

Mind the Gap!

An investigation into the optimisation of public health skills, knowledge and practices of health workers in Cambodia



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Abstract

Universal health coverage (UHC) has been identified as a priority in the sustainable development goals (SDG3), but it is argued here that this is only possible if the health workforce is educated in, and values a public health approach at the primary health care (PHC) level. Encouraging community participation by developing a critical awareness of the social determinants of health and supporting communities to take action is needed. Community health workers (CHWs) have the potential to act as agents for social change to improve the health of rural communities if trained and supported appropriately. This study investigates the optimization of public health skills, knowledge and practices of health workers at the PHC level in rural Cambodia. It is anticipated that this study will afford new insights to inform stakeholders of the factors impacting on the development of public health workforce capacity.

The research engaged twenty CHWs over two studies using a participatory action research approach. Over eight participatory workshops and a two-day training session CHWs identified (using photovoice), implemented and reflected on solutions to community health problems. In addition, ten semi-structured interviews were undertaken with key stakeholders from government and non-government organisations (NGOs) to gain an understanding of current methods used to develop the public health capacity of health workers in Cambodia.

The public health skills gaps identified at provincial and community levels included planning, communication, community engagement techniques and using initiative to identify and implement solutions. These gaps are intrinsically linked to Cambodian social and political structures, and cultural values which promote a hierarchical working environment. In addition, aid dependency and a lack of ownership has created a new patronage which encourages further disempowerment and an apathetic approach to independently tackling community health issues. Fragmented public health training mainly directed by international agents and a lack of financial support to develop sustainable training, supervision and monitoring negatively impacts public health skill development. Health promotion and prevention training is provided to health facility workers, but there is a 'know-do' gap. They view their role as purely curative and removed from the community public health agenda, thus devaluing the application of new public health skills. The implementation of community participation policies in Cambodia is hindered by a reliance on external agencies and cultural norms of respect, obedience and fear of challenging the elite. The capacity for CHWs to act as agents of social change is unlikely given the current policy structure and implementing environment.

The health workforce in Cambodia has the potential to contribute significantly to the goal of UHC, however factors affecting their desire and ability to implement a public health approach need

addressing. Although many health systems are hierarchical in nature, the degree to which people can innovate, openly analyse processes and procedures and suggest solutions needs to be considered. Identifying ways of supporting CHWs to mobilise and enable communities to be empowered within the contextual environment is required, as is a better understanding of how to close the know-do gap in health facility workers.

Acronyms

BCC	Behaviour Change Communication
CBD	Community Based Distributors
HC	Health Centre
INGO	International Non-Government Organisation
MCH	Maternal and Child Health
MCat	Midwifery Coordination Alliance Team
MoH	Ministry of Health
NCDD	National Centre for Democratic Development
NCHP	National Centre for Health Promotion
NGO	Non-Government Organisation
OD	Operational District
PHD	Provincial Health Department
RA	Research Assistant
RGC	Royal Government of Cambodia
ProTW	Provincial Technical Working [Group]
RMNH	Reproductive, maternal and newborn health
SDG	Sustainable Development Goals
SDOH	Social Determinants of Health
TBA	Traditional Birth Attendant
THE	Total Health Expenditure
WHO	World Health Organisation
UHC	Universal Health Coverage
VHSG	Village Health Support Group

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Chapter 1 Introduction

The relationship between health system development and the public health approach was categorically developed in 1978 with the Alma-Ata declaration of Health for All (WHO 1978). The Director General of the World Health Organisation (WHO) at the time, Halfdan Mahler, called for a comprehensive model of primary health care (PHC) that would be universal, equitable and affordable for all (WHO 1978). Key principles included community participation, people centered approaches to health, and tackling the social economic determinants of ill health (WHO 1978). However, in low and middle income countries (LMICs), comprehensive PHC did not progress as anticipated due to the development of selective PHC (SPHC) that focused on preventing or treating the few diseases responsible for the greatest mortality and morbidity (Walsh and Warren 1980). The legacy of this model, although originally intended as a short-term fix to global health problems, is still evident in LMICs like Cambodia (Bourdier 2016). Vertical short term programmes funded and implemented by international aid organisations have weakened health systems and governance, and fostered an aid dependency which has become embedded into the social structure and culture of Cambodia (Chhea et al. 2010, Peou and Pavithra 2011, Plummer et al. 2013). Furthermore, basic health infrastructure has been neglected, rural communities still lack clean water, nutritional food, sanitation, adequate housing and safe environments for children to develop. Malnutrition in a food secure country such as Cambodia is unacceptable, yet ongoing, with over 50% of women and children in some rural areas experiencing anemia (Cambodia National Institute of Statistics et al. 2015). The situation in Cambodia is not unusual for LMICs and global organisations and researchers are advocating for a return to the comprehensive principles of PHC for the very reasons identified above (Walley et al. 2008).

As the Sustainable Development Goals (SDGs) begin, there is a renewed focus on health equity and specifically achieving universal health coverage (UHC) (Naimoli et al. 2015, United Nations 2015a). Having a well-functioning people centred, community focused comprehensive PHC service would allow for mobilization of public health strategies such as health promotion and education, preventative health and health literacy (WHO 2008d). This would also serve to empower individuals and communities to take ownership of their own health and therefore preserve good health (WHO 1986). Improved health literacy together with empowered communities would enable disadvantaged and discriminated people from poor communities to advocate for better living and working conditions and to lobby government for better policies to protect healthy people from becoming ill (Nutbeam 2006). Furthermore, to achieve UHC in LMICs where health workforce shortages are a problem, task shifting of health service functions from highly qualified professionals to lay community members is recommended (WHO 2006). Suggested functions include counselling, drug distribution, testing and

some treatment for HIV and health promotion (WHO 2008c, Smith et al. 2014). The global energy towards community participation and task shifting has led governments in LMICs to develop community health worker (CHW) programmes.

CHWs are lay community members who may deliver basic health care services, undertake activities to promote health, improve health seeking behaviour or empower communities to advocate for health needs (Standing and Chowdhury 2008, Lewin et al. 2010). They receive some basic training but are not health care professionals. The values behind CHW policies should include contributing to a reduction in health inequalities, linking communities with health systems and empowering communities to take responsibility for their own health through participation (Ingram et al. 2008, Behdjat et al. 2009, Kok et al. 2015). However, policy development, implementation and success of CHW programmes and participation policies varies globally depending on interpretation (Naimoli et al. 2015). In countries such as Cuba, community participation has empowered communities to take control of their own health and health care systems (Greene 2003), in other countries community participation is understood more as community involvement in health initiatives (Perry and Zulliger 2012).

By taking a broader public health approach and reorienting health systems towards primary health care, the health workforce, including CHWs in LMICs like Cambodia, have the potential to improve the health of communities at the PHC level and contribute to UHC (Campbell et al. 2013, Theobald et al. 2015). Thus, there is a need to identify what skills, knowledge and practices are required to build their capacity as educators and practitioners who can facilitate the development of public health strategies and interventions as intended in the Alma-Ata declaration (WHO 2008b, Campbell et al. 2013). This includes addressing fundamental health determinants, seeking solutions as agents of change, providing specific public health services and acting as advocates to improve the health of the communities that they serve (Campbell et al. 2013, Theobald et al. 2015, Rabbani et al. 2016). Public health training, supervision and ongoing support for the health workforce is complex and requires further exploration if Cambodia is to address health inequalities in rural areas (Ingleby et al. 2013).

This chapter introduces the research topic area, including the research context of Cambodia, the public health approach in relation to the Alma-Ata declaration and the challenges associated with developing public health knowledge, skills and practices in LMICs. Research aims and questions are defined and the rationale for my personal research choice based on previous experiences is explained.

1.1 Cambodia

Cambodia has experienced impressive annual economic growth of around 7%, this together with health reforms since the 1990s has resulted in improved health indicators such as; declining maternal and child/infant mortality rates and increased life expectancy (Cambodia National Institute of Statistics et al. 2015, WHO 2016a). However, despite economic growth, inequalities continue to increase; the rural poor suffer the most with diminishing natural resources and are often devoid of basic needs (Brinkley 2011, Schelzig 2014). Cambodia still ranks as a low income country with 41% of Cambodians living close to or under the poverty line, measured at \$2 (USD) per day, the majority of which live rurally (Schelzig 2014, World Bank 2014).

Health inequalities coupled with inadequate public health infrastructure, expensive private healthcare and demotivated, underpaid public sector health staff have resulted in poorer health indicators in comparison to the western pacific region (Bourdier 2016). For example, Cambodia still has one of the highest infant and under five child mortality rates in the region with 35 per 1,000 children dying under the age of five (Cambodia National Institute of Statistics et al. 2015). Maternal mortality rates remain high at 170 per 100,000 live births compared with the regional rate of 49 (2013, Cambodia National Institute of Statistics et al. 2015). Cambodia is going through a demographic and health transition, with a third of the population currently under the age of 15, however with falling fertility rates and increased life expectancy there is a growth in the aging population and 50% of total health expenditure is for the elderly (MoH-RGC and WHO 2012, MoH-RGC 2015). There is also a dual burden of disease with communicable diseases like tuberculosis (TB) amongst the highest in the world (Wilson-Jones et al. 2014) occurring alongside an increase in noncommunicable diseases (NCDs) which now account for approximately 53% of deaths per year (MoH and WHO 2012).

There is evidence of urban-rural health inequalities, for example, infant mortality rates in rural areas are 42 deaths per 1,000 live births, about three times higher than in urban areas (Cambodia National Institute of Statistics et al. 2015). Urban-rural health inequalities are a consequence of unfair distribution of income, resources, infrastructure and services (United Nations 2015b, Ensor et al. 2016). Many public health issues arise from; limited access to safe drinking water, contaminated soil from open defecation, dysentery and cholera, the use of biomass fuels for cooking and rising use of motor vehicles with limited regulation and legislation causing traffic accidents and increased respiratory diseases (WHO and MoH Cambodia 2009, Irwin and Scali 2010, Brinkley 2011, Soeung et al. 2012, World Bank 2012, Phalla et al. 2014, Schelzig 2014, Sokcheng and Kimsun 2014, Annear et al. 2015, Cambodia National Institute of Statistics et al. 2015, Hong and Them 2015). Social determinants of health (SDOH) such as inadequate education and living wage and social isolation are barriers to sustaining and

improving rural community health (Soeung et al. 2012). These SDOH trap communities in an intergenerational cycle of ill health (Irwin and Scali 2010, Soeung et al. 2012).

Inadequate health services, particularly in rural areas where health facilities are poorly resourced add to the health burden. Shortages of trained health personnel, often demotivated due to insufficient wages, a lack of training, supervision, management and development opportunities further exacerbate health problems in Cambodia (Dolea et al. 2010, Ingleby et al. 2013, Bourdier 2016). Latest data suggests that the health care workforce in Cambodia has only 0.169 physicians and 0.79 nurses and midwives per 1000 compared to the WHO recommendation of 2.3 (WHO 2012). In rural areas, there are even fewer health care personnel due to mal-distribution of the workforce and an unwillingness to work in remote areas (Dolea et al. 2010, Ingleby et al. 2013). This means a higher dependency on a less skilled volunteer workforce. Variations between and within provinces exist with better and more services provided in areas of higher density compared to areas of low population (Ensor et al. 2016). Health outcomes are worse in the east of Cambodia partially due to an increased number of indigenous groups who lack trust in health facilities, which are also fewer and more difficult to reach, and a preference to use traditional healers and birth attendants (Ensor et al. 2016). In addition, poverty, ethnicity, geography and language present barriers to accessing health services and information (Cambodia National Institute of Statistics et al. 2015).

The chosen site of this research is in the north-east province of Kratie (Figure 1). Kratie was chosen because it is rural, outside of the main tourist areas, experiencing greater socio-economic challenges and has higher maternal and child mortality rates in comparison to other provinces (Cambodia National Institute of Statistics et al. 2015).



Figure 1 Map of Cambodia (United Nations 2004)

1.2 The public health approach

The public health approach is recognised as a critical element for sustainable health improvement, however, compared to biomedical procedures and the high status of medical professionals it is often neglected in national health policy (Skolnik 2012). The definition widely used for public health came from the Acheson Report in 1988 as ‘The science and art of promoting and protecting health and well-being, preventing ill-health and prolonging life through the organised efforts of society’ (Nutbeam 1998 p.3).

The public health approach:

- Is population based
- Emphasises collective responsibility for health, its protection and disease prevention

- Recognises the key role of the state, linked to a concern for the underlying socio-economic and wider determinants of health, as well as disease
- Emphasises partnerships with all those who contribute to the health of the population (The UK Faculty of Public Health 2010)

The three key domains of public health are health improvement, improving health services and health protection. Public health practices should be empowering, effective, evidence-based, fair and inclusive (UK Faculty of Public Health, 2010). Public health is a part of health systems as defined below:

A health system consists of all the organizations, institutions, resources and people whose primary purpose is to improve health. This includes efforts to influence determinants of health as well as more direct health-improvement activities. The health system delivers preventive, promotive, curative and rehabilitative interventions through a combination of public health actions and the pyramid of health care facilities that deliver personal health care — by both State and non-State actors (WHO 2010 p.vi).

The building blocks of a health system are; quality service delivery, adequately trained health workforce, information systems, access to medicines, robust financing and effective leadership and governance (WHO 2010). Health systems in LMICs are influenced by both internal government policies and externally by international aid agencies and donors (WHO 2010).

1.3 Public health skills, knowledge and practices in Cambodia

Public health at the PHC level in rural Cambodia is mainly the responsibility of health facility staff and CHWs under the instruction and support of decentralised Provincial Health Departments (PHDs), Operational Districts (ODs) and international and national non-government organisations (NGOs). PHDs receive policy guidance from the central Ministry of Health (MoH-RGC 2008). The 'Community Participation Policy for Health' is the main policy for community level public health activities and is the basis for the CHW programme and community participation. CHWs are known as Village Health Support Group (VHSG) members (MOH-RGC 2008). VHSGs according to the policy should be selected by community members, serve between 10-50 households and be linked with local health centres (MoH-RGC 2008). The policy goal for VHSGs is 'promoting a well-functioning system among the different community structures, and improving the health situation in their village' and 'to ensure the regular flow of information between the community and the HC' (MoH-RGC 2008 p.13). Health facility staff based in health centres and hospitals also have some responsibility for public health activities, however their position is much more focused on curative care.

Cambodia, like other LMICs experiences a lack of public health expertise due to; prioritization of developing medical/clinical skills, limited resources, political and economic instability, and unbalanced partnerships (Zwanikken et al. 2014, Rabbani et al. 2016). Furthermore, historical, political, social and cultural factors present contextual barriers to improving public health competencies and achieving community participation (Ovesen et al. 1996, O'Leary and Meas 2001).

Cambodia's history and development are complex with colonial legacies and more recent conflicts influencing societal relations. Between 1975 and 1979 under the Khmer Rouge Communist regime, Cambodia experienced one of the worst genocides in recent history with approximately a quarter of the population executed. Personal and political freedoms were outlawed and intellectual cleansing resulted in the mass execution or exodus of the educated classes (Chandler 1991). This has left a legacy of survivors who learned to hide their intellect from authority and created a climate of control and fear (Chandler 1991). Currently Cambodia is constitutionally a democracy, but the same Prime Minister controversially elected in 1993 is still in power in 2017; with reports of corruption, violence and political control (Brinkley 2011, Ear 2013). Since the 1990s international aid has poured into the country and impacted on the development and governance of Cambodia (Ear 2013); making it one of the most aid dependent countries globally (Chanboreth and Hach 2008). Furthermore, Cambodia's social structure is strongly hierarchical and rural communities rely on patron-client relations with those in power for survival (O'Leary and Meas 2001).

Participation policies in health, education and development have been largely unsuccessful because of these contextual factors, which have resulted in a reluctance to speak openly for fear of upsetting the social balance and losing established and needed patronages (O'Leary and Meas 2001, Pellini 2007, Rushton 2007). Research investigating elements of the CPPH also found that such policies are dominated by international aid organisations who use community participation as a free source of labour to achieve donor expectations (Rushton 2008). In addition capacity development across sectors as a result of technical assistance from international agencies has not transpired (Godfrey et al. 2002, Kelsall and Heng 2015). The CPPH and public health capacity building efforts lack ownership and leadership by provincial government bodies (Men et al. 2005) resulting in a fragmented short-term delivery of vertical health programmes that are dictated by external donor funds (Godfrey et al. 2002, Annear et al. 2015, Bourdier 2016). Providing effective public health training and education to improve the skills, knowledge and practices of the health workforce is complex and requires further exploration if Cambodia is to address health inequalities in rural areas (Ingleby et al. 2013). However, as is the case in most developing countries training strategies in health tend to focus on the initial training of highly

qualified, exportable workers and not on the development of mid-level health workers such as health facility staff and CHWs (Hongoro and McPake 2004).

Rabbani et al. (2016 p.8) state that public health knowledge and skills development is key to:

develop cadres of competent and well-motivated public health workforce; educators, practitioners and researchers who ask questions that address fundamental health determinants, seek solutions as agents of change within their mandates, provide specific services and serve as advocates for multilevel partnerships.

Rowe et al. (2005) proposed that further research is needed to gain a better understanding of the determinants of effective performance of health workers in LMICs. They further stress the importance of translating research findings into action that will improve health care through Ministries of Health and international partners. Goyet et al. (2015) state that there is an urgent need to address the gap between research and policymaking to define public health priority strategies in Cambodia.

1.4 Aims and objectives

The purpose of this research is to examine what is required to improve public health for communities at the primary health care level in rural low resource settings. This research hopes to better understand the knowledge, skills and practices required for health workers to apply a public health approach to improve community health. It is anticipated that the research will delineate the contextual and relational environment in which public health actors and communities are living and working to provide a broader understanding of the challenges and strengths associated with improving public health in poor rural communities. It is hoped that the research will provide practical recommendations to assist researchers, policy makers, provincial and district level government workers and international aid agencies to improve health of rural communities in Cambodia. There are two overarching aims with objectives to guide the research process, as listed below.

Aim 1: To gain further understanding of the public health knowledge, skills and practices required to build capacity within primary health care in low resource settings.

The research focuses on rural health workers in Cambodia. The research objectives are to:

- Identify where and what gaps exist in public health knowledge, skills and practices of facility based health workers and CHWs.
- Assess policy translation, especially in underserved rural areas.
- Analyse the roles and involvement of individuals, communities, organisations and governments in the development of health workers and CHWs.

- Explore how the Alma-Ata approach to PHC is understood and implemented, specifically with regards to community participation and empowerment.

Following a greater understanding of the above, identifying realistic, context specific mechanisms for improving public health knowledge, skills and practices of health workers and CHWs at the local level in Cambodia is needed. Also, educational institutions and training providers must understand how this impacts on the delivery of specific programmes, thus Aim 2 follows.

Aim 2: Investigate the needs and gaps in training and educational provision and identify strategies and mechanisms of improving public health capacity at PHC level.

Objectives;

- Identify methods currently being used by training providers to build capacity of health workers in Cambodia
- Evaluate which methods and mechanisms are considered effective
- Critically analyse current methods and mechanisms that restrain capacity development
- Explore how contextual factors impact on the application of skills, knowledge and practices
- Investigate contextual factors to improve application of public health practices

1.5 Research design overview

With approval from the National Ethics Committee for Health Research in Cambodia and Liverpool John Moores University Research Ethics Committee the research employed three qualitative studies. The research approach was a combination of Participatory Action Research (PAR) with VHSGs and semi-structured interviews with stakeholders facilitating workforce capacity building. The use of integrated methodologies in the development context is advocated by Desai and Potter (2006) who argue that complementary research methods enable researchers to consolidate strengths, cross-check and triangulate information for a truer account of reality.

Studies one and two applied a PAR approach with VHSGs to identify public health problems and explore challenges and successes when applying public health strategies to improve the health of community members. The ideology behind the PAR was to engage VHSGs in the research process to encourage ownership of the findings and building shared knowledge which may inform future practices. Khmer research assistants (RAs) were co-researchers in this cross-language, cross-cultural study.

Study three consisted of 10 semi-structured interviews with key stakeholders from NGOs, government and international volunteer agencies working to develop public health skills, knowledge and practices or support community participation mechanisms. The interviews were used to gain an understanding

of the public health approaches used in Cambodia, the perceived underlying structures, beliefs and views of factors that impact on capacity building in Cambodia. The research was conducted over two field trips, four months in 2014 and three months in 2016.

1.6 Why me? Why Cambodia?

Having worked in the field of public health for over eight years in the UK, a high-income country, I had a desire to understand the public health challenges faced in low resource settings and challenging contexts. I also wanted to exchange knowledge and skills with others working in different public health environments. Therefore, in 2012 I took a position with a County Health Department in South Sudan as a public health management advisor where I was required to build the capacity of the team to manage health facilities and CHWs. This 10-month experience inspired me to develop a research project that looked at public health capacity building in LMICs. Whilst in South Sudan, I witnessed external agencies coming with preconceived ideas of health development which bypassed the views and ideas of my Sudanese counterparts. I observed the assumed higher power of external agents and developed a desire to do things differently. Therefore, I designed a research proposal that was based on knowledge exchange through participatory, inclusive and action orientated methods.

Initially my research was to be conducted in South Sudan, however due to a resurgence of conflict it was no longer safe for me to travel as an independent researcher. Having previously visited Cambodia, I was intrigued how a country that had experienced peace for over thirty years had managed to develop its public health systems and approaches. Visually it was clear that poverty, sanitation, and water access were still major issues in this peaceful country. Upon further reading it became clear that Cambodia needed public health capacity building strategies and so it became the setting for my research. Through the planning of the PhD project I identified my own value system as corresponding with PAR principles and concepts. Although I was familiar with the role of international agents and government bodies in South Sudan, I did not have the same level of knowledge for Cambodia and wanted to understand the views, experience and opinions of those responsible for developing public health skills, knowledge and practices. The interview process allowed me to gain this perspective whilst ensuring that those in power did not directly impact the participatory research. My initial research focus changed somewhat during the first field visit. Initially I thought my focus would be with health facility staff, however it became clear that CHWs were much more involved in public health activities, especially at the community level, and so they were recruited as the PAR participants.

1.7 Outline of chapters

This chapter has set out the introduction and origins of the research choice and design along with the research aims and objectives; the following chapter outlines are described below.

Chapter two is a literature review presented in three sections, each of which serves to explore what is required to improve public health for communities at the PHC level in rural low resource settings. Section one develops an understanding of the broader public health context in relation to PHC and the Alma-Ata declaration and the role of community participation. Section two presents the context of Cambodia in relation to research aims and objectives. Section three presents international, national and local efforts to build capacity in the health sector.

Chapter three presents the research paradigm and orientation of the research including key values and principles that have an impact on the research process such as power, reflexivity and positionality. The methodology is then explained along with the rationale for the research design, the role of research assistants, research location and ethical procedures. Core methods are described including photovoice, community asset identification, participatory workshops (to categorise and prioritise public health issues for the development and implementation of action plans) and semi-structured interviews. The analysis process for each of the three studies is provided.

Chapter four presents the findings of all three studies as summarised in Table 1. Study 1: Identifying public health issues and developing an action plan and Study 2: Participatory Action Research are presented in a narrative format describing the intricacies of each workshop followed by a discussion of the workshop outcomes and reflections of all researchers. The Stakeholder Interviews from Study 3 are presented by themes developed from thematic analysis of ten transcribed and coded interviews.

Table 1 Summary of all studies

Study	Timeframe	Purpose	Connection between studies
Study 1: Identifying public health issues and developing an action plan	September to December 2014	To identify key public health issues faced by rural communities using photovoice and to gain a better understanding of the capacity of VHSGs to develop an action plan	<p>The learnings from Study 1 were applied in the design of Study 2.</p> <p>The photovoice activities in Studies 1 and 2 identified public health issues during two different seasons (rainy and dry) and were undertaken with different participant groups which added variation and potential for comparison.</p> <p>In study 3 the stakeholder interviews connected with Studies 1 and 2 in the form of triangulation and identification of key thematic areas which are discussed in Chapter 5: Analysis, interpretation and synthesis of findings.</p>
Study 2: Participatory Action Research (creating and implementing an action plan)	January to March 2016	To provide an opportunity for VHSGs to display their public health knowledge, skills and practices and to understand the facilitators, barriers and influences when implementing public health initiatives	
Study 3: Stakeholder Interviews	September to December 2014	To assess the landscape of skills and knowledge development efforts and ascertain learnings gained from health and development professionals involved in delivering training and education in Cambodia	

Chapter five presents my interpretation of the findings following triangulation of all three studies. The discussion follows the structure of the research aims and thus is presented in two sections. Section one discusses the public health knowledge, skills and practices required to build capacity within primary health care in low resource settings. This section has three main parts; Health facility workers and public health ‘it’s not my job’, VHSGs knowledge, skills and practice needs and VHSGs as agents of social change. Section two discusses the needs and gaps in training and educational provision and strategies and mechanisms for improving public health capacity at PHC level. This is presented in relation to three main levels, the individual, the organisational and the environmental level.

Chapter six presents the conclusions with key findings, recommendations and areas for further research in relation to each level of the health system; national, provincial, health facility, VHSG and community levels. To end the thesis is a final reflection of the research process and future intentions.

1.8 Chapter summary

This chapter has introduced the thesis and key areas of discussion which will be developed and critically argued throughout. An understanding of the public health approach and comprehensive primary health care is central to this research, as is an appreciation of the various factors that impact on the development of public health skills, knowledge and practices in LMICs. The research setting of rural Cambodia is contextually complex and an interesting country to base the research due to the historical, political, social and cultural intricacies. The next chapter will discuss the literature surrounding the key areas of this research including PHC and community participation, the context of Cambodia, and building skills, knowledge and practices in LMICs. It will also highlight the importance of country ownership, an enabling environment and a supportive organisation in optimising the performance of health workers.

Chapter 2 Literature review

2.1 Introduction

This literature review takes a narrative approach due to the broad nature of the research area (Collins and Fauser 2005). It is aimed at providing the reader with an overview of the research context and the various findings and interpretations of current literature surrounding the topic. The literature review was an iterative process that developed as the action research unfolded and I gained a deeper understanding of Cambodia, the health system and local community dynamics. As described by Herr and Anderson (2005 p.84) in their guide to writing an action research dissertation, the research 'process is done in relation to a larger body of literature that helps illuminate the findings, deepen the understanding and perhaps suggest directions for the next iteration'. As a result, the data analysis was directed by relevant literature and extended through the contribution of this action research. Therefore the literature review was refreshed at all points of the research process, 'unearthing the real issues and questions for study' which led me in a direction I did not predict (Herr and Anderson 2005 p.84). Before embarking on the fieldwork my literature review focus was around public health issues, policy development and primary health care on the one hand; and research methods on the other.

The initial review had not prepared me for the interplay between the political, economic, sociological and historical context. Learning in the field was an important part of the research journey, as was ongoing literature searching, reading and reflection in an attempt to synthesize findings within a broader reality. The search criteria are explained for each part of the review below. Search engines included Google Scholar and Liverpool John Moores University journal search engine 'Discover' which elicited relevant journals, books and articles. The literature review consists of three sections; Section 1 'Primary Health Care and Participation', Section 2 'Cambodia as the research setting' and Section 3 'Building public health knowledge, skills and practices in LMICs'. Figure 2 shows a summary of the literature review for Sections 1 and 2.

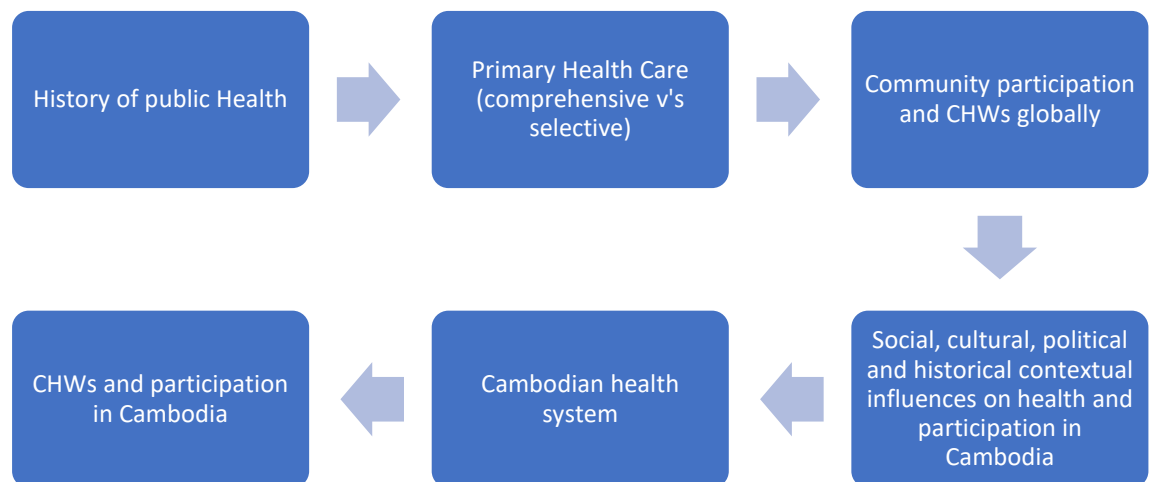


Figure 2 Literature review structure: Sections 1 and 2

Section 1, Primary Health Care and Participation, provides a historical and present-day account of the transformation of Primary Health Care (PHC) in Low- and Middle-Income Countries (LMICs). This includes the comprehensive PHC model introduced in the Alma-Ata Declaration to the growth of selective primary health care and the eventual resurgence of the Alma-Ata principles. One of the key areas of exploration is community participation and empowerment and the tensions associated with interpretations and application of participation ideals in the context of LMICs. The literature search included key words and phrases such as; primary health care, selective PHC, comprehensive PHC, community development, participation and empowerment, Halfdan Mahler, public health in LMICs, health care in LMICs, Community Health Workers, Lay Health Workers, Village Health Workers, Volunteer Health Workers, medicalisation of public health, health(care) workforce, and participatory, action and research.

Section 2, Cambodia as the research setting, provides an account of the Cambodian context, including the political, economic, social and historical background which has an impact on the research objectives. These sections were very much developed throughout the action research process as new themes and concepts emerged from the data collection and analysis process that were not identified prior to research commencing. The review then defines the Cambodian health system, key policies, strategies and initiatives to demonstrate the complex network of agencies involved in establishing PHC and participation in rural communities. This includes the influence of international aid on the development of public health knowledge, skills and practices and community participation in Cambodia. The Community Participation Policy for Health (CPPH), the key policy driver for CHWs, is examined with reference to studies on implementation. The literature

search included key words and phrases with the prefix or suffix Khmer or Cambodia(n) included; health system, health care, health policies and strategies, participation and empowerment, doctors and health workforce, social structure, history, Khmer Rouge political situation, accountability, decentralisation, human rights, voting and democracy and democratisation. Terms related to aid dependency were also searched such as international aid in Cambodia and power of NGOs and donors in LMICs. I also followed English language Cambodian news pages on social media including The Cambodia Daily and the Phnom Penh Post. I read fiction and non-fiction to get a feel and flavour for the Cambodian persona.

Section 3, Building public health knowledge, skills and practices presents literature specific to the development of public health skills and knowledge of primary health care workers and specifically CHWs in LMICs (Figure 3). Capacity building methods and factors influencing health worker performance are presented. The purpose of this section is to provide a review of what works and does not work when building capacity of PHC workers and CHWs. Also discussed are the external wider supporting factors that optimise health worker performance. Search terms included; capacity building and ownership, capacity development with international aid, knowledge and skill development in health, training methodologies, CHW support mechanisms, health worker leadership, management and supervision and subnational leadership.

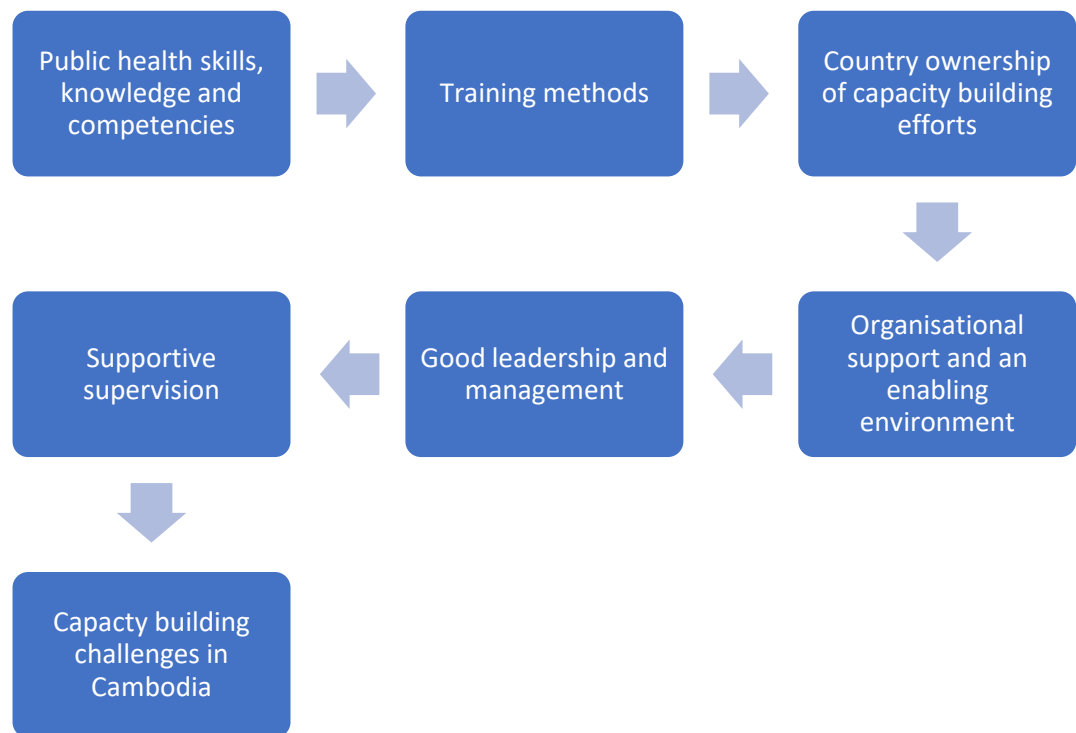


Figure 3 Literature review structure: Section 3

2.2 Section one: Primary health care and participation

This section aims to develop an understanding of the broader public health context in relation to the Alma-Ata declaration. The evolution of PHC and community participation is discussed, providing definitions, and interpretations globally. CHW programmes and policies of LMICs are presented to demonstrate the variety of leadership, training, supervision and remuneration structures between countries. Context and design factors affecting CHW programme implementation and their impact on success is also discussed.

In the nineteenth century, the first public health movements began with a realization that people who lived and worked in poor conditions with poor sanitation were the worst affected by crowd diseases like tuberculosis, cholera, pneumonia, measles and smallpox (Ashton and Seymore 1992). Thus, the origins of public health were based on the improvement of the sanitation and environmental conditions of the poorest communities. However, despite public health having its origins in this population based approach, it was largely superseded from the 1870's until the 1970's by the growth of high-technology clinical medicine aimed at the individual, such as vaccinations and immunisations (Ashton and Seymore 1992, Green 2007). Bio-medical interventions dominated not only high income countries, but LMICs through global health strategies promoted by international organisations such as WHO and UNICEF (Ashton and Seymore 1992). However, in the 1960s and 1970s, the social injustices associated with this approach were challenged and research highlighted growing health inequities between and within countries (Ashton and Seymore 1992, Magnussen et al. 2004).

A new determination to advocate for health as a fundamental human right saw a return to the origins of public health as an approach that went beyond biology to recognise the social aspects of health problems caused by lifestyles and environmental factors (Ashton and Seymore 1992, Carpenter 2000). In 1978 the Alma-Ata declaration categorically developed a comprehensive PHC approach which challenged traditional health approaches that previously only benefitted the elite few (WHO 1978). The motto of 'Health for all by the year 2000' was coined at the Alma-Ata conference and associated goals and targets were set (Hall and Taylor 2003, Brown et al. 2016). Revolutionary principles of community participation, a focus on health promotion and prevention leading to self-reliance, appropriate use of resources and technology and intersectoral action were key features in the Alma-Ata Declaration (WHO 1978, Lawn et al. 2008, Rohde et al. 2008). A global determination to tackle the wider social, economic, political and environmental determinants of health through a community based, participatory primary health care system was born (WHO 1978, Gush 1979). Top down health campaigns were challenged and new models were proposed to train

CHWs as agents for social change and encourage community participation through empowerment of the people (Gush 1979, Cueto 2004).

Within a year, the ideals of the Alma-Ata declaration were challenged as being too broad and vague, too lengthy to implement and unrealistic in terms of cost and human resources in 'less developed countries' (Walsh and Warren 1980, Wisner 1988, Lawn et al. 2008, Brown et al. 2016). In response, selective primary health care (SPHC) was developed as a model 'directed at preventing or treating the few diseases responsible for the greatest mortality and morbidity in less developed areas' (Walsh and Warren 1980 p.145). SPHC was initially proposed as an interim solution but with the support of key international agencies such as UNICEF it soon became the accepted form of PHC for a number of reasons (Walsh and Warren 1980). Global economic recession and the debt crisis fed neo-liberalism and the development of new lending strategies and the structural adjustment programmes (SAPs) (Carpenter 2000). SAPs forced governments to follow strict austerity measures in favour of privatization and opened up indebted countries to the influence of multi-nationals (Carpenter 2000, Coburn 2000, Fee and Brown 2015). SPHC suited the neo-liberal approach, where cost-effectiveness rather than rights and social justice ruled global health strategies. Furthermore, the SPHC approach could provide immediate and measurable results which appealed to funders and powerful governments (Werner and Sanders 1997). The power of international agencies such as the World Bank, International Monetary Fund, UNICEF and other implementing international NGOs meant they had, and still have great influence over government decisions, policies and strategies which could be moulded to suit the aims and targets of donor set outcomes (Werner and Sanders 1997, Ear 2013).

The delivery of SPHC is top-down through vertical programmes chosen by international consultants, not communities. The interventions chosen were growth monitoring, oral-rehydration therapy for children with diarrhea, breastfeeding promotion and childhood immunization (Walsh and Warren 1980, Wisner 1988). These interventions were supported by UNICEF who later added family spacing, female education and food supplements (Wisner 1988). SPHC undermined and stifled the key principles of the Alma-Ata declaration (Newell 1988). Specifically it did not allow for a primary care system that 'requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation and control of primary health care' (WHO 1978 p.2). Instead, the top down approach resulted in communities having little say in what their needs were and even less involvement in planning and solution finding (Hall and Taylor 2003). Interventions were decided and controlled by foreign consultants with technical expertise (Wisner 1988, Hall and Taylor 2003). Furthermore, by focusing on specific interventions targeted at

individuals, group efforts by the poor to advocate for the basic needs of water and sanitation, land, shelter, and employment were undermined (Wisner 1988, Cueto 2004, Jacob 2007). Poor communities were not empowered to take ownership of their health but instead learned to depend on the international community to send in aid (Wisner 1988, Ear 2013). For example oral re-hydration sachets dropped from helicopters in the sky rather than simple homemade solutions being taught to communities reinforced the power of the western world (Wisner 1988). The focus increasingly became treatment and not prevention of diarrhoea, whilst the basic need of sanitation and clean water supplies became secondary (Cueto 2004).

Another influential factor that hindered the development of comprehensive PHC was the biomedical focus of health programmes (Macdonald 1993, Morgan 2001). In the article 'Where is "Public" in the Public Health Discourse?' by Kumar et al. (2016), the deviation from a people-centred public participation approach in health to a biomedical approach is highlighted. In their reference to India they discuss the need to understand the social, economic and political context in which interventions and policies are functioning rather than simply applying a westernized model of public health. In western countries, many basic needs are well established such as access to clean water, good sanitation, nutrition and housing, where as in LMICs often these needs are left unmet. Yet, the focus remains on technological bio-medical interventions that can only provide short term solutions to the wider public health agenda (Macdonald 1993, Morgan 2001, Jacob 2007, Kumar et al. 2016, World Health Organisation 2016b).

Furthermore leadership and management positions within public health at national and sub-national levels in LMICs are often occupied by medically trained staff such as doctors who are ill equipped to tackle the wider social determinants of health and community participation (Dal Poz et al. 2009). Such medicalisation of health services presents barriers to achieving people centered health care that is focused and organized on the person in the context of his or her family, community, and culture, rather than diseases (Epping-Jordan 2010).

The Rockefeller Report (1985) highlighted how some countries with limited economic resources were still able to achieve 'Good Health at Low Cost' with examples from China, Costa Rica, Kerala State in India and Sri Lanka. The report challenged the idea that economic growth alone would lead to improved population health. Instead the common factors amongst the named countries were; political and historical commitment to health as a social goal, strong societal values of equity, political participation and community involvement, investment in PHC and community based services and intersectoral linkages (Balabanova et al. 2011).

Critiques of SPHC and a resurgence in public health theory and practice influenced the Millennium Development Goals (MDGs), the Commission on the Social Determinants of Health (SDOH) and WHO's recommitment to comprehensive PHC through the report 'Primary Health Care, Now more than Ever'. (WHO 2008d, WHO 2008a). Furthermore, the Lancet Series 'Alma-Ata Re-birth and Revision' argued that weak health systems restricted efforts to improve health and called for the strengthening of health systems through the implementation of effective, comprehensive primary health care (Lawn et al. 2008, Rohde et al. 2008, The Lancet 2008, Walley et al. 2008). More recently the 'Framework on integrated people-centred health services' presented at the sixty-ninth World Health Assembly in April 2016 highlights a need for countries to re-orientate health systems towards comprehensive PHC through five interdependent strategies: (1) empowering and engaging people and communities; (2) strengthening governance and accountability; (3) reorient the model of care; (4) coordinating services within and across sectors; and (5) creating an enabling environment (WHO 2016b). One of the key messages was the need for community participation and empowerment (Rohde et al. 2008, Lewin et al. 2010).

2.2.1 Community participation

Community participation is a contested concept. It is viewed by some as a form of community collaboration or involvement in which people, voluntarily or as a result of an incentive, agree to collaborate with organisations/institutions by contributing their labour and/or other resources in return for some expected benefit (Morgan 2001). Another perspective of community participation is one of empowerment where a community sets up a process to control its own development, often described as community mobilisation or people-centred development (Morgan 1999).

Defining what is meant by community participation in health is controversial and dependent on the users aims. Is the participation goal, social justice or operational outcomes? Is it community mobilization via professional assessment and dictated activities or to empower communities to undertake their own analysis and actions? (Morgan 2001, Bhatia and Rifkin 2010, Asha et al. 2015). For the purpose of this research, community participation is aligned with the Alma-Ata principles of people centered community empowerment that;

requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation and control of primary health care, making fullest use of local, national and other available resources; and to this end develops through appropriate education the ability of communities to participate (WHO 1978 p.2).

Community participation is featured in many public health policies, programmes and initiatives; however, research has highlighted that it is often rhetoric rather than reality, with more studies describing participation as a collaborative approach as opposed to participation resulting in community mobilization or empowerment (Morgan 2001, Asha et al. 2015, Saprii et al. 2015). One of the reasons for this is the tension between organisations wanting to show they are using community participation methods in their design, and the need to demonstrate measurable outcomes to prove the value of investment by donors. Thus the social justice, community led principles of participation are lost in practice and the power imbalance between professional outsiders and communities in LMICs is left unaddressed (Cooke and Kothari 2001, Rifkin 2001). Cooke and Kothari (2001) argue that participatory development has the potential for tyranny and discuss how international development programmes exercise power due to the political origins associated with donor agencies. A systematic review exploring the nature and quality of community participation in health system interventions in LMICs by Asha et al. (2015) concluded that few articles discuss power or control in developing and implementing participatory interventions with communities. They stated that understanding, negotiating and contesting power remains amiss within community health interventions. Kumar et al. (2016) add that current public health models talk about public participation but fail to ensure that citizens are fully involved in designing and implementing policy, programmes and interventions resulting in a lack of ownership by the people and unsuccessful public health interventions.

There are, however, examples where community empowerment follows the model of participation as described at the Alma-Ata conference, such as initiatives led by 'The People's Health Movement', an organisation supported by Dr. Halfdan Mahler, the pioneer of comprehensive PHC (The People's Health Movement 2000). Furthermore, countries such as Cuba have successfully embedded community participation into health strategies and policies and have seen vast population level health improvements (Greene 2003). Many LMICs have translated their understanding of community participation into the development of CHW programmes where lay individuals who often live and work in the areas they serve, act as a link between communities and the formal health system. Their ability to act as the empowering social change agents envisioned in the Alma-Ata conference, however, is less well understood. More recently as the Sustainable Development Goals (SDGs) begin implementation there is anticipation that CHWs will contribute to the achievement of Universal Health Coverage and other health related goals in LMICs (Tulenکو et al. 2013, Naimoli et al. 2015, Theobald et al. 2015). There is an increasing body of literature that indicates an expectation that CHWs will help address health burdens through community based action (Schneider et al. 2016).

2.2.2 *Community health workers*

Defining CHWs is difficult due to the plethora and variety of programmes, interventions and tasks, which vary from country to country. Tasks can include: management of uncomplicated childhood illnesses, advice on maternal and newborn care, prevention and treatment of communicable diseases such as malaria, tuberculosis, HIV/AIDS and health promotion of sanitary practices and water treatment (Scott and Shanker 2010, Crigler et al. 2013, Tulenko et al. 2013, Bhutta et al. 2015, LeFevre et al. 2015, Saprii et al. 2015, Schneider et al. 2016). In addition, their role is evolving as a new generation of health issues emerges such as non-communicable diseases (NCDs), mental health, violence and injury (Schneider et al. 2016). CHW programmes also offer solutions in the form of task shifting to address shortages of qualified health professionals (WHO 2007b, Lewin et al. 2010, Bhutta et al. 2015, Tran 2015). Standing and Chowdhury (2008) argue that CHW policies are defined by two main agendas, pragmatic and transformative. The pragmatic agenda is where CHWs fill the gap created by health workforce shortages through task shifting practices. The transformative agenda is where CHWs create awareness of the social context of community health and work with communities to tackle this through broader political means such as advocacy. A WHO study group reported that CHWs should be: members of the communities where they work, selected by and answerable to communities and supported by the health system and have shorter training than professional workers (WHO Study Group 1989).

Olaniran et al. (2017 p.8), after undertaking a review of CHW definitions, concluded that:

they are individuals with an in-depth understanding of the community culture and language, have received standardised job-related training which is of shorter duration than health professionals, and their primary goal is to provide culturally appropriate health services to the community

This definition does not include community empowerment nor mobilization but rather indicates a more curative based medical perspective that does not allude to health promotion and prevention aspects of a CHW role or their role in advocating for basic health needs. It remains pragmatic rather than transformative.

There is evidence that CHW programmes demonstrate their value by achieving improved health outcomes in communities (Lassi et al. 2010, Lewin et al. 2010, Perry and Zulliger 2012, Bhutta et al. 2015). Also, CHW involvement in the management of health care facilities has been found to enhance their responsiveness and utilisation rates (Unger et al. 2003, Hossain et al. 2004). Scott and Shanker (2010) state that CHWs could be powerful change agents when affiliated with health

systems able to adequately support their work and respond to their insights. Though, current systems of CHW management are not optimizing their ability to contribute to health improvement (Kok et al. 2016). The voices of CHWs are often silent or are not considered as acceptable evidence to shape policy and procedure (Mishra 2014, Chikaphupha et al. 2016). Yet CHW programmes are considered more successful when they are involved in planning, implementing and monitoring processes through shared ownership and resources (Rifkin 1986, Naimoli et al. 2015, Tran 2015).

The success of CHW programmes is dependent on common design factors such as regular training, supportive supervision, monitoring, career development opportunities, clear funding streams and manageable workloads (Lehmann and Sanders 2007, Jaskiewicz and Tulenko 2012, Perry and Zulliger 2012, Crigler et al. 2013, De Koning et al. 2014, Kok et al. 2014, Chikaphupha et al. 2016). Successful CHW programmes include 'Lady Health Workers' in Pakistan who undergo 15 months of training, 3 months full-time followed by 12 months of in-service training (Douthwaite and Ward 2005). They also receive a small allowance, have dedicated supervisors and are attached to a government health facility, from which they receive training and medical supplies (Douthwaite and Ward 2005). Similarly in Iran a 2-year training period includes theory and practical classes covering a broad range of topics from health care services to communication skills and social determinants of health (Javanparast et al. 2011). In Thailand, CHWs receive seven days of training in primary health care and 15 days of specialized on-the-job training in health promotion, disease prevention, and health education followed up with supervision from public health officials (Kowitt et al. 2015). Initial core training packages for CHWs are recommended along with accreditation and financial incentives (Alam et al. 2012, Tran et al. 2014, Kowitt et al. 2015, Saprii et al. 2015). Other CHW motivating design factors include; clearly identified roles with adequate communication channels to different levels of the health system, non-financial incentives such as positive community feedback, social prestige, and adequate supplies and materials (Alam et al. 2012, Kok et al. 2014, Chikaphupha et al. 2016).

Studies contend that policy makers and programme managers will be better equipped to develop CHW interventions if they have contextual insight (Bhattacharyya et al. 2001, Jaskiewicz and Tulenko 2012, De Koning et al. 2014, Naimoli et al. 2014, Bhutta et al. 2015). Contextual factors that play a key role in the performance of CHWs include social-cultural values and structures; balance of power in society; the role of foreign aid in development; the extent of transparency in governance; frequency of political elections, violence, and coercion; and the level of ethnic fragmentation in society (Naimoli et al. 2014). A review by Kok et al. (2015) found that economy, environment, and health system policy and practice including a CHW policy with clear political commitment influenced

CHW performance. They further added that health service functionality, human resources provision, level of decision-making, costs of health services, and the governance and coordination structure affected the performance of CHW interventions or programmes. Having positive trusted relationships between all actors; CHWs, community members and health professionals was also found to optimise CHW performance (Lehmann et al. 2004).

Furthermore, CHWs have been reported to feel empowered when they are associated with the health system and viewed as a credible source of information (Jaskiewicz and Tulenko 2012, Kane et al. 2016). To address credibility and alignment with the health system several methods have been suggested in the literature. These include media campaigns highlighting the roles and responsibilities of CHWs which were found to successfully build their image as a credible source of health information (Haq and Hafeez 2009). Mass media health campaigns about specific health issues being delivered at the same time as CHWs also emphasized their knowledge in the eyes of the community (Haq and Hafeez 2009).

In many LMICs, CHW programmes are supported by international agencies. They provide financial and technical support for capacity building and supervision, facilitate community organisation by linking health actors together such as health centre staff, CHWs and the community, and provide management support to health centres and sub-national administrative teams (Godfrey et al. 2002, Chanboreth and Hach 2008, Ui et al. 2010, Ear 2013). However, initiatives delivered by international partners are often through vertical short-term health programmes with limited geographic coverage and resources (Lane 2007, Chanboreth and Hach 2008, Peou and Pavithra 2011, Ear 2013). This presents risks in identifying long-term solutions to sustainably support CHW programmes (Lane 2007, Chanboreth and Hach 2008, Ear 2013). Vertical health programmes can provide short-term health gains, however, there is a need for long term investment from the community and formal health system, as well as a consideration for the social, economic and political systems in place (Magnussen et al. 2004, Tulenko et al. 2013). In countries with newly developed health systems, verticalisation results in overlap and waste, fragmentation of training, disjointed roles and tasks, multiple reporting mechanisms and a confusing array of supervisors creating uncertainty of identity in health workers, particularly CHWs (Magnussen et al. 2004, Bourdier 2016). Kok et al (2015) surmise that while vertical short-term programmes continue to direct the work and rewards of CHWs, long-term sustainability is unlikely. Mogedal et al. (2013) in their report from the Global Health Workforce Alliance, state that international actors need to contribute together to a comprehensive systems approach in advocacy, programming, funding, implementing, monitoring and in building the knowledge base for CHW programmes. Table 2 shows the proposed principles

to support countries and their partners in their efforts to harmonise CHW support and minimise fragmentation.

Table 2 Guiding principles to support countries to harmonise CHW support (Mogedal et al. 2013)

Harmonize donor support, based on commitments by all partners to collaborate at global and national level
Build greater synergies across CHW programs with communities, districts and countries, guided by national leadership, national strategies and nationally agreed systems for monitoring and evaluation
Improve efforts to integrate CHWs into the broader health system, with a particular focus on effective linkages between community based and facility based health workers at the front line of service delivery, so that individuals receive the health services they need

2.2.3 CHWs as an answer to community participation and empowerment

The definition of CHWs cited above by Olaniran et al. (2017) was formed following a systematic review of CHW definitions but does not include their role in community participation and empowerment. This may be because there is more literature focused on the role of CHWs as a link between health facilities and the community with little attention given to their role as agents of change through empowering communities to be self-reliant and act on informed choices (Hossain et al. 2004, Behdjat et al. 2009, Kane et al. 2016). Kane et al. (2016) add that health programmes need to take a developmental and empowerment perspective when engaging CHWs and that those in power, such as governments, should take actions to prevent organisations from disempowering CHWs during project implementation.

Reported barriers to community mobilization include male dominance and didactic community leadership. Power imbalances between health professionals or government officials and public participants can also negatively impact the likelihood of empowerment, particularly for women, young people and marginalised men (Baatiema et al. 2013, Bath and Wakerman 2015). In contrast, it is important to realise that CHWs can and have empowered and mobilised communities and good examples do exist (Rifkin 2009). For example, an action research project in Iran was undertaken to identify if CHWs could support health improvements through facilitating communities to define and solve their own problems rather than only providing information on health problems. The training included defining participation and its importance in health services, identifying the determinants of health particularly those related to lifestyle and their amenability to change, and learning

methods and tools for participatory planning (Behdjat et al. 2009). The results identified that CHWs could facilitate participatory needs assessments in which local people collected information, analysed results and made action plans to address priorities. Local people could plan and execute activities that lead to health improvements demonstrating that participatory approaches to health promotion can change lifestyle habits among communities to improve both individual and community health. However, this was an urban study, where choice and influence is perhaps stronger than in a rural context, and was small scale. The feasibility of scaling up such an approach and the associated costs is unknown and is a gap in the research. Behdjat et al. (2009 p. 1173) concluded that;

It is now recognised that health improvements are as much a result of what people do to and for themselves as a result of biomedical interventions. The challenge is to identify processes whereby individuals and communities find ways to follow a course of action to produce better, sustainable health. Action research makes an important contribution to addressing this challenge.

It is clear that the majority of CHW programmes do not include community empowerment as a central aim, but rather focus their training and activities on basic health promotion and linking community members with the health system.

2.3 Section two: The context of Cambodia

It is important to understand a country's context when investigating health systems, planning and policy, especially in LMICs where these are also changing rapidly (Green 2007). This includes the economic situation of a country, their political situation including any democratic fragility and the historical and current influences on social structure and culture (Green 2007). Having up to date contextual awareness in a country that is experiencing rapid change through economic growth, rising inequalities and growing aid dependency is crucial to development processes and for comprehensive PHC. This section aims to develop an understanding of the Cambodian context and its impact on participation, capacity building and public health outcomes. This section will inform the reader of the:

- historical and political structures that impact on community development and participation in Cambodia,
- impact of social structures and cultural values of Khmer people in relation to the capacity and willingness of communities to engage in participatory, democratic processes,
- role of international agencies in capacity building

- structure of the Cambodian health system with particular focus on the 'Community Participation for Health Policy', the key policy influencing public health at the primary health care level.

All levels of the health system are considered from national policy level, through provincial and district level down to primary health care, communities and individuals.

2.3.1 Cambodia history

Cambodia's history and development is complex with colonial legacies and more recent conflicts influencing societal relations. Between 1975 and 1979 under the Khmer Rouge Communist regime, Cambodia experienced one of the worst genocides in recent history with approximately a quarter of the population executed. Personal and political freedoms were outlawed and intellectual cleansing resulted in the mass execution or exodus of the educated classes (Chandler 1991). Under the constant fear of execution Cambodians perfected the art of hiding or banishing independent thoughts and criticisms in order to save their lives (Chandler 1991, De Walque 2005). This has left a legacy of survivors who learned to hide their intellect from authority and created a climate of control and fear (Chandler 1991, De Walque 2005, Brinkley 2011). Following the war, Cambodia began to rediscover and reshape its identity under the auspices of the United Nations (UN) (Chandler 1996), who orchestrated the first liberal democratic elections (Berdal and Economides 2007). Although constitutionally a democracy, the same Prime Minister is still in power in 2017; with reports of corruption, violence and political control (Ear 2013). Human rights abuses are consistently reported by the media (Human Rights Watch 2015). In 2015 the Secretary General of the United Nations '...expressed his concerns about reports of widespread intimidation, harassment and arrests of civil society actors, the media, and members of the political opposition' (Ki-Moon 2016). Such incidents further reinforce a climate of oppression, reluctance to express critical thought and fears of showing negativity towards any governmental activities. Plummer et al. (2013) found that the significant gap between state and citizen further hinders the likelihood of engagement processes. In addition, speaking out in the westernised way of advocacy is viewed as a form of confrontation and aggression towards the entity that is being lobbied (O'Leary and Meas 2001).

2.3.2 Social and cultural aspects of Cambodia

Key social and cultural practices present in Cambodia including kinship, social hierarchical structures, patron-client relations and collectivism, also have an impact on community participation and are discussed here (O'Leary and Meas 2001, Ledgerwood and Vijghen 2002, O'Leary 2006, Pellini 2007, Chen and Chheang 2008).

In Cambodia, the social position of an individual is constructed by a pragmatic combination of class, wealth, education, political position, skills, age, gender and religious sanctity (Plummer et al. 2013). Those who are lower in the hierarchy show deference and even fear to those higher up which is maintained through a mutually expected way of relating (O'Leary and Meas 2001). This social hierarchy exists together with strong patron-client relationships in which those at the top expect loyalty and labour in exchange for security, physical protection, financial and moral support (Ledgerwood and Vijghen 2002, Ovesen and Trankell 2010, Plummer and Tritt 2011). Although the services provided by the patron do not match those of the client, it is the expectation of resources and improved social status by showing allegiance (political or otherwise) that enables the relationship to continue (Chen and Chheang 2008). From early childhood this is reinforced through teaching obedience and respect of those in authority and accepting one's place in the social order (O'Leary and Meas 2001). To challenge the hierarchy is to lose face and thus, showing contempt for the actions and decisions of leaders is a great risk (O'Leary and Meas 2001, Ledgerwood and Vijghen 2002, Michaud 2005, Chen and Chheang 2008). Such a social structure has implications for development and particularly to participation ideals (O'Leary and Meas 2001, Scott and Shanker 2010). Even when participation is a planned part of development programmes by government or NGOs, research has shown that Khmer workers will give priority to pleasing those with power and resources rather than to the facilitation of community participation (Ledgerwood and Vijghen 2002, O'Leary 2006). In short, patron-client relationships discourage participation and creates an unwillingness to take initiative without approval from above (Ledgerwood and Vijghen 2002, Rusten et al. 2004, Pellini 2007, Chen and Chheang 2008). Ovesen et al. (1996) suggest that such social structures are often not fully understood by international organisations trying to impose policies and ideologies in Cambodia such as citizen participation. Additionally, participation in decision-making processes and expressing opinions of leaders or government services is more akin to liberal societies where 'self-assertion is the counterpart characteristic of individual consciousness' rather than the collectivist society found in Cambodia (Chen and Chheang 2008 p.10).

Policy documentation and strategies (influenced by international agencies) suggest an understanding at the national level of the need for participatory, democratic processes to develop public services but a wide gap exists between what is said and what is done. Government reforms are reflecting a willingness to move towards social accountability and providing frameworks for citizen's voices to be heard (National Centre for Democratic Development 2014, Netra et al. 2015). However, in reality government actions do not match their policies and strategies. For instance, the government has introduced a social accountability framework (2015-2018) to improve service provision which is currently being rolled out through training and capacity building of sub-national

personnel and civil society. Conversely, at the same time the media reports severe consequences such as violence, arrests and legislation changes that prevent people from speaking out (Human Rights Watch 2015, Baliga and Chheng 2017).

This conflict of ideals results in communities being fearful of expressing themselves even if opportunities are presented. This is further backed up with a recent study of three projects aimed to improve citizen engagement through establishing social accountability frameworks to improve service delivery in Cambodia, including one in health and one to improve clear water provision (Netra et al. 2015). The studies found that the government chooses to control and respond selectively to citizen's voices and demands (Netra et al. 2015). The study concluded that;

Changes in empowerment and improved state-society relations are insignificant because ordinary citizens and the poor remain fearful of exerting their voice, and because government and NGOs are implementing very weak forms of social accountability (Netra et al. 2015 p.vi).

Interestingly this is not reflected in the development of strategies and plans by international or national bodies. Although community participation has been institutionalised in mainstream development by NGOs, donors and the World Bank, there is little recognition of the complex political reality of implementing in differing contexts (Morgan 2001). For instance, the United Nations Development Assistance Framework highlights that poverty is linked with a lack of participation by the poor and vulnerable in decisions affecting their lives but does not discuss how this may be supported further or how to minimise barriers to participation (United Nations in Cambodia 2015). National strategies promoting the need for engagement with farmers, women, youth, parents and guardians exist but they simply state that participation will be 'encouraged' without identifying how (RGC 2014). Rushton (2007 p.1) states that 'participatory processes need to be sensitive to matters such as social status and must be carefully designed in order to limit the impact of status and to maximise the influence of lay citizens in government decision-making'.

Rifkin (1986) astutely stated that community participation interventions need to recognise, understand and manage political influences in order to achieve meaningful participation. Further understanding of how social structures and cultural beliefs in Cambodia can or cannot fit with participation efforts is necessary to support principles of people centered, inclusive, self-sufficient comprehensive primary health care.

2.3.3 International aid in Cambodia

Since the 1990s international aid has poured into Cambodia and has shaped its development and governance (Ear 2013) ; making it one of the most aid dependent countries in the world (Chanboreth and Hach 2008). Aid dependency is defined as ‘a situation in which a country cannot perform many of the core functions of government, such as operations and maintenance, or the delivery of basic public services, without foreign aid funding and expertise’ (Bräutigam 2000 p.2).

Aid dependency is an issue for Cambodia generally and the development of public health skills and knowledge in particular as the health sector is highly dependent on funding and operationalizations from INGOs and international donors (Plummer et al. 2013). Since 2008, external donors have contributed approximately the same share of Total Health Expenditure (THE) as the government, currently around 18% as shown in Figure 4 (MoH-RGC et al. 2014) giving them substantial power and influence on Cambodia’s health system.

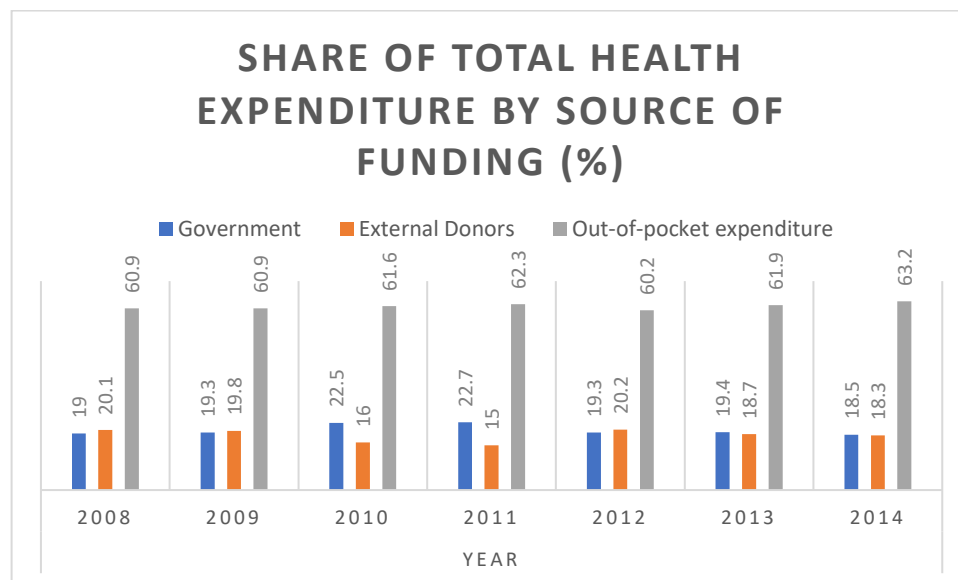


Figure 4 Total Health Expenditure by source of funding, adapted from (MoH-RGC 2015)

Within the region Cambodia’s donor expenditure as a percentage of THE was only higher in Lao (21% THE) and is significantly higher than in Vietnam (2.4% THE), the Philippines (1.8% THE) and Thailand (0.6%) (MoH-RGC et al. 2014). Only 6% of THE was spent on prevention and 0.4% on nutrition with the majority spent in private health clinics and pharmacies and on communicable diseases. (MoH-RGC 2015). Aid dependency has been reported to restrict sustainable capacity building, weaken health system development, promote verticalisation of health programmes, dilute government responsibility, permit corruption, create additional hierarchies and disempower individuals (Godfrey et al. 2002, Michaud 2005, Biesma et al. 2009, MacLachlan et al. 2010, Ear 2013, Bourdier

2016). All of these negatively impact on the goal of increasing public health skills and knowledge of paid and volunteer health workers.

The removal of power from the community to foreign consultants has been a long-standing phenomenon where selective PHC has become subject to the policies of external agencies and not of the communities it is meant to serve (Hall and Taylor 2003). MacLachlan et al. (2010) posit that social dominance by international agencies in LMICs comes from several root causes. For example, the poor must enter relationships with agencies through need, whereas donors can pick and choose who they engage with, they set the conditions for exchange through contracts and have the freedom to exit at any point. Therefore, an inherent belief is established that outsiders have 'better' knowledge, resources and power regardless of actual credentials (MacLachlan et al. 2010, Ear 2013). These factors amongst others result in an internalized inferior position by health workers who seek assistance without question from international individuals and organisations.

Furthermore, dependence on larger INGOs, is partly due to a lack of dedicated government funding resulting in modest input by the MoH (Chanboreth and Hach 2008, Ui et al. 2010, Naimoli et al. 2014). As international agencies fund health programmes, there is little motivation for governments to fund their own activities and to collect taxes for this purpose. Ear (2013) argues that such structures contribute to corruption, do not support the development of leadership for change and results in a status quo. This is particularly risky for Cambodia as it is on the verge of earning the status of a middle income country with a target to reach upper-middle by 2030 (UNDP 2015). This status change will lead to a decrease in external aid and require a self-sustained public service delivery by the government (Parikh 2015, United Nations Development Programme 2015). As such more robust policies to build capacity, with clearly identified financial support will be vital to the sustainability of health workers during the transition from low to middle income country (Perry and Zulliger 2012).

2.3.4 Cambodia's health system

The current health system is financed through international development partners (18%), MoH (19%) and out of pocket spending (OOP) which is responsible for 63% of total healthcare expenditure. Control and prevention of diseases are coordinated and supervised at the national level through independent departments and units, one of which is The National Centre for Health Promotion (NCHP). The NCHP is the lead arm within the government for public health with units for Tobacco and alcohol control, Health Communications, Sanitation and Hygiene, Primary Health Care and Training and Research. The NCHP provides technical support in coordination with Health Promotion Units of Provincial health departments (PHDs) nationwide. In the past, they have

provided cross cutting training on health promotion, behaviour change communication, basic health education, counselling and inter-personal communication (MoH-RGC 2017).

Although the majority of resources (70%) are managed at the national level, Cambodia has a decentralized government system with administrative responsibilities for health at twenty four PHDs who govern Operational Districts (OD) and provincial hospitals (Annear et al. 2015, MOH-RGC 2015). Each OD is responsible for 100 000 to 200 000 people served by health centres and a referral hospital that delivers a 'Complementary Package of Activities' (CPA) consisting of secondary care. Health centres and health posts cover between ten to twenty thousand people and provide a 'Minimum Package of Activities' (MPA) of preventive and basic curative services (Annear et al. 2015). The health workforce in Cambodia includes, Primary and Secondary Nurses' and Midwives', Traditional Birth Attendants (TBA's), Pharmacists, Laboratory Assistants, Medical Assistants, Doctors, and traditional healers - Kru Khmer (Dewdney 2004, MOH-RGC and WHO 2012). At the community level, numerous CHWs and volunteers provide preventive and curative services. Traditional healers and birth attendants are still used by some remote and indigenous communities.

International donors and NGOs provide technical and financial assistance to health institutions and health facilities. Some pooled funds are delivered under the Health Sector Support Programme (HSSP) of which the third has just begun running from 2016-2021 (MoH-RGC Annear et al. 2015, 2015). However, some donor funds go directly to health organisations, health facilities or NGOs working at the provincial and community level (MoH-RGC 2015). Figure 5 displays a summary of the Cambodian Health System.

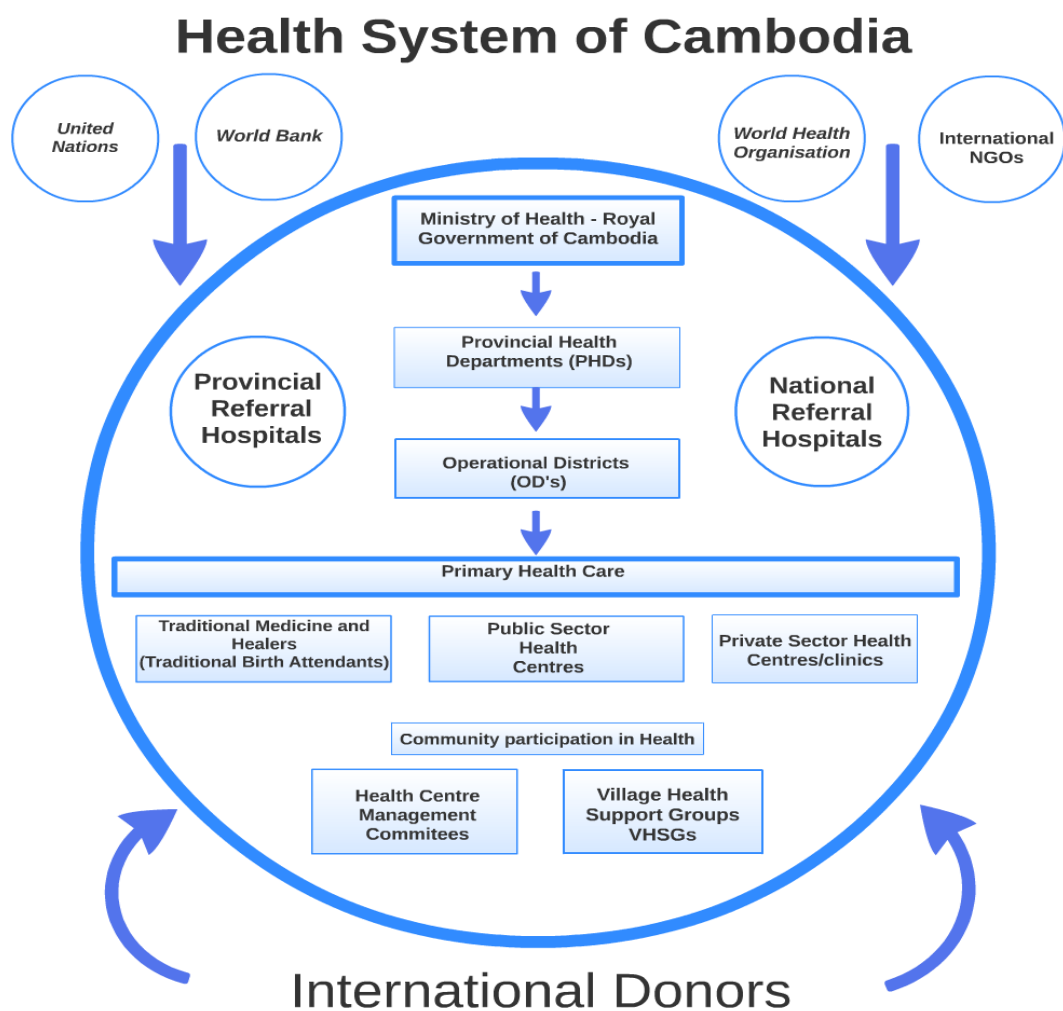


Figure 5 Cambodian Health System

User fees for both private and public health services are the norm, however Cambodia has shown commitment to UHC by introducing Health Equity Funds (HEFs) which aims to remove user fees for the poor (Kelsall and Heng 2015). Health facilities that exempt poor patients with an eligibility card known as a 'poor card' are reimbursed following treatment. However, pro-poor financing methods to address UHC have been reported to result in the poorest people receiving the lowest standards of health care provided through public services (Kelsall and Heng 2015). Therefore, in an effort to improve staff performance, quality and functionality of public health facilities, Cambodia introduced an internal contracting system. PHDs act as commissioners for performance management of ODs that qualify as Special Operating Agencies (SOAs) (Kelsall and Heng 2015, Ensor et al. 2016). Improved performance management of health facilities by ODs is rewarded with greater autonomy and control over resources and staff management (Kelsall and Heng 2015). Health facilities

managed by ODs that have been given SOA status were found to perform higher than those who did not (Ensor et al. 2016)

Driving the health sector in Cambodia is the Health Strategic Plan (HSP) (MoH-RGC 2008a). The first one, HSP1 ran from 2003-2007, HSP2 2008-2015 has just ended and was focused on three main goals;

1. reduce newborn, child and maternal morbidity through increased reproductive health care
2. reduce morbidity and mortality of HIV/AIDS, malaria, tuberculosis and other communicable diseases
3. reduce the burden of non\communicable diseases (Bureau of Health Economics - Cambodia 2008, MoH-RGC 2008a, Annear et al. 2015).

Five cross cutting building blocks are included in the strategy; health system delivery, health care financing, human resources for health, health information systems and health system governance. The HSP3 2016-2020 was still in draft format at the time of writing this research, however the concept note indicates that a fourth goal of health system strengthening will be added. This reflects the WHO's Health System Framework for Action (WHO 2007a). The WHO Country Cooperation Strategy 2016-2020 (WHO 2016a p.12) highlights four main priorities:

Priority 1. Providing leadership for priority public health programmes

Priority 2. Advancing universal health coverage

Priority 3. Strengthening the capacity for health security

Priority 4. Engaging in multi-sectoral collaboration and fostering partnerships.

The HSP is implemented through 'Annual Operating Plans' which are developed at the national level with inputs from the PHD, OD and health centres in the form of proposed activity and budget plans for the year. Monitoring is in the form of a joint annual performance review with an independent consultant conducting a midterm review of the HSP of that period. *The Health Workforce Development Plan 2006-2015* focuses on workforce regulation to improve clinical quality along with the management of recruitment and deployment of health workers (Dewdney 2004).

The current health system faces challenges in delivering equitable high quality health care, mainly due to insufficient funding, inadequate management and organisational capacity, a lack of skilled human resources for health, essential drugs shortages and the absence of operational guideline requirements (MoH-RGC and WHO 2012, Bureau of Health Economics and Financing - Cambodia

2013). Furthermore, health worker performance has been reported to be substandard due to insufficient salaries, motivational factors, inadequate management and inefficient use of resources (Soeters and Griffiths 2003, Ingleby et al. 2013). Another major feature of the Cambodian health system is the verticalisation of health programmes created by donor driven agendas (Bourdier 2016).

The MoH operational manual for the HSP2 highlighted the need for a greater focus on PHC at PHDs and district level, recognising that previous system strengthening has been focused at the MoH. At policy level, there seems to be great support and understanding of the ‘people centered’ and ‘community focused’ principles of comprehensive PHC. Within the HSP2 there are clear references to the Alma-Ata principles such as ‘client focused approach to health delivery’ and ‘an integrated approach to high quality health service delivery and public health interventions’. Within the operational manual is a specific item on strengthening community capacity through community participation and multi-sectoral responses. And the vision stated within the National Health Financing Policy states the need for participation of citizens to achieve universal health care:

The vision of this policy is to enable active participation of all residents of Cambodian society through a health system that provides universal access to an essential package of quality health interventions in a regulated health market based on fairness of contributions and equity in access, thereby providing protection against impoverishment due to ill health (MoH-RGC 2015 p.8).

Since 2006 there has been a Community Participation Policy for Health which was last revised in 2008 (MoH-RGC 2008).

2.3.5 The ‘Community Participation Policy for Health’

The ‘Community Participation Policy for Health’ (CPPH) outlines the aspirations of community participation and specifically the roles of CHWs which are referred to as ‘Village Health Support Group’ (VHSG) members (MoH-RGC 2008, Ui et al. 2010). The policy states that CHWs can be male or female, should be literate, live in the communities they serve and be elected by community members. Each CHW serves between 10-50 households depending on the community’s needs. Implementation is supported by PHDs and ODs in terms of structure and management as shown in Figure 6. Each CHW is associated with a health centre where they should receive training and supervision and in some cases resources to support their role (Annear et al. 2015). The other function within the CPPH is that of the Health Centre Management Committee whose aim is to improve performance, functionality and accountability of health centres. The factors influencing

participation of lay community members in HCMCs has been explored by another doctoral researcher who found that her research focus changed direction upon discovering the dominance of international agencies on the structure and function of HCMCs (Rushton 2008). While there will be brief references to the HCMCs, the exploration of this aspect of the CPPH will not be explored in depth as this research is focused on the public health skills and knowledge of health workers in the community and not on the management of services.

Figure 6 originally presented here cannot be made freely available via LJMU Digital Collections because of copyright reasons. The diagram was sourced from the Community Participation Policy for Health and is referenced below.

Figure 6 CPPH outline of management structures (MoH-RGC 2008 p.16)

Box 1 below describes the variety and scope of skills and knowledge required to undertake the duties of a VHSG. It is important to recognise that this is being asked of “lay” volunteer health workers with limited education, some not beyond primary level. Also, VHSGs are often close to the poverty line themselves, which places them at risk of reducing their income further when much of their time is spent doing voluntary work (Lehmann and Sanders 2007, B-Lajoie et al. 2014).

The CPPH does not clearly identify how it is to be financed (MoH-RGC 2008). This is a problem as the allocation of funds from the MoH for the provincial level is only 30% of the total (Bureau of Health Economics and Financing - Cambodia 2013). This means that local budgets for services are already stretched and often do not reach PHC level (Grundy et al. 2009). This unstructured support means that CHWs, local health departments and health centres rely on external funding from NGOs which is often short term, unsustainable and dominated by donor focused outcomes (Annear et al. 2015, Kok et al. 2015). NGO health programmes supported by donors have specified geographic areas and health improvement aims which dictate the level and type of training and support provided to CHWs.

Box 1: Scope of work for CHWs summarised from the Community Participation Policy for Health (MoH-RGC 2008)

Health information systems:

- Disease surveillance/monitoring and case reporting to health centre
- Keep a register of all children below five years of age in the village, recording each child's name, sex, date of birth, and parents' name
- Assist the HC in collecting vital registration statistics including notification of pregnancies, births and deaths
- Verbal autopsies for deaths that occur in the village
- Collect information through appropriate tools on health and health-related problems in the community, inform and report to the HC

Provision and follow up of information and essential services:

- Facilitate the identification of the poor for fee exemption
- Provide health education, promote improved health practices, and distribute health IEC materials. Health topics to be covered include: Key Family Practices, family planning, antenatal care, clean delivery, post-natal care, breastfeeding, complementary feeding, safe water, hygiene and sanitation, malaria and dengue control, HIV/AIDS/STIs, tuberculosis, immunizations, non-communicable and chronic diseases, mental health, tobacco and alcohol, and gender-based and family violence;
- Mobilize families and assist HC staff during outreach activities and health campaigns
- Assist in the mobilization of resources for sustainability of Health Centres
- Assist families with early identification of the danger signs for severe/serious illnesses;
- Promote and strengthen the HC referral system and assist in logistics such as transportation.

Provision and follow up of essential diagnosis and treatment services (Following National Guidelines):

- Promote correct home care for illnesses
- Provide community based first aid and rehabilitation
- Identify, refer and follow up children with acute malnutrition
- Provide home based care
- Provide oral rehydration therapy including zinc for diarrhoea in children

In remote and difficult to access communities:

- Provide early diagnosis and treatment for malaria
- Diagnosis and treat acute respiratory infections with antibiotics in children

Provision of essential commodities:

- Distribute micronutrient supplementatio
- Distribute mebendazol
- Distribute oral re-hydration treatment with zinc
- Distribute condoms and family planning supplies
- Distribute long lasting insecticide treated mosquito bed nets and hammock nets
- Distribute food supplementation and supplementary foods

Although published research of CHWs in Cambodia, which includes VHSGs and Village Malaria workers (VMW), is limited, studies have demonstrated that they achieve positive health outcomes when supported appropriately (MoH and USAID 2010, CARE Cambodia et al. 2012, Yasuoka et al. 2012). For example, a large-scale programme implemented by an international partner to improve child survival found that by training forty-six CHWs and supporting health centres and PHDs to provide regular supervision with supportive feedback, 2465 children were successfully treated for multiple symptoms including diarrhea and pneumonia (MoH-RGC and USAID 2010). However, the development partners trained VHSGs directly rather than following the training structure set out in the CPPH which states that PHDs should train health centre staff who should then train VHSGs. This would have strengthened the health system capacity to develop skills and knowledge of new staff in the future. This project was in one province only and a dissemination workshop shared lessons learned and next steps to expand the service with stakeholders, but it was unclear if the MoH would be able to support this initiative long term.

Although research has shown the positive impact that CHWs can have on health outcomes, the programmes often follow vertical funding streams, which are short term, lack country ownership and sustainable exit strategies. For example, a six year, nationwide 'Behaviour Change Communication' (BCC) skills development programme for health centre staff and VHSGs that included counselling and interpersonal communication training resulted in positive outcomes for patients and health workers (Peou and Pavithra 2011). The project trained PHD and OD staff to deliver BCC training using tools and resources developed with international partners. Furthermore, BCC forums were developed in all provinces. Whilst service delivery by health workers and health care seeking behaviour by communities improved, high staff turnover and low motivation from insufficient remuneration hindered the project's success. Furthermore, the programme was time-bound, with limited funding and lacked ownership by the National Centre for Health Promotion (NCHP) as they had limited budgetary control and influence over the programme. Sustainability was further jeopardized by the growing verticalisation of health programmes in Cambodia, where strategic commitment to deliver such cross cutting skills was dwindling (Peou and Pavithra 2011). The evaluation described doubts that sustainability was possible without the NCHP independently attracting international funding, however the Centre had pressure to prioritise tasks in the HSP2.

Similarly, a project supported by an international partner assessing the training needs and challenges faced by frontline health workers and CHWs in Cambodia showed a lack of consideration for sustainability (CARE Cambodia et al. 2012). Reassuringly the programme worked collaboratively

with the MoH to ensure they had an active leadership role as well as meeting external donor's priorities. VHSGs were supported to better link with their health facility and to deliver community health education in their villages. Training materials and awards for community members that attended education sessions were supplied to the VHSGs to assist them in their educational role and increase motivation of community members to attend (CARE Cambodia et al. 2012). Whilst this is admirable, the programme was province specific with limited funding and no clear plans to upscale the initiative following project completion. It was not clear how VHSGs would be able to continue educating their communities with any success once the training materials and awards were exhausted through use.

Other barriers to optimizing CHW functioning and performance in Cambodia comes from the national Village Malaria Workers (VMW) programme to tackle prevention and treatment of Malaria at the community level (Aryal 2015, Canavati et al. 2016). A large mixed methods study in five provinces by Canavati et al. (2016) found high levels of VMW performance. However, issues were identified such as lack of transportation, inconsistent supply of medicines, lack of supplies such as bags and IEC materials, and irregular supportive supervision and feedback. VMWs were also confused between malaria prevention and other health prevention advice. Another study by Bourdier (2016) found that the use of VMWs in Cambodia presented risks to communities as they were not adequately trained or supported by the health system and should be focusing on their own domestic and occupational challenges. Selection processes were criticised as being biased towards supporting political lineages and family members to maintain patron-client relations and secure prestige or symbolic status. Bourdier (2016) argues that such selection processes result in less motivated health workers and the same volunteers being part of many development initiatives, thus diluting their efforts to tackle malaria. However, it could be argued that they are making more efficient use of time by tackling multiple health issues per every family visit and providing a more holistic approach to health problems.

Nevertheless, positive outcomes in Malaria reduction resulting from VMW activities has led to at least two studies by Canavati et al. (2016) and Yasuoka et al. (2012) suggesting scaling up VMWs to tackle additional health issues such as respiratory infections and diarrhea. This is also the role of VHSGs. Such duplication is evidence of how CHW roles and identities become confused by vertical health programmes tackling one disease at a time. The Malaria Programme is dictating the tasks of one set of CHWs while government policy is addressing another set with the same aims. In addition, while short term programmes with time limited funding and support have contributed to developing

health worker's performance and health service delivery, sustainability and coverage of these programmes is an ongoing issue.

As the CPPH in Cambodia is largely driven by external agencies with short term aims, resulting performance barriers are faced including; fragmentation of service delivery and structure, inadequate financial remuneration and materials, lack of structured professional development opportunities and regular training, poor supervision and management, low community status and appreciation and negative patient/community member attitudes coupled with low levels of education leading to a lack of understanding of health messages (Chhea et al. 2010, CARE Cambodia et al. 2012, Ingleby et al. 2013, Bourdier 2016). Functionality and sustainability of VHSGs is also compromised by the lack of resources available at health centres and success is mainly the result of greater financial and technical support from NGOs (Ui et al. 2010). Furthermore, the CHW programme in Cambodia does not have an accreditation system, an initial training package, or regular structured ongoing training and remuneration as recommended and found in other countries (Tran et al. 2014, Kowitt et al. 2015, Saprii et al. 2015). NGOs and government are advocating for overall health system strengthening to solve this problem (B-Lajoie et al. 2014), however in LMICs where health care is focused on medical curative services, CHWs are not a priority. Government policies are vague and so the responsibility for the livelihood, sustainability and welfare of the CHWs who are giving their time, resources and energy to improve the health of their communities is lost in a chasm between government and NGOs who have other organisational priorities to focus on.

In order to address such challenges, a large scale qualitative evaluation of health workers in Cambodia by Ingleby et al. (2013) suggest that policy makers and partners should listen and apply the suggestions voiced by health workers in order to improve their working conditions and satisfaction which in turn would lead to improved health care. However, the mechanisms to support CHWs and other community lay members to engage in discussion and participate in decision making processes is difficult within the social structure of Cambodia. This is evident in the application of Health Centre Management Committees (HCMCs), the other initiative outlined in the CPPH. VHSG Leaders from the health centre catchment are supposed to attend together with staff from NGOs, PHD/ODs, Commune Councils and health centers. The VHSGs identified role is to provide feedback and suggestions collected from community members' comments and complaints, to improve service delivery at the health centre. However in reality the meetings do not support the environment of equality and openness required to voice critiques of service provision (Rushton 2007) due to the replication of social hierarchies, found within society, also being established at the meetings. Men

are more dominant than women, the rich more powerful than the poor, the elder more respected than the youth and those higher up in the government system or working for NGOs dominate the meetings (Rushton 2007).

There is a need to address the ethos, values, processes and structures that can facilitate community members to feel they can safely participate in decision making processes, critiques and solutions to public health issues in the presence of those with power (O'Leary and Meas 2001, Rushton 2007, Rushton 2008). Similarly a study of CHWs in India reported that the potential role of CHWs as agents of social change and health promoters through effective community participation is stifled by highly hierarchical bureaucratic structures of top-down communication (Mishra 2014). Creating an enabling receptive social environment where the poor are heard and heeded by the powerful is necessary for community based action (Campbell and Cornish 2012).

2.4 Section three: Building public health knowledge, skills and practices

This section presents efforts to build capacity in the health sector within Cambodia and in other countries. The key competencies needed to develop public health practices are presented. Training methods used to develop public health knowledge and skills are discussed along with methods that have been associated with positive and negative learning experiences. Additional external factors that enable health workers to apply public health knowledge, skills and practices are then discussed. This includes country ownership of capacity building efforts, the need for a supportive government and an enabling environment and the requirement of effective strong supportive leadership, management and supervision. Finally, a brief summary of research related to the challenges associated with building capacity in the Cambodian context is provided.

2.4.1 Public health knowledge, skills and key competencies

The skills and knowledge needs of PHC workers and CHWs differ across and within countries and are dependent on the context in which they are working (Tulenکو et al. 2013). However some key competencies have been identified. Zwanikken et al. (2014) in their research to validate public health competencies in LMICs, suggests that the following seven competencies should be applied in LMICs when designing and evaluating public health capacity building initiatives:

- Policy development
- Planning and management
- Leadership and systems thinking
- Communication
- Assessment and analysis

- Context sensitivity
- Community and intersectoral working

Each of the competencies are broken down further and highlight the need for training programmes that encompass non-technical, cross cutting and context specific skills. For instance, communication should use a variety of culturally appropriate approaches to disseminate public health information. Health workers and CHWs should have the ability to assess population health status and identify health problems, risk factors, related social determinants, and determine needs. A review on CHW programmes in LMICs also argue that training should cover knowledge of environmental, psychological, economic, cultural and social factors that affect health (Lehmann et al. 2004). Having the ability to assess and engage community actors and key stakeholders, including from different sectors can also help health workers to gain support to improve health outcomes through intersectoral working (Zwanikken et al. 2014). Likewise, Lehmann et al. (2004) suggest that CHWs establish links with workers from other sectors such as agriculture, education, water supply, housing and social welfare in order to have a more community based intersectoral, horizontal approach to health issues.

Other competencies reported to optimise CHW performance include basic health and clinical knowledge, decision-making, planning, situation awareness, interpersonal communication expertise, and teamwork ability (Haq and Hafeez 2009, De Koning et al. 2014, Scott et al. 2016). Ruiz et al. (2012) identified nine competencies specifically for CHWs:

1. CHW role and history
2. Communication skills
3. Interpersonal skills
4. Informal counselling
5. Service coordination
6. Capacity-building skills
7. Advocacy skills
8. Technical skills
9. Organizational skills

Following implementation of training focusing on these competencies, CHWs reported improved confidence and intention to utilise and implement new skills to modify the way they worked (Ruiz et al. 2012). However, the study did not follow CHWs post training to assess if their work was modified or improved in anyway.

The mix of technical and non-technical public health knowledge and skills development for community level health workers enhances trustworthiness, acceptability and credibility in the eyes of the communities they serve (De Koning et al. 2014). De Koning et al. (2014) found that a balance of both theoretical class-room based training alongside practical on the job training with supportive supervision and follow up is necessary for effective capacity building of close to community providers. For example, a qualitative study with ‘Lady Health Workers’ in Pakistan found that the community asked questions relating to technical knowledge of emerging diseases such as Congo Fever and Avian Flu to which they could not respond as these topics were not a routine part of their curriculum or training (Haq and Hafeez 2009). The same study identified a gap in training of non-technical interpersonal communication skills, especially with males on family planning, convincing TB suspects to make use of diagnostic facilities; and talking about HIV/AIDS and other sexually transmitted diseases (STDs). This example highlights the need for regular assessments of competence and training needs which is lacking in many CHW programmes (Condo et al. 2014, Tran et al. 2014).

2.4.2 Training methods

Crisp et al. (2000) identified four approaches to capacity building in health:

- (i) a top-down organizational approach which might begin with changing agency policies or practices; similar to the Cambodian example
- (ii) a bottom-up organizational approach, e.g. provision of skills to staff; more often delivered by NGOs
- (iii) a partnerships approach which involves strengthening the relationships between organizations;
- (iv) a community organizing approach in which individual community members are drawn into forming new organizations or joining existing ones to improve the health of community members.

The authors add that the fourth approach, of which is central to this research, is challenging for low resource communities without support to develop their skills in leadership, decision-making, conflict resolution and the ability to articulate shared visions. Although CHWs are not always an organisation within themselves but rather a policy driven initiative they are still acting in a community organising role and so it could be argued that they also require the above skills.

Initial training followed by regular ongoing refresher training is said to be essential to the performance and quality of service provided by CHWs (Lehmann and Sanders 2007). However

reviews of CHW programmes by Lehmann et al. (2004) and Redick et al. (2014) found that although the duration of training programmes for CHWs was published the approaches and methods used within the training were not clear. The review did find evidence of adult learning principles within the literature including; learner centered, experiential, community based, problem orientated, self-discovery, analytical emphasis and context appropriate. Also referenced was the use of storytelling, drama and song used as an education tool (Lehmann et al. 2004). Training approaches specifically used to train health workers include role plays, didactic in-house training, PowerPoint presentations, case study approach, lecturing, learning from printed materials, mobile technologies/computers such as tablets and phones, team based approaches, clinical practice sessions, peer to peer learning and problem based learning and participatory methods (Kamiru et al. 2009, Jaskiewicz and Tulenko 2012, Nsona et al. 2012, Bluestone et al. 2013, Willock et al. 2015).

Participatory and action oriented training techniques have been identified as an effective means of educating, motivating and empowering community workers as well as creating new knowledge through collective social action (Behdjat et al. 2009, Asuquo and Etowa 2016). Such participatory approaches were shown to; provide a collective identity and strength of solidarity, develop intergroup empathy, increase the ability to critically analyse structural causes of inequalities and address health issues in the community (Behdjat et al. 2009, Scheib and Lykes 2013, Asuquo and Etowa 2016). Ruiz et al. (2012) in their training based on nine competencies identified above used techniques that view participants as both teachers and learners, emphasizing learning through learners' experiences and experiential learning methods that model CHW approaches. Donor organisations and NGOs work with LMICs to develop capacity in the form of training and technical assistance using a variety of approaches such as; professional training, peer assessments, process consulting, performance contracting, executive coaching, mentorship and international organizational collaboration (Goldberg and Bryant 2012).

Positive experiences resulting from training methods were associated with clear language, knowledgeable trainers with practical tips and interactive teaching methods (Kamiru et al. 2009, Bluestone et al. 2013). Negative experiences were reported when; training needs were not assessed prior to design and delivery, health workers were not consulted on contextual and other barriers and didactic instruction was used (Kamiru et al. 2009, Redick et al. 2014). Other factors that facilitated learning included targeted, repetitive training that provides reinforcement of important messages, opportunities to practice skills and mechanisms for fostering interaction, and choosing a setting that is similar to the work environment and allows for practice and feedback (Bluestone et al. 2013, Redick et al. 2014). Recommendations to improve the quality of CHW training programmes

include coordination amongst training providers, including NGOs, civil society organizations, and governments and regular monitoring of CHW competency through the use of pre-tests, post-tests, and self-assessment (Redick et al. 2014). Table 3 provides a summary of the literature of public health competencies, training styles, methods and other influencing factors.

Table 3 Summary of public health competencies, training styles, methods and other influencing factors

Competencies	Training styles	Training methods	Other influencing factors
Technical skills	Learner centred	Community based	Targeted training
Planning and management	Experiential	Problem orientated	Ongoing refresher training
Leadership and systems thinking	Self-discovery	Story telling	Re-enforcement of key messages
Communication and interpersonal skills	Analytical emphasis	Drama/song	Opportunities to practice skills and knowledge in a timely manner
Assessment and analysis	Didactic	PowerPoint lecturing	Delivering training that is reflects the context
Context sensitivity	Reading information	Case study approach	Delivering training in a work context
Community engagement/defining participation	Practical hands-on	Learning from printed material	Constructive feedback
Intersectoral working/service coordination	Peer to Peer	Mentorship/coaching	Coordination among training providers
Advocacy skills	Participatory and/or action oriented	Peer assessments	Regular monitoring of training needs
Identifying social determinants of health	Interactive		Health worker involvement in developing training
Participatory planning techniques	Process consulting		

2.4.3 Country ownership of capacity building efforts

Goldberg and Bryant (2012 p.4) propose that building capacity in a LMIC should be owned by the host country and defined as:

a continuous and participatory process undertaken independently or in collaboration with external partners to empower the organization to systematically identify and respond to its institutional needs and the needs of the population it serves in order to better meet its stated mission and goals, solve problems, implement change and increase efficiency.

However capacity building efforts largely driven by external donors in LMICs means that country ownership has become compromised, presenting risks to long term sustainability (Crisp et al. 2000). Capacity building efforts in LMICs can and do benefit from external resources and technical assistance, however the aim of that support should be to nurture and build on the strengths, resources and problem-solving abilities already present, without creating a dependency (Crisp et al. 2000). Capacity building by international agencies may be improved if they followed value principles such as those from the Paris Declaration for Aid Effectiveness including country ownership, harmonization between aid organisations and government, and alignment with partner countries' strategies, operational frameworks, systems and procedures (OECD 2005, Fujita et al. 2011).

2.4.4 Organisational support and an enabling environment

The United Nations Development Programme (2009) argue that, building the capacity of individuals alone is not enough and that having a well-functioning organisation and an enabling environment are two other key factors required to build capacity in a sustainable manner. An enabling environment allows people and organizations to function and includes rules, laws, policies, power relations and social norms that govern civic engagement. Campbell and Cornish (2012) argue that to truly achieve empowerment of marginalised individuals, an environment that legitimately recognises voice, provides a safe atmosphere and promotes confidence to speak to an audience that has a clear interest in taking them seriously is necessary. It is the enabling environment that sets the overall scope for capacity development. The organization, in this case government, is where the internal structure, policies and procedures determine effectiveness of capacity building. It is here that the benefits of the enabling environment are put into action and a collection of individuals come together. UNDP explain that 'the better resourced and aligned these three elements are, the greater the potential for growing capacity'(UNDP 2009).

2.4.5 Leadership and management

To improve public health skills and knowledge application, effective leadership, management and ongoing supportive supervision are required (Lehmann et al. 2004, Lehmann and Sanders 2007, WHO 2007b, WHO 2008b, Raven et al. 2015). For instance, Rowe et al. (2005) highlight that strengthening of district health-management teams can quickly improve performance of much larger numbers of front-line health workers. As summarised in the Technical Brief by UN agencies, WHO and the World Bank:

CHW programmes can succeed if they are based on appropriate planning and management; this includes having realistic terms of reference and expectations, short and mid-term planning, regular supportive supervision, effective logistic support, linkage to the health system for referral when needed, and reliable estimation of resources required to make them work (Tran 2015 p.2).

Active government leadership with good programme management is a key factor in successful CHW programmes that is often neglected in research and practice (Raven et al. 2015). One of the challenges for effective CHW management is the disjointed funding streams led by different organisations which leads to ill-defined ownership, accountability and management responsibilities (WHO 2007b). Opportunities to develop leadership and management skills of sub-national and health centre staff is often hindered as NGOs undertake management roles or provide short training for managers to meet their needs which may not be consistent with the actual needs of managers or be culturally appropriate (Dal Poz et al. 2009). Studies have identified the need for socially and culturally appropriate training in management that is undertaken in the place where managers work, with the team they work with, addressing practical skills faced every day (Filerman 2003, Raven et al. 2015). In contrast, leadership training in LMICs, if it exists, tends to focus instead on the technical and operational skills of planning and budgeting rather than the ability to inspire and motivate others, to mentor, and to lead organisational change processes (Daire et al. 2014).

2.4.6 Supportive supervision

Supportive supervision is a key influencing factor on health worker performance following training efforts, however research has identified supervision as a gap in many CHW programmes (De Koning et al. 2014, Tran et al. 2014). Supervision in national CHW programmes is often not defined, costed or planned for from the beginning. As a result supervisors are often unclear of their role in supporting CHWs and lack the capacity to be an effective supervisor due to misunderstanding and absence of training (WHO 2007b). When supervision is a planned element of CHW programmes the focus tends to be on collection and analysis of data, and less on quality assurance, performance

evaluation and feedback (Condo et al. 2014, Tran et al. 2014, Kane et al. 2016). Furthermore, the skills necessary for supportive health worker supervision at sub-national levels such as; making positive suggestions for change, problem solving with health workers, building on previous supervisory visits, negotiation, communication and delegation were found to be deficient (Tavrow et al. 2002, Rowe et al. 2005, Hernández et al. 2014). Important aspects of supervision include a two-way flow of information and acting as a positive role model (WHO 2007b). A review of literature from six LMICs on CHW experiences found that supervision tended to emphasize fault finding rather than capacity building through constructive criticism (Kane et al. 2016). In LMICs punitive supervision by sub-national staff was found to damage essential links between health workers and state and demotivate individuals (Enwereji 2012, De Koning et al. 2014). Hernández et al. (2014) argues that it is not simply a lack of skills but also the orientation of managers to supervise and monitor staff, for instance either in a controlling manner or cooperative in nature. The authors found that an understanding of the health worker's needs provided the grounds for a more humanized, supportive relationship. Raven et al. (2015) in their study of CHW management in five African countries found that supervisors based in health centres played a major role in managing CHWs and are central to the management process but in reality, their involvement with CHW programmes was low. The authors call for a more coordinated approach to human resource management of CHW programmes so that CHW expectations and programme aims were met.

2.4.7 Capacity building in Cambodia

Capacity building for public health in Cambodia has three main routes; at the academic level, there is the National Institute for Public Health (NIPH) which provides Masters degrees and short courses; The National Centre for Health Promotion, MOH which provides public health training, mainly to PHDs and ODs, and the international community that provides technical assistance and capacity building to all levels of the health system. Ongoing capacity building and supervision of health workers follows a hierarchical cascade model of delivery known as Train the Trainer (ToT). The National level are responsible for training the sub national level who then train the health facilities. Health Centre staff also have responsibility to train and supervise VHS GS to deliver health education to community members. Feedback and reporting from the community level is then transferred up the ladder through the various levels (MoH-RGC 2008). This is depicted below in Figure 7.

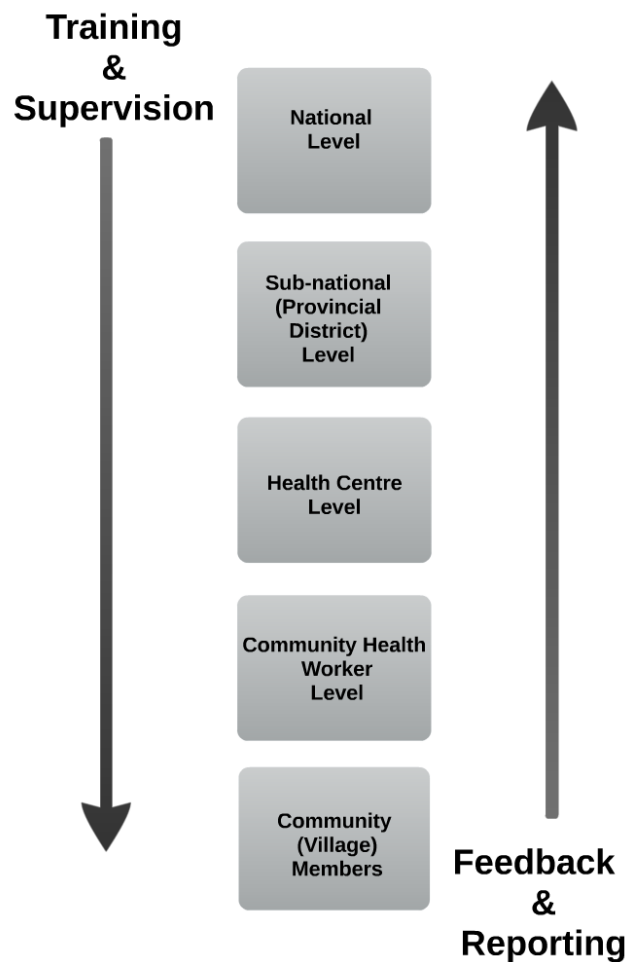


Figure 7 Communication system for training and feedback

Within this system is a complex network of international agencies that deliver technical and non-technical training, however the training is often disease specific, focused on targeted geographical areas, with time-limited resources and funding. Literature has highlighted that capacity development as a result of technical assistance in Cambodia has not transpired (Godfrey et al. 2002, Kelsall and Heng 2015). Godfrey et al. (2002 p.355) stated that:

Unless donors develop a coherent strategy (rather than competitive, project-related salary supplementation) to deal with this situation, the record of technical assistance in developing capacity will continue to be disappointing, and an escape from aid dependence will be postponed.

An in-depth report by O'Leary and Meas (2001) examined development practice within the Cambodian context in relation to influences of conflict and foreign development. Although the research is over 15 years old it provides important insights on the restricted understanding of development agencies regarding the provision of culturally, socially acceptable strategies to improve capacity. Following 43 interviews with advisors, trainers and educators from 31 organizations, and 35 NGO staff the authors concluded that capacity development approaches and interventions are not enabling Cambodian people to develop their capacities to have greater control over their lives, rather they are doing 'for' the people not 'with' the people. O'Leary and Meas (2001) predicted that this was fostering a dependency and maintaining the status quo rather than promoting change and empowerment. Of equal importance was the unconscious nature in which well-meaning practitioners were creating this dependency.

2.5 Chapter summary

This chapter raised issues associated with implementing comprehensive PHC values and principles, particularly community participation within the complex social, cultural, political and historical context of Cambodia. Both internationally and nationally through policy guidance and strategic direction, there are clear efforts to support community participation, however, the rhetoric is not met with action or a supportive, enabling environment. International aid and a top down vertical health system appears to be hindering the sustainable development of public health in Cambodia. Key public health competencies required to develop capacity of health workers are critical and lessons learned from similar LMICs indicate that participatory, inclusive and experiential learning methods improve learning. Developing effective leadership with supportive, supervisory skills is another important factor for building public health capacity. The following chapter discusses the PAR methodology used, the key values and principles associated with this paradigm and the methods employed in all three studies.

Chapter 3 Research paradigm, methodology and methods

This chapter presents the research paradigm, methodology and methods applied to address the research aims and objectives. Three research studies were undertaken to explore the aims and objectives. Studies 1 and 2 applied a Participatory Action Research (PAR) approach with VHSGs. As this is a cross cultural, cross language study, Research Assistants (RAs) were recruited as co-researchers for studies 1 and 2. Study 3 consisted of semi-structured interviews with public health stakeholders working to build capacity of health workers. The research was undertaken over two field trips, the first in 2014 and the second in 2016.

This chapter critically discusses the research paradigm, epistemological and ontological stances and orientation of the research. Key values and principles of PAR are explored including, equality and power, positionality and reflexivity and quality and credibility. The methodology is then explained along with the rationale for the research design, the role of RAs, research location and ethical procedures. Finally, the methods used including, photovoice, community asset identification, participatory workshops, action plan development and semi-structured interviews are described. In each section, each of the three studies are explored.

3.1 Research paradigm, ontology, epistemology and orientation of PAR

PAR aims to create a space for researcher and participants to co-produce knowledge and where relevant, action for change (Chambers 1994, Baum 2016). The ideology behind PAR was first introduced in 1945 by Kurt Lewin who argued that communities and individuals affected by a problem should be actively involved in researching solutions (Kindon et al. 2007, Chevalier and Buckles 2013). In the 1970s the emancipatory educator Paulo Friere and social researcher Orlando Fals-Borda further developed PAR through their belief in supporting poor and marginalised communities to acquire a heightened consciousness of the forces affecting their lives so that they may take action (Carr and Kemmis 1986, Kindon et al. 2007). Freire (1970) illustrated that poor people can and should be able to conduct their own analysis of their own reality. Their work, amongst others, inspired the key values and principles of PAR such as democratic education and learning processes, emancipation, social justice and equality (Brown and Tandon 1983, Chambers 1983, Carr and Kemmis 1986, Bradbury 2015). Since this time many others have contributed to PAR as a co-learning research process, between communities and researchers, of problem identification, action and reflection leading to further inquiry and action for change (Brown and Tandon 1983, Carr and Kemmis 1986, Chambers 1994).

When PAR is done successfully the result should be to empower and build confidence in the participant's ability to contribute to social change (Kindon et al. 2007). This is even more important when working with marginalised or vulnerable groups who are unlikely to have an impact on development decision making and implementation (Koning and Martin 1996, Desai and Potter 2006). This means acknowledging and addressing inherent power differentials between researchers and participants (Kindon et al. 2007), a challenge when researchers come from high income countries with resources and prevailing power based on a history of colonization and aid dependency.

PAR draws on the paradigms of critical theory and constructivism amongst others (Baum et al. 2006, Denzin and Lincoln 2013). From critical theory, ontological underpinnings include a focus on the struggle for power and the desire to create change for the benefit of those oppressed (Denzin and Lincoln 2013). Critical theorists use critical reflection of the social reality to take action for change by questioning the cultures that they study (Baum et al. 2006). Likewise, participatory, pragmatic and action oriented theoretical approaches focus on the need for transformative action based on the democratic participation between researcher and participants (Denzin and Lincoln 2013). Constructivists believe that knowledge is constructed through our lived experiences and relations with other members of society, highlighting the need for researchers to participate in the research process with participants to ensure we produce knowledge that is reflective of their reality (Denzin and Lincoln 2013). All of the above ontological and epistemological beliefs highlight the vast array of principles that cross theoretical stances and are also values within PAR. As such, Kindon et al. (2007 p.13) propose that 'the key is an ontology that suggests that human-beings are dynamic agents capable of reflexivity and self-change, and an epistemology that accommodates the reflexive capacities of human beings within the research process'. The extended epistemological stance of PAR adds that it is not enough to understand the world, but to change it for the better (Greenwood and Levin 1998).

The theoretical paradigms mentioned above along with many others engaged in PAR including Feminism, Poststructuralism and Marxism have led to the view that PAR is not simply a methodology but an orientation to inquiry (Kindon et al. 2007). PAR is considered by some as a paradigm in itself, that embodies a particular set of concepts under which researchers operate (Carr and Kemmis 1986, Minkler and Wallerstein 2008). These include respect for diversity, community strengths, reflection of cultural identities, power-sharing, and co-learning (Minkler 2000). The ontological and epistemological views that I took for this research are based on the theoretical elements stated above and the values of PAR as a way of conducting research. This includes:

- addressing power imbalances and seeking to create, where possible, environments of equality in the interest of sharing knowledge,
- enabling the development of consciousness of participants, RAs and myself to facilitate transformative action, to reflect and take further action,
- acknowledging and addressing my own and others' positionalities through practicing reflexivity in the interest of credibility and depth of understanding.

Each of these values is explored in more depth below.

3.1.1 Equality and power

A fundamental issue within PAR is the balance of power and the need to recognize that the researcher and participants both have situated and experiential knowledge that can benefit each other and to create as much as possible an environment that promotes equality (Karnieli-Miller et al. 2009). As described by Karnieli-Miller et al. (2009), the researcher's role is to create a welcoming, informal, anti-authoritative and non-hierarchical atmosphere in which participants and RAs are able to explore their research area. To provide what Kemmis (2006 p.472) describes as 'a communicative space in which emerging agreements and disagreements, understandings and decisions can be problematised and explored openly'.

PAR projects in cross cultural, cross language settings have often struggled to create equality with participants. Caretta (2014) conducted cross cultural, cross language research with RAs in Kenya and Tanzania and found that despite all intentions and attempts to re-construct her hierarchical position amongst participants and RAs their perception and distorted expectations towards her did not change. Kemmis (2006) states that it is far from easy to establish the social and discursive conditions in a project where people can equally, openly and fearlessly ask and answer questions. Mitteness and Barker (2004) suggest that researchers accept that a common ground is only ever fleeting and that social hierarchies exist and cannot be modified by ideological stances. Therefore, in the interest of negotiating prevailing power differentials and to better understand how the RAs and my positionalities and power impacted on the research process, reflexivity was key.

3.1.2 Positionality

Positionality is the wider historical, political, economic, religious, social and intellectual context of a person that affects both interpersonal relations and qualitative research processes (Merriam et al. 2001, Temple and Edwards 2002). Part of a researcher's positionality is also how they view themselves and are viewed by others: as an insider or outsider, someone with power or who feels powerless, or coming from a privileged or disadvantaged situation. For instance, I arrived in

Cambodia feeling like a privileged outsider as a white, middle class, educated woman with funding to travel and research in Cambodia. I perceived the RAs as being 'insiders'. However, the RAs identified themselves as outsiders in comparison to the VHSGs. As noted above, they were urban educated professionals, which elevated them in the eyes of the VHSGs who called them 'Teacher' regardless of attempts by the RAs to challenge this power imbalance (Ozano and Khatri 2017).

Edwards and Alexander (2011) highlight that 'insider' co-researchers have familiarity with the local milieu and a feel for behaviours and values which help the research process. However, 'outside' researchers do not seek to create a falsely positive model of their community to protect reputations and do not equate their own experiences with the participants which may result in the omission of certain information feeling it would be taken for granted. Therefore, the positionality of the RAs as somewhere in-between insider and outsider researcher has advantages from both sides of the argument. As will be discussed in more detail the RAs were able to advise on codes of behaviour and values as well as being inquisitive about the rural lifestyle and challenges of the VHSGs which might have been missed if they had been recruited from the rural area.

3.1.3 Reflexivity

Reflexivity differs from reflection in that it is not only a process for making sense of an experience but is an entire attitude, a state of mind (McGee 2002). It involves an immediate, dynamic and continuing self-awareness that reminds the researcher to deconstruct their positionality with the aim of producing a more trustworthy, transparent and honest account of the research (Finlay 2002, McGee 2002, Finlay and Gough 2003). Practical reflexivity such as keeping a research diary allows for the recording of thoughts and experiences, before, during and after data collection and analysis. Such diaries may include choices or decisions made, reasons for these and personal reactions to research situations and relationships (Gough 2003, Bradbury 2015). Asking difficult questions about one's culture, environment, social and personal history helps to deconstruct the ever changing sense of ourselves in the research process (Etherington 2004). Another method is verbal collective reflexivity in research teams or with research participants, which promotes open discussions about how different positionalities are affecting the research. Both methods were used here.

Reflexivity is important for all co-researchers; translators, RAs, peer and community researchers (Edwards and Alexander 2011, Caretta 2014). Literature on the implications of engaging RAs in cross cultural, cross language research is growing (Flaherty and Starcova 2012, Caretta 2014, MacKenzie 2015) and in some part this can be attributed to a shift in theoretical perspectives concerning their impact on the research process and outcomes (Temple and Edwards 2002). Research assistants and particularly interpreters were traditionally viewed as neutral transmitters of messages (Temple and

Edwards 2002). More recently research has recognised their role as active participants in the research process (Temple and Edwards 2002, Berman and Tyyska 2011). It is now clear that their positionality is likely to have an impact on the research; understanding how and in which way is a growing area of interest. Temple and Edwards (2002) through their own experience of working with interpreters highlight the need to understand the positionality of all involved in the research and have coined the term 'triple subjectivity' to describe this phenomenon. They argue that:

'Like researchers, interpreters bring their own assumptions and concerns to the interview and the research process. The research thus becomes subject to 'triple subjectivity' (the interactions between research participant, researcher and interpreter), and this needs to be made explicit. Rigorous reflexivity in research where researchers are working with interpreters requires an exploration of the social location of the interpreter.' (Temple and Edwards 2002 p.11)

A lead researcher is most often an outsider whereas research assistants are normally positioned as insiders in that they may share similar language, gender, race, geographical location and cultural backgrounds with the participants (Merriam et al. 2001, Edwards and Alexander 2011). Being reflexive about positionality including the insider/outsider status of the researchers (both lead and assistant) can facilitate an understanding of complex cultural differences and power imbalances that are often present between researcher, research assistants and participants (Merriam et al. 2001). Edwards and Alexander (2011) identify that power relations between assistant researchers and lead researchers are fluid and change throughout the course of the research period. They suggest that lead researchers have more power during conceptualization and recruitment but less during data collection when insider knowledge and language are required, and during other phases power is likely to be fluid and changing. Likewise, the power dynamics between RAs and participants will also change over the course of the research process.

Recording reflexivity in Study 2

During the planning phase of Study 2 I was aware of my own need to include reflexive practices but also to encourage and capture the reflexive accounts of the RAs as part of the research process. So, when training the RAs on the principles and concepts of conducting research within a PAR paradigm I introduced the concept of reflexivity. As the training progressed and we got to know each other I would highlight when RAs were being naturally reflexive, explaining that we would be capturing our reflexive activities in some format once the project started. We decided together to try using voice recorders on the RAs phones to record their reflexive thoughts. I explained I would keep a written

journal where I would record my own reflections. They felt this would not suit them and expressed a preference for verbal methods.

After the first session on the way home in the Tuk Tuk we excitedly spoke about meeting the VHSGs and what we felt about the session. The RAs were hyper reflexive of their own facilitator techniques, what they had learnt, how they had transferred skills from their other normal jobs to the research and what they would do differently. It was evident the RAs were natural at reflecting on their own capabilities, fears and aspirations for the project. I was pleased that I would not have to structure specific questions to prompt reflexive practice as they did this automatically. The discussions gave me a chance to ask further questions about the session, about cultural practices, which I did not fully understand and for the RAs to ask questions related to the methodology or health. However, when the RAs attempted to record their thoughts later on they found it uncomfortable, thus inhibiting their natural ability to be reflexive. Recordings were short and read stiffly from prepared written sheets. We discussed this difficulty and how we might do it differently and decided to do reflective sessions verbally without recordings but to record our final reflections after the project ended. I continued to write a reflexive journal capturing some of the discussions from the Tuk Tuk rides and other conversations. These will be presented following the account of the workshops. On one occasion, we used flip charts to record reflections as there seemed to be many from that workshop session.

3.1.4 Quality measures for PAR

Terminology traditionally used in quantitative research, such as validity and reliability, has been adapted to better align with PAR values and is now often referred to in terms of trustworthiness and credibility (De Koning and Martin 1996). Trustworthiness and credibility are assured through a systematic and rigorous data generation/analysis process, responsive reflection including reflexivity, and a documented account of the research process whilst researching (Bradbury 2015). Methods include checking data collection with participants to ensure it accurately reflects the meaning, keeping a reflective journal/diary of research activities, engaging researchers and participants in reflective activities, reflecting on and addressing power dynamics where possible (De Koning and Martin 1996, Bradbury 2015, Kingery et al. 2016). All of these were included in this research process and are reported in the findings section.

The quality of PAR research is linked to adherence to the key values and principles associated with the inclusive, democratic, co-learning nature of the PAR paradigm (Minkler and Wallerstein 2008, Bradbury 2015). To further ensure the research was credible and trustworthy key guidelines and literature for ensuring and assessing quality were used and reflected upon (Israel et al. 1998, Mercer

et al. 2008, Springett et al. 2016). In the interest of ensuring research credibility and trustworthiness I have applied the five principles shown in Table 4 as suggested by Heikkinen et al. (2007) in their article 'Action Research as Narrative'.

Table 4 Quality criteria for action research adapted from Heikkinen et al. (2007)

Principle of historical continuity	<i>Analysis of the history of action:</i> how has the action evolved historically? <i>Employment:</i> how logically and coherently does the narrative proceed?
Principle of Reflexivity	<i>Subjective adequacy:</i> what is the researcher's relationship with his/her object of research like? <i>Presumptions:</i> what are the researcher's presumptions of knowledge and reality? <i>Transparency:</i> how does the researcher describe his/her material and methods?
Principle of dialectics	<i>Dialogue:</i> how has the researcher's insight developed in dialogue with others? <i>Polyphony:</i> how does the report present different voices and interpretations? <i>Authenticity:</i> how authentic and genuine are the protagonists of the narrative?
Principle of workability	<i>Pragmatic quality:</i> how well does the research succeed in creating workable practices? <i>Criticality:</i> what kind of discussion does the research provoke? <i>Ethics:</i> how are ethical problems dealt with? <i>Empowerment:</i> does the research make people believe in their own capabilities and possibilities to act and thereby encourage new practices and actions?
Principle of evocativeness	<i>Evocativeness:</i> how well does the research narrative evoke mental images, memories or emotions related to the theme?

Not all the guidelines could be satisfied entirely, thus recognition and discussion of the limitations is presented.

PAR limitations

Following my experience in South Sudan, I had decided on a participatory research paradigm and the research questions before engaging with the VHSGs (Kindon et al. 2007, Mercer et al. 2008). Some literature posits that for full and meaningful participation, self-mobilization by participants who then seek out the researcher as a resource rather than a researcher identifying a problem (as is the case here) is necessary (Herr and Anderson 2005, Kindon et al. 2007). However, it is not always

possible to achieve this level of commitment early on in a doctoral degree, especially when ethical approval is required first. There are many action research projects from doctoral studies which have resulted in publications and added to the literature on a variety of development areas (Herr and Anderson 2014). Still I was aware of such limitations and like McIntyre (1997) in her PAR project exploring racial identity with white teachers, I experienced feelings of self-doubt concerning the purity of the project.

However, I rationalized that there are levels of participation by co-researchers and participants that exist on a continuum within the literature. Kindon et al. (2007) and McIntyre (1997) suggest that as long as this is recognized and addressed the 'purity' of the PAR is not an issue. Therefore, while recognizing the limitations of not involving participants in the initial research proposal or the writing up phase I endeavoured to ensure that while in Cambodia, the VHSGs were involved in decision making processes such as deciding timings, venues, workshop topics, structure and exercises, though I still battled with questions of ownership, power relations, co-analysis and emancipation.

Being away from the university setting and supervisors meant that I spoke not with other academics but with the RAs about these challenges. At times, I felt a need for a more academic opinion but in hindsight perhaps being isolated from outside influences meant the research remained situated in the actual context. Another quality factor of PAR is that that both the researcher and the participants benefit from the research process (Mercer et al. 2008). Although it was clear how I would benefit from the research as a doctoral student, I questioned throughout how the participants and assistants would also benefit. Through being a reflexive research team, we could identify potential benefits and orchestrate training for both the VHSGs and the RAs. Without being aware of the limitations and potential strengths of the research, such opportunities might have been missed.

3.2 Methodology

This section presents the methodologies employed for all three studies. Studies 1 and 2 are presented together and Study 3 is presented separately. The rationale for the research design, research location and ethical procedures is also provided. The timeline of the research process is shown in Figure 8.

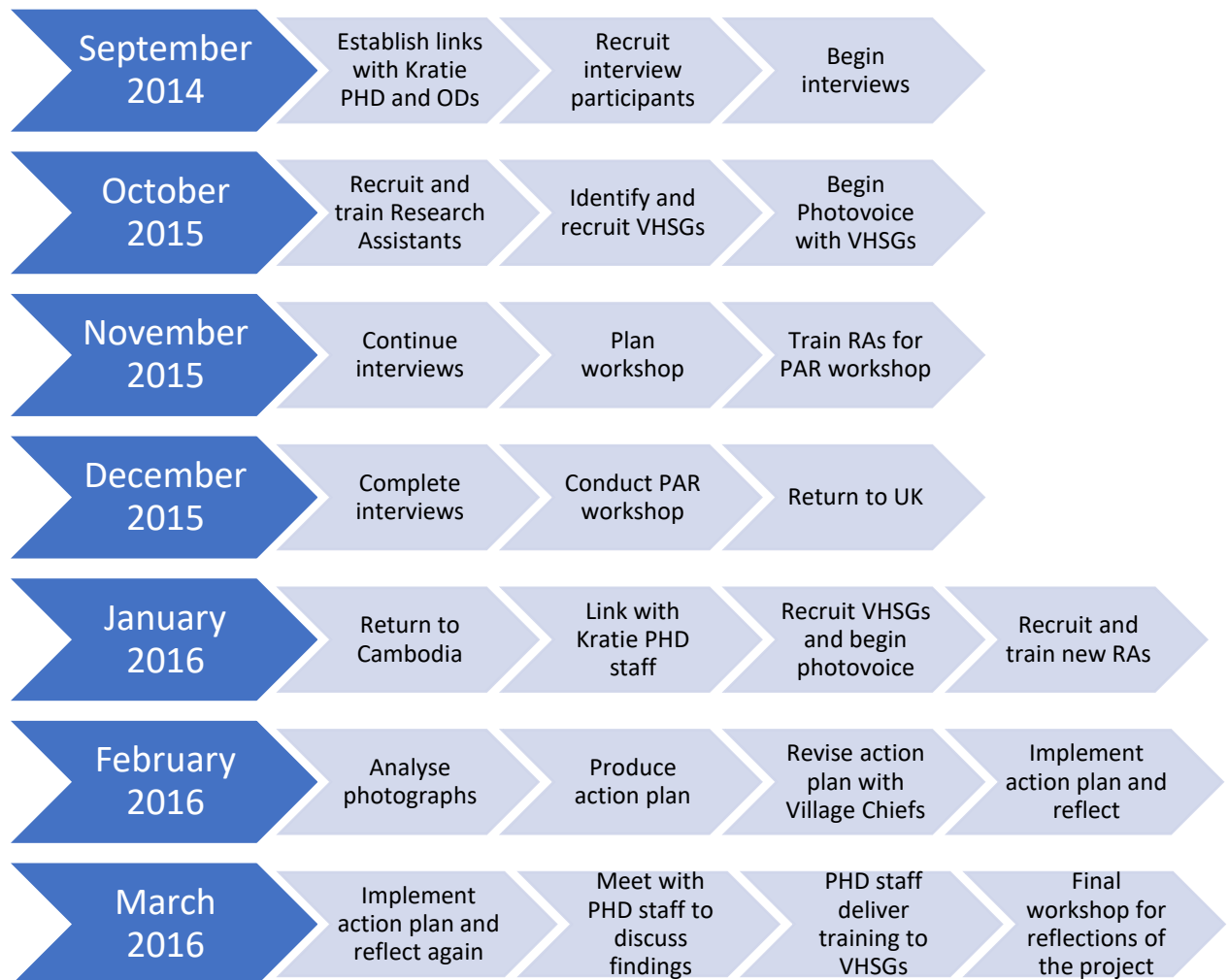


Figure 8 Timeframe and activities for field research

3.2.1 Methodology for Studies 1 and 2

In health PAR has been presented and applied as a means to bridge the gap between research and practice, to promote social justice and create the conditions necessary for communities and

individuals to have control over the determinants of health (De Koning and Martin 1996, Cargo and Mercer 2008). PAR has been applied to a broad range of topics in public health and the methods used within the process have included community asset mapping, participatory evaluation of public health programmes, community monitoring of health service quality, and advocating to address determinants of poor health including unclean water and sanitation and environmental pollution and participatory health policy research (Minkler and Wallerstein 2008, Kemmis et al. 2014, Baum 2016). PAR within public health is based on a cycle of action and reflection (Figure 9) that aims to improve health through working collaboratively with the people who are most affected, who in turn take actions to improve their own health (Baum et al. 2006, Cargo and Mercer 2008). The reflection process allows researchers and participants to identify and make sense of an experience, situation or practice with the aim of understanding and improving it through collective discussion (McGee 2002).

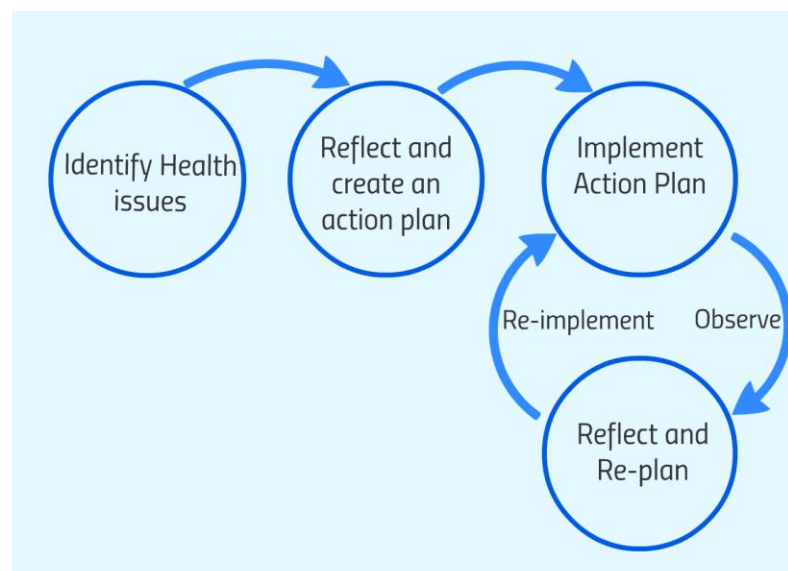


Figure 9 Action/Reflection cycle for health

This process was employed partly in study 1 and fully in study 2 with VHSGs as participants. In both Studies health issues were identified using photovoice (detailed below). The VHSGs then categorised the photographs and prioritised one or two issues to focus on. Action plans to improve the selected health issues were produced in both studies. Study 1 was completed at this point and results were used to inform the structure and format of study 2 which took place in the second field trip. Study 2 took the research process to the final stages identified in Figure 9, that of implementation and reflection. Participatory workshops were employed as a means of reflecting on the implementation of the action plan, re-assessing and re-implementing where necessary. This took place over eight workshops within ten weeks. This resulted in a two-day training session on behaviour change

communication which was delivered by PHD staff. The processes of Studies 1 and 2 are summarised in Figure 10.

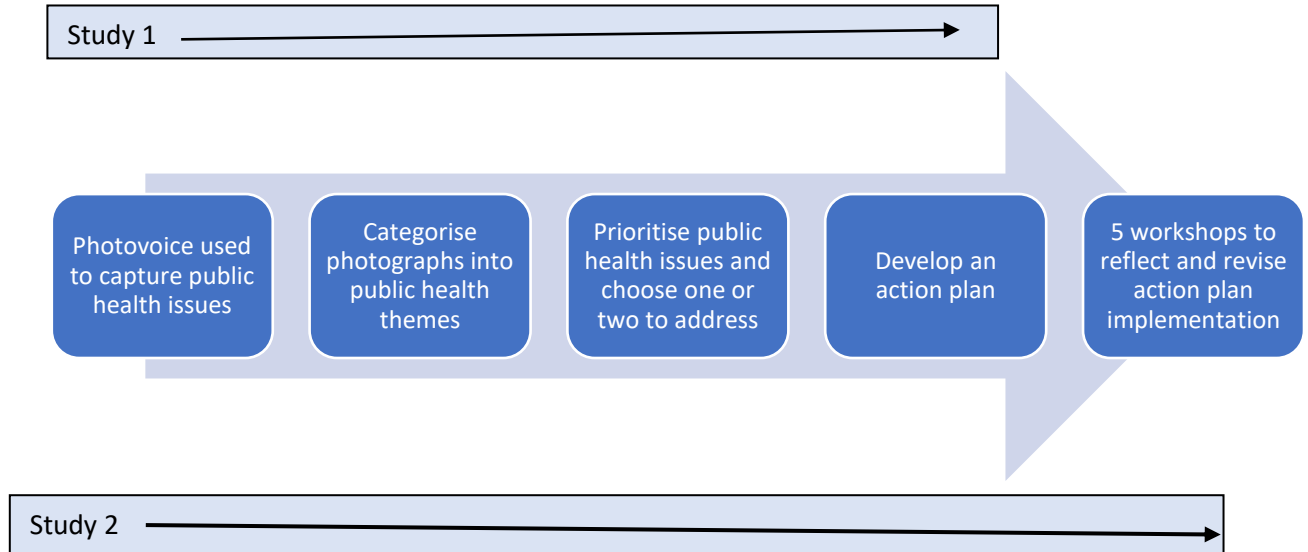


Figure 10 Overview of Studies 1 and 2

As studies 1 and 2 were iterative processes, analysis included a mixture of approaches. An independent thematic analysis of the photographs from study 1 was undertaken by myself to gain an understanding of the public health issues faced by rural communities, whereas the analysis for study 2 was largely done together with VHSGs and RAs. The PAR workshops in study 2 uncovered several phenomena that were explored further upon my return to the United Kingdom by widening the scope of the initial literature review.

Recruitment and role of Research Assistants

Four RAs were employed for the research in Studies 1 and 2. They were recruited through online social networking sites and by advertising through NGOs and known contacts. In study 1, two RAs were recruited, one from Phnom Penh and the second in Kratie on a part time basis. Their role was to guide participants through the photovoice and workshop process. A third translator also assisted in the workshop so that I could understand the general flow of conversation and add suggestions where appropriate.

In Study 2, Sothara and Sophal (pseudonyms), were co-researchers and had a much larger role. Sothara and Sophal were chosen as they were local to Kratie Province, spoke good English and demonstrated a passion for participation and their rural contemporaries. Many others applied for the role but the majority lived in the administrative capital of Phnom Penh and I felt the research should remain as local to the community as possible. Also, I anticipated that the RAs would be more

‘insider’ researchers with similar background, geographical location and knowledge of what it means to live in the province of Kratie. The first assistant recruited was Sothara who then identified the second RA who was a known colleague that she felt comfortable with. I considered it important that the two RAs would be happy to work together and this proved a crucial point in the research as they were able to openly discuss the research without fear of judgement from each other.

Two RAs were employed for Study 2, thus offering different communication styles and the opportunity to discuss and agree on their interpretations of the workshop dialogue in their own language ready for translation to English (Ozano and Khatri 2017). Literature has highlighted that there is no one meaning to be taken from experiences of the social world and so there can be no one translation, emphasising the need for two viewpoints (Temple and Edwards 2002). Furthermore, the availability of one RA to translate at the workshops enabled me to understand the workshop flow and offer advice when required.

Sothara (female) has a university degree and good English literacy skills with some experience of working with English speaking researchers as a translator. Sophal (male) also has a university degree and experience of working with English speaking tourists. Both RAs were urban, educated, with access to a better standard of living, infrastructure and services compared to the VHSGs; and both were computer literate and owned iPhones. During the research, I stayed in the hotel where Sothara worked which meant she could access me at all times with potential questions and I could work around her schedule with ease. Sophal and Sothara had no experience of working in the field of health and although they had both used public and private health facilities, they were unaware of the existence of VHSGs.

Sothara was first engaged in the research on the 19th January 2016 and Sophal was recruited three days before the first workshop session. The training sessions began immediately after recruitment and continued throughout the research process. The following training topics were included;

- Understanding PAR concepts and principles
- Community asset mapping
- Ethics and confidentiality
- Facilitation and communication techniques
- Understanding the health structure in Cambodia and the role of VHSGs
- Technical health language in English and in Khmer (provided by a Khmer Medical Doctor working for an NGO)
- Reflexivity

- Understanding power dynamics in PAR
- Working as a research team

Training sessions used PowerPoint presentations, guidance sheets and open discussions with the use of flip charts. The RAs for Study 1 also conversed with the RAs from Study 2 to help them understand the challenges associated with the workshops and provide culturally appropriate tips for photovoice, community asset identification and action plan creation. This took place without my input in Khmer.

3.2.2 Methodology for Study 3

A semi-structured interview schedule was used to interview a total of ten participants. Possible participants were identified initially through a Google search of health organisations in Cambodia. Recruitment of participants was done by email, telephone or word of mouth. The recorded interviews were transcribed verbatim and organised in NVIVO (Richards 1999). Open coding was used to identify themes and sub themes which were checked across interviews to identify commonalities (Vaismorandi et al. 2013). Further details of the analysis process are provided in section 3.4.

3.2.3 Rationale for research design

The rationale for the research design is based on meeting the research objectives. Studies 1 and 2 aimed to address the following research objectives;

- **Identify where and what gaps exist in public health knowledge, skills and practices of facility based health workers and CHWs.** It was hoped that the PAR process presented an opportunity for VHSGs to display the public health knowledge, skills and practices they had gained, without feeling they were being assessed or instructed by outsiders. Rather the approach removed them from outside influences of control such as governmental and NGO staff and provided them with a space for collective analysis and problem solving. My role was to observe and record what solutions, if any, would materialize without direction from others. Through the use of creative methodologies in a workshop setting, it was expected that VHSGs and researchers could benefit from each other's knowledge. As a researcher, I shared some tools used to analyse a situation in a step by step process which had the potential to influence future analytical processes used by VHSGs. In exchange, the VHSGs shared their knowledge and experiences of being a VHSG in rural Cambodia, helping to situate the research into a broader context and providing an opportunity to understand their knowledge and skill base. Study 2 also investigates the application of action plans in

the community setting thus providing a stage for VHSGs to demonstrate their skills, knowledge and practices.

- **Explore how the Alma-Ata approach to PHC is understood and implemented, specifically with regards to community participation and empowerment.** The Community Participation Policy for Health underlined the need for VHSGs to engage community members in solving health problems. Through the use of photovoice, it was anticipated that VHSGs could easily display their life world and how they interacted with community members. The aim of producing an action plan also presented an opportunity to understand how they may or may not mobilise or empower communities to address health problems in their villages. The action plan implementation and reflection phases set a platform on which to learn how VHSGs engage with community members and how they may or may not organise and mobilise villages to improve health outcomes.
- **Assess policy translation, especially in underserved rural areas and explore how contextual factors impact on the application of skills, knowledge and practices.** The VHSG role is identified as part of the CPPH. Through the implementation of the action plans, a wider understanding of how policy objectives are supported, monitored and delivered in relation to contextual factors, health actors and community organisation was expected.
- **Analyse the roles and involvement of individuals, communities, organisations and governments in the development of health workers and CHWs.** Through the reflection process it was hoped that VHSGs would discuss the impact of outsiders on their capacity development and application.
- **Investigate contextual factors to improve application of public health practices.** It was hoped that VHSGs would provide insights through the workshops on the ways contextual factors either hinder or support their work to inform the development of strategies and mechanisms to build public health skills, knowledge and practices.

Study 3 aimed to address the following research objectives;

- **Analyse the roles and involvement of individuals, communities, organisations and governments in the development of health workers and CHWs.** Each interviewee had a very different experience and role of working in Cambodia, many also worked with differing partners. By exploring their own job roles as well as their views on working with others it was hoped that a better understanding of the various roles would be gained.

The following research objectives were hoped to be achieved as interviewees have experience of developing public health skills, knowledge and practices. It was anticipated that they would have,

to a greater or lesser extent, identified gaps and learned which mechanisms worked (or did not) for different levels of health workers in the contextual working environment. Although it was understood that their portrayals would be subjective, it was hoped that they would provide a comparison from different points of view which could be triangulated with Studies 1 and 2 and further investigated in relation to international literature.

- **Identify where and what gaps exist in public health knowledge, skills and practices of facility based health workers and CHWs.**
- **Identify methods currently being used by training providers to build capacity of health workers in Cambodia**
- **Evaluate which methods and mechanisms are considered effective**
- **Critically analyse current methods and mechanisms that restrain capacity development**
- **Explore how contextual factors impact on the application of skills, knowledge and practices**
- **Investigate contextual factors to improve application of public health practices**

3.2.4 Research location

Studies 1 and 2 took place in rural Kratie. Kratie has an estimated 344,195 people who live in 255 villages with a population density of 31 people per square kilometer (Ministry of Planning - Kingdom of Cambodia 2013). Kratie is situated along the Mekong river bank which floods the land regularly, bringing with it many public health concerns including increased risk of communicable diseases such as diarrhoea, injury and an increase in vector-borne diseases from amplified mosquito populations attracted to stagnant water (Torti 2012). In addition, transportation is difficult and often requires crossing rivers by boat which comes at a cost. Roads can also become inaccessible in the rainy season placing additional barriers to accessing food, supplies and services. With regards to the SDOH, Kratie women in comparison to other provinces get married at a younger age, have higher fertility rates at 3.6 children per woman and 20% are pregnant by the age of 19 (Cambodia National Institute of Statistics et al. 2015). Less than half of women deliver their babies in a health centre and Kratie experiences one of the highest under-five child mortality rates at 80 deaths per 1,000 live births (Cambodia National Institute of Statistics et al. 2015). Kratie also endures higher rates of poverty and domestic violence than other provinces (Cambodia National Institute of Statistics et al. 2015). Health Administration is decentralised to one PHD and two ODs, Kratie District and Chhlong District, with management responsibilities specifically for health centres and CHW management.

Some of the interviews also took place in Phnom Penh, the capital city of Cambodia as the interviewees were associated with national government departments or with NGOs and volunteer organisations who had their headquarters in Phnom Penh.

3.2.5 Ethics

Before the research began, full permission was sought and gained from the National Ethics Committee for Health Research, MoH, Kingdom of Cambodia (Appendix A) and from the Liverpool John Moores University Research Ethics Committee. Participant information sheets (Appendix D) were issued in English written format for the interviews and consent forms (Appendix E) were signed before the interviews took place.

Before arriving in Kratie, the PHD director was sent a letter requesting permission to undertake research in the province, the approval letter sent back was translated to English and may be found in Appendix F. Before beginning the PAR, VHSGs received verbal and written participant information sheets translated from English (Appendix G) to Khmer (Appendix H). Consent forms were also verbally explained in Khmer with opportunities to ask questions. The consent forms were translated from English (Appendix I) to Khmer (Appendix J) and signed before the VHSGs began the PAR.

Ethics related to the use of participatory methods and photovoice

Before engaging in the research process ethical considerations of using photovoice and participatory methods were considered. Wang and Redwood-Jones (2001) summarised some of the ethical considerations of using photovoice, such as respect of people's privacy, (mis)representation of people or situations and potential disclosure of information that subjects do not want revealed. These considerations were raised in the camera training session and participants and RAs discussed the importance of informing an individual of the purpose of taking the photograph and asking their permission first. If under 18 years a parent or guardian was to be asked. As the photographs were only used for discussion in the workshops and with the PHD Director and Health Promotion Officer, many of the ethical challenges were minimised as the public were not to view the photographs. An ethical incident regarding the privacy of the photographs is discussed in the section; 'Reflexivity of the RAs role'. The issue of representation was minimised as participants were to provide their own subjective view of health problems and were able to add context to the photographs by describing each photo to the RAs.

As PAR is a flexible, socially responsive and emergent process, I was required to make ethical decisions throughout, an aspect I had read and understood before entering the field. Some considerations were addressed by the ethical procedures of the University and Cambodia, however

others emerged during the research process which are discussed as part of the narrative (particularly the reflexivity sections) of the findings chapter for studies 1 and 2 and in section 4.3.4 'Did the action research project end in social change?'. As explained by Kindon et al. (2007 p.39) participants and researchers 'must constantly reflect on their beliefs, motivations and actions and ask themselves: 'What kind of change agent am I and how am I accountable for my own actions?'. I did this with the help of the RAs and by engaging in reflexivity as narrated in the findings sections.

3.3 Methods

A number of core methods were used in this research including; semi-structured interviews, photovoice, community asset identification, categorisation and prioritization of health issues, action plan design and implementation and reflective participatory workshops followed by facilitator feedback. The participatory workshops in Study 2 developed throughout the PAR process and are included in the findings section to improve flow and understanding of the iterative nature of the research.

3.3.1 *Photovoice*

Photovoice entails the use of photographic images taken by the community to capture cultural practices and social conditions (Wang et al. 1996, Castleden et al. 2008). Photovoice was used as a tool to enable CHWs to identify health issues observed every day in their local villages. Photovoice was first introduced by Wang and Burris (1997 p.369) as:

a process to which people can identify, represent, and enhance their community through a specific photographic technique. It entrusts cameras to the hands of people to enable them to act as recorders, and potential catalysts for change, in their own communities. It uses the immediacy of the visual image to furnish evidence and to promote an effective, participatory means of sharing expertise and knowledge.

Photovoice is now a common method used within health participatory research (Catalani and Minkler 2010). A review of photovoice use in health projects concluded that it contributes to a greater understanding of communities' assets and needs and to empowerment (Catalani and Minkler 2010). It also emphasizes ownership by participants as they decide how and what images to capture (Kindon et al. 2007). Photovoice has been used in other studies in LMICs such as Kenya where the method was used to demarcate the health-related needs of a small rural community (Kingery et al. 2016). An evaluation of the use of photovoice in a community based participatory research project with indigenous peoples found that the method effectively balanced power,

created a sense of ownership, fostered trust, built capacity, and responded to cultural preference (Castleden et al. 2008).

Photovoice took place with VHSGs on two separate occasions, the first in October 2014 (PV1) and the second in January/February 2016 (PV2). Both photovoice activities involved the identification and categorisation of health issues experienced in their villages. The results from both PV1 and 2 are presented together in the findings section to provide the reader with a more holistic overview of health issues faced by communities in rural Cambodia. The photovoice process adapted the steps highlighted by Wang (2006) and can be found in Table 5.

Table 5 Photovoice process

<i>Step 1: Select and recruit a target audience</i>	The research is for a doctoral project with the aim of disseminating to policy makers and actors in community participation and CHWs through publications and research dissemination.
<i>Step 2: Recruit a group of photovoice participants</i>	The VHSGs were initially selected in cooperation with ODs and Health Centre Chiefs. A total of ten VHSGs successfully took part in Study 1 and eight VHSGs in Study 2.
<i>Step 3: Introduce the photovoice methodology to participants, and facilitate a discussion about cameras and ethics</i>	The researcher and the RA travelled to the health centres and VHSG homes to provide information about the study. Due to travel difficulties in accessing VHSGs to distribute cameras, the project was introduced, consent was obtained and camera training was provided at the same point in time.
<i>Step 4: Obtain informed consent</i>	Participant information sheets and consent forms were issued verbally and in written format and signed before any research activities took place.
<i>Step 5: Pose initial theme/s for taking pictures.</i>	Through the RA, the VHSGs were asked to take photographs of things in the community that might cause ill health or things that if improved or made better would enhance good health. We then asked the participant to suggest examples of what they may take photographs of to ensure they understood the theme. Once the aim of the research was fully understood the cameras were left for periods of one to two weeks depending on

	availability in Study 1. In study 2 the cameras were only left with participants for three days due to time restrictions and a shift in focus from identifying community health problems to implementing solutions.
<i>Step 6: Distribute cameras to participants and review how to use the camera.</i>	Basic camera training was provided, including how to frame a subject, use zoom and focus and change batteries. The participants then took several practice photographs to ensure they were confident with using the camera. As the VHSGs were mainly consulted in pairs they also supported each other with instruction and advice. One camera was issued to two VHSGs, however in some cases VHSGs lived too far apart to share and so worked separately. The RAs phone number was provided should any issues arise.
<i>Step 7: Camera collection and photo discussions</i>	On collection of the photographs, participants verbally described to the RA what the photograph represented. The RA immediately described in English what was being discussed. The timeliness of the translation allowed the researcher to ask further questions to clarify the understanding of the photograph.
<i>Step 8: Meet as a group to discuss photographs and identify themes</i>	This part of the project was undertaken in a workshop as a group. Each group was presented with a selection of photographs at the workshop and they began with open discussions about what was taking place in the photographs, what health issues were being depicted and the causes of the problem.
<i>Step 9: Categorise health issues, prioritise one or two and develop an action plan</i>	Each of the two workshop groups analysed the photographs and grouped them into categories that they then gave a title. Each group member was asked to choose a photograph that represented what was the most important public health issue to them in their village. They were also asked to identify a photograph that represented what public health issue would be possible to improve. Finally, as a group they were asked to identify a public health issue that they would focus on for developing an action plan.

3.3.2 Community asset identification exercise

The premise of community asset identification is that communities can drive development themselves by identifying and mobilising community assets that already exist. This can include personal assets or skills, institutions, physical structures, social groups and community relations between members and between external organisations, agencies and government institutions. Traditionally public health community development programmes, research and services have focused on a community's needs, deficiencies and problems. This approach was critiqued by Kretzmunn and McKnight (1996) who argued that this resulted in disadvantaged communities seeing themselves as clients of well-being services provided by outsiders, thus constraining their ability to problem solve within their own environment and resources. They were consumers of services, with no incentive to be producers. This is particularly a risk in Cambodia as one of the most aid-dependent countries in the world. In contrast to the needs based model, Kretzmunn and McKnight (1996) recommend an asset based model that leads to the development of policies and activities based on the capacities, skills and assets of poorer communities

The aim of this exercise was to move the groups away from thinking that the researcher was there to solve problems and to frame the session around what the community can do for itself. To begin this process the groups were asked to identify 'What is good in your community?' The RAs were trained and provided with guidelines prior to engaging participants in the exercise.

Study 1 requested that VHSGs discuss and write down community assets. In Study 2 this was progressed to asset mapping as a tool for greater discussion. Asset mapping works with participants to draw a map of their area, recording on it the assets within the community, thereby highlighting the attributes and potential contributions of social structures, institutions and community members, irrespective of age, gender, or social position and showing where opportunities for collaboration exist for mutual gain (Mathie and Cunningham 2005). The details of this session are provided in the narrative for Study 2.

3.3.3 Participatory workshops

To design the participatory workshops, I referred to several texts for ideas and suggestions, both before and during the fieldwork, which were then discussed with the RAs for feasibility. Texts included:

- Community based participatory research for health: From process to outcome (Minkler and Wallerstein 2008)
- Participatory workshops: A sourcebook of 21 sets of ideas and activities (Chambers 2002)

- Participatory Action Research: Theory and Methods for Engaged Enquiry (Chevalier and Buckles 2013)
- The Action Research Planner: Doing Critical Participatory Action Research (Kemmis et al. 2014)

The participatory workshop for Study 1 was predesigned as it was only one session with clear aims. The workshops for Study 2 were designed on short notice due to the iterative nature of the workshops. Each session was not planned until the previous session was complete. Themes that emerged from one workshop helped the researcher and RAs decide on the structure of the next workshop. The participants also inputted into the delivery structure of the workshops when they wished to demonstrate a particular issue. Study 2 consisted of eight workshops and a two-day training session, each workshop used different techniques and methods. The RAs facilitated the participatory workshops (in Khmer) which were followed by a debrief session to discuss (in English) their interpretations of the workshop dialogue. Key themes developed out of the debrief were reported back to the participants at the next workshop for verification. The discussions grew organically from that point with a few pre-determined open questions should they be required. Figure 11 provides an overview of the process and the key people involved.

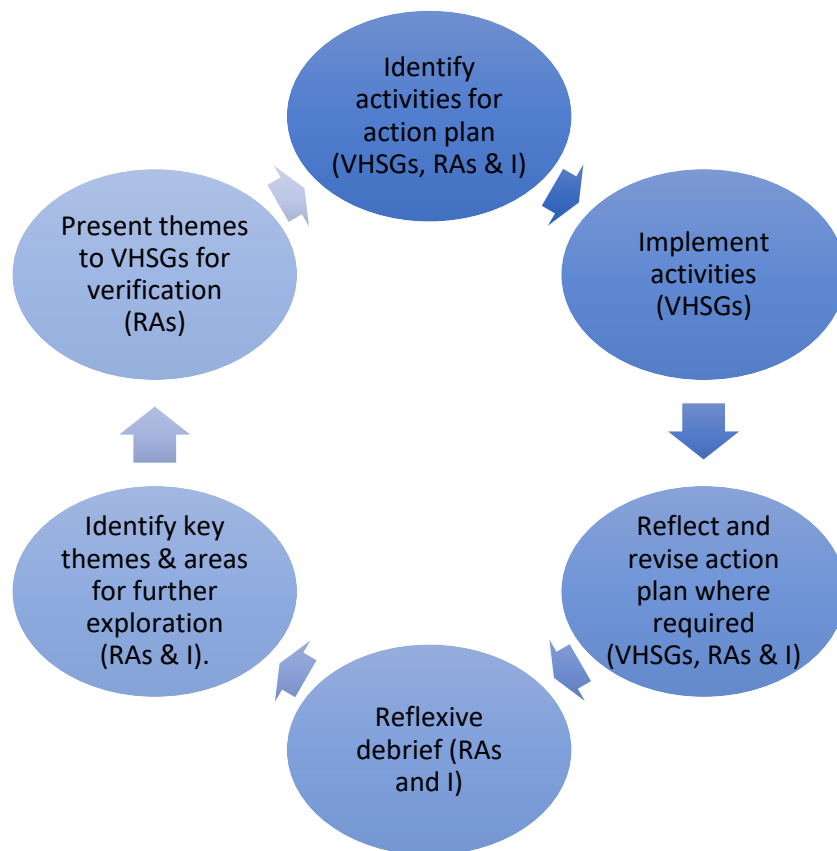


Figure 11: Action/ Reflection Cycle

Each session was recorded on either an LG2 phone or a Sony IC Recorder. The recordings were used during the feedback sessions with the RAs and me, as prompts to recall the workshop discussions. During the sessions if one of the RAs translated a conversation that I wanted to understand better, I wrote down the location point on the recorder for reference later. In addition to the workshops with the VHSGs, there were three meetings held with the Technical Unit Director and the Health Promotion Officer to discuss the outcomes of the PAR sessions and ways to address some of the challenges faced by the VHSGs. Because of this, two days of training was provided by the Director from the Technical Unit and the Health Promotion Officer. Workshop procedures and findings from each session are presented together to capture and define the intricacies of the sessions. An overview of the dates and session content is provided in the findings section.

3.3.4 Categorisation and prioritization

Each of the groups in Studies 1 and 2 analysed the photographs and grouped them into categories that they then gave a title. Each group member was asked to choose a photograph that represented what was the most important health issue to them in their village. They were then asked to identify a photograph that represented what public health issue would be possible to improve. Finally, as a group they were asked to identify a public health issue that they would focus on for developing an action plan.



Photograph 1 Organising photographs into public health categories

3.3.5 Developing an action plan

Each of the groups in studies 1 and 2 developed an action plan on a template that was prepared by the facilitators. The template only consisted of headings. These were; Activity/Solution, Resources/equipment, deadline and person responsible/involved. The template was adapted from one delivered by the Rural Development Department for Village Chiefs. The headings were in Khmer and should have been familiar to some participants who were also Village Chiefs. In this manner, the processes of the government were being mirrored for consistency. The details of the participatory workshops that reflected on implementation of the action plan in Study 2 are provided in the findings section as a narrative.

3.3.6 Semi-structured interviews

The purpose of the interviews was to assess the landscape of skills and knowledge development efforts and ascertain learnings gained from health and development professionals involved in delivering training and education in Cambodia. A semi-structured interview schedule was developed in the UK to address the aims of the research (Appendix C) which was approved by the Liverpool John Moores University Research Ethics Committee before going to Cambodia. A three stage theoretical sampling method was used to ensure that relevant interviewees were selected to contribute to the development of theories in the research area (Green and Thorogood 2004, Robinson 2014).

Stage 1, convenience sampling: A recruitment email (Appendix B) was sent out to a variety of organisations, identified through a google search, who worked in the field of health in Cambodia. A mixture of replies came back and initial meetings were set up to discuss the interviews further.

Stage 2, deliberate selection: On arrival in Cambodia further links were established through these networks and possible interviewees were recommended. Interviewees were selected based on their likelihood to generate data of more relevance to the concepts that were emerging in the initial interviews. For example, initially only international organisations were being targeted for the interviews due to their focus of building capacity, however two national level health sector employees were identified as having key roles in public health capacity development and so the opportunity to interview them was seized.

Stage 3, discriminate selection: Selection was based on the need to fill in knowledge gaps and to test emerging areas of interest. For example, one interviewee did not have a direct role in health development but did have roles in developing community participation as part of a democratic process which seemed relevant to the research and so they were also interviewed.

The interview schedules were slightly adapted to ensure the questions were relevant to the interviewee's position. A summary of the topics is presented in Table 6.

Table 6 Summary of interview schedules

Interviewee type	International NGO/volunteer worker	Government Employee	International democratic development volunteer
Interview topics	The role of the participant and the organisation they worked for	The role of the participant and the organisation they worked for	The role of the participant and the organisation they worked for
	Experiences of working with government bodies and individuals	Key policies, operational plans and procedures influencing work plans	Experiences of working with government
	Knowledge of policies related to public health and PHC	Relationship with other ministries and organisations	Citizen participation in Cambodia
	PHC functioning in Cambodia at the provincial/district level	PHC functioning in Cambodia at the provincial/district level	Challenges to participation in health
	Interventions tackling wider social determinants of health	Education and training initiatives for health workers and active community volunteers	Government plans to encourage citizen participation
	Health Service improvement at PHC level	Training formats and experiences for public health at the PHC level	Experience and understanding of key government policies related to primary health care or public health
	Public health knowledge and skills at a local level	Community participation and influence on health decisions and plans	Challenges to building capacity in Cambodia
	Education and training initiatives for health workers and active community members	Health promotion, prevention or education interventions	
	Health worker's skills and knowledge gaps, challenges and solutions	Health worker's skills and knowledge gaps, challenges and solutions	
	Perceived gaps of knowledge, skills and application of public health practices.		

An iterative approach to interviewing was used, where a theme that arose in one interview was used to inform future interview areas (Chhea et al. 2010). Interviews were recorded using a Sony IC recorder and a LGG2 phone recorder.

3.4 Analysis

Analysis was undertaken for each of the three studies independently. After independent analysis triangulation identified commonalities and differences which were interpreted and discussed in relation to literature. Triangulation of data combines data drawn from different sources, at different times from different people and can be used to compare and contrast action research with interviews (Flick et al. 2004). Triangulation consisted of comparing and contrasting interview transcripts, cross referenced with other interviews, VHSGs accounts of the workshops, reflexivity sessions with RAs, translated flip charts, photographs and discussions with the PHD Technical Director and Health Promotion Officer. As highlighted by Flick et al. (2004) visual data may be triangulated with verbal data as an independent source of information. The analysis process drew out repeated concepts for exploration in the analysis and interpretation chapter.

3.4.1 *Studies 1 and 2 photovoice analysis*

The photographs collected for study 1 were categorised by the participants in the workshop but I also individually categorised the photographs into themes. Notes were made during the conversations with VHSGs about what was being represented in the photographs and these were read back to ensure the RA agreed with the description. These descriptions were analysed along with the photographs and placed into categories for Study 1. Photographs of the same scene were only categorised once unless a different public health issue was identified. Some photographs fitted into more than one category and were included in as many categories as was relevant. These categories were compared with the categories chosen by participants for validity. In Study 2 I did not analyse the photographs as this was part of the ongoing PAR process. However, in the findings section I do highlight differences between PV1 and PV2 for the reader.

3.4.2 *Study 1 workshop analysis*

For Study 1 each RA provided an account of the workshop and translated flip charts with community assets, public health categories, priorities, solutions and action plans. The debrief sessions involved the RAs listening to the audio recording of the workshop and reflecting on the conversations that took place. Whilst each RA reflected individually, I typed up their summaries and read it back so that they agreed it was an accurate account of the session. I also audio recorded the debrief sessions

and re-listened to them later to identify key points. The translated flip charts and the RAs written and verbal accounts were uploaded to NVivo. Thematic areas were developed for the community assets and action plans and the verbal accounts added context.

3.4.3 Study 2 workshop analysis

For Study 2 the workshop sessions and reflexivity are presented and analysed in a narrative format to create order and ensure a day by day understanding was achieved by bringing together all evidence. Therefore each workshop methodology is immediately followed by findings and reflections. Greenwood and Levin (1998) state that narrative structures of local knowledge exchange act as a mechanism to construct, learn, convey and apply action research. However, to try to minimize the gap between the narrative told and the reality I have presented voices from the participants and RAs as well as from my own perspective. This includes;

- transcriptions of recorded reflexivity and feedback activities by/with RAs,
- accounts provided by the RAs of the VHSGs discussions from audio recordings and from memory
- translated written materials from the workshops.

3.4.4 Study 3 interview analysis

The process of thematic analysis for the semi-structured interviews involved the following steps which were adapted from literature (Dey 1993, Flick et al. 2004, Saldana 2013, Vaismorandi et al. 2013) and are summarised in Figure 12 from Saldana (2013).

1. Read and annotate printed transcripts. As described by Flick et al. (2004 p.254) 'The aim is to note, for every single interview transcript, the topics that occur and individual aspects of these which can be related – in a very broad sense – to the context of the research question(s).
2. Manage data by uploading all transcripts to NVIVO (Richards 1999).
3. Create preliminary categories based on annotated notes as the conceptual building blocks from which to construct theoretical structures.
4. Code data by transferring data sections, line by line to the appropriate category using open coding to identify commonalities (Vaismorandi et al. 2013)
5. Re-contextualise the data in terms of the categories, developing sub-categories where necessary and revising category names to ensure the name reflects the interview data segments

6. Organise categories into main themes by linking data and identifying substantive connections and interactions between categories

Figure 12 originally presented here cannot be made freely available via LJMU Digital Collections because of copyright reasons. The figure was sourced from Saldana (2013).

Figure 12 Codes to theory model of interview analysis

3.5 Chapter summary

This chapter presented the theoretical bases for the research process and explained how the PAR paradigm is threaded throughout the research design, data collection and analysis process. It highlights the importance of considering one's own positionality and power and ensuring that all researchers are part of a reflexivity process that encourages credibility and trustworthiness. The multiple research methods are detailed along with a rationale of how they aim to meet the aims and objectives. The following chapter provides the key findings from the analysis with some contextual background. Each study is presented separately so the reader can clearly understand the various steps taken and how the findings evolved.

Chapter 4 Findings

This chapter presents the key findings from all three studies. The findings from Study 1 are presented as follows:

- A summary of the photovoice¹ results collected during Studies 1 and 2 to depict public health issues faced in rural Kratie.
- Findings from the two groups who took part in the initial workshop conducted in 2014. This includes:
 - Categorisation of public health issues identified in the photographs
 - Prioritisation of one or two key public health issues for exploration
 - Identification of community assets
 - Development of an action plan

The action plan was not implemented in Study 1 as the focus was to better understand the public health issues faced in rural Kratie and to develop an understanding of the capacity of VHSGs to identify solutions and develop a plan. This was then used to inform Study 2 where the action plan was implemented. The VHSGs in Studies 1 and 2 were recruited separately due to the lengthy time gap between the studies. As Study 1 was conducted in 2014, it was unclear who would still be a VHSG in Study 2 which took place in 2016. Therefore, on the advice of the PHD staff, recruitment exercises took place twice and are described in each study. The findings from Study 2 are presented in a narrative format with each workshop method detailed and followed with the workshop outcomes and reflexive accounts of the process. The narrative consists of:

- Accounts of 8 workshops
- Account of meetings with the PHD Technical Director and Health Promotion Officer
- Account of a training workshop that was led by the above PHD staff
- A final reflection of the PAR process

The findings from the semi-structured interviews in Study 3 are presented in themes with contextual background where required.

¹ All photographs with identifying features have been blurred for confidentiality reasons

4.1 Study 1: Identifying public health issues and developing an action plan

Study 1 was implemented in 2014 and consisted of VHSGs undertaking the photovoice exercise followed by one workshop to categorise and prioritise public health issues and develop an action plan. The workshop participants were separated into two groups, each had an RA who had been trained on facilitation techniques and the methods used. A third facilitator translated some of the discussions that were taking place during the workshop so that I could understand the flow of topic areas and offer advice where necessary. The workshop consisted of four sessions as summarised in Figure 13.

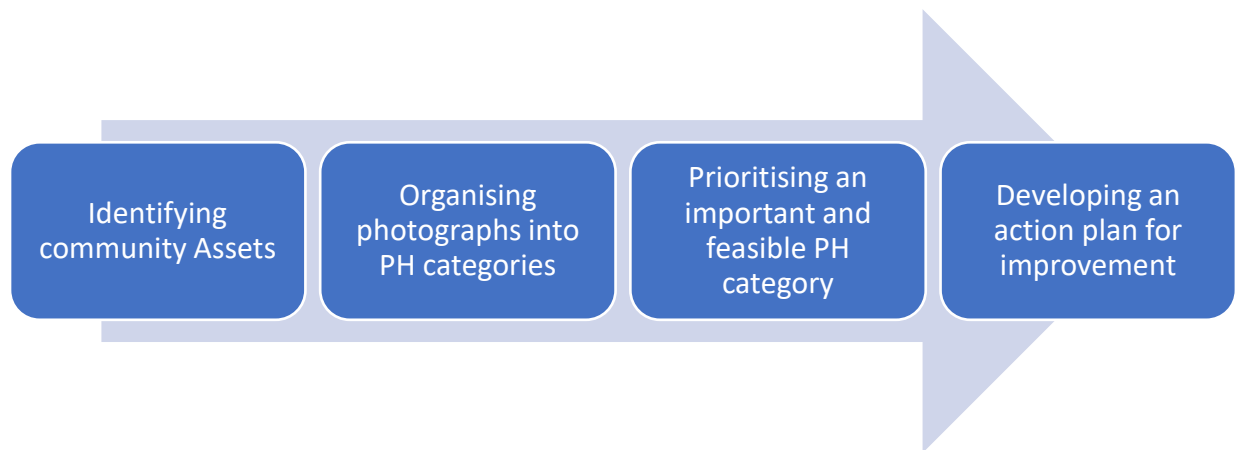


Figure 13 Study 1 Summary of workshop session

A debrief session was undertaken with each facilitator separately to discuss their experiences and interpretations of the workshop dialogue. The debrief outcomes were also summarised in a written format at the time in English. This provided important insights on the workshop process and the characteristics of the participants.

4.1.1 Participants

A total of thirteen VHSGs were selected in collaboration with the OD Director and Health Centre Chiefs to take part in the Photovoice stage and 10 successfully took part. Three could not commit further for personal reasons. The recruitment process aimed to select VHSGs from a range of backgrounds to ensure transferability was achieved as much as possible. Variations included; cultural (Muslim and Khmer communities), geographic (rural and town), and environmental (surrounded by river or central land mass) differences.

Thirteen VHSGs from Kratie district (n=8) and Chhlong district (n=5) associated with six health centres attended the workshop. Ten were involved in the photovoice stage and three additional were invited to join the workshop at a later stage. The additional invitees included two staff from Chhlong administrative OD as there were only three representatives from Chhlong OD attending the

workshop and it was felt there should be greater representation. The third additional invitee was suggested by a VHSG who lived on an island as her partner in the Photovoice stage could not come. The VHSG who was invited and attended was from the same island and understood the health needs of that community.

Figure 14 shows participants' attributes. Male and female VHSGs were selected. Education levels were generally low, with participants having attained up to grade nine education. Seven of the participants also already had a level of power in their communities as they were either a Village Chief or a Deputy Village Chief. The mean number of years as a VHSGs was 12 years. It is worth noting that this high level of experience is not the norm for most VHSGs. For instance, an independent evaluation for another project undertaken by myself in Mondulkiri province found a much larger turnover of VHSGs, with an average of only a year as a VHSG. This may have had an impact on the level of skills and knowledge of the VHSGs in Kratie province. If the research was conducted in another province the outcome might have differed greatly.

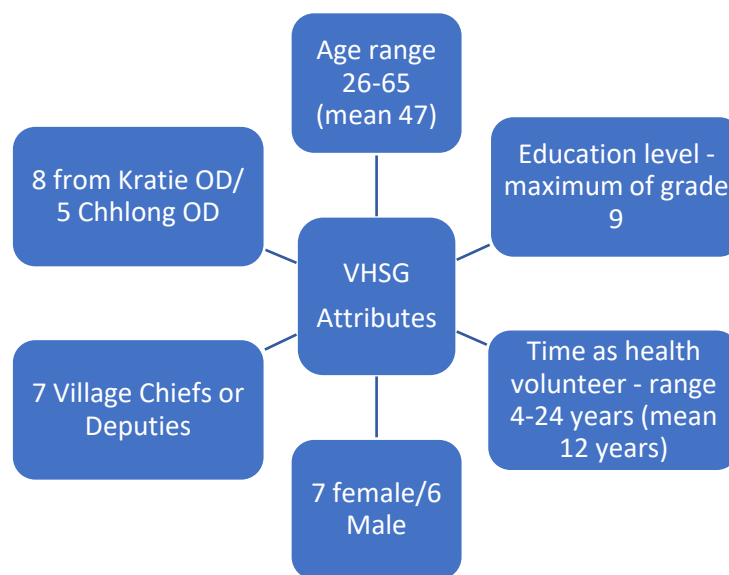


Figure 14 Attributes of VHSG participants in Study 1

During the issuing and collecting of cameras, observations and informal conversations were undertaken with the VHSGs where additional information was elicited. The conversations were unstructured and the direction of conversation changed with each interview. However, the conversations helped situate the VHSGs into a wider context. A summary of the conversations is found in Table 7.

Table 7 Contextual background from VHSGs

Motivation for being a VHSG
<p>The main motivation expressed was care for their community. One VHSG who had retired but was a Village Chief said he had to do it as he was the only one in the community who had the time, others had to work and had families to look after. His position meant he could attend training and had the time to share information with the community. Other more intrinsic motivations included building self-confidence, enjoyment, learning about health and having had previous experience in health either as a volunteer or in short-term paid positions.</p>
Public health topic areas previously covered by VHSGs
<ul style="list-style-type: none"> • Communicable diseases including TB, Malaria and Dengue Fever • Reproductive, maternal and child health including pregnancy screening, healthy pregnancy and child birth, child vaccinations and immunisations, Vitamin A supplementation and family planning • Lifestyle issues including abstaining from tobacco and alcohol while pregnant and second-hand smoke • (Mal)Nutrition • Hygiene and sanitation and diarrhoea • Clean Drinking water
Training Formats
<p>The training formats were workshops, training sessions and meetings. Most training sessions were associated with some small payment which varied depending on length of session and travel to the venue. For example, \$25 for a two-day workshop and 2500 Riel for a meeting with travel costs of around 40,000 Riel. Four major NGOs were mentioned as training providers along with the PHD and hospital, surprisingly the health centres were not mentioned as a training provider.</p>
VHSG roles and activities
<p>The term ‘spreading information’ was used to describe their role: to inform health centres as to what health issues were occurring in the community and to inform communities of the activities that were happening in the health centres. They communicated with community members on a one to one basis and in organised groups depending on the directions from the original training provider. This also meant that VHSGs had to travel considerably. Activities included:</p> <ul style="list-style-type: none"> • signposting community members for diagnosis and treatments at health centres • rallying community members for vaccinations or education sessions • identifying people that needed poor cards (a card to access free health care) to ensure they were not missed out when they were being issued • visit people with poor cards to assess their health needs and direct them to the health centre • search the village for anyone who had a cough for longer than two weeks as a means of identifying TB and send them to the health centre. • educate agricultural workers who sleep overnight, to take mosquito nets and put them over the tree to cover them and their hammocks while they sleep

Competing roles and responsibilities
<p>The VHSGs experienced other demands on their time. This varied depending on age, work commitments, child care duties and other civil duties. For example, seven VHSGs were either a Village Chief or a Deputy Village Chief. These roles have demands that possibly clash with VHSG duties or facilitate them. For instance, part of a Village Chief's role is to identify the development needs of a community and if some of these are health related then they are in a good position to advocate for change. Also, Village Chiefs are well respected and so may have more influence with community members when instigating individual change. Jobs and child care duties may make it difficult to engage in the duties of being a VHSG. There was evidence in the recruitment for this research in that one participant could not attend the workshop at the same time as her VHSG partner as they shared child care responsibilities. This could result in training sessions being missed. Another example was from a VHSG who was a carer for her husband who was sick; she explained that it was not possible for her to travel out of province to attend training as she could not leave her sick husband unattended.</p>

4.1.2 *Participatory workshop from Study 1*

Identification of public health issues in rural Kratie by VHSGs

I have highlighted some differences between the photographs from Studies 1 and 2 to situate the knowledge in a specific time to enable the reader to comprehend changes in seasons and VHSG interpretations of the instructions. The photographs from PV1 were taken during the rainy season and so featured flooding and resulting mosquito breeding grounds, whereas PV2 took place during the dry season after several months without rain and so featured a lack of water from wells which were either dysfunctional or had dried up. In PV2 many more photographs featured poverty as a major public health issue while this was less of a feature in PV1. In PV1 ten participants took 247 photos over a period of several weeks in comparison to eight participants taking 96 photographs over three days in PV2. The reduced time for photo collection in PV2 was due to research time constraints and the need to focus on the PAR process and outcomes rather than an in-depth identification of public health issues. As the public health issues from both PV exercises were similar, the categories are presented together to provide a more holistic view of the public health issues experienced in rural Kratie from two groups across two seasons. Eight categories are labelled below in Figure 15 with example photographs. Explanations of the categories follows.

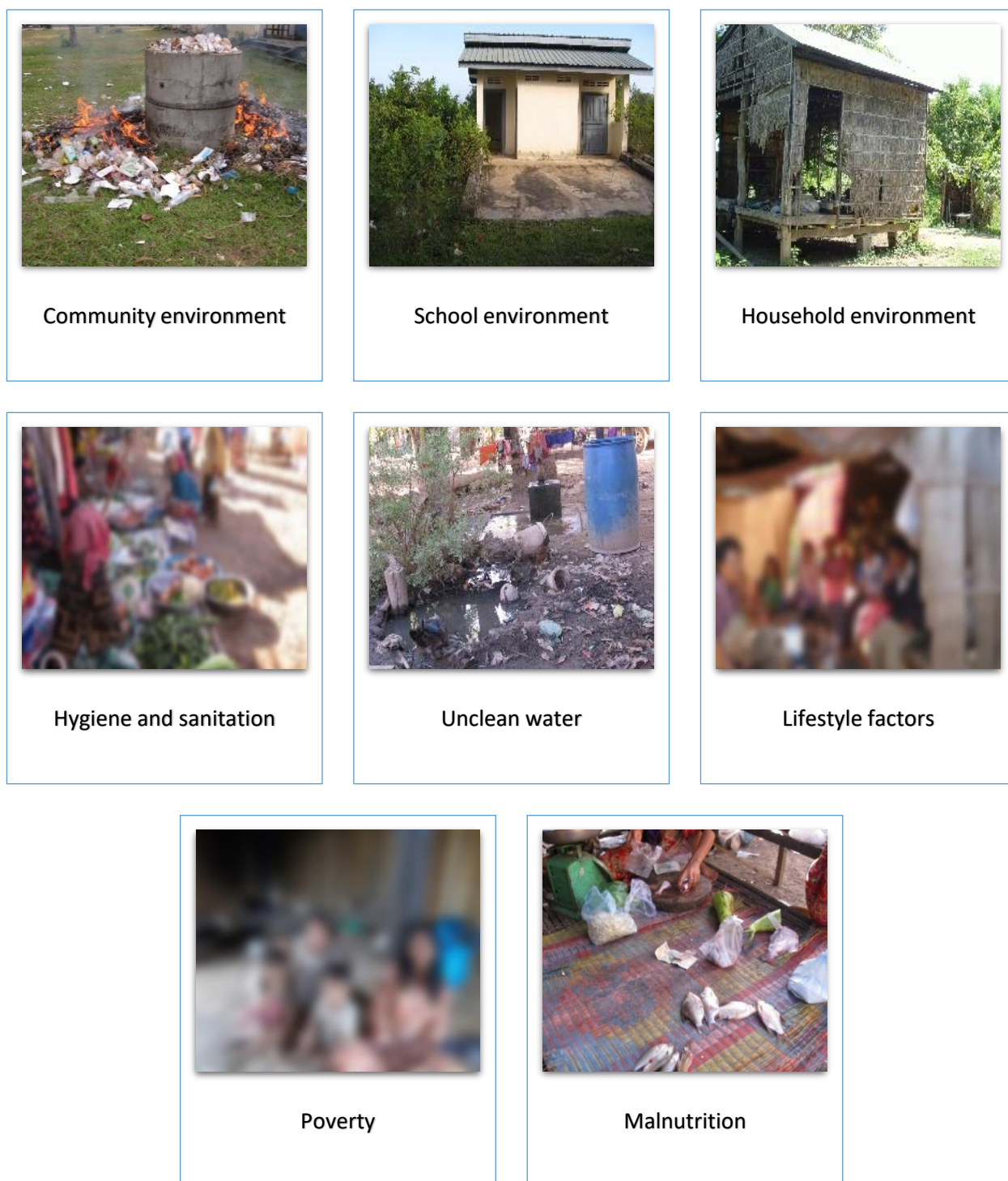


Figure 15 Photovoice categories from Studies 1 and 2 (all photographs with identifying features have been blurred for confidentiality reasons)

4.1.3 Photovoice categories from Studies 1 and 2

Community environment

Unsafe play areas for children were a concern including areas with stagnant water pools and areas with long grass or many plants. These areas were perceived as breeding grounds for mosquitos increasing risks of malaria and dengue. Children were attracted to these areas to play and often care givers would be at work so unable to monitor children. Also voiced were concerns of drowning, snakes and bacterial infections from swimming with buffalo in large water pools.



Children playing near a stagnant water pool and hunting for frogs

Rubbish, either in the community or in mounds on the outskirts was photographed clearly. The risks highlighted by the participants were availability of breeding grounds for mosquitos, danger to children who searched for items to sell or eat and bad smells. One VHSG also highlighted that this was more of a problem during the rainy season as the rubbish could not be burnt. All Photographs with identifying features have been blurred for confidentiality reasons.



Rubbish tip area where animals and children played

School Environment

Concerns were particularly focused around children's access to water for drinking and for using toilets whilst in school. In schools where there was a water well, it was felt it was too difficult for the pupils to use or the well was not maintained so the water was not clean or smelled bad. If there was no water in the toilet the children would use the field near the school. In the rainy season, human waste would be washed into water sources contaminating them.



School toilet that did not have water

Household Environment

The main issue represented was rubbish in and around the household. This was a very visible, easily identifiable public health issue.



Child cooking in an unclean area and waste collecting on the floor under the kitchen area

The participants did speak about an agency that was responsible for rubbish collection but thought they did not do their job correctly. They mentioned that the rubbish was not cleared away effectively and was often not burned as is the expectation. Many households discarded rubbish around the household and did not collect it at all. The rubbish from under the houses, which are on stilts, mixed with animal/child faeces and water left over from the rainy season. This then produced a green sludge that could be seen under and around households.



Green sludge under a house

There were fears of children playing near sludgy areas and that it provided breeding grounds for mosquitos. There were also pools of water and evidence of flooding under households creating the same fear of mosquito increase and bad smells.

Waste handling generally was viewed as a problem, animal waste, human waste from open defecation and waste from cooking, bathing and washing. Without an effective means of removing waste from the households there were many potential public health risks.

Poor households were also brought up as a public health risk, particularly the cleanliness of households and the lack of space to separate eating, sleeping and cooking.



A house lived in by a poor family with no separation of rooms

Hygiene and Sanitation

Hygiene and sanitation issues were depicted in different forms, often pictures of people eating or drinking were captured and explained verbally. Many of the children were not appropriately dressed and this was raised as an issue of skin exposure causing possible injuries, mosquito bites and exposure to bacteria and worms. There were links between children playing in dirty areas and not washing their hands before eating or drinking.



Children eating without washing hands first after playing in dirty areas

Food preparation areas being unclean was a concern, especially where the food was sold to the public. Often food selling areas were on the ground, near rubbish, sludge and animal faeces causing diarrhoea outbreaks in areas of the community. Food sellers and household members were also pictured eating with unwashed hands and without utensils.

Lack of toilets in community venues and households was linked to human waste contaminating the water sources.

Unclean Water (contaminated or untreated)

Accessing clean water in the dry season was an annual problem. Water filters were issued by NGOs in some households but required maintenance and regular cleaning which did not occur so they would break and become useless. The wells in the dry season dried up and many were broken. Some families bought water from a truck but at \$7.50 per container this was unaffordable to many. The VHSGs were educating villagers to have improved hygiene when they were not able to get water to wash themselves or clean cooking equipment.

Many households were equipped with water containers and wooden covers that were meant to be set upon a raised platform to be used for drinking and cooking. However, many water containers were not covered and so animals would drink out of them or insects would be floating in them, thereby contaminating the water. Some were dirty and sat on the ground near waste or rubbish. Some photographs depicted wells that were working but surrounded by rubbish and waste. These children were depicted drinking untreated water.



Children drinking unclean water

Lifestyle Issues

Lifestyle issues was not a common feature. Smoking was the main issue and was pictured near children and in closed surroundings, exposing others to second hand smoke. VHSGs from PV1 had received training on secondhand smoke but some in PV2 had not and were unaware of the dangers. Alcohol was viewed in only three photographs and the only risk highlighted was injury that might occur when drinking and doing building work.



Child at risk of secondhand smoke

Malnutrition

Poor nutrition was depicted in several ways such as a small fish that would feed an entire family, or a child who appeared thin.



One fish this size to feed a family resulting in malnutrition

An elderly woman who was pictured alone was placed in the nutrition category as the verbal description explained how her children did not assist in cooking and she could not cook for herself so experienced malnutrition. Many of the nutrition photographs were taken by one participant who had expressed a concern about malnutrition on her island when the camera was delivered. Being on the island also restricted access to food as travel across the river cost money which some families could not afford. They relied on others who brought a selected amount of produce to the island at inflated prices.

Poverty

Poverty was not created as a category by any of the groups but was a key feature described in the photographs. Therefore, I felt it was necessary to add this as a category for the completeness of the research. Poverty was depicted through photographs of families in poor housing conditions. The descriptions alongside the photographs provided the information necessary to understand the poverty situation. The following quotes help to understand the issues related to poverty and all came from PV2.

Poverty resulted in malnutrition, increased sickness and insufficient necessities like food and clothing.	<i>'The family [in the picture] is poor so don't have knowledge, motivation or power to improve their lifestyle'</i>
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'[the picture shows] some dirty child, not enough food or clothes, not growing properly.'

'She [women in a photograph] is sick and her children also sick as there is not enough food so they are weak'

Homelessness from poverty was also captured	<i>'She has one child but the child is always poor, so she doesn't stay [with her mother]. Her child stays in another village. The lady moves from one house to another doing house work or something, for food and somewhere to sleep.'</i>
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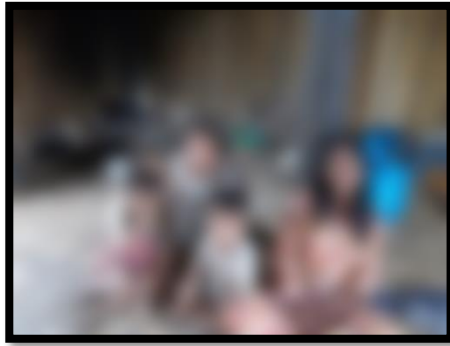
Elderly poor people have no one to care for them so were sick from malnutrition and living in unclean homes.	<i>'She is old and sick and doesn't have enough money, she is poor, her home and her own hygiene is poor, she is not clean and her home is not clean. I [VHSG] don't know how to solve the problem.'</i>
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'She is older and poor and this lady wants an organisation or anyone to help her to give her some money or food or something.'

Family sickness resulted in children being taken out of schools.	<i>'Only the very poor family stops their child attending school. Parents get sick and so the kids have to work. '</i>
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Poor families did not have enough money to get to the health centre or hospital when referred.	<i>'Poor lady, when she is sick she goes to health centre but not enough money for transportation.'</i>
---	---



'She goes to health centre to check the children's health and they need to go to provincial hospital but no money for transportation.'

'All children get sick one after another but they do bring them to the health centre, but sometimes they need referral to the provincial hospital but a lack of money means they don't take them.'

Insufficient income or job instability. One photo depicted a group of men sitting around, they told the VHSG that their job was to transport logs from the forest to the people but now the government had stopped logging in the area putting an end to their jobs so they had to think of a new way to earn money. They were worried about their children in the future. Others also highlighted risks associated with not earning a sufficient income to sustain the family.



'They [husband and wife] cannot grow enough rice because they are sick a lot and so they are not strong enough to grow rice or work on the farm, so they collect cow faeces as a way to earn money to sell.'

'Lady [in the picture] is breaking wood for burning, [her]husband goes to [the] farm all day and sleeps away, so the woman is alone and has to work hard, when the women work too hard and they are pregnant it is a risk to the baby.'

'The husband cannot walk so the old lady tries to earn the money to have enough to look after them.'

(All photographs with identifying features have been blurred for confidentiality reasons)

Other Issues

Only a few participants highlighted clinical concerns, this was due to the RAs explaining that patients were not to be photographed as the research was investigating non-clinical issues. However, some still felt it was necessary to highlight some issues. The main one was that they had asked a community member who appeared ill to attend the health centre but they would or could not due to financial and family restrictions. Two community members had a cough and there were fears of TB.

Lack of care for children and the elderly was photographed several times. There was a risk that children were not cared for when their parents had to work, either selling items or work in the fields.

The children were not monitored during these times and if they were it was by other siblings or grandparents with varying capacity to be a good caregiver.

Study 1 and Study 2: Summary of public health issues in rural Kratie

A summary of the main public health issues and associated causes identified through the photovoice exercises in both Study 1 and 2 are provided in Table 8.

Table 8 Summary of public health issues identified through photovoice

Public Health Issue	Cause
Malaria and Dengue	<ul style="list-style-type: none"> Increased mosquito larvae and mosquitos from; <ul style="list-style-type: none"> Unkempt grassy areas, Packaging waste and general rubbish left in the community, poor disposal infrastructure Stagnant water from flooding under kitchens and near homes Inadequate or lack of clothing and shoes
Accidental incidents	<ul style="list-style-type: none"> Risks of drowning in stagnant water areas Children playing in unsafe areas Snake bites
Malnutrition	<ul style="list-style-type: none"> Poverty through unemployment, disability and age Lack of access to nutritional food
Risks of faecal-oral diseases and infections	<ul style="list-style-type: none"> Lack of access to clean water, not boiling or treating water Broken or unclean water wells, contaminated water sources from dirty clothes or rubbish nearby Poor sanitation practices when eating and preparing food Inadequate housing allowing dust and dirt to blow into the house and one room for sleeping, eating and socialising Open defecation because of no toilet or no water to flush toilets Flooding bringing human/animal faeces into water supply and living areas Human faeces and animal faeces sometimes stored for manure Inadequate or lack of clothing and shoes, particularly with children
Social determinants of poor health	<ul style="list-style-type: none"> Care givers working full time and unable to care for children/parents Neglect, lack of social services and poverty Insufficient income Poor housing

Community Assets

Six areas of community assets were identified as can be seen in Figure 16.



Figure 16 Summary of community assets identified by VHSGs

1. **Education opportunities** for children and students to further their education included a Muslim organisation that sends children to Malaysia to study. Another VHSG explained how the children had access to a shared computer and were able to attend schools and pagodas to further their knowledge.
2. **Improved community infrastructure** included new roads, toilets, wells, clean water tanks and health centres.
3. **Organisational help** consisted of groups such as rice banks, animal feeding and sharing schemes and affordable toilets schemes where the community were given materials to build and sell toilets at vastly reduced rates.
4. **Community support and cooperation** theme demonstrated the community's ability to support each other in times of need. An example was given of how the community would help when there was an accident to bring the injured person to the health centre. Community leaders were mentioned as advocates for change. For instance, a road was

constructed because of the community leader approaching a Vietnamese organisation for support and asking for the community's cooperation to build the road. Another example was given of a small group of community members who saved money together that could be drawn on if a member needed financial help.

5. **Community talents** was a small theme and only two talents were mentioned, that of a wood carver and that of farming.
6. **Improved health knowledge and behaviour** was one of the main themes and included; improved hygiene and sanitation, use of toilets, increased care of child health and increased health seeking behaviour. The role of VHSGs in improving health knowledge and practice of citizens and Village Chiefs was also discussed as an asset.

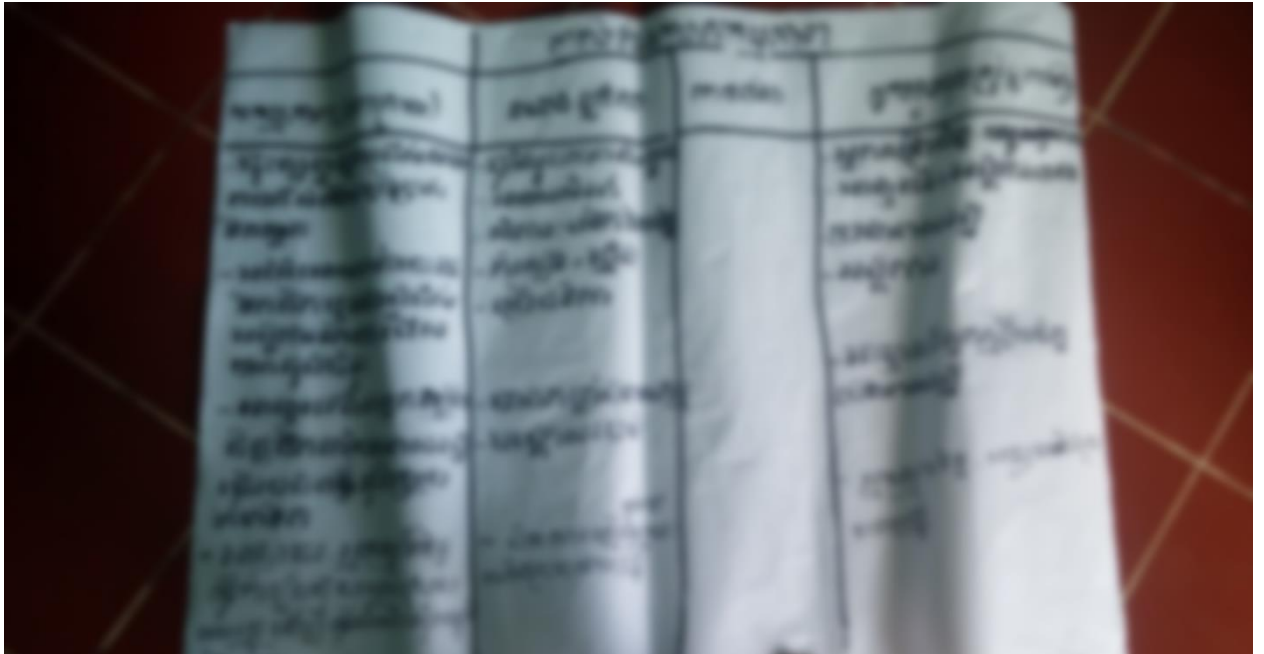
Categorisation and prioritization of public health issues

Each group member was asked to choose a photograph that represented what was the most important public health issue to them in their village. The photographs chosen belonged to the categories of unclean water, lack of hygiene, unclean environment and nutrition.

Participants were also asked to identify a photograph that represented what public health issue would be possible to improve. The photographs chosen belonged to the categories of unclean environment, unclean water, and hygiene. The main reasons given for choosing the photographs included the ability to educate communities and children on hygiene issues, how to avoid mosquito bites, dress appropriately and how to clean water. The two categories chosen by the groups to focus on in the action plan were *unclean water and lack of hygiene*.

Action Plans

The two action plans and written summary of the debrief sessions was organised into thematic areas using NVIVO software. Included in the analysis were solutions that had been discussed throughout the various stages of the workshop, this ensured that the full capacity of the VHSGs to identify realistic solutions was captured.



Photograph 2 Action plan for Group 1

Action plan for Group 1

Activity (solution)	Resource/equipment	Responsible/involved
Spread out info to community about using clean water	Posters, big and small, snack, incentive like soap for washing hands	VHSG, HC, Authority, other organisation
Educate the people to boil water	Kettle or pot, money	Villagers do it themselves
Ask organisation for water filter	Filter	Named organisation
Authority and VHSG lead the people to make the fence around the water source	People in power and fencing material	Authority, VHSG and villager
Authority and VHSG will make a meeting with villagers to make a proposal to get a well for clean water	Document with thumb stamp of the people	VHSG, authority and villager

Action plan for Group 2

Activity (solution)	Resource/equipment	Date	Responsible/involved
Provide health promotion in village about hygiene (drinking clean water, cleaning food, how to make water safe)	Trainers or facilitator, materials, posters	Jan or Feb as not harvest season	Village Chief Organisation VHSG HC staff They can use the tool from home or ask villager to provide just once. Poster from HC or organisation and one VHSG has a poster already
Provide education house by house	Trainer and poster	Same as above	VHSG, Village Chief and health centre staff and villager with high education who joins in lots of activity in village can respond to be a trainer. HC give poster or organisation that works with hygiene or PHD or VHSG may have too
Stakeholder meeting to manage the plan and the activities in the plan and to do an evaluation to share what they learnt from doing the activities	Venue, stakeholders, water to drink, pen and book	Every three months	VHSG, HC staff, Village Chief and anyone involved in the activities, model mother
Increase participants in health promotion sessions	Provide advice to family members		VHSG and Village Chief and Deputy Chief to tell the participants to come, the villagers are busy
Request water resource, pond or well	Material for building well or pond, a budget	Whenever the commune meeting is	Rural Development Department and request a budget from an organisation and ask for a small amount from rice bank and Chief of Commune can plan it with Provincial Department and organisation

Theme 1 Health Education and Promotion

This theme was the most featured. The VHSGs planned activities to provide health education to individuals and families. The VHSGs recognised that health education was part of their role but also that the wider community had a responsibility to educate and promote health in their own environments. School teachers, health centre staff, organisations, Village Chiefs and mothers within the community were mentioned as possible educators. Community members with higher levels of education were also mentioned. Health education topics included personal hygiene, washing hands, boiling water, using water filters, using mosquito larvae killer, cleaning water containers, correct rubbish storage and using toilets. Children were cited specifically as a group that should receive education, particularly on wearing clothes and shoes, avoiding areas with high mosquito concentrations, disposing of rubbish in bins and washing hands with soap. Education formats included house to house education on a one to one basis and classroom education. One VHSG stressed the importance of doing this in coordination with the local authority.

Subtheme: Tools and communication materials

In order to educate effectively a number of items were required, this included communication materials such as leaflets, posters, demonstration equipment and small incentives such as soap. VHSGs also felt that they needed training guides to help them become better educators. The participants identified possible sources such as borrowing equipment from villager households, gaining posters from health centres and Local Authority and one CHW informed us that she already had posters which could be used.

Theme 2 Media and community health promotion

This theme identified wider communication methods such as using media like TV or radio to send messages to the community. Community group health education and promotion sessions featured as a method for communicating to a wider audience. This method was already used by VHSGs, however gaining enough participants in the sessions was a challenge. To solve this, it was suggested that Village Chiefs should promote the sessions to increase attendance. The topics suggested for this were personal hygiene, drinking and eating hygiene standards and risks from poor waste disposal.

Theme 3 Community coordination

The participants reflected how community coordination could lead to change if organised. For example, in order to maintain a water well, it was suggested that a group be identified as responsible

for ensuring the water source is protected and maintained. Similarly, it was thought that the VHSGs together could lead a group to build a fence around a water source to prevent animals and humans contaminating the source.

The participants felt that if the Village Chiefs, health centres and organisations worked with them they could help villagers understand the risks to their own health through poor public health practices. It was thought that if the villagers understood these risks they would be more likely to attend education sessions. One participant shared that the community could be brought together for a rubbish cleaning event where everyone was involved in cleaning up the village. It was highlighted that the VHSGs, Chiefs, villagers, monks from the local pagoda and teachers in the schools should be involved to be role models for the children to follow.

Included in this theme were activities that reflected the ability of VHSGs to utilise advocacy techniques. One of the activities within the plan was to make a proposal for a well to be installed. Once the proposal was developed they would seek a thumb print from local villagers in support of the proposal which would then be taken to local authority. Group 2 suggested something similar but added that the proposal should be taken to the commune meeting held monthly and supported by the Rural Development Department. In addition, a budget could be obtained from an organisation or the local rice bank to further support the project.

Theme 4 External Support

Throughout the workshop, it was evident that the VHSGs were reliant on external support for projects particularly anything that required a budget or resource which they could not access. For instance, it was suggested that water filters could be obtained from a Muslim organisation and a budget could be accessed via an organisation that represented that particular public health issue.

One participant spoke of the importance of the rubbish collection service doing their job correctly. The CHW thought that education was needed for the service provider as they did not ensure the rubbish was tipped into the hole which had been dug for this service, also that they did not burn the rubbish correctly.

Theme 5 Technical solutions

This theme encompassed the more technical, practical application of activities. These included:

- Clean water through boiling, leaving it in the sun or use a water filter
- Ensure everyone has a clean water container
- Encourage the purchasing of toilets through local schemes

- Bury human faeces if no toilet
- Wash hands with ash if there is no soap available
- Use mosquito larvae killer in stored water
- Burn rubbish in the can before it overflows
- Have punishments for children who litter

Facilitator reflections

The facilitator from group 1 struggled getting her group to design an action plan. She reflected that there was a focus on finding money to implement any solutions and stated;

‘This session is more difficult than the other as it was difficult to find the solution and people always find a solution that focus on the budget cause some solution can be done without money but the people always depend on another like organisation and government’. They do not think what they can use.’

There was one VHSG who joined the group in place of his colleague, therefore, he had not taken part in the photovoice section and so was not aware of the entire project. However, he dominated the group with concerns that every activity must be directed through the government. The RA explained;

‘The discussion in the group was difficult because there was one participant that always said that, when other people want to give idea, he said first you have to talk to authority because in Cambodia village before starting anything you have to ask about authority, even taking photos they should ask authority from the Village Chief... One women said to ask for help from an organisation but he said ask authority first.’

She added that without the help of an organisation the VHSGs can only help educate and spread out the information because all the solutions are the same. They do not have the ability to access material or equipment or to create a clean water source.

The facilitator from group 2 reported that participants were engaged in the research and played to their talents. Some were more involved in writing ideas down and others chose to just verbally contribute.

4.2 Study 2: Participatory Action Research

The participatory action research was implemented in 2016 and consisted of eight workshops, two meetings with PHD staff and a two-day training session, each workshop used different techniques and methods as detailed below (Figure 17). In the past, most work by VHSGs had been directed by local government and NGOs where pre-conceived outcomes such as a focus on child vaccinations or use of mosquito nets, were the basis of their work. They had limited space and opportunity to try and implement changes independently of structured organisations with specific instructions. I anticipated that through the creation of this space, VHSGs could be creative, explorative researchers who are leaders of their own co-produced plans without the restrictions imposed by external agents.



Figure 17 Summary of Study 2 activities

The workshop sessions and reflexivity are presented in a narrative format to create order and ensure a day by day understanding was achieved by bringing together all evidence. Therefore each workshop methodology is immediately followed by findings and reflections. Greenwood and Levin (1998) state that narrative structures of local knowledge exchange act as a mechanism to construct, learn, convey and apply action research.

4.2.1 Participants

Study 2 took place between January and March 2016. Before arriving in Cambodia, the Director of the Technical Unit at Kratie PHD was informed of the research by a RA from Study 1 and was

consulted throughout the project. The Technical Director selected Thmey Commune for the research location for three main reasons; 1. it was rural, 2. the VHSOs were not functioning as well as in other Communes and 3. they had less input from NGOs and so would benefit from being involved in the PAR project. The Kratie OD Director, Health Centre Chief from Thmey health centre and Thmey Commune Chief were contacted and informed of the research. At our request, the Health Centre Chief selected eight VHSOs from four different villages for the research. These were contacted by phone and the first workshop was arranged at the health centre.

Eight VHSOs were recruited who were the ‘inside’ researchers. By chance one VHSO had also taken part in the research in Study 1. This was not known until the initial meeting. Most VHSOs worked in the agricultural sector and had minimal education, most only to primary school level. The VHSOs differed in experience, gender, age and social position and because of this there were internal power differentials. Two VHSOs held positions of power due to their elevated hierarchical status as elders, Deputy Village Chiefs and their vast experience as health volunteers. During the workshops, the other CHWs would look to them for answers to our questions before replying themselves. The RAs also looked to them for support when they needed to motivate or explain parts of the workshop that were more challenging. Despite the power differentials the older CHWs were not dismissive of younger, less experienced CHWs; indeed, they provided at times much needed leadership skills. Table 9 shows the characteristics of the research participants. Pseudonyms are used for anonymity purposes.

Table 9 Research participants’ characteristics

Participant	Gender	Age	Experience as a volunteer health worker	Other roles	Distance from health centre
Norn	Female	53	20 years	Deputy Village Chief	6.5km
Lena	Female	58	6 years	Farmer	2kms
Sophale	Female	53	20 years	Farmer	5km
Tha	Female	24	6 months	Farmer	5km
Sambo	Male	65	20 years	Deputy Village Chief	2km
Nita	Male	59	15 years	Farmer	5km
Phaly	Female	24	3 years	Farmer	5km
Tey	Female	25	6 months	Farmer	2km

4.2.2 PAR workshops

Workshop 1 (Jan 26th, 2016) – Introductions, consent and camera allocation

The first workshop with VHSs took place at Thmey health centre. The RAs explained the principles of shared knowledge in a PAR project, photovoice and the research commitments and remuneration. After some brief introductions, it was established that Norn, one of the more experienced VHSs, had been part of the research in 2014. She explained that after the research ended last time she decided to follow some of the action plan through and as a result the pagoda and school were kept cleaner and the overgrown bushes which served as breeding grounds for mosquitos were chopped down by the Cambodian Red Cross on Norn's request. Norn had 20 years' experience working as a health volunteer and was a Deputy Village Chief, she was clearly respected by the other VHSs. She shared her experiences of being part of Study 1 with the group, giving examples of the photos she had taken.

The prepared participant information sheets and consent forms were provided and read out by Sophal. VHSs asked questions and all agreed to take part, consent forms were signed. Sophal thought it was best to read out the consent form and to explain each section so they understood what confidential and anonymous meant. Some VHSs expressed the desire for their names not to be included in the research write up. VHSs age, gender, location, experience as a health worker and regular employment was recorded.

The VHSs were asked to take pictures of anything in the community that may cause poor health or health problems or prevent a person from being healthy. The VHSs were informed that they must seek permission from the person (or parent/guardian in the case of a child) before taking their photograph. The RAs then handed out one camera between two VHSs and assisted them to practise taking photographs. The VHSs were given three days to take photographs in their respective villages. The VHSs chose the next workshop location which was a mini-pagoda not far from the health centre.

Workshop 2 (Jan 29th, 2016) Camera and photograph collection with verbal descriptions

All three cameras were collected in by the RAs and uploaded onto two computers. A total of 94 photographs were returned from all eight participants. The VHSs described what was taking place in the photographs which Sophal and Sothara recorded in Khmer and later translated into English for my understanding. During the descriptions, the RAs asked questions to further understand the context depicted in the photographs. After the descriptions, each VHS was asked to choose five photographs which they felt showed important public health issues. While Sothara finished with the

last few photograph descriptions, Sophal had informal conversations with the VHSGs to get some background information on their regular activities. These were noted down in Khmer by Sophal and later translated to English, some of the findings from those conversations are included below.

VHSG tasks and responsibilities

The roles and responsibilities matched those from Study 1 and so will not be repeated here. VHSGs stated that their work came from NGOs, the MoH, PHD/OD and the health centre. They were required to learn technical information, then teach or inform the villagers and in some cases, follow up with a report. At the time of research, they were working mostly on reproductive, maternal and newborn health following a four-day training session provided by an international NGO. Other responsibilities reported by VHSGs from this study can be found in Table 10.

Table 10 Roles and responsibilities reported by VHSGs from Study 2

Report the number of women they engage with
Report newborns that weigh less than 2.4kgs
Monitor every newborn for 7 days and if they are still alive, register their birth
Collect children for vaccinations provided by health centre staff
Encourage pregnant women to go to the health centres for ANC and PNC
Educate men who work in the fields to cover up with long shirts and trousers to prevent malaria from mosquito bites
Encourage people to go to the HC when unwell and not to use traditional medicines
Promote public health facilities instead of the private more expensive facilities
Identify people eligible for 'poor cards' for free health care
Assess those with poor cards for health needs and direct them to health centres

During the research process the VHSGs had been asked by health centres to find any children under the age of five years so they could measure their height and weight and provide vitamin sachets. The VHSGs were not part of the measuring process but stayed to observe. They were not trained or recruited to provide advice on the vitamin sachets or to support families using them or improving nutritional eating habits.

Reflexivity following Workshop 2

There was evidence during the photo collection process that some of the VHSGs viewed us as an external organisation that brought funds to improve health. NGOs, for many years, have provided services, goods, training and infrastructure to improve health. Being an outside white researcher from a high-income country created this anticipation. During the initial training sessions with the RAs I had to ensure they understood that I did not come with a large budget for the VHSGs to access, rather we were providing a communicative space to investigate what ‘Cambodians could do for Cambodians’ without the input and instruction from external agencies. This slogan, although used informally as a simplified way of communicating the need to investigate possibilities without specific input from NGOs, stuck for the remainder of the research. I had explained that as Cambodia increased its income and began to develop from a low-income country to a middle-income country that many NGOs would leave to support countries in more need. They understood this and showed a real interest in the idea of ‘Cambodians helping Cambodians’. During the first session, the RAs explained this to the VHSGs. However, it took time for the VHSGs to accept that I really did not come with funds. This was evident in the photographs taken by one VHSG that depicted poor families, women and elders standing in front of inadequate housing. She said the people in the photographs were asking me for help, to provide money, food or something to help them. In Sothara’s recorded reflection she stated;

...when the VHSG take the picture of them [poor villagers], they think that our [research]team [can] help them by either money or [give] other thing to them, because they always...request [us] to help them buy many things, like make the toilet, the well or [give] the money for them.

I felt my positionality had influenced the photos being taken and the VHSG wanted to help these families by showing their need to me through the photographs. I asked the RAs to once again explain that the project was research based and that funds were not available, but that during the next session we could discuss what other ways were available to help the poor families. Managing expectations was difficult and challenged my ethical position regularly, was I promising to deliver ‘better health’ simply by being there? Another example of this occurred when the mini-pagoda filled with villagers, as the VHSG asked them to leave she had to explain that I would not be providing gifts, Sophal explains;

... she [the VHSG] stood up and face everyone, um and told them that this is not giving the gift, this is just the work and it's, it's only for the VHSG and the researcher only, it's not for them so then they leave.

The association between being an outsider and bringing gifts or aid was so engrained and I had to be aware of this throughout the research process.

Reflexivity of the RAs role

The location and space used for workshops had to be thought through, preferably (I thought) a politically neutral space was required. However, in the interest of deconstructing power balances, we asked the VHSGs where they would like to conduct the workshops and they chose a mini-pagoda (wooden structure on stilts without furniture, electricity or water) which was also open to the public. Workshop 2 took place there. The photographs taken by the VHSGs of public health issues were sensitive in nature. Within minutes of the workshop at least 20 villagers had entered the mini-pagoda and immediately collected around the laptops showing the pictures. The ethical implications were clear and I shared my concerns with the RAs and requested that they politely ask the villagers to leave. However, I had not understood the cultural implications of who should remove the villagers within the context of the hierarchical society of Cambodia. Even though I knew from reading and observing that Cambodia held strong to hierarchical traditions, I didn't understand how that translated into reality at the community level. The RAs told me they could not ask the villagers to leave, it would be disrespectful and they were uncomfortable with me asking them to take control. However, they solved the problem in a culturally appropriate manner by seeking the help of Norn. She then instructed the VHSG who was active in that village to tell the villagers to leave the Pagoda, it was her village and therefore her responsibility. I learned two things, one that there was a leader amongst the VHSGs who would continue to lead the group throughout the research and two that I had to relinquish control and trust the RAs to handle situations. From this point I understood that the RAs would facilitate and navigate such cultural differences and as Flaherty and Starcova (2012) state, would be the conduit for all interactions no matter how trivial.

Workshop 3 (February 1st, 2016) – Asset mapping, photograph analysis, public health issue selection and identification of root causes

I produced a workshop guide in English and trained the RAs on the methods used. They spent time discussing the guide together and translating it to Khmer for ease of delivery and cultural appropriateness. The session was broken up into sections which are described below.

Ground Rules

At the beginning of the workshop the VHSGs and RAs together, established some ground rules;

- Come on time
- Phone on silent
- No talking outside the workshop (this referred to confidentiality)
- Be focused
- Not talk about the photo to other people
- No interruptions (when someone is speaking)
- Everyone has the right to speak

Community Asset Mapping

The RAs facilitated the session based on the following dialogue:

‘We are going to draw a map of your villages and on the map draw all the good things about your villages, these are called community assets. These should not be just related to health but just anything that is good. For example, pagoda and schools. We want to understand what makes your community a good place to live, what is special about the people in your village, what makes your community strong and makes your villages work together. In order to address problems, we must first identify our strengths. We must appreciate what we have before we focus on what we need. So, from now start thinking about the positive things about your village, your workplace, your pagoda, and your schools and put them on the map.’

Following this the VHSGs began to draw the map initially without prompts. Photograph 3 shows the finalised version of the map.



Photograph 3 Map of Community assets

The RAs felt that at first the VHSGs did not understand what community assets were and so they gave the example of a rice bank. The VHSGs immediately marked all the rice banks on the map but struggled to identify community assets without additional prompting. For example, VHSGs identified toilets and water wells as assets (which they added to the map) but not schools. A discussion took place with the RAs to further clarify what a community asset was and then they began to write down several organisations which are listed along with their function in Table 11.

Table 11 Organisations named as community assets

Oxfam – Donates water filters and provides toilets.

Red Cross – Cleans the environment such as cuts overgrown trees and removes rubbish, also provides first aid/emergency care.

Samaritans – Helps to build schools.

CED – Gives water tanks to collect water, donates water containers to villagers and educates about domestic violence.

Marie Stopes – Pays for birth spacing (contraceptives) so the health centre can give it for free.

Save the children – Built a waiting room for pregnant women who live far from the health centre so they can come before their due date and wait to go into labour. They also gave money to pregnant women for health care and supplied mosquito nets for newborns.

VATANAK PHEAP – Educates people about development in the village and informs the villagers about what money is available. They also give free advice about anything to do with the commune, such as the rice bank or the school.

ROLIP – Provided a chicken bank

KAFDOC – A local NGO that has a coordination role linking villagers to community loans.

Micro-finance- Provides loans for people to open a business which are then paid back monthly.

VHSGs were asked to name other community assets not associated with NGOs, Table 12 shows these;

Table 12 Community assets named by VHSGs

Livestock bank where an individual helps care for another's animal such as a cow, the first calf produced by the cow belongs to the owner and the second calf goes to the helper or they may sell the animal and split the profits.

A Commune Fund initially set up by an NGO. The funds come from raising livestock, that is then sold when fully grown. The funds then remain in the commune for development purposes. However, the VHSGs stated that although the funds belong to the villages they were not being used.

Rice bank as described above.

A wealthy person in the commune who buys water tanks for the pagoda and poor families.

A traditional dancing group from the schools, they dance at parties or when they have a celebration

A class for teaching people about making clothes, how to cut and sew.

Traditional music classes for free.

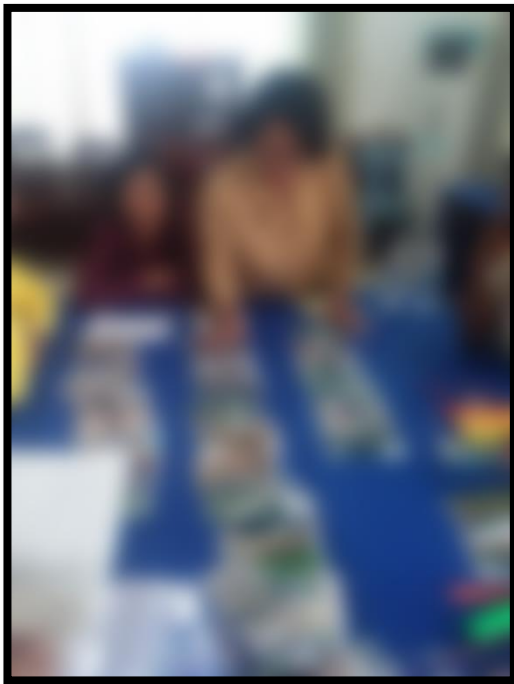
A Youth group.

Some clean wells and toilets.

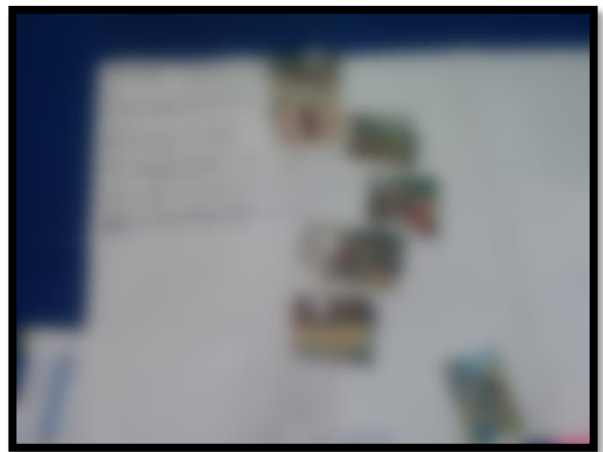
The RAs and I reminded the VHSGs of these community assets when designing the action plan and asked that they think about how these could help them improve health. They discussed the Commune Fund but dismissed it as something that was used for roads or schools and they spoke about the youth group but felt that they were geographically too far away to make a difference. Further discussions did not result in actions to incorporate the assets.

Categorisation and health issue selection

Following the asset mapping exercise participants were given the selected printed photographs and allowed time to discuss the photographs and what they depicted. They were then asked to place them into piles of similar health issues and to label each pile as a health category. Then, as a team, they selected one or two health categories, to try and improve through the design and implementation of an action plan (Photograph 4 and Photograph 5). This process was similar to Study 1 except the participants were aware that the action plan would be implemented following production.



Photograph 5 Two VHSGs organising photos into public health categories



Photograph 4 Public health category list

The categories from both groups are listed below with example photographs and descriptions.

Sopha's group identified six categories depicted in Figure 18.



Figure 18 Public health categories identified by Sopha's group 9 (all photographs with identifying features have been blurred for confidentiality reasons)

The categories from Sopha's group came with the following descriptions;

- 1. Diseases.** Caused by mosquitos breeding in stagnant water under kitchens and near homes, in discarded rubbish and in areas of darkness such as where rice is stored. Diarrhoea and intestinal diseases are caused by poor hygiene practices.
- 2. Malnutrition.** A result of poverty and not enough food.
- 3. Lack of water and unclean water.** A result of unclean or broken wells. Some wells have dirty clothes or rubbish around them creating a hygiene risk.
- 4. Poor hygiene.** Rubbish discarded near the pagodas. Inadequate housing which allows dust, dirt and rain to blow in the house. Preparing food near the dusty, dirty ground. A deceased person buried in the ground near the house. Rubbish on school grounds.

5. **Children play in dangerous places.** They jump over concrete posts and around wood which is heavy and could hurt them.
6. **Animal faeces.** This is collected and stored near the house to sell as manure.

Sothara's group identified four categories as shown in Figure 19.

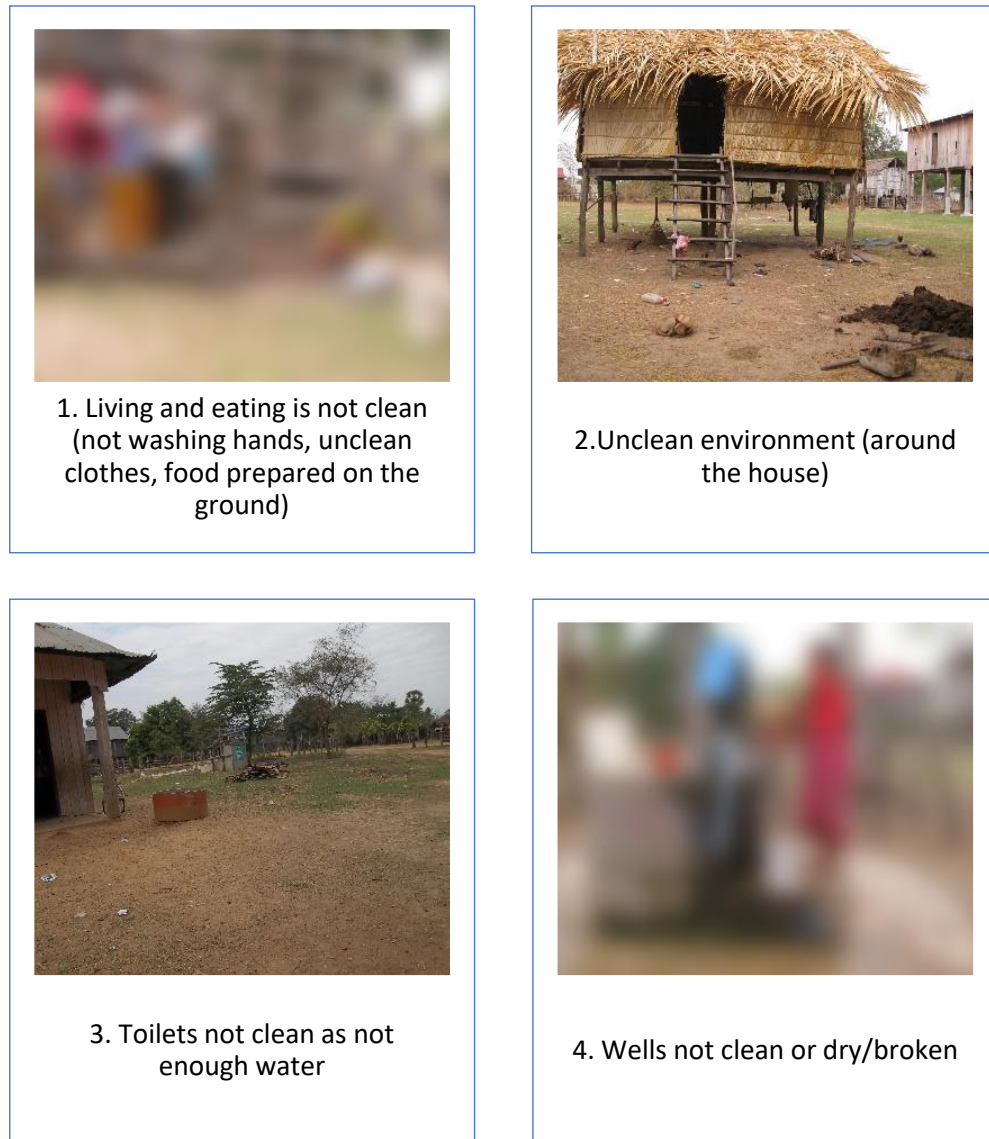


Figure 19 Public health categories identified by Sothara's group (all photographs with identifying features have been blurred for confidentiality reasons)

The categories from Sothara's group came with the following descriptions;

1. **Living and eating is not clean.** Not washing hands with soap. Water containers don't have a lid. One lady sold food to customers which is not prepared hygienically. Families use well water without filters or boiling. Cooking takes place outside the house where dirt and dust

contaminates it, food is prepared on the ground such as noodle pressing. Not enough clothes and shoes so families and children are always dirty.

2. **Environment not clean**, impacts on the villager's health by causing sickness like diarrhoea, malaria, dengue and throat infections. Uncut grass and trees provide mosquito breeding grounds. Houses have rubbish and animal faeces around them.
3. **Toilet not clean** because there is not enough water so the villagers practice open defecation resulting in insects transferring diseases from the faeces to their food.
4. **Wells are not clean or dry/broken** causing bacteria and mud with bad smells. Animals sleep near the wells mixing faeces and water. Wells broken or run out of water in the dry season.

Interestingly neither group created a 'poor or poverty' category even though that was a focus when the photographs were being described. The two groups then came together and decided the two health issues they would like to focus on for the action plan were 'Water problems'; with wells, including cleanliness, function and water shortages and 'Unclean environments' in the village and within villager's homes.

Root causes of 'water problems' and 'unclean environment'

The two groups together discussed the root causes of the two health problems, these are presented below in Figure 20 and Figure 21.

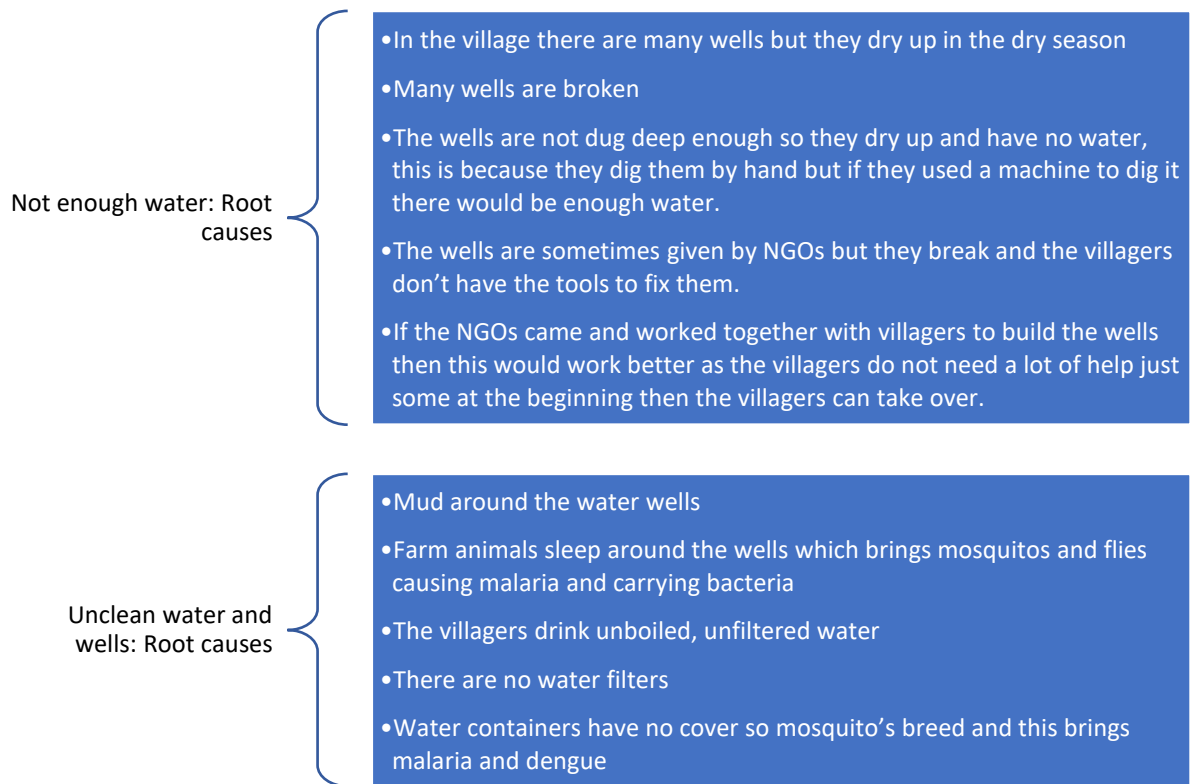


Figure 20 Root causes of water problems

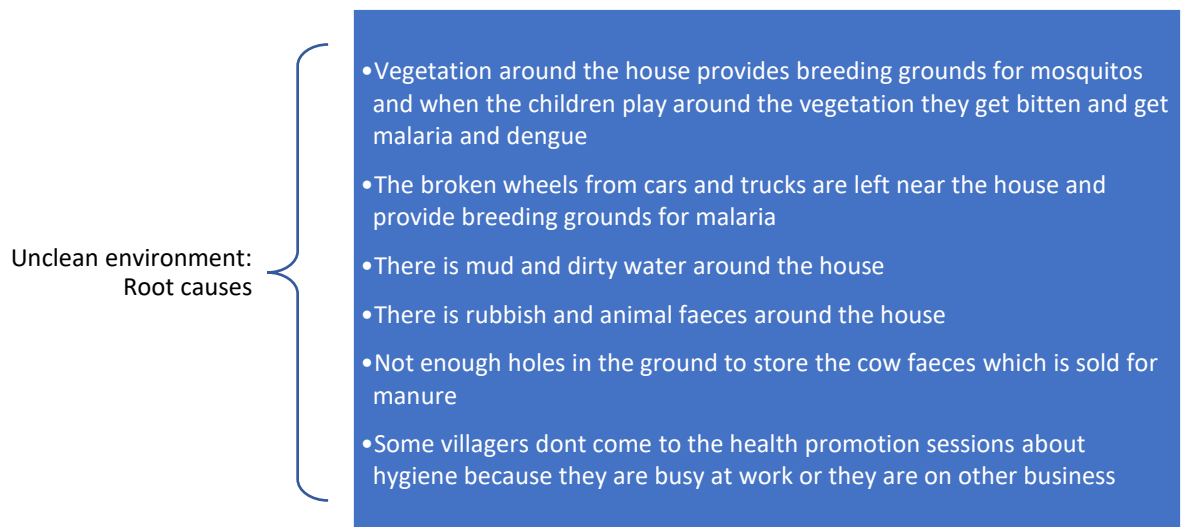


Figure 21 Root causes of unclean environment

Reflexivity from workshop 3

When listening to the audio recording from each group, Sophal translated a discussion which occurred between the VHSGs while Sophal was away from the table on a phone call. The discussion highlighted that one VHSG was suggesting that they choose a category that was easiest to implement in order to make their job easier. I wrote in my diary;

In Sophal's absence they discussed choosing a category that would be easy and so they would not have to do as much work. We were both surprised by this and felt that the PAR ethos was perhaps not working as well as we had hoped.

However, as we continued to listen to the conversation, other VHSGs spoke about choosing a category based on its importance to the community and not for ease. What the 'secret' conversation highlighted is that perhaps the VHSGs held back in our presence. We speculated on the reasons for this. The project was still in its infancy and so perhaps the VHSGs did not feel comfortable enough to be completely honest. They knew each other very well but we were outsiders. They may also not have wanted to offend us. This lead onto Sophal reflexively assessing his observations of the VHSGs behavior and his own positionality, I wrote about our conversation in my diary;

Sophal said he also felt that they [VHSGs] watched and waited for his response before making decisions and he felt perhaps his response was not always correct. He felt the VHSGs were not responding to their true feeling but rather saying what they thought was the right answer. Sophal feels that he can say something or has a facial expression and it can change the course of the whole conversation or decisions made by the VHSG. They are relying on him to choose the right thing. Sophal gave me an example, during the mapping session the RAs knew nothing about the villages and so the VHSGs fully took over, however once the RAs show they have any opinion at all the VHSGs react to this. Sophal and I discussed this and feel we need to give more space to VHSGs without so much facilitation in order to get a realistic outcome.

Sophal could identify that his insider and outsider transient position in the research meant that he was impacting the research process and was worried that this would bias the research in some way. I was unsure what was the best advice in this situation and struggled with the PAR ideology versus research outcomes. We were a research team together so could have some influence but if we were changing the research outcomes based on facial expressions or comments, weren't we also biasing the findings or misleading VHSGs to answer in our favour? We discussed this together and decided the following;

After our feedback session in the evening we decided to change the structure of the next session to allow more freedom and independent activity for the VHSGs. We decided not to facilitate the action plan but to ask if they would be happy to make an action plan and then leave them to do this while we waited outside in the tuk tuk. We thought this might allow for a more honest planning session and free flowing discussion. (my diary)

Workshop 4 (February 3rd, 2016) – Assessing possible solutions to root causes and producing an action plan

This session continued from Workshop 3. The RAs presented the flip charts from the previous session displaying the root causes of the two health issues they chose. The VHSGs then discussed possible solutions to the root causes which are presented below. A basic action plan was then constructed with actions to be completed by the following week.

Proposed solutions to ‘water problems’ and ‘unclean environment’

During the solution finding process, the RAs asked VHSGs what also could be done without NGO support to improve health in the villages. The slogan of ‘Cambodians helping Cambodians’ was repeated. The following solutions were suggested.

Not enough water and unclean water and wells: Solutions	Unclean environment: Solutions
<ul style="list-style-type: none"> • Educate the villagers to remove the mud from the basket wells (mud builds up and blocks water flow) • Organise a collection of money from the people in the village to fix the pump well • Educate the villagers to use dry soil to cover the wet mud by the wells (mud provides mosquito breeding grounds and attracts animals to lay in it) • Continue to educate the people to drink boiled water or safe water 	<ul style="list-style-type: none"> • People need to join together to clean the environment • Cut the trees or forest around the houses • Cover mud around houses with dry soil (mud provides mosquito breeding grounds) • Burn car wheels or place them in a garbage hole (discarded wheels provide mosquito breeding grounds) • Make sure each family in the village digs a hole in the ground to put the cow faeces (the acceptable way to store this manure)

Challenges and limitations to solutions

From this a discussion about improving these health issues took place and the following themes arose.

Activities already taking place and out of scope for VHSGs

There were already several activities taking place or planned, by agencies or the government, to fix wells or to build more. For example, some VHSGs had already made a request to the Commune Council, along with the estimated costs, which was put forward by the Commune Chief to the Ministry of Rural Development. If the request was accepted it would be built into the plan for the following year. Once a proposal was submitted in this way the VHSGs could only wait to see if it had been accepted and would go forward.

NGO dependency

There were discussions about international organisations coming to supply items or support and a clear dependency on NGOs was evident. For instance, they said Red Cross would come and clean the environment, Save the Children would fix maternal and child health issues, Oxfam would come and provide wells and another NGO had said they were going to build an additional ten wells. One VHSG suggested we wait for these organisations to solve the issues and not try to fix them ourselves.

Lack of respect from villagers

The discussion about solutions started off with a focus on education for villagers on healthier practices. The VHSGs discussed that health education was not enough and often did not result in changing behaviour amongst villagers. VHSGs reported that they had no influence or power over villagers who challenged them as to who they were to tell them what to do. This was a particular problem for younger, newer VHSGs who repeatedly said it was easier for the elder VHSGs who had the duplicate role of being a Deputy Village Chief as the villagers would listen to them. In addition, Tey (a younger less experienced VHSG) had not been elected into her role by the community as was the identified procedure in the Community Participation Policy for Health. Instead the previous VHSG was no longer able to do the role and Tey was told to take on the role by the Village Chief.

VHSGs felt that the villagers would only attend group health education sessions if there was a promise of a gift or some money, otherwise they had little incentive to come. The phrase 'no money, no participation' was also repeated and joked about as a tradition across Cambodia. Achieving behaviour change with poorer villagers was particularly difficult as they had little time to listen to health information and to follow healthy practices as they spent all their time searching for income possibilities and working when possible. The education level of community members was often low which further challenged their ability to understand complex health information. For example, some community members were not familiar with linking poor health practices to ill health such as washing hands before eating or after toilet use.

Engaging Village Chiefs

The VHSGs stated that their respective Village Chiefs or deputies from their villages (who were not VHSGs) did not follow good health practices themselves even though the VHSGs had spoken to them about it. As they were leaders this impacted how the community responded to VHSG health education and advice. Some VHSGs were not comfortable asking their Village Chiefs for support and even fearful as they had experienced negative attitudes such as being told they were too young and not to be disrespectful by challenging elders. We discussed engaging Village Chiefs in the research by inviting them to a workshop where we could present the research findings to date. Some of the VHSGs stated the Village Chiefs would never come without payment. They told us that we were seen as an organisation and organisations paid for the time of Village Chiefs. They also highlighted that they as research participants were given a small amount to participate and the Village Chiefs would therefore also expect money. The RAs and I explained that Village Chiefs were already paid by the government for their role and therefore did not need additional remuneration, unlike the VHSGs as unpaid volunteers. We also highlighted that Village Chiefs had an interest in improving the development of their villages and that this could be part of that role. It was suggested that they ask them and if they said no, then nothing would be lost. The VHSGs seemed dismissive of the idea.

Other barriers

Other barriers to improving community health were a lack of resources, equipment or tools to fix or build wells, a lack of skills or knowledge to fix pump wells, a lack of motivation from villagers to clean, maintain and fix wells and finally other demands on the VHSGs time such as work and family commitments as well as attending training and undertaking activities from NGOs, the MoH and health centre.

First action plan

This task proved more difficult compared to study 1. The VHSGs had spent a long time discussing barriers which may have resulted in a more negative mindset. The RAs and I reminded them of the community assets they had identified in the previous session and asked that they think about how these could help them improve health. A basic action plan was constructed with actions to be completed by the following week. However as can be seen below, the timelines were short and the steps were not broken down into smaller actions such as how were the villagers to be recruited to help clean, when the 'Well Committee' met and who would be able to clean the mud from the well. However, as this was the end of the session we decided to see what would happen in the following

week and reflect on the implementation process and the action plan itself at the next session. Table 13 shows the action plan developed by VHSGs with minimal input from the RAs.

Table 13 Action plan 1

Activity	Participants	Resources	Date	Responsibility
Clean the village	The villagers and Village Chief	Knife, digger, axe, basket, broom and plastic bag	06.02.16	VHSG and Village Chief
Inform Village Chief before doing anything	Village Chief, villagers and VHSG	As above except plastic bag	No date	Village Chief and VHSG
Educate people to know about lack of water in the commune	Villager, leader of the 'Well Committee'	Remove mud from basket well or the pump well	07.02.16	Village Chief and VHSG

Reflexivity from Workshop 4

The RAs and I began to understand the challenges experienced by the VHSGs when trying to perform their roles. The hierarchical nature of Cambodian culture hugely disadvantaged the younger less experienced VHSGs and this manifested in disrespect from villagers.

The RAs and I had another discussion about how we were still perceived as an organisation by VHSGs and that no matter how many times we tried to challenge this, the opinion remained. I reflected on the fact that I provided the VHSGs with a small amount of money (\$10USD) for attending the workshops. Although this was meant to cover travel, child care and possible loss of income, it also re-enforced both the RAs and my position of power. This was a challenge as morally I felt it was right to provide remuneration for their time, but it also presented barriers to breaking down power structures. I was placed in the same category as a NGO worker, meaning that I came with funds and an agenda that the RAs and participants would do their best to help me with. This preconceived view of my role caused confusion as to the purpose of the research. Initially the RAs and I spent time trying to create an equal environment desirable for a PAR project, however as the research progressed I realised that I visually, audibly and financially represented an individual with more power.

Workshop 5 (February 9th, 2016) – Village Chief attendance and action plan reflections

The RAs and I did little planning for this workshop as we wanted to give space to the VHSGs to discuss the implementation of their action plan, however on arrival this changed for two reasons. Firstly, the VHSGs had not conducted any activities from the action plan due to the Chinese New Year and malaria training, secondly two Village Chiefs were in attendance. We were told that three had been invited but one had a previous commitment.

Village Chief attendance

Two VHSGs took it upon themselves to invite their Village Chiefs. We had not prepared for this so the session changed. Thus, the RAs showed some key themes discussed from the previous week in the form of a table (Table 14) and asked if the VHSGs thought the table was an accurate summary (the summary was in Khmer). The summary also presented key discussion points for the Village Chiefs. This also served as a way of bringing the Village Chiefs up to date with our discussions without naming any VHSGs and so protecting their input.

Table 14 Themes identified from Workshop 4

Health problem	Out of scope	In scope/action	Barriers	Opportunities
Lack of water	Build wells	Unblock the wells	Lack of skills, equipment and tools	Experience of older VHSG
Unclean wells	Fix pump wells put in place by organizations	Clean the environment around the wells	Always waiting for aid and NGO's help	Good examples
		Educate the people about the lack of water in the villages	No cooperation from villagers to clean, maintain and fix wells and village	Ideas and imaginations
				Ask students to help
Unclean environment		Make an activity to clean the village	Not enough power for VHSG's, especially the younger ones	Community assets like schools, pagoda, rice bank
		Make activity to give the information to Village Chief before they do anything	No money/reward no participation	Continue to educate the villagers over and over
			Villager don't want to be told and if they receive advice they still don't follow	Give education at individual households for those that don't come to the meetings
			Cannot request support from Village Chief	Ask the people that won't come to education sessions to go to the health centre sessions as maybe they respect them more
			VHSG have much demand and work to do	
			Rich families don't come to education sessions and do not clean and practice hygiene	

The summary sparked some debate that it was not only poor families that did not attend or engage in healthier practices but some wealthier families also had poor hygiene and cleaning practices. This was added to the summary on request.

One of the elder more experienced VHSGs who was also a Deputy Village Chief and had a lot of experience felt that everything that could be done to improve the health of villagers was already done and that it was now in the hands of the government so the VHSGs couldn't help further. He was the same VHSG that had tried to steer the group towards an easy option when picking the categories. This was not discussed further and did not hinder the progress of the research but rather was an indication of his reluctance to work independently from government or organisations.

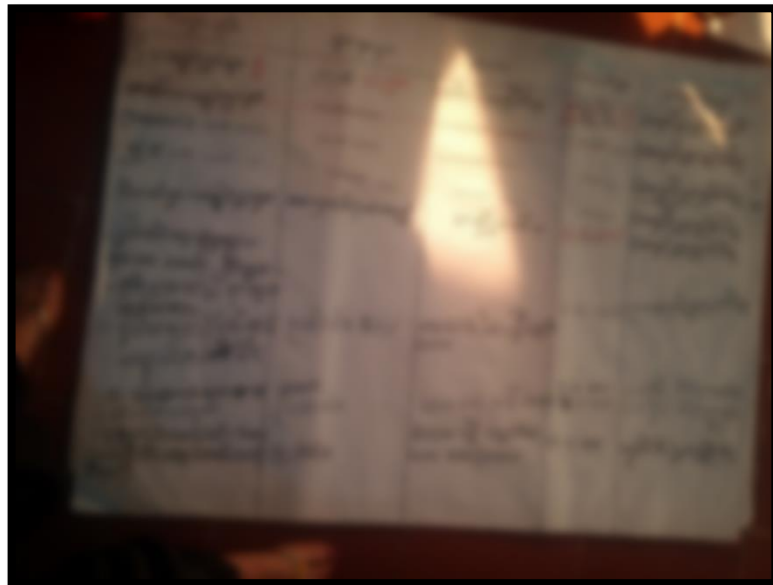
Second action plan with Village Chief input

The Village Chiefs together with the VHSGs re-structured the action plan. The Village Chiefs had an impact on the action plans due to their knowledge of planning. I was aware of their familiarity with making action plans as during my previous fieldwork I had attended a session where Village Chiefs were trained on assessing development needs and producing an action plan for presentation at the Commune meetings. The Village Chief's input helped the VHSGs structure their plans a little better and one Village Chief suggested breaking the plan down by villages. I wrote in my diary;

One Village Chief said it is not out of scope to fix wells and even said he had and would again, sell a cow to fix or build a well. However, he was very domineering and strong during the meeting. He cared about the village a lot and the VHSG in his village said he supported all activities and was very active. The RAs felt that he was very good and supportive as a Village Chief. ...The second Chief came with one of the younger new VHSGs who had stressed her bad experiences when trying to educate in the community and she had said her Village Chief was not supportive so I was pleased to see him there. It gave us a chance to engage the Village Chief in supporting her efforts. The RAs got across to the Village Chiefs that NGOs would not be here forever and this project allowed the VHSG and Village Chiefs to think of ways for villagers to help themselves.

The Village Chiefs left the group after about an hour and the VHSGs continued to reflect on the new action plans and the activities that had taken place during the week. The VHSGs recognised that they had different needs in their respective villages and discussed what should be addressed. This personalised the plans and made them more relevant and realistic. The specifics around the number of villagers to be involved and what they would be doing was also made clearer. Norn who was well respected in her village and therefore more likely to be able to raise money from villagers, knew

that she would approach 62 families. She was confident that the majority would contribute but if it was evident that some families did not have the money she would not ask. They identified that only 40% of villagers used the particular well referred to in the plan and so would gather them together to help clean it. Phaly and Nita thought their villagers needed education around the importance of cleaning and maintaining cleanliness around the well and so identified education as a plan. Finally, Lena and Sambo felt the hygiene in the home was more of an issue for their village and would educate 20 families who they identified as problem households. Sadly, two VHSGs had been involved in traffic accidents and were injured so could not attend this session. One of these had been taken to Phnom Penh and hospitalised so could no longer take part in the research. Deadlines for actions were within a week (except for Norn, who would fix the well after 2 weeks) and so we arranged to revisit them a week later. Photograph 6 shows the action plan which was produced in Khmer and Table 15 translated to English by the RAs.



Photograph 6 Action plan 2

Table 15 Action plan 2

Activities	VHSG	People Involved	Resource/Equipment	Date	Person Responsible
Village: 1 broken well	Norn	62 families in the village	Raise the money from villagers to buy tools from the Ministry of Rural Development	Start raising money on 12 th Feb and fix it on the 26 th Feb	VHSG, Village Chief
Village: Clean one well (the west one) there are 120 families and only two wells	Tey	40% of the village	Shovel, rubbish basket and broom. Buy from Ministry of Rural Development. Burn the rubbish or keep in a big hole.	11 th Feb, one day to clean	VHSG, Village Chief,
Village: Educate people to clean the well	Phaly and Nita	villagers	Shovel, rubbish basket and broom as above	9 th educate 14 th start cleaning	VHSG, Village Chief
Village: Educate the people to understand the problems like clean around the house and in the house like clean kitchen	Lena and Sambo	20 families	Rubbish basket, plastic bag, broom, lighter to burn	13 th Feb to educate	VHSG, Village Chief

Shared knowledge and experience

After the action plans were complete the Village Chiefs left the group. Discussions that took place after included advice from the more experienced VHSGs as to how they have handled challenges and negativity from community members in the past, I wrote in my diary;

A major part of the workshop was more experienced VHSGs giving advice and examples of good practice in the community. Norn has 20 years' experience and many innovative ways of getting villagers to implement health improvements. She had a cousin who would not clean up mud under her house, she told her again and again about the health risks but nothing happened so she collected Red Cross members and students from the school and went onto her property and they cleaned it up. She said her cousin was so ashamed she never let the mud build up again. Sometimes she has difficult families who

won't listen but she keeps educating them and won't stop. If they don't believe what she says she arranges an education session at the health centre so nurses and midwives back her up. She was advising the new VHSGs to always go with the Village Chief until they gain respect. The new VHSG had a lot of abuse from her villagers and struggles to communicate with them. The RAs advised the new VHSGs to spend time with Norn to learn from her. They [other VHSGs] feel Norn is [geographically too] far away and it's difficult to spend time together.

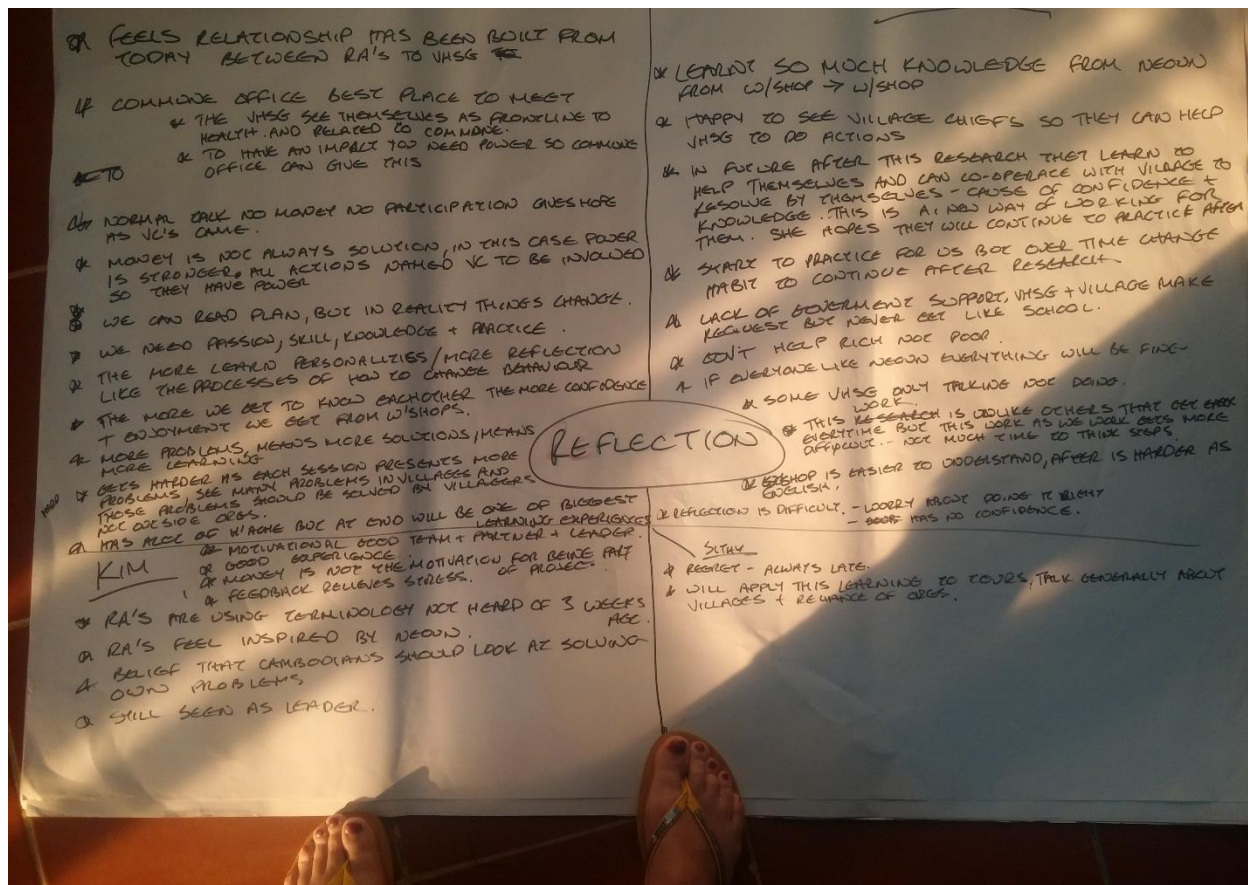
There were also discussions about the Village Chiefs attendance without pay. The RAs highlighted the disbelief from VHSGs that the Village Chiefs would come without payment and suggested we should all learn that if we don't try, we don't know and that some things that seem impossible can be possible. They discussed the engrained belief of 'no money, no participation' and how this manifests in the abandonment of some actions which could make a difference.

Reflexivity from workshop 5

The RAs and I discussed the idea of power, Sophal said he feels for the first time that money does not mean power and that either can exist without the other. We discussed the differences of power between the Village Chiefs and the differences in their behaviour, dress, voice, volume and confidence. They both had power as Village Chiefs but at different levels, one commanded attention and became involved, the other distanced himself and remained very quiet. We discussed how the quieter Village Chief still commanded respect even though he did not appear to have money. For example, when they were discussing the challenges Tey was experiencing, the VHSGs offered advice to Tey but did not suggest anything to the Village Chief about how he may help her, even though it was clear that Tey required his support. The other VHSGs did not feel it was their place to instruct him. We wondered how the relationship would change, if at all following the workshop. We discussed the changes in the action plan and although the new plan seemed more detailed Sothara was not sure how they would do it in reality with all the barriers.

Recording key reflexivity points

The RAs and I decided to record our reflections on a flip chart as there seemed to be many and this helped us to focus.



Sophal's reflections included the following;

- Feels the relationship has been built today between the VHSGs and RAs
- The commune office was the best place to have the workshops because the VHSG see themselves as the frontline to health in the villages and this is a commune concern. To have an impact you need power so commune office can give this.
- Normal talk 'no money, no participation', gives hope as Village Chiefs came
- Money is not always the solution, in this case power is stronger
- All actions named Village Chief to be involved so they [VHSGs] have power
- We can read [and] plan, but in reality, things change
- We need, passion, skill, knowledge and practice
- The more we learn about personalities, more reflections, [we understand more about] the processes of how to change behaviour
- The more we get to know each other, the more confidence and enjoyment we get from the workshops
- More problems, means more solutions, means more learning

- Gets harder as each session presents more problems, see many problems in villages and those problems should be solved by villagers not outside organisations
- The project has a lot of headache but in the end, will be one of the biggest learning experiences
- We have a good motivational team and partner and leader
- Good experience
- Money [wages] is not the motivation for being part of the project
- Feedback relieves stress
- I will apply this learning to my tours, talk generally about the villages and the reliance on organisations.

Sothara's reflections included the following;

- Learnt so much knowledge from Norn from workshop to workshop
- Happy to see Village Chiefs so they can help VHSG do actions
- In future after the research they learn to help themselves and can co-operate with village to resolve by themselves, because of confidence and knowledge, this is a new way of working for them, she hopes they will continue to practice after
- [The VHSGs] start to practice [implement actions] for us and the research but over time will they change habit to continue after research?
- [There is] a lack of government support, VHSG and village make request but they never get, like [a new] school.
- Government help rich but not poor.
- If everyone [all VHSG] was like Norn everything would be ok
- Some VHSG only talking [about actions] not doing [actions]
- This work is unlike others that get easier every time, but this work as we work gets more difficult, not much time [between workshops] to think of [next] steps
- [The] workshop is easier to understand [as its in Khmer], after [during reflection] is harder as in English
- Reflection is difficult, [I] worry about doing it right, have no confidence

My own reflections in this session were shorter due to my own reflexive diary, however I shared the following with the RAs

- RAs are using terminology not heard of 3 weeks ago
- RAs feel inspired by Norn

- [RAs] believe that Cambodians should look at solving own problems
- [I am] still seen as a leader

I wrote in my diary:

He [Sopha] commented today that for the first time, he sees that power can be greater than money. That the VHSGs personalities and individual differences make all the difference in changing behaviour. They have been learning from another project about knowledge, attitude and practice and I watched as they reflected on how this is influenced by each VHSGs position in society, their experiences, ability to understand behaviour and people and communication techniques.

Workshop 6 (February 15th, 2016) – Reflections on the week's activities and visits to each VHSG village to see progress and challenges

This workshop, as with the previous one, had minimal planning as we prepared to give time for VHSGs to talk about their experiences of implementing the action plans in their communities. This workshop was a challenge for several reasons, Sopha's wife had given birth during the week and so he was not able to come with us to the workshops for a few weeks, so Sothara had the difficult role of facilitating the workshop without help, communicating to me and listening to the VHSGs. When reflecting on implementation of the action plans, further barriers were discussed. The VHSGs asked that Sothara and I visit their villages and on convoy we all visited four villages, discussing various public health issues. In one village, we drove around several roads to assess the issues and successes. In the other three villages, we looked at water wells that were mentioned in the action plan as needing cleaning or fixing. While at the wells I observed the VHSGs interact with the villagers and wrote about this in my diary. I asked if there were any other actions we could do as a team and the VHSGs were not forthcoming, they said there was nothing else they could do.

Workshop discussions

During this workshop, the VHSGs seemed reluctant to talk with us about their experiences in their villages. They told us 'the plan is done', or 'don't worry, its fixed'. When we tried to establish what had occurred during the process they again focused only the barriers generally, not on their progress in relation to the action plans. The VHSGs were focused on the challenges they faced in their roles and appeared reluctant to discuss the action plan implementation but rather to continuously focus on barriers and not solutions. The less experienced, younger VHSGs received verbal abuse from the local community and were challenged as to their authority to instruct on health practices. Some were not supported by Village Chiefs who could enhance their authority through association and

ended up implementing the action plan alone without help from the community. The VHSGs began to show signs of demotivation. As we discussed the barriers, it seemed the obstacles were too much for them to overcome and they started to doubt their ability to do the role at all. The process of reflection had produced this doubt when previously it had not been an issue. The sessions began to have a negative focus. I feared for the project and questioned my own ethical practices as the information was important to the research but was disempowering for the participants, the antithesis of PAR.

I wrote about the session in my diary;

The workshop today was difficult, when we arrived there was very little energy in the room and VHSG seemed quiet. We started by asking how they got on with their action plans and they just responded with 'yes its done'. It took a while to find out more. The action plans were focused on fixing wells and cleaning up the environment around the wells and educating people in the community to clean their own homes. Norn had collected money from residents to fix the well and was going to fix the well by the 26th. Norn's experience, power and position makes her a strong VHSG but she is focused on her own village. The way the VHSGs are structured means they do not have a sense of being from the same group but more affiliated with their own villages. Although Norn tried to share her experience with the younger new VHSGs there was no sense of being part of a shared group. One of the main reasons for this I think is the lack of any structural government training programme. The VHSGs that had taken up the position six months ago had only received training from Save the Children and some from Red Cross when they visited the villages. When I asked the older VHSGs what training they had received from the government they said never, only NGOs. Even the election process seems vague and Tey was selected by previous VHSG, not elected by the village. When I asked if they have fixed wells in the past or organised mass clean ups they said they had and once a month they tried to organise this clean up. We explored the idea of the villagers cleaning up their garbage on a daily basis but they said this doesn't work. The villagers don't listen and if they do, the young children under 6 [years old] go through the rubbish bags and throw it out again. We discussed discipline of children and I was told there is no discipline of children, they do as they want....

Alcohol was also mentioned a lot in the aspect of houses that are not clean, they are also poor and 'lazy' so don't clean up... Today I could sense again this frustration of not being listened to. However, they have never received any training about communication

or behaviour change. I described to them today some of the models in neighboring countries like Thailand where they receive training, an allowance and some materials. They felt a small allowance would allow them to offer incentives to villagers who would then attend training sessions. After two hours of reflecting on their challenges, they said I should go to the villages. I agreed immediately and we all went to four villages.

Visiting the villages to reflect on the action plan implementation process

The VHSGs proposal to go to the villages presented a new way of discussing their action plan implementation experiences. Sothara translated the VHSGs whilst in the villages and afterwards we discussed the events further. Following this I wrote in my diary;

Norn's village was relatively tidy but on one road was much rubbish, she said this was because of a wedding. The rest was fairly clean and she was proud of her area. The next village we were taken to took us to a well that had been cleaned per the action plan, it was still messy but apparently better than before. It had a lot of swampy water around and the VHSG there said he was going to ask the Village Chief for a pump to stop this happening. While we were stood at the well, Norn spoke to the villagers around [even though it was not her village] and told them they should keep this well clean. She was educating throughout our trips to the villages but the others were not. They seemed reluctant to talk with their fellow villagers. Once again, I noticed that knowing how to communicate is a vital part of being a VHSG and not all had this skill. We went to another well that had similar problems and spoke to the villagers there, two adult women there told us the reasons for keeping the wells clean was because you could become sick and that last year the people came to clean everywhere but this year not. There is a dependency on outsiders to come clean and organise and not much of a sense of personal responsibility. The next two villages we saw efforts to keep wells clean with rubbish bags hung up and boxes, some used some not. The wells in the poorer villages were very busy and it was evident they were not enough. I asked if there were any other actions we could do as a team and the VHSGs were not forthcoming, they said there was nothing else they could do. Two VHSGs planned to fix wells but the other younger newer VHSGs were at a loss.

Reflexivity of Workshop 6

Several points of interest arose from this workshop which linked to previous workshops and would impact on the next action. Through the process of reflexivity, I tried to deconstruct what had

occurred in this workshop and others, how my own positionality had influenced my interpretation of the situation and the context in which we were working.

Communication challenges

During the early stages of the research, participants actively took part in the photography and planning processes and openly discussed the various challenges and solutions. However, the problems arose when trying to explore the VHSGs experiences of implementing the action plans in their respective villages. Sothara and I had begun with asking prepared open questions such as 'How did the plan go?' 'What worked well or didn't work so well?' 'How did it make you feel?' 'What experiences did you have when implementing the action plan?', however we received short answers such as 'it was fine', 'no problem', 'it is done, don't worry'. We struggled to get any additional details of what had transpired in the villages and continued receiving one-word answers rather than the rich discussions that had previously taken place. I couldn't understand why there was a change in attitude, why there was a reluctance to discuss what had happened during the weeks of action. I asked Sothara to re-structure the questions and although she tried she also seemed confused and told me she wasn't sure what I wanted. I had used these questions many times in qualitative research workshops/interviews in the past and was confused by the short answers I was receiving here. It was not that participants were reluctant to answer questions but seemed unable to provide detailed, opinionated, critical accounts of an experienced situation.

In addition, although it seemed apparent that the VHSGs did not know how to communicate their experiences when sitting in the Commune Office, they did suggest that I come to their villages to show me the reality. This may have been an easier way to critically reflect and one which they are more familiar with. At the villages, they showed me the state of the wells, the boxes or bags they had provided for villagers to put rubbish in and the difficulty in getting the villagers to use the disposal mechanisms. I was also able to see the relationship between villagers and the VHSGs, while Norn was very vocal and teacher like, the others remained silent and even avoided contact with the other villagers. Some of the villagers were shouting things at our group which the VHSGs ignored, from my own observations they did not seem positive comments. I asked what they were saying but the VHSGs told me they were asking what we were doing there. Sothara and I felt sympathetic to the VHSGs role that required such confidence and conviction in one's knowledge and communication techniques to educate to wider groups when their social standing was not respected. The social structure of hierarchy was clear, the villager's attitude towards Norn was respect, even without speaking Khmer I watched as the villagers stopped their conversations to listen to Norn's words, she commanded respect and was a good communicator. We asked Norn to

come with us to Tey's village as suggested by the RAs the previous week and she agreed but instead of offering Tey advice, Norn simply spoke with the villagers. The VHSGs did not function as a homogenous group and viewed their challenges as theirs alone, there was no sense of shared ownership between villages, even though they were part of the same Commune. This reflects the findings from Ovesen et al. (1996) who wrote '*When every household is an island: social organization and power structures in rural Cambodia*'. Oveson and authors found that the social structures of Cambodia were not grounded so much by geographical location or social organisation (such as being a VHSG in the same commune) but by cultural and ideological structures such as hierarchy. The social distance between VHSGs is further re-enforced by a lack of a formal induction, core training programme or organised meetings across the VHSG community. NGOs work with VHSGs on different topics in different areas meaning that the role of one VHSG is not necessarily synonymous with a VHSG in the neighbouring village. This lack of a VHSG community structure results in the loss of shared experiences which may improve the performance of younger new VHSGs.

After the visit to the villages was over, I tried to better understand what cultural factors were in play that I was not appreciating. My first step was to ask the RAs why they thought the answers at the commune office were short. The RAs highlighted that the open questions I was asking were not the 'Cambodian way' and explained how they also were not familiar with the type of questions I was asking and struggled to imagine what they would answer in a similar situation. I decided to take time for some deeper reflection and began to realise that I came from a very different world, one which is more open to offering opinions, feelings, criticisms and reflections. A world that supports and encourages open criticisms of governments and services through evaluation and appraisal and is all part of the liberal society and consumerism model in which I lived and worked. Following this critical self-awareness, I returned to the RAs to further explore their life world and how we could change our style to suit the 'Cambodian way'.

The RAs and I discussed other ways of communicating and decided that I would discuss with them what we would like to know more about and they would spend time discussing in Khmer the best way to support the VHSGs in providing a richer report of their experiences.

The discussions, although negative in nature, were situating the research into a wider socio-political and cultural context. Demonstrating how the hierarchical system embedded in Cambodian culture could be a barrier to changing behaviour, how the structures within government did not support them and the financial inequalities within and between villages had a distinct effect on health behaviours. Still my initial response was concern that I had created this negativity so close to the

end of the research period. I postponed the next meeting with the VHSGs and during this period considered the impact of the research on the VHSGs morale and the role of outside agents in their plight.

Meeting with Provincial Health Department staff (February 29th, 2016)

After consideration and discussion with Sothara, we concluded that outside advice and support was required. The VHSGs had highlighted a lack of support from government institutions, insufficient funding and gaps in training around behaviour change techniques. Therefore, we decided to take some of these discussions to the PHD Technical Director and Health Promotion Officer who we had been involved with at the beginning. Sothara was very nervous about this meeting and so I prepared a prompt guide (Box 2) for Sothara to translate into Khmer ready for the meeting. Sothara found the meeting challenging as some of the language was quite technical and she did not always have an English translation. Also, Sothara found it difficult to translate quickly and the PHD staff did not give her much time to do this. We recorded the session and afterwards engaged the services of an RA from Study 1 to help with translation. We used the photographs to illustrate to the PHD staff some of the public health problems identified by the VHSGs.

Box 2 Summary of workshops for PHD staff

We have worked for the last few weeks with VHSGs to understand public health problems in the community using photography, to make an action plan to try to improve those public health issues and to discover the barriers for VHSGs when trying to improve health in their villages. The VHSGs were not instructed but given freedom to select and design their own plans.

The VHSGs selected public health problems associated with a lack of water and unclean water. Not enough wells, wells that don't work and wells that are not kept clean by the communities. The second issue was keeping the villages clean of rubbish, stagnant water pools and clean homes such as kitchens and areas where children play.

Each week we met with the VHSGs to ask them how the action plans were going and they demonstrated many challenges

- Villagers don't respect the VHSGs unless they are already a Village Chief or elder, some VHSGs who are young and new to the role receive negative behaviour from villagers
- Some Village Chiefs support VHSGs but others do not listen to their advice
- The new VHSGs don't know how to communicate with villagers and are not provided with support of materials, information or training to change behaviour
- There is no uniform to identify them at VHSGs and the villagers do not always trust what they say
- Lack of training for public health issues, current training only from Save the Children about maternal health
- Lack of understanding about how to change behaviour in communities
- When asked about training from the PHD/OD the VHSG could not remember ever having training, however the Community Participation Policy for Health says there should be guidance and training from the health centre through the OD and PHD.

Possible Questions

1. We would like to ask you what training is planned for VHSGs and what training has been delivered in the past?
2. How can we support VHSGs to do their role better and to have more respect and power in the communities where they work?
3. Once NGOs are no longer in Thmey, what will the VHSGs do? How will they develop their skills?
4. With a small budget, what training or support could the PHD/OD/Health promotion staff offer?
5. Could the health promotion department support them better?

The following headings provide a summary of these discussions along with some quotes provided by the RA who translated the audio recordings of the meetings.

Behaviour Change

The PHD director stressed he was fully aware of the ability of the VHSGs to identify health problems as they had been trained and had been monitoring the situation for over 20 years. The PHD were also aware of the health issues in the villages and that villagers didn't always listen to the VHSGs. He gave an example of hygiene, stating that villagers listen and understand hygiene practices but don't change their behaviour. He feels that the villagers need encouragement or motivation to change behaviour like a prize or certificate for families who have healthy practices. Furthermore, he stressed that changing behaviour takes time as it is linked with wider traditional community practices, income and necessity, he explained;

So changing behavior is the most difficult problem, not only the hygiene in the village but also getting services from the health center. We explain and spread out [information] to get pregnancy checkup but [it's] not 100 % yet. Like [the organisation] SAMARITAN, they build the waiting house for pregnant woman but there are women who don't come on time and instead deliver with traditional midwife.

[A] strategy to make the villagers respect the VHSGs needs more long time because it is involved with tradition, habit, and economy. If they [villagers] have less income, [doesn't matter] how much we educate them, they don't care because they don't have money. We make an appointment to give vaccinations [for the children] but they have gone to take children to the field [for work]. They don't wait. They said they need to work, if they don't work, no rice to eat...So the strategy to make change, I think first we should encourage and support to make VHSGs [to be] more active. It means the salary for VHSGs.

The PHD director explains it would be better if VHSGs had their own budget and action plan as they would be responsible for it themselves with technical support from the PHD and OD. He explained that the government is preparing such budgets for other development areas like school management, women's education, human trafficking, violence and road construction but not for health. If the Commune Chief and Village Chief have a plan they implement and monitor it by themselves, this structure would be better for the VHSGs. However, this was not part of the government plans as yet. He agrees that the VHSGs would benefit from T-shirts identifying them as health volunteers and that they need money to support their activities but there isn't any.

Training

The PHD explained that they have delivered training to VHSGs during the last two years, even if it was instigated by an external organisation, the PHD stated they were involved, along with the OD and health centre. They spoke about training related to; identifying children with Pneumonia, maternal and child health, malaria, TB and diarrhea, all supported by external organisations, but in partnership with the PHD. However, after training was delivered there was not a budget to support the VHSGs to deliver or for the PHD to supervise and monitor change. He gave the example of clean water use, a monthly report reflecting the number of families who use clean water after receiving education is required to monitor success but there was not a budget for this. The Health Promotion Officer informed that VHSGs are enthusiastic immediately after training and for the first week they will practice whatever they learnt but after a week they return to normal practice as there is little motivation to continue.

In order to deliver any activities, the Health Promotion Officer has to be flexible and adapt training to fit in with external organisations as there is insufficient money coming from the government. In Cambodia, if an organisation or another department want a government staff member to assist in providing training or any activity, the staff member asks for additional money known as 'Per Diem', they do not see this as part of their normal day to day work, even though it is government business and in their working hours. The Health Promotion Officer explains how she adapts her work to others;

When we [PHD] go to work or educate in one place we always go with an organisation because the government doesn't have any money, so when we go we have to go with the organisation because when people from the PHD go with us we need to give them much money [Per Diem]. Sometimes we go with an organisation, they have money to give to the participants too. Like Save the Children we go with that organisation, we connect our work with them otherwise we won't have the money to pay Per diem so we try to tie in our work with the organisations.

The VHSG role

The PHD director felt the VHSGs were not really volunteers, that they only offered to do the role because they did not have much personal work to do and for the financial reward that comes from training. He compared the VHSGs to that of other countries he had visited that also had CHWs such as Thailand, Malaysia and Korea. In these countries, he reported more willingness and motivation to do their role. He suggested for example that the VHSGs in Cambodia would not participate in my

research if it was not for the financial remuneration. For the last 20 years, he has been trying to find a strategy to make the VHSGs work without giving money. If the VHSGs are given communication material, it is not distributed by the VHSGs unless some money comes with the activity. He suggests that perhaps some VHSGs do work without money but not many, and it's more likely if they are also a Village Chief, however he states that even Village Chiefs are difficult to work with and when they go visit them, many are drunk. The VHSG also have to hire someone to do their own paid work when they come to training and complain if the PHD doesn't give enough money to cover this cost when training them. In addition, even the Health Centre Management Committees identified in the Community Participation Policy for Health only take place in the health centres where NGOs are working as they support the meeting technically and financially.

After discussing the various elements, I explained that I could fund a small activity and asked what they would suggest. It was decided that the PHD Director and Health Promotion Officer would deliver training on behaviour change communication over two days. They had previously delivered a programme similar to this which could be adapted for the VHSGs. We agreed that I would return in a few days to discuss the budget and structure.

Workshop 7 (March 1st, 2016) – Reflections on the week's activities and introduction to behaviour change communication training

Only five VHSGs attended this session, one was still in hospital, one had another meeting and one was with her daughter whose baby had sadly died. This workshop began once again with Sothara asking about the action plan and then discussing what changes may have occurred as a result of the action plan and our meetings. Sophal was still with his wife and newborn so unable to attend, leaving Sothara to facilitate the workshop alone. We recorded the session and Sothara translated as much as she could about the discussions so I could understand. We discussed the training being offered by the PHD and they were enthusiastic to take part.

VHSG reports from implementing the action plan

Tey Reported that she had been going to the villagers houses to tell them to keep the village clean and their house, however she said that another NGO had a project that just started which was to educate people to clean their houses, their kitchen and their clothes. The NGO had a meeting in the village but Tey didn't know it was happening as the NGO only informed the other VHSG from her village. The NGO had selected from the village a number of volunteers to educate the people. Tey had been to the well where she had placed a box for people to dispose their rubbish to prevent it becoming unclean again, she said she went every day to tell the people to clean it but if she misses

a day they don't do it. She had been going with the Village Chief which was a positive sign as she previously reported a lack of support from him. He was also one of the Village Chiefs who attended the workshop earlier on. She told us;

The Village Chief and I tell them [the villagers], if they leave the water outside the well, the pig comes to sleep there in the water. Before this project the Village Chief joined with me to educate the people sometimes and sometimes he doesn't go. Now he always goes with me all the time, but before I go I tell him first the topic that they need to talk about with the villager. Like if maternal health I tell him what to say after I say it. Before this project, I used to tell the villager to dig a drainage ditch across their house but they said 'it's not our well so we don't care', now the Village Chief also comes to tell, to dig a drainage ditch to flow across their house and they didn't do it and the Village Chief said if they don't dig across their house they will be fined 20,000 riels each and then they dig the drainage ditch. The drainage would run through half of the village through many house, like half of the village. The Village Chief said this just to scare [them] he doesn't really fine them.

When we asked her if there was a difference in the Village Chiefs involvement since the project began she replied;

He used to come some but now he comes more after the meeting [workshop] that he joined. He used to be more [too] busy but now he is more involved. The Village Chief is more involved because if someone needs to borrow from microfinance they need him to sign some documents. He is at home to do the microfinance and so I can ask him more.

Sambo Has been educating villagers to clean their homes, however most of his time had been taken up with a new project to build a road which he had requested in 2013 and was only just coming to fruition. His role as a Deputy Village Chief had taken over most of his time.

When I asked the group what changes had occurred since the project started they referred to outside organisations who had made changes rather than those from the plan. Sambo said the villagers were cleaning their house better but that it was a result of Red Cross monthly meetings with villagers to educate them.

Tha reported that although she wanted the well cleaned, it was done once but it became dirty again. In addition, stagnant water was collecting around the well as it used to flow through someone's field and they didn't want that so they blocked it, also two wells out of three were still broken. Tha said

also that since her accident she was unable to move around and educate the villagers to clean the house.

When Sothara and I attempted to ask what they thought about the project or what they understood about the research aims the responses were limited. Nita said that it was for me to see if the villagers changed their bad habits to make the villages clearer, others said it was a good project and they will continue to educate after it is over 'to change the bad thing to the good thing'. They were keen to tell me the project was good but could not define what they meant by this. After several attempts to re-phrase the question, I understood the answers would not change. The responses felt generic and similar to the previous workshop where they were keen to tell me the plans were done and successful regardless of the reality.

Sothara and I spoke to the VHSGs about our conversation with the PHD. We suggested that the VHSGs over the weeks had told us more how they were affiliated with NGOs rather than the government. They corrected this and stated they were well aware that they were part of the government health system and in contrast to previous statements around training, now reported they had received training from the health centre, PHD and OD about maternal and child health topics.

We also shared that some of the PHD thought the VHSGs were mainly motivated by money and asked if they thought this was true. Tha was very passionate to dispel this belief, she gave examples where organisations had asked her to come for training without payment or gifts and she had gone anyway, several times, even though other VHSGs stopped going once they realised there was no gift or payment. Tha said that only some VHSGs were like that and although she had only been in post six months she wanted to learn and would have come to the workshops in this research without payment. Other VHSGs said if there had not been a payment they would have checked if they were busy with other work, if they had not been busy, they would have come, but if they were busy working they would not have been able to. Nita who had been a health volunteer for over 15 years said he will take the payment if it is there but will still come if not as it's his duty. However, he is also a Deputy Village Chief which involves elements of health development and he also receives payment.

We discussed the training being offered by the PHD and they were enthusiastic to take part. They all agreed to attend.

Reflexivity from Workshop 7

At this point I questioned the initial principles I had aspired to achieve when undertaking a PAR project. The participants were not as aware as I had hoped of the research aims, meaning that the project still remained vastly in my control. In addition, I had taken the decision to engage the PHD independently without first discussing this with the VHSGs. My reasons for doing this was a sense of responsibility for the VHSGs well-being and to ensure they would also benefit from the research (which is part of the PAR ethos) but it also meant I had taken over some decision-making, jeopardising the purity of the PAR approach. I reasoned that the 'purity' of the research was being compromised by the lack of options available due to the context at that particular point in time. There were many factors impacting on the VHSGs lives and so on the research process. I understood that without payment the VHSGs could not take part. Through living and observing the rural life in Kratie it was evident that there was no spare time from work which they could use to participate in unpaid research. Every day was a struggle to earn enough to support families. In addition, the high frequency of road accidents had already taken two of eight participants out of the research and a third due to a child's death. Remaining healthy in Cambodia was a daily challenge and the VHSGs regularly discussed health problems or deaths in their families. The very thing we were researching was a barrier to participating in the research. Furthermore, the VHSGs had demands from NGOs, the health centre and the community which was their main work. I had provided a space to investigate what would happen without these influences but they were still around them every day. I was asking the VHSGs to add to their already busy lives, and they were trying, but it could not be a priority against so many other more pressing priorities.

This finding is mirrored in other community based projects where students find that the realities of a setting hinder the involvement of research participants no matter how enthusiastically they may have signed up at the beginning. Herr and Anderson (2014) recommend that researchers must react to this by continuing to honour the values underpinning PAR even when faced with the lived reality and constraints of the setting, I tried to do this as best as possible.

4.2.3 Behaviour change communication training session (March 14th and 15th)

The training took place at the PHD building over a period of two days and was provided by the Health Promotion Officer and the PHD Director to a lesser extent. Seven out of eight VHSGs attended along with Sothara. I attended the workshop for the second day and asked another RA to come and translate for me. The training materials covered the following over two days:

- Definitions of behaviour change communication and theories (five stages of change).

- Communication techniques and media use. According to the footnotes of the training material this session was originally produced by UNFPA and the National Centre for Health Promotion.
- The role of VHSGs including increasing health seeking behaviour, working with health centres to coordinate outreach activities, attending meetings at the health centre, exchanging information between the health centre and the village, and identifying families eligible for poor cards.
- Environmental health and hygiene practices and their impact on community and personal health. This session was originally produced by the 'Environmental Health and Hygiene unit' and was initially called 'Food hygiene for pregnant women' as indicated in the footnotes.
- Safe water for drinking and washing including bacteria and disease education and how to communicate this information to villagers.
- Multiple choice pre-and post-test to measure changes in knowledge.

Examples of the PowerPoint slides used may be found in Appendix K. The sessions included participatory interactive techniques such as role play, where one VHSG would practice educating the rest of the group who would act as villagers, posing difficult questions. A problem tree was also used to demonstrate the ideas of root causes and solutions. The influence of outside agencies in their design was evident as some of the materials showed more western styles of water supply such as porcelain sinks and some of the diagrams had English words next to them. Printed resources such as leaflets on Cholera, handwashing, second hand smoke and personal hygiene were given to the VHSGs during the training.

Communication techniques included how to speak to people in a polite respectful way, beginning with personal introductions. Tips included not turning your back away from the person you are speaking to, looking directly at the person, not pointing fingers at people and waiting until other people finish talking before continuing. Also, how to use the pictures on the leaflets to re-enforce what was being communicated.

The role play method was interesting as the problems presented by the pretend villagers were an insight into the experiences of VHSGs. For example, Tey took her turn to role play educating the villagers below.

Role play villager	<i>'I just bite my nails and don't use nail clippers'</i>
Tey:	<i>'If you bite your nails you will get diarrhea, worms, hepatitis, malaria and dengue, you must use nail clippers'</i>
Role Play Villager	<i>'Why don't you give me the nail cutters then; I can't afford to buy them'</i>
Tey:	<i>'You must borrow them and tell your children don't bite their nails either'</i>

The Health Promotion Officer picked up on the fact that Tey named diseases that were not transmitted by biting nails and asked if she had ever received training on disease transmission and she said no. This indicated that some VHSGs are giving out incorrect information due to the lack of knowledge and inconsistent training. In addition, Tey's education level was grade six and she struggled to read the information on the leaflets, the instructor tried to reassure Tey that she was doing a good job and asked the other VHSGs for feedback. They readily suggested she show the pictures from the leaflets instead. The Health Promotion Officer also told the VHSGs if they are not certain about the education they are giving then they must not give it, that giving wrong information was not good. The Health Promotion Officer, like the RAs suggested that the VHSGs learn from each other and again this was dismissed. Another example of the independent nature of VHSGs work and their lack of affiliation to each other. Even when VHSGs live close to each other they do not seem to work together. For instance, in Tey's village there is another more experienced VHSG who does not communicate with Tey and to some extent tries to keep Tey out of projects resulting in missed opportunities to receive training.

The VHSGs were asked to role play about second hand smoke but they didn't know anything about secondhand smoke. The Health Promotion Officer realised there are huge gaps in the knowledge of the VHSGs around health issues and skipped over the second-hand smoke section.

At the end of the session the Technical Director returned to give some final messages. He advised the VHSGs work with people in power to gain respect from the villagers, like the Village Chief, the Commune Chief, the health centre and any organisations. He explained that they have the health knowledge and should go to the Village Chief to ask them to tell the villagers to listen. As he was out of the room during most of the session, he was not aware of the lack of health knowledge of some of the VHSGs.

4.2.4 Second meeting with PHD Technical Director and Health Promotion Officer

Following the training Sothara and I met with the PHD staff again and discussed their opinion of the group.

The VHSGs had communicated to the PHD Technical Director the challenges they were having when trying to engage the Village Chiefs in their work. The PHD director understood this and explained that the Village Chiefs think that health is the work of VHSGs and the VHSGs thought it was the Village Chiefs job to support them and gain villager support. He had reassured the VHSGs that he would contact the Village Chiefs and ask that they support them. The Health Promotion Officer also explained that new VHSGs always had problems, but once they had successfully delivered a health programme/project to the villagers, they gained respect and the dynamic changed. The Technical Director had been an advocate for tackling VHSG challenges and was sympathetic to their situation;

For [a] long time ago, not now, we made suggestion, we collect the problem [from VHSGs] and give to the PHD Director to make [a] suggestion to authority [Village/Commune Chiefs] to support [them]. Especially when I join provincial meeting once a month. I suggest to authority, that the Village Chiefs have to cooperate and support outreach activities and other activities of VHSGs, this is first. The second is we also have made budget activity plan for [a] year to strengthen [VHSG programme], like training or revise about communication, behaviour change, and also encouragement [motivation] plan like buying bicycle, T shirt or rain coat to give to VHSGs... We suggested at the workshop not only Kratie province also other province[s]. They have difficulty to ask the VHSGs to work because little sponsor [funding]. In the big conference, they [conference attendees] have discuss[ed] but haven't pay [provided funding]...

The findings from this research are not new for the PHDs and discussions at national conferences regarding support for VHSGs have taken place but the funding does not follow. The PHD Technical Director asked that I write about these problems so they have some proof and can use the information to advocate for better conditions for the VHSGs. He told us;

We have enough document [training materials] but we don't have enough budget to provide them the training, even the health center we don't have enough budget, unless there are support and cooperation with NGOs. NGOs provide the budget and we, technical team, process for the health center and also VHSGs.

We asked the Health Promotion Officer and Technical Director whether they thought the training from the two days would help the VHSGs and if they thought the VHSGs would educate the villagers following the information they learnt;

We don't know yet, we need to observe. We have train[ed] them. After training we need to observe to know how do they do (Health Promotion Officer)

I think the seven [VHSGs] they have willingness but it is not for long time. They came to join the training and [if] there is money to support [them] they are happy. When they go back during for 1 or 2 weeks, they can help or do something but after that they will become like before...for example we have leaflet for them to deliver. If we have per diem for them for example 3 days, they can do it. But for normal day generally not active because they are busy to do their [paid] job.

Workshop 8 (March 16th) Final reflections

This session involved discussions of what VHSGs had learned from the BCC training and final reflections of the PAR project. The session began with a drawing exercise where VHSGs drew some of the things they learned in the BCC training session and explained the meaning behind the drawings.

Table 16 and Figure 22 shows a summary of the main learning areas from attending the BCC training.

Table 16 Learning points from BCC training

Hygiene	Use clean water
<ul style="list-style-type: none"> *Take a shower often *Clean teeth *Wear shoes to protect from worms *Mother to show children how to wash their hair *An unclean house and flies on food can transmit disease *Bacteria on hands *Cover food to protect from flies *A person with Cholera vomits and diarrhea can transmit disease *Open defecation causes sickness from Cholera *If a sick person vomits, you must collect it then empty in toilet and then wash hands 	<ul style="list-style-type: none"> *Boil water to drink *Clean the water well, don't hang clothes on top of well because its dirty and the clothes may drop in the well or leak dirty water into the well. *Don't use a lake which is also used by dogs, ducks and cows as it is not clean *Make sure the house is 30 meters away from a toilet, water well, pond or cows barn as they are not clean
Communication techniques	
<ul style="list-style-type: none"> *Communication can be from one person to many villagers *Techniques of how VHSGs should educate villagers *Problem tree to show root causes *Set a time to meet the villagers for education *Washing hands with soap should be demonstrated on one to one basis 	

<i>'Tomorrow if [I] go to village, first inform Village Chief, he will tell [the] villager[s] and it makes my job easier to educate the villager'</i>	<i>'Change from bad behaviour to good behaviour, change to clean our own village, do not wait for others to come and clean for us'</i>	<i>'Each family should take responsibility around their house and clean around the house'</i>
<i>'Introduce ourselves to the villager[s]'</i>	<i>'Educate them [villagers] to understand about hygiene, show the pictures, if they are pregnant educate them to go to the HC'</i>	<i>'Have pictures to show and do not point at [their] face'</i>
<i>'Instead of pointing use open hands'</i>	<i>'VHSG should have good behaviour'</i>	<i>'Say thank you to someone [a villager] who ask the question and say 'good question'</i>
<i>The communication between VHSG and Village Chief must be good, in [the] past its [been] separate but the PHD told us, we work together</i>	<i>Now I understand that speaking to villager[s] [you] don't need to speak too long or speak too much</i>	<i>Use the microphones to announce to the people and check the list [vaccination list] and tell villager[s] about vaccinations.</i>

Figure 22 Quotes from VHSGs highlighting key points from BCC training

When asked if the training had affected how the VHSGs felt about communicating with villagers, Tey replied;

...after training I think they [villagers] will listen to me, because I can speak more polite than before, polite words. Before when [I] educate they [do] not listen...the villagers say 'before I didn't do like that and didn't die'... this time I will use the pictures to show them and so they may believe as I have something to show... I have a feeling that I have a better way to explain to educate people about hygiene, I learned from the teacher and I remember because she spoke slowly.

Having the leaflets gave them a tool which they could use to reinforce their messages and help them communicate with community members. One VHSG commented about the training style of the Health Promotion Officer;

The difference is the way they [PHD staff] communicated and I had never learned about good behaviour to educate and communicate, like introductions, speak softly, slowly, not too much...

Following the training reflections, we asked the VHSGs to do a timeline of the research activities to remind them of the processes we went through, we helped prompt their memory to ensure they recalled enough detail to reflect. We then asked what, if anything was completed from the plans. It was difficult to decipher if there were changes due to the action plans or from outside influences. We asked the VHSGs to choose a photo that would help them describe any changes. All photographs with identifying features have been blurred for confidentiality reasons.

Tey

Tey said the villagers can use all the water wells now and that because of her education one well is clean but the other is not. Tey chose a picture of a broken well below which can be seen behind the motorcyclists and explained she is trying to get someone to fix it. She also said there is not enough wells to provide water for all the villagers. Norn advised that she bring this up at all village meetings and Tey said she was already telling every organisation about this problem in the hope that someone could help.



Nita

Nita reported that around 50-60% of villagers understand that they should clean their house and that he would continue to educate others. He had also spoken to the Village Chief about collecting

money to get a pump to remove the stagnant water around the well. However, he said the Village Chief lives far away near the fields so it was difficult to get him involved in activities. He said the villagers that went to work at the fields also had houses here but he could not educate them as they were away most of time. He did not choose a photo.

Tha

Tha said now her well is fixed but it was not because of the action plan but because the villagers fixed it. She chose a picture of another well that was broken and she expressed plans to help get it fixed.



Norn

Norn stated that because of the action plan she had raised money to fix the well and that she was now working with the school to fix a well so the toilets would have a water supply. The picture below represents the school toilets.



Phaly

Phaly chose the following picture with cow faeces and rubbish and explained that after her education, as part of the action plan and her work with Red Cross, it is now clean.



Sambo

Sambo chose the following photo of a child playing on the ground who could become sick. He reported that after educating the family they tried to ensure the children did not play on the ground

and so they are not sick as often and thus can save money on health care. Sambo added that the villagers were cleaning their house better but that it was a result of Red Cross monthly meetings with villagers to educate them.



Lena

Lena's photo shows a stagnant water pool that attracted animals to come drink and lie in it. Lena said he incorporated our action plan with the rural development plan to build a road and asked them to use the extracted dry soil to soak up the water.



Finally, we asked what the VHSGs thought about using Photovoice, only one VHSG commented;

‘we can take picture of what one person sees, then we can show to everyone and discuss. With photo, we can use it to identify problems.’

We explored what the VHSGs thought of the action plans they had produced at the beginning. This question was difficult and once again the format of the questions seemed unfamiliar. We received answers such as ‘it’s good’ and when trying to establish what made the plan good, the VHSGs remained quiet. We decided to ask them to compare and discuss the action plan produced by themselves initially with the one produced after the Village Chiefs came to the meeting. They reflected that the first plan was more general ideas and the second plan had more actions and had added who was responsible as well as dates. When we showed them the assets they had identified, Tey highlighted that they did not include teachers in the plan and she had forgot about this. Norn who had many years’ experience as a health volunteer reflected on this opportunity as being the first time the VHSGs had ever tried to make an action plan. She thought it was a good idea. Tey added;

I am interested in this project and I learned a lot and I have done some things that I have never done before. It helped me understand about hygiene and health care and helped me understand myself and the community.

We ended the session with some final comments from the VHSGs which re-iterated their view that I was someone with power and privilege who remained in their eyes ‘an organisation’;

Norn: Thank you to your organisation for helping us and the researchers that come to the commune that help us to create a plan and I can do some part of the plan and finish some of the plan. I will still continue to do this plan to make sure that everything is getting better. Please come back again and again. If not soon at least once a year. It will help us to be stronger. You want to just put this project here and go away! If I’m not strong enough, please come help me to be strong enough.

The VHSGs experience of the project varied, with some being more involved than others. Experience as a health volunteer, status and general life experience played a role. Norn and Tey at opposite ends of the experience spectrum were engaged in the research process the most. Tey although selected to be a VHSG without initially volunteering was keen to improve her role and actively took part in the research but the majority of her input evolved from frustration and negative experiences.

Norn served as a role model and leader throughout. Her shared experience and knowledge helped educate her fellow VHSs. This communicative space enabled this to take place, however I suspect now the research is complete these links will be lost.

4.3 Overall reflexivity of the PAR process

4.3.1 Reflexivity of the research process with RAs

The RAs and I discussed the research journey and how we progressively understood each other with time. As described by Sophal, who thought we moved closer to understanding each other as the research went on;

... now I think we both understand that you know it's, you understand your point, I understand my point, all we have to do is experience it together!... So when I understand more of you, I feel like my work is getting a bit easier and I'm not saying that this is easy but it's getting easier for me to deal with you because I understand more.

For instance, some of the questions I had suggested for the workshops were not the 'Cambodian way' and it took some time for me to understand this. The RAs were hinting that perhaps some of the questions would not result in in-depth answers but my positionality limited my ability to see how a question I perceived as simple and straight forward such as 'how did the plan go?' 'What did you experience when trying to implement the plan?' was in fact loaded with a range of cultural, political and contextual differences, Sophal reflected:

...in Cambodia, we have a lot of ways of saying things...if you think like 'this is polite', 'this is rude', there is hundreds of other words in-between. Depending on which word[s] you're using [depends] on what result you get. So, my feeling is that if you try to speak a bit rude sometimes, um, a bit more simple, more cut through, the more conversations we have, the better answer[s] we get....

I think most of the thing[s] that we found out for our research was unexpected...unexpected conversations like... that was when it [people's hesitations] went down a little bit, you know just normal conversation. So, when all the question[s] are prepared to ask them, [we get the] same answer but [if] we just speak cut through, we found a different thing all the time.

The difficulty with action research is the unpredictable flexible nature which means that a researcher must react to a groups responses and preparation is minimal. When there is the added complexity of cross language and cross culture, the difficulty is increased. Research Assistants must

be reactive and make decisions about what information is important and how to facilitate the direction of the research. In addition, a central component of PAR is the ability to be critical of a situation, however in Cambodia being critical goes against political, historical and cultural values and beliefs. Typical open questions exploring feelings and experiences did not translate well and Sothara also struggled with understanding how to translate these questions as she too is Cambodian. As Sophal said earlier on, using more direct questions in a relaxed conversational manner resulted in better thick descriptions. Sothara was very good at this relaxed unassuming approach to conversation, but my prepared questions hindered her ability to apply this approach. Finding a balance between having some structure and enabling the RAs to use more culturally acceptable ways of communicating was a challenge. Sophal tried to explain their journey of understanding how my background and control of the research made it easier for me and left them sometimes guessing;

... I feel like I don't understand everything in your head, it's like you know, have this experience, you have that experience, you wrote it down so you can feel like, just like you're the writer of a story so I'm taking every part that you need me, so my, I have to guess all the time about you.... You know the questions, but you don't know the answer, for me I don't know the question, I know the answer (Both RAs laugh)...that's why I try to ask you and to challenge you with some of the questions you said...you know.

Sothara found this type of research challenging from beginning to end;

It mean, like for other [work]... when we work one week or two week it mean that it gets easier from one week to one week, but work with you from beginning until the end still difficult, the same.

Sothara stated that each workshop presented more challenges, whereas when she had worked as a translator for interviews in another project the challenges were at the beginning but over the research period it became easy. With PAR the challenges were ongoing for Sothara. Sophal was much more confident in challenging some of my suggested approaches which then gave confidence for Sothara to follow suit, an advantage of working with two RAs. In the above quote Sophal explains that he can predict some of the responses from the questions I suggest using as he is familiar with Cambodian culture. Sometimes he would tell me that my question will result in one-word answers even though it was an open question. Sophal and Sothara would discuss how the question could be phrased differently to elicit better answers or how they could use a different technique.

We discussed the challenges of trying to establish an equal environment for open discussion and Sophal reflected on how this was not possible since we were outsiders and seen as teachers. The villagers respected us and so our status remained elevated. Sophal felt that if we could have established a relationship more akin to friendship, we may have received more in-depth conversations;

The relationship has been built...ahhh...well they keep calling me 'crew crew', meaning teacher and I know they really respect me...so they they really pay the respect to us, which means the more they respect to us the less uh, benefit, the less answer, the less output we get... It's just like, when they respect us, they look at us above, so whatever they say they have to think, like you know answering the question in, ah frequently, it's not about this and the tiniest things, that's why I said if we put the word down a little bit rude, cut through makes simple, makes it friends, more result that comes out.

I asked if they thought it was possible to create such an environment of equality, they replied;

Its hard, it's a real challenge for this, I don't see any way we can do that...its a cultural barrier I think... (Sophal)

Epecially for the villager, they... if someone from the other, from the outside they think they [must] will obey them. (Sothara)

We discussed why the RAs were called teacher even though the knowledge came mostly from the VHSGs. Sothara explained the word teacher is a respect position and the VHSGs wanted the RAs to know they were respected, it does not mean they teach them, although she also added that we did teach them;

...what they see is that we teach them to build up the [action] plan, we teach them, to think about taking photographs, finding out the health problem, we teach... like we teach them every step through.

Sophal described how he would do the research differently next time;

If...if at the beginning I understand as much as now, I would change everythings...Just come and tell them, 'ok we are a student so we want to come and learn from what you have been doing and we will write down and we will tell our teacher, we have another teacher (laughs)...So that way they can feel like they are more responsible in telling us and teaching us and... Yeah...but we look like organisations and it, you know that's what we get now! (laughs)

Positive aspects of being part of the research

Sophal reflected on the skills he had learned from being part of the research such as the process of making an action plan, brainstorming ideas and using drawing techniques;

... this kind of research although doing with the health and you know with health, but it's on, it's just like for everything in life... just like it give you 100 times more confident to yourself... The process, because the process of the research it's just, we had the brain storming, we had plan, we draw things, it's just like, because I am a business man I feel like I should have used this for my business, for my business plan which I'm going to use now. Without this research, I know nothings about that.

Sothara expressed that she learned a lot of information about healthy practices and behavior, especially around maternal and newborn health which she shared with family and friends. Also, the RAs opinions of government services was challenged by what they learned during the research process. Sothara said she will now use the public health centres and has already tried to convince her family to do the same;

But for myself, you know like before I don't work with you, so like I told you, I know nothing, but after I work with you, when...the first time that I look at just my family first and then when I see my family like my niece, when they like not, not well, I just tell my mother that, just bring her to the health centre, but she said that she not trust the health centre and quickly bring her to the [private] clinic... Yes, but I told her that just start with, I work with you, I just ah like...like like follow like the government, I just tell her to...like to trust all the health centre, just bring them to there.

I had not expressed to Sothara whether I thought private or public services were better or worse, but Sothara had spoken with health care professionals from the public facilities and with the VHSGs and made her own opinion.

Both RAs knew very little about health systems in Cambodia before the project, they were familiar with private health clinics which both they and their families used but not about public health centres or VHSGs. Sophal reflected on his opinions of health care and life in rural communities changed;

...all I know is like the regret feeling for the people that live in the rural area [was] because I never tried a health centre...I never thought that there are VHSG so I didn't

think there was a connection between the health care and the people who live in the rural community but now I've done research I feel like there are connections...

For some reason it's [health systems] much better than some people that live in the city for example, uh...it's easy to educate the [rural] people, the people really quickly learn about something when they get told from the health centre and from the VHSG and then when they get problem all the things [services] is like there, so better and then now that they have connection in health centre and hospital in the province, in the town, so if there is a problems, they quickly make a phone call and there is an ambulance take them here...so my regret was wrong, I always feel like, 'ohh poor people live in rural area', if I compare to their lifestyle, they have, they have...you know an ok lifestyle.

4.3.2 Influences on PAR projects in cross-cultural, cross-language settings

Reflexivity continued after my return to the UK and I began following up threads of thoughts that were not fully explored while in the field due to constraints of time and resources. I went back to the literature to develop a deeper knowledge and understanding of the Cambodian historical, political and cultural forces, which I had struggled to grasp when in the field. My reading prior to arriving in Cambodia had been a more general history; with a stronger focus on public health and development. After all that was what I was there to investigate. However, I had missed the 'wider' reading which may have enabled a broader and deeper analysis of Cambodia's past and present. While in Cambodia, I read accounts from survivors of the Khmer Rouge, I visited information tourist areas that depicted the realities of the past and I spoke to many people. On my return to the UK, I read fiction based in Cambodia that provided colorful accounts of the culture and provided an imaginative literary voice. I read books written about religion, power and moral order, about Cambodia's dependency on International Aid and the role of the UN after the days of the Khmer Rouge. All of these helped me to understand the life world of the participants and what I had observed during the research process. I better understood that critical reflection as a method in itself went against the grain of the Cambodian Culture as did challenging hierarchical structures that provided security through established patron-client relationships such as between a community member and Village Chiefs or the PHD.

The normal role of CHWs is limited to transferring information from NGO training to the community and not to question a situation or reflect on experiences. There is an embedded culture of pleasing external agencies; hence the response of 'don't worry, the plan is done', which indicated a desire to show success regardless of the reality. The reflective methodologies that are a central feature in

PAR practice also did not come natural and were not culturally aligned to the current Cambodian context.

Being Cambodian, Sophal and Sothara were able to understand the gaps in communication between my methods and participant's understanding. It was not until the RAs created a more relaxed environment and particularly when Sothara took over with a gentler more conversational approach that narrative of their true experiences unfolded. Their approach aligned with the work of Harris (2008) with Cambodian development workers who also found that pushing local people to participate can actually bring about negative effects, while being patient enabled participants to become more involved. In hindsight, it would have been better to have more time with the RAs prior to meeting the VHSGs to discuss with them Cambodian traits and possible research approaches, but time and availability was a pressure. Without the RAs the research would have gone stagnant and remained a predominant western model and not true to the principles of PAR. Meulenberg-Buskens (1996) argues that western constructed methods can be a starting point but that the challenge remains to 'come up with the most appropriate response to a certain situation, taking everything (as much as you can) into consideration' by exploring other modes of knowledge construction. This is what Sophal and Sothara did on my behalf and my power focused on ensuring they could do this by providing and facilitating space for them to be reflexive together.

4.3.3 Power structures

I arrived into an aid dependent nation where external organisations, from high income countries, had dominated development and held power over government and people. Therefore, I too, as a white, western, educated woman from a university, had presumed power that was defined even before I arrived. On arrival, I remained in power as I instructed the initial design and implementation of the research process and methodologies. At this point in time I risked compromising the emancipatory and non-hierarchical knowledge production aims of PAR as, regardless of my conscious desire to relinquish control, my own underlying positionality and project aims made it difficult for me to let go. However, as the research progressed the RAs spotted the errors in my methodological approaches and began to challenge my design and so a power transference took place from me to them. As highlighted by Martin (1996), when power seeks to dominate it is met with resistance and Sophal who was the more confident of the two RAs explained how he needed to challenge my approaches in order to better the research outcomes.

Perhaps it is how such resistance to dominant power structures is handled that determines whether power can be a dynamic and fluid force. Foucault (1980) argued that power is exercised and not possessed, but I possessed power even before the research began due to the context I was working

in. However, as suggested by Martin (1996), by exercising less power during the research process, a more dynamic power arrangement of structural dominance and subordination by participants and researchers is achievable. However, I cannot say that the power I held at the beginning was ever fully negated as even in the final reflections the RAs continued to call me 'Boss' and the participants referred to us as 'Teacher'. These were terms they chose, that felt natural for them and were embedded in the social structures of Cambodia. This is a historical feature of Cambodian social organisation which is explained well by Ovesen et al. (1996);

'what appears to a Westerner as conservatism in the sense of unwillingness to bring about change is basically a function of the quest for order, for restoring and/or upholding the ideal social and cosmological order which is a prominent feature of Khmer culture and world view.'

This is counter to the vision of PAR which is to bring about social or community change yet I was asking VHSGs to challenge established social order and to disrupt power structures which they had relied on and practiced for years. Challenging, critiquing and reflecting is counter to the Cambodian notion of learning as explained by Tith Huon who comments that 'in Cambodia, importance is given to recitation rather than to reflection and to the diploma rather than to learning' (as cited by Ovesen et al. 1996). Undertaking a PAR project within such an established social and world order was challenging. However, the RAs acted as negotiators and boundary-crossers with special insights into the complexities of implementation, changing the research into one that was more culturally acceptable (Harris 2008). Our views of the power held by VHSGs also changed. Sophal reflected that previously he had pitied the rural population but now considered them as resilient; whilst remaining sympathetic to their challenges. I felt the same. This concept of empathy versus pity is echoed by Enria (2016) who argued that while it is essential for outside researchers to identify his/her privilege, this ought not to result in essentialising the 'other' as powerless.

4.3.4 Did the action research project end in social change?

When I started the research process I set out with clear action research principles and ideologies with the objective of social change. Greenwood and Levin (1998) described how the action/reflection cycle should result in the participants learning new things about the problems they face, thereby revising their understanding of the situation. This poses three questions,

1. Did the PAR result in a revised understanding?
2. Was it conducive to improving the VHSGs situation?
3. Was the goal of achieving social change reached?

The VHSGs utilized the shared space to exchange experiences and discussed ways of handling difficult situations and as a group presented these to people in power, mainly the Village Chiefs and the PHD Technical Director. Norn aired her concerns that the Village Chiefs were not facilitating villager cooperation and the PHD Technical Director agreed to speak with them and encourage support. Furthermore, the VHSGs received training and some tools to improve communication with the villagers and learned new skills around action planning and problem solving. However, the context in which the VHSGs were working could mean that after the project was completed they return to the status quo. It is difficult to measure if long term social change was achieved or even if it is possible given the external influences on their work. Nygreen (2010) argues that PAR as a method, when led and initiated by university based researchers who occupy multiple positions of power and privilege, has limitations in achieving the ethical and political aspirations of a PAR project. Nygreen identified three critical dilemmas in such PAR projects; power, authorship and scale that limit the political and intellectual possibilities. Indeed, the scale of the research here was small, just one researcher, not a team or organisation and the time allocated was minimal. Nygreen's comparison of undertaking PAR for the first time as a doctoral student compared with PAR projects post PhD has led the author to believe that researchers should curb their enthusiasm and consider reconceptualising PAR as one of many tactics of critical research for social change. Not to say that the research does not have valuable outcomes but rather that the ideals sought in a PAR project are not always achievable and at the PhD level are often part of a longer learning process.

Following submission of the thesis I will consider it my ethical duty to share the knowledge and experiences of the VHSGs with those in power, through dissemination of articles, short summaries in Khmer and where possible presentations. I aim to reach those in Cambodia with some power at national, subnational and local government as well as NGOs working with VHSGs to contribute to some social change if possible. However, the authorship of such documents will be mine and the VHSGs are unlikely to be part of this. Some of the VHSGs also wanted to remain anonymous for various reasons and so would not like such ownership of the research. Rather in this situation it was better to share their problems as a VHSG community rather than as individual struggles. The research so far has answered many questions about the public health skills and knowledge of VHSGs and the macro and micro-political forces at play which will be part of the wider research dissertation but also disseminated more widely. Was social change observed in this research is a crucial question, is social change always possible? I would argue that in order to achieve lasting social change, other factors have to also align at that particular point in time, such as place, engrained culture, politics and local structures.

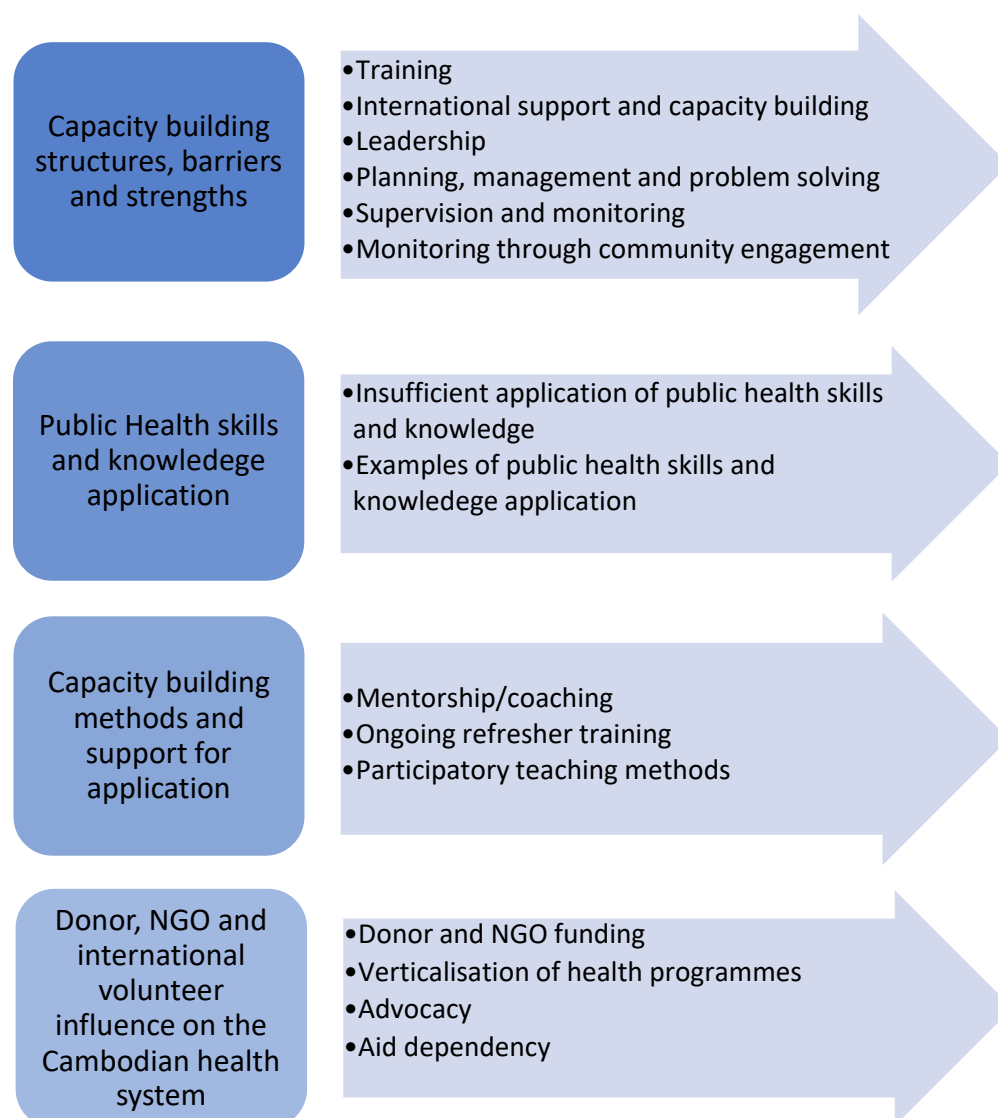
4.4 Study 3: Stakeholder interviews

Semi structured interviews were conducted with ten professionals working across disciplines but with some or all aspects of their jobs linked to public health development or citizen participation in Cambodia. The interviews were undertaken at their workplace or in a local café/restaurant in English and lasted between forty-two minutes and one hour and thirty-two minutes. Findings are presented with quotes from interviewees stating their job role and whether they are international or Khmer. I chose to identify these traits as it provides an indication of the cultural backgrounds and positionalities of the interviewees that may affect their answers. For instance, interviewees from a western liberal background may present ideas different from a Khmer national who understands the intricacies of the Khmer people. All internationals were from Europe, Australia or North America except for one interviewee who was originally from another southeast Asian country.

4.4.1 *Participants*

The interviewees consisted of staff working for international NGOs (1 Khmer, 2 internationals), International volunteers (3), International volunteer programme leads (1 Khmer, 1 international) and Public Health professionals working for national government departments (2 Khmer). International volunteers were experts in their field and supported government staff and civil society to develop capacity as identified by in-country partners and did not come with a substantial budget. International NGO workers had more of a programme focus, part of which involved building capacity at national, subnational or community level. Khmer nationals worked for international volunteer organisations, government units and international NGOs. All were highly educated with many years' experience working within the field of health in Cambodia. Four main themes are identified with sub-themes as shown in Table 17.

Table 17 Interview themes and subthemes



4.5 Theme 1: Capacity building structures, barriers and strengths

This theme highlights the views of interviewees on past and current experiences of government and NGO structures of training, supervision, monitoring and evaluation in the health sector. Strengths and weaknesses of such structures are discussed with examples to further represent the situation.

4.5.1 Training

The reported model for training of government personnel is a cascade model referred to as Training of Trainers (ToT). Some variations occurred in which National Government Units directly trained health workers at the community level or the OD/PHD trained VHSGs without going through the health centre first. An interviewee from a national unit explained the hierarchical nature of training;

Our [NCHP] job is only do the training to the Provincial Health Department...And sometime also the district, Operational Health district and those people are the ones who supposed to do the training to volun...to the health centre and [VHSG] volunteer, most of the time they do the health centre uh, uh, separately and the volunteer separately, this is our, our hierarchy of role... (Interview 1, Khmer, national government official)

This hierarchical structure was also followed for approval and permissions for new projects. For example, health centre staff insisted on waiting for guidance and acceptance from the PHD or OD before they became involved in any new activities or training offered by NGOs. Likewise, the PHD would seek instruction and guidance from national programmes before acting independently. It was also suggested that Health Chiefs in health centres would be reluctant to receive training for anything that contradicted manuals issued from the national level;

I think that any any foreign NGO coming in trying to teach them, something that isn't in the MoH, uh policies, the Health Centre Chief will have issues with that...(Interview 5, international public health volunteer working at district level)

Although the cascade model was the norm for governmental training, (I)NGOs and volunteers delivered training in an ad hoc manner at various levels of the health system. External agencies generally contacted a governmental body for permission to begin new projects but they implemented training at whichever level was relevant for their project. Some international organisations followed the ToT system;

...according to the guideline on national programme, yeah national programme provide the ToT to PHD staff and, so when we [international volunteer organisation] would like to provide the training to the health centre staff we cooperate with the PHD (Interview 8, Khmer, NGO Regional manager)

Some organisations did not adhere to governmental training structures, especially when donors were prescriptive in who they wished to train and where. This means that the national level was not always involved in designing training and delivering it through the cascade system. For example, the below quote shows that although permission was sought from the PHD, and health centres helped with coordination, the NGO delivered training directly to the VHSGs missing out the above levels.

Yeah, for example right now [named NGO] provide the training to VHSG in in some health centre and we [local NGO worker] cooperate with PHD staff and OD staff to provide this training, facilitate this training uh, health centre staff just provide

coordination and facilitation about the administration process. (Interview 8, Khmer, NGO Regional manager)

If cascade training was followed the NGO would have trained the PHD level to train health centre staff and then VHSGs, thereby building the capacity at all levels. In cases where the ToT model wasn't followed, health centres were sometimes unaware of initiatives happening in the community which they could have supported further if they had also been trained. Most interviewees stated that they ensured the PHD level were aware of their activities with VHSGs but this did not necessarily mean the information was passed to health centres or ODs or that PHDs were directly involved in delivery, possibly missing opportunities to strengthen the overall health system. One international volunteer explained communication with PHD/ODs did not always result in direct involvement;

We would sit down with uh, a representative of the OD or the PHD, discuss with them, 'This is what we want to do'...'ok that's fine' [and] they will raise their concerns. [You explain] how do you address their concerns, uh and then you just submit your work plan in writing. But... you know they did not direct what we did...(Interview 5, international public health volunteer working at district level)

When asked why PHD/ODs had minimal involvement in delivering training, the volunteer expressed that a fear of losing funding and an inability to fund activities after the training restrained their involvement;

um, I think maybe they may be afraid to pass up the opportunity by directing too much, um directing NGOs to do... I mean, some some members of the PHD have extensive knowledge in, even though they may not have the facilitation skills that we would consider to be adequate in a western context, they do have the technical knowledge, but it's just, even if you build up their capacity or you uh, they will, they will not be able to do it without funding, they will not be able to go to the communities or the schools or... without funding, they're very dependent on funding from from NGO's.(Interview 5, international public health volunteer working at district level)

Other concerns about the cascade model of training were voiced such as a lack of quality training skills and materials that were not always developed suitably for the community level due to insufficient capacity at the PHD level;

Provincial department, they lack of capacity to develop good material to to [train] the health centre and [VHSG] volunteers.... Basically, the capacity is still limited for some provinces so they need regular monitoring, support, supervision to make sure that they

can handle the same quality of training to lower level. (Interview 1, Khmer, national government official)

One international volunteer organised a training session on interpersonal communication and invited some health centre staff to then cascade the training later. However, only six out of ten staff came meaning that some health centres missed out. This was echoed by national staff who stated that only one or two staff from health centres were invited to training sessions. Also, interviewees explained that health workers did not have the skills to deliver effective training to others. One volunteer commented on the style of training used by health centre staff when preparing VHSGs to deliver health promotion in the community;

...you know it's a very directive type of prepping [from health centre staff], you know just holding the flip chart or holding you know the pamphlet and just talking and talking and talking, so that didn't get them [VHSGs] prepared to practice what they were going to say to the community. So you know the health centre staff don't have that participatory um, it's, they don't know how to use participatory techniques... (Interview 5, international public health volunteer working at district level)

This reportedly impacted on the confidence of VHSGs to deliver health promotion sessions to large groups in the community and could result in a reduced number of VHSGs delivering the sessions.

4.5.2 International support and capacity building

NGOs and international volunteers were reported to build capacity and support national programmes on a variety of topics including RMCH, HIV/AIDS, health promotion and education, behaviour change communication, technical and clinical skills, management and democratic process at national, sub national and community levels. NGOs and volunteers also worked alongside national government to support policy and strategy development, implementation, monitoring and evaluation. For example, interviewees stated that they were working to support implementation and functioning of the Community Participation Policy for Health. Other NGOs ensured their work supported the 'Fast Track Initiative Road Map for Reducing Maternal and Newborn Mortality' and were reluctant to go outside this framework.

At the national level, NGO workers and International volunteers based in Phnom Penh worked closely with the MoH and specific units such as the National Centre for Health Promotion, Maternal and Child Health unit and HIV/AIDS unit. One international volunteer also worked alongside Cambodian colleagues to support democratic development which was a cross-sector project. Their roles were to build capacity by providing support and advice to national programme staff to improve

programme implementation and systems management in relation to specific funding and outcomes, for example;

...our mission is to save lives and to partner with the Ministries of Health in developing countries, um, to provide the assistance that they feel that they need, um, and to help them interpret their, you know their strategies and their visions into...uh, into operations and into programmes, that are sustainable um. And in a way that also is, you know every day and in every step of the process is building the capacity of of the Ministry um, and of of the national programme staff, um to do their jobs better...(Interview 3 NGO international programme lead working at national level)

Although the same interviewee referred to the government as an extension of their team rather than the other way around;

.... The national programme staff are almost an extension of our team, so and it just works, you know... (Interview 3 NGO international programme lead working at national level)

Another example was a request to NGOs and international organisations to assist in the development of the National Health Accounts, which for some time was advocated for by donors and NGOs. The interviewee also spoke of the importance of waiting for national staff to be ready to move an activity forward;

...at some point he [unit director] might say 'We can't do this in Cambodia, we're not ready', but in in a couple of weeks or in a month, or in a year he might say 'I've decided we're going to do this'. (Interview 3 NGO international programme lead working at national level)

Furthermore, NGOs implemented and evaluated pilot projects funded by external donors. If effective, they coordinated with the Ministry of Health to roll them out nationally. For example, the curricula for Midwifery Coordination Alliance Team (MCAT) meetings was being trialed by different NGOs in different regions with an aim of creating one for the national government to adapt;

we're actually trying to get together and harmonise across NGOs working in different parts of the country, cause it was crazy to duplicate, you know and hopefully we can develop a sort of combined curriculum that's then available at the national level and the Ministry, we'll work with the Ministry and hopefully it will become the national page. (Interview 7, International NGO director)

At the community level, international volunteers helped (often with local translators) to build capacity of health centre staff and volunteer CHWs;

Our [volunteer] public health advisor, they work at the community level, they work with health centre staff, they build capacity of the health centre staff and they work, they work with the community level to organize the training with VHSg in order to build their capacity, especially on their own responsibility [or initiative] and on disease prevention... (Interview 9, Khmer Volunteer Manager)

NGOs developed tools and guidelines for implementing the Community Participation for Health, however the area of focus depended on which NGO was developing the guideline. For instance, the health centre management committee (HCMC) is responsible for monitoring overall health centre performance and quality, but an NGO with a focus of reproductive, maternal and child health developed guidelines for this area only;

... [we] develop tools and protocols for areas where Ministry of Health guidelines don't exist. So, for example um health centre management committees, there isn't a standardised training package for them for reproductive, maternal and neonatal health. So, we're developing those, applying them in the field and then will be...advocating and disseminating those at the national level, and offering them for other stakeholders to use and ideally for the national programme to take up. (Interview 7, International NGO director)

Interviewees explained that NGOs and international volunteers identified and filled procedural and quality gaps. For instance, an annual monitoring exercise that takes place at health centres by national and subnational government did not have a measurement for quality of service delivery and so an NGO took on the role of developing a measurement tool, however it had not been adopted by the MoH as yet.

4.5.3 Leadership

Interviewees felt that capacity building efforts were more successful if the leader was strong and committed to the project and to the wider development of their department or organisation.

...one of the most important factors of success is leadership in the organisation....And leadership with more I suppose, open democratic process of participation, so someone that doesn't want to hold the um, doesn't want to be uh, in a power control position,

someone that wants to share the knowledge and wants to build, truly build the teams capacity and allow is flexible open (Interview 10, International volunteer manager)

This was echoed by another interviewee who had supervised many international volunteers and found that a leader who was committed to change was a key factor in project participation;

...the Director ah who have a strong commitment that really want to see the change of the organization, working with those people, really we can see the change you know, because there is encouragement from the director... (Interview 9, Khmer Volunteer Manager)

The importance of having a supportive senior leader in place was also linked to hierarchy in a health system where no activities took place without the approval from the senior level. This meant that the chain of command had to be intact and fully functioning to implement positive changes;

Sometimes it's hard to move things forward because they need to wait for the top to provide you know approval on something.... there's gotta be a chain, a chain of command that functions...if there's someone in that chain who's not, who is senior, who is not facilitating in some way, either they are just are absent and they'll kind of step out and do whatever they want to do... they will, you know, be potentially actually obstruct, some of those interventions... (Interview 3 NGO international programme lead working at national level)

A need to have strong leadership that applied clear disciplinary/management policies was reported need for health worker management;

...we require strong commitment and leadership, you know ah, we have to develop policy in place and we need to enforce the policy to make sure that the staff are functioning in their role... so we need to change ah, the leadership and management from the top level first, the senior people at the Ministry of Health to to really really force policy to make sure that the staff, implement their own responsibility. (Interview 9, Khmer Volunteer Manager)

An interviewee explained that without disciplinary actions for health workers who do not fulfil their roles and responsibilities, there was no incentive to change their behaviour following training;

..they have evaluation [of health workers] but [its] just [a] comment not [a] fine or not [a] punishment (Interview 8, Khmer, NGO Regional manager)

The same interviewee felt that capacity building of PHD/OD staff to manage, monitor and evaluate was the responsibility of the national staff;

... the Ministry of Health should provide education and provide training and the coaching to the PHD to build their capacity to high, to to the quality management yeah, in that field. (Interview 8, Khmer, NGO Regional manager)

Interviewees expressed the importance of engaging national staff in identifying and developing capacity building agendas. For example;

...so [the] volunteer, before they go to capacity build them [PHD] they need to discuss with them what training they need to do their work better and then they try to organize the training based on ah, capacity building around the partner. (Interview 9, Khmer Volunteer Manager)

Likewise, another volunteer engaged health centres and VHSGs in selecting training programmes to suit their needs;

... we said here is a list of topics that we could do, we could do ANC, PNC, we could do breastfeeding, we could do you know, sterilisation, or 'What do you think would be more important?' and so they chose amongst the topics that we offered...(Interview 5, international public health volunteer working at district level)

Pressurising organisations into undertaking specific capacity building exercises did not work and it was felt that external agencies must avoid this to ensure ownership remained with the national partner;

...but so, pushing, like just that pressure doesn't really help, you need to sort of be offering, I think to partner with them and you really see the benefit and they need to be given the space to um, to make it their own. (Interview 3 NGO international programme lead working at national level)

One NGO worker felt it was important to suggest ideas but to wait until the leader was ready to engage. She explained how she introduced ideas without enforcing them and stated the importance of a leader ensuring NGOs or external donors don't take over ownership;

... at some point he might say 'We can't do this in Cambodia, we're not ready', but in in a couple of weeks or in a month, or in a year he might say 'I've decided we're going to do this'... he'll kind of shut down conversations where people are talking too much about

a donor or about, he says 'this is not about global fund or about, this is about Cambodia, this is a Cambodia programme, this is not about [donor]'...but they're also, you know they're aware that this is uh, they're heavily donor dependent. (Interview 3 NGO international programme lead working at national level)

Professional international volunteers who came with their own personal development agendas could present a risk to national ownership as they had preconceived ideas about what they would like to implement. Managing these expectations early on was deemed necessary;

... the focus is the partner organisation and often most importantly is the community and the beneficiaries, so 'your role is backstage, your role is very much a supportive role ...to support the hospital to make those outputs but they're never yours they don't belong to you'. (Interview 10, International volunteer manager)

4.5.4 Planning, management and problem solving

Interviewees articulate that building capacity of personnel requires the ability of senior managers to plan, manage and solve problems. The knowledge and ability of senior managers within health centres, hospitals and the PHD/OD to plan and manage facilities and health initiatives was described as minimal with little support and opportunity to develop these skills.

...there is very little support for and training on what it means to be a hospital director, what it means to be a manager, a leader, a planner, a strategic planner... (Interview 10, International volunteer manager)

A lack of opportunity to develop problem solving and management skills by Health Centre Chiefs was reported;

.... a lot of them [health Chiefs] don't have, um, management skills so, some of the Health Centre Chiefs don't know how to manage their employees, um and also don't have the power to do anything over disruptive employees, you know if they always have to keep going to the OD to ask for help to... (Interview 5, international public health volunteer working at district level)

The ability to problem solve was also identified as a skill gap for other health workers;

...they don't have the problem-solving skills, they just think, they will present you with a problem but they will never give you a solution... it's like they don't want to think, I don't know. Its, I don't know maybe sometimes I, I see them, as they are lazy thinkers, they don't think. (Interview 4, International volunteer working in a rural hospital)

Lacking the ability to think critically to solve problems was thought to be a common skill gap in LMICs;

... when I was in [another LMIC], they are also the same as this [Cambodian] people, they don't give solutions to the problems they just give you problems, in short they are lack of critical thinking...And creative thinking, yeah they don't have this. (Interview 4, International volunteer working in a rural hospital)

Similarly, the ability to take problems and critically address these by coming up with solutions was thought to be challenging for some Health Centre Chiefs;

The capacity to then do something with those results [from supervision visits], just thinking you know when you get down to some of the health centres where you've got a small team, quite inexperienced, lots of different demands, not enough time (Interview 7, International NGO director)

Supporting managers to develop processes of self-reflection, analysis and critical thinking was thought to be challenging due to cultural factors;

..., to step back out of that role of leadership and see it from a little bit more from the outside... so to be more self-critical and analytical about and them as a leader, 'Where am I, Why is this happening?' and to have the support and the support to reflect and to look well, you know it may need changes within your leadership style...and that's a very confronting area to work in because also we have in Cambodia like in many other countries, there are systems, there is hierarchy, there is cultural uh elements um (Interview 10, International volunteer manager)

Lack of availability, due to time constraints of busy directors and managers also hindered capacity building efforts;

...so for our [international volunteer] management advisor the challenge has been, the Director is very committed but is trying to manage 500 things at the same time...he has multiple hats and he has to provide training, he has to provide leadership, he has to attend conference with the government when its mental health, so his time is so limited...(Interview 10, International volunteer manager)

4.5.5 Supervision and monitoring

Supportive supervision and monitoring following capacity building efforts was understood as a necessity to measure the effectiveness of health interventions and improve service quality provided by health workers. In the past external donors through the HSSP2 would fund supervision activities at the provincial level, however fears that this was not promoting sustainability resulted in the withdrawal of funding for this task. An interviewee explained that if their NGO required supervision to support an outcome then they had to fund it in that area or it would not happen as the government was not providing the budget for this. Without supervision from the PHD/OD, some NGOs were not able to achieve their aims and so funded the activity short term. Supervision (referred to here as 'follow up') was only possible if specific funding was identified by a national unit or an NGO;

I think they [PHD/OD] demand per diem to support them so that they can travel to follow up, usually it's not functioning if they don't get support from NGO or from national programme ...(Interview 9, Khmer Volunteer Manager)

Although health centre personnel were perceived as having plenty of training, they received little supervision;

... right now I see many training but have no coaching and supervision yeah...They [PHD] do, they do, supervision to the health centre but not frequently yeah, some can two times per year, one time per year, yeah... (Interview 8, Khmer, NGO Regional manager)

Although supervision and monitoring was factored into the health system in the form of monthly integrated Service Checklists, it was not carried out on a regular basis. It was felt that the checklist approach did not adequately support supervision duties and did not result in actions to improve performance;

...because supervision usually means lists...Checklists yes... so if all they do, is they go in and they fill in their checklist, that doesn't improve the capacity of midwives on the ground. And so you know if they're filling in a checklist and there's a big gap, then taking the opportunity to discuss that with the midwife, to work on those skills...so it's just making a bit more of the opportunity and do more of that participatory supportive supervision which isn't necessarily [happening] at the moment. ...the next step really is the action planning that follows that and again that's something that we are trying to support because it's not automatic. You know, so you get your results but 'What do you actually, what do you do with those results?' (Interview 7, International NGO director)

Checklists were described as very prescriptive and resulted in PHD supervision being centered around the checklist and not on developing the capacity of the health workers. Supervision skills were also criticised by interviewees as lacking in constructive criticism and solution focused instruction making it difficult for health centres to improve delivery;

...they [OD] don't offer support, they, you know they'll say that 'you're, you better get your scores up, you better get your scores up or else!'... if the OD cannot offer solutions that doesn't entail cutting down your incentives, or cutting down your salary or um, then how are health centre taught to come up with solutions? ... it's not a very positive feedback or constructive criticism that OD gives back to them, you know so it's very punitive.....if the OD actually was a little bit less critical or offered more constructive criticism, offered more support um, I think that would also generate a sense of pride (Interview 5, international public health volunteer working at district level)

Furthermore, supervision of volunteer CHWs such as community based distributors (CBDs) of family planning products should come through the health centre but as one interviewee explained, this did not happen because of a lack of communication and support from the PHD;

... PHD not introduce the CBD to the health centre. So the health centre not communicate with CBD and the CBD working by themselves and the health centre working by themselves... but have no connected so the CBD not know, can't have no support from the health centre... even, if the health centre not supervise the volunteer, the volunteer will not work... (Interview 8, Khmer, NGO Regional manager)

4.5.6 Monitoring through community engagement

Ensuring accountability and transparency to improve health worker capacity to provide safe, quality health services was reflected by one interviewee who explained that the national government have internal contracts whereby ODs can qualify as Special Operating Agencies (SOAs) by better managing the performance of their health facilities/staff. The reward is that the OD can have more autonomy over financial and other resources which acts as an incentive for them. An interviewee alleged that the facility performance was measured through health centre scorecards which have a question relating to community satisfaction of the health facility, however it was felt that the level of questioning did not always result in answers that were reflective of the community;

'there's a tiny component where they go and interview members of the community, but that always comes out 90-100% satisfaction so I am not sure that's entirely [true]

(laughs), you know I think someone from the Ministry of Health comes and asks you if you're satisfied with your local health facility and what are you going to say to that?
(Interview 7, International NGO director)

In addition, recently (2015) the National Committee for Sub-National Democratic Development (NCDD) has introduced a Social Accountability Framework which aims to allow citizens to analyse government supplied information and to undertake monitoring and assessment of public services and government performance using multi-sector scorecards. Expected standards of service, governance and performance are to be displayed on posters. Health is one of the sectors being monitored through the scorecard. One interviewee gave an example related to health;

[information will be] put on those posters so that citizens can read it and see how their health centre or their school or their commune has performed in the last year... It's about uh uh how many staff do you have working in your health centre... it will be put in those posters and, and its readable for the, for the citizens and they understand probably, if they are, uh, coming to the health centre [why] there's not someone can help them. (Interview 2, international volunteer working at national level)

By displaying the information to the public, health targets that have been in place for some years were taken more seriously by government officials;

...but in health they are uh, really feeling that the targets are too high, they, no one is really, ah, performing according to those targets, everybody is much lower in their performance and they feel that if it [public posters] is implemented now that they will be [put under] a lot of of pressure on them to to to raise their performance (Interview 2, international volunteer working at national level)

Such accountability could result in more realistic targets being set and allow the public to challenge government health workers on inadequate services and poor staff attendance. Interviewees explained that health centre staff will work at a private facility as well as the government facility, splitting their time between the two resulting in health centres being closed when they should be open.

4.6 Theme 2: Public health skills and knowledge application

This theme encompasses two sub-themes which present how insufficient application of public health knowledge and skills is an issue in Cambodia along with some of the reasons behind this and some good examples of public health knowledge and skill application.

4.6.1 *Insufficient application of public health skills and knowledge*

Generally, interviewees felt that whilst there was a good level of public health knowledge and skills amongst health workers, there was a lack of application in the work setting. Efforts to address this had been undertaken by the national government through training and incentivisation of health workers. For instance, training on patient care, counselling, interpersonal communication and behaviour change communication had been delivered by the National Centre for Health Promotion. However, application of such skills and knowledge was reported as an issue. Interviewees discussed possible reasons behind this. For example, health centre staff had been trained by the NCHP to tackle tobacco issues with patients coming in for respiratory problems, however following training the staff did not apply their new knowledge when back in the work environment. It was thought that engrained culture was part of the reason;

...when they get the training, the application of those skill is still not...happen...Like counselling you know...but I see health staff...and it's a very short conversation, you know, but they are not able to to do that ... now we have done many training, not only the the the NCHP but the health promotion centre, but at the, at the programme [training] they also include some kind of uh prevention to them as well but it's still not yet happened.... it's still like the the culture, the belief, education... (Interview 1, Khmer, national government official)

Interviewees felt that the concept of patient centered care was not understood by health workers and that a curative medical model of assessment and treatment resulted in missed opportunities to provide health education and promotion. One Interviewee explained an international volunteer's observations from working at a district hospital;

According to what our volunteers have seen is a patient comes in, they get told what is wrong with them they get even the medicine and then that's it...there wasn't an effort to do um, education about you know breastfeeding for example, about how to care for your health now...So, there wasn't that patient focus care (Interview 10, International volunteer manager)

This minimal communication and lack of health education between health facility staff and patients was also seen at the health centre level and during outreach by a volunteer programme manager;

The health centre staff usually only do very uh, very uh, minimal work on providing education to the people, they don't spend much time on that... they don't focus much on education, not educating to the people also. (Interview 9, Khmer Volunteer Manager)

One volunteer explained that hospital staff could offer new mothers health advice but lacked personal initiative to do so;

I think they [midwives] have the knowledge but you know, they don't have this initial thinking ... initiative to do this job, to do this, like for example if I am pregnant woman, I am a first time mother so I don't know what to do, so it's the, it's their responsibility to teach me, but then they never...(Interview 4, International volunteer working in a rural hospital)

Some interviewees thought that demotivation prevented health workers offering health advice and that their profession was purely for financial gain and did not have the necessary caring element required for health care;

For public health skills, you can give them [health workers] as much education on PNC, ANC, uh, infectious diseases, nutrition, but, its, there's something deeper than, you know, wanting to translate that education into uh, patient care. There there's missing a link, there's missing real motivation to do so, and I'm not, I'm not saying all of them are like that uh, but it just seems to me that it's not a prof, a caring profession, um as we know it to be. Here it's a financial security. (Interview 5, international public health volunteer working at district level)

This was further explained by another interviewee;

...they have the knowledge you know because they receive lots of training from national programme like from the Centre for Health Promotion they provide training to them, they know how to do it but they think they don't want to do it, they only do it if uh, they get like per diem support, you know, in terms of the work with NGO if they have specific project they will do, if no project then they don't want to do... (Interview 9, Khmer Volunteer Manager)

Two interviewees commented that individuals needed to feel valued and awards (financial or otherwise) did this;

... there needs to be a sense that 'what I do matters' (Interview 3 NGO international programme lead working at national level)

... in the hospital we introduce recognition awards, it's like valuing health workers, giving them recognition award for the good job that they have done, so we did...(Interview 4, International volunteer working in a rural hospital)

However, the awards approach did not result in sustained behaviour change;

Yes, it increased motivation to the staff but then, you know after a while, when we finished awarding, two or three months later I noticed that they go back again to their old habits. (Interview 4, International volunteer working in a rural hospital)

In 2016, there was an agreement to increase health worker wages but at the time of interview this had still not materialised. Another interviewee felt that even with a small wage increase, improved motivation would still be influenced by a lack of professional development opportunities and recognition;

... even if they officially get a little bit of money like there's just nothing that's going to see them really like having a true capacity building opportunity with like, you know um, like any kind of mobility or any kind of um, recognition I imagine for their work um... (Interview 3 NGO international programme lead working at national level)

The lack of communication and poor patient interaction is also thought to be influenced by the hierarchical social order in Cambodia which situates poor, uneducated people as subordinates. It is such populations that access cheaper government healthcare facilities. One interviewee suggested to health workers a way of empathizing;

'How would you feel if this happened, you know...maybe in your lives, with [your] friends?... 'see the patient more as someone closer to you rather than someone poor, you know unemployed, no money uh, no education and then they are very below you'. Therefore, you know, they [health workers] feel that the person has less resources' they [should get] less care yeah, so its ah, what we call you know a behavioural change, a mental attitude, you have to change your way of thinking so that is going to take a long time... (Interview 10, International volunteer manager)

An interviewee added that she also felt that language barriers between Khmer and indigenous populations together with low education levels of patients and community members made it frustrating when health workers tried to educate and so demotivated them;

I think also having to deal with a population that is, that has lower education um, that has language barriers, that you have had to repeat several times, how to take a medication, they still don't do it properly. Um, that you have given information but they don't understand or they don't uh, um, they don't follow your advice, um can be frustrating.... So I think, it's not in their nature to um, be educators... uh or to see education as part of their uh, um, their job, it's it's more kind of giving the technical or the biomedical care, um that is seen as part of their jobs, um and I think just patient, all that patient care orientated, which we still struggle with at home, um, is a foreign concept to them and health education, well, you know 'if I tell him, I know he's not going to understand so why bother?' (Interview 5, international public health volunteer working at district level)

Also reported was a lack of identity by health centre workers as being part of the wider community health agenda;

... some of the health centre don't think they are they are the part of the community health yeah. They say that it is a commune business, 'it's not my business', yeah, 'my business is to provide quality service in the health facility' they think that. (Interview 8, Khmer, NGO Regional manager)

Promotion of public health skills and knowledge was also hindered due to public health management roles reportedly filled by medically trained staff often resulting in a focus on a curative medical model of delivery. However public health as a non-medical discipline was increasing as higher education within public health was becoming more popular;

Now public health is getting more popular than before, you know like, many student want to learn public health, they growing school for public health and getting like...I can see the changes ...Interview 1, Khmer, national government official)

Improved institutional factors such as better wages, supportive supervision and monitoring and high quality, regular training with greater coverage were listed as possible solutions to move health workers towards a more people centered health care approach which would include health promotion and education;

How do we change this?...continue training, continue uh supervision, monitoring and support and mostly because they don't really care sometimesthey don't really apply [knowledge and skills]. We have many health education counselling regarding to nutrition, uh, ante-natal but it's not really effective yet in terms of translation of those skill into practice...The gap, big gap is around application but that doesn't mean the training today is sufficient, the training today is not yet sufficient in terms of coverage as well as the quality... they know that what will benefit them, so with many factor around like the low salary, the the system, everything to make them discouraged, less motivated, so sometimes they just don't care, and it doesn't mean they don't know what to do, they just don't do it.(Interview 1, Khmer, national government official)

4.6.2 Examples of public health skills and knowledge application

Examples of good practice were shared by interviewees where individuals and even entire health centres had made efforts to improve community perceptions and relations with the health centre. Efforts to improve facilities were then communicated to village women to increase facility usage. A volunteer working at national level gave an example;

... the health centre made, did a lot of communication on on their part...about how clean it is. After, they invited people to have a look and they promised that there would always be ahhh skilled uh hh midwife available etc etc, then people started to to visit the health centre by uh, in their own commune ...and uh, now slowly, bit by bit, trust is building up and more... (Interview 2, international volunteer working at national level)

Another interviewee explained how in the regions where she worked health centres have improved hygiene and sanitation and staff attitudes towards patients;

Right now, we can see the change of the health centre staff, right now the attitude of the staff is improved, and the management, the health centre management is also uh, is better than before, yeah, and the the communication about the health centre and the PHD is really better than before. Yeah and the, I see I see the health centre environment, the hygiene and sanitation is improved in some health centre (Interview 9, Khmer Volunteer Manager)

4.7 Theme 3: Capacity building methods and support for application

Interviewees were asked 'What training does your organisation offer to mid-level health workers or community volunteers at primary health care level?' And 'What format is used to deliver that training?'

Mentorship or coaching on the job was most discussed as an effective but costly way to increase capacity. Group training using participatory techniques such as practical hands-on exercises to test the ability to implement new knowledge and skills was also believed to make a difference. Shared learning and working collaboratively was suggested as another mechanism to improve capacity of public health knowledge and skills.

4.7.1 Mentorship/coaching

International volunteers played a key role in providing on the job mentoring and coaching along with encouraging reflective practices as described below;

One to one mentoring, so uh, the the Nurse Mentor, she spends time with different team members and then goes through the daily scenario and discusses what maybe, maybe that is going, 'that is actually really good what you're doing, what about this, what do you think its lacking?' so they have those type of discussions (Interview 10, International volunteer manager)

Sometimes volunteers provided a more practical mentorship approach;

...volunteer they choose to provide training to the staff to provide mentor coaching you know, by working with them, alongside with them, hand and hand practice with them and introduce them how to do something for example emergency aid, uh, if they have any patient they will work with them and show them what to do (Interview 9, Khmer Volunteer Manager)

One interviewee suggested that if mentors were available to highlight health promotion/education opportunities in a real-life work situation that health workers would better understand when and how to take a more people centered approach to health care;

...it would be great to just to have somebody almost work with them on site all the time and point out to them this is an opportunity for you to discuss this [health education/promotion]. (Interview 5, international public health volunteer working at district level)

Another form of mentorship was reported where NGO staff stayed overnight at the health centres with midwives to improve their practical skills in real-life situations;

...our staff will go to the health centre and sleep with the midwife in the health centre and uh, practice together.... my experience and others experience have uh with previous NGO they do that and the capacity of the midwife is improved so right now we bring this experience to this project to improve the quality. (Interview 8, Khmer, NGO Regional manager)

The importance of delivering training that is context specific to rural life was depicted through the example of midwives;

...you have to go and apply what you've learnt in Phnom Penh in a place that has no electricity, uh, you've got a whole family staring at you so if you do something wrong, you your life could be in danger, um, you don't have running water, you may have to go and pump, you might be the only one around. Um, so I think that what could help is to have more people work on site with them um, and to see the realities, 'How do you troubleshoot the conditions ...(Interview 5, international public health volunteer working at district level)

Another interviewee highlighted the importance of supporting VHSGs through ongoing coaching to improve their confidence;

...we need to provide the the uh, strong follow up to them to build their confidence because if you don't do follow up, they still don't have confidence to educate to the people, so after training we need to do follow up, we have to go and meet them and stay with them while they conduct the education to the people, so otherwise they don't have the confidence to do this work by themselves so we need to do follow up support from the NGO. (Interview 9, Khmer Volunteer Manager)

However, it was felt that such mentorship was not always available for lower cadres of the health system;

But I also feel like there's an um, there's a tendency towards that like that very didactic, kind of approach, where what we really need is more of a kind of, like more of a kind of mentorship approach or at least that willingness to like go to, go down to that level, go to those people and spend time with them (Interview 3 NGO international programme lead working at national level)

Some felt that mentorship should be a local person's role rather than an international role which was seen as a temporary fix. For example, senior staff could act as mentors to junior staff. However, fears that team working in Cambodia was not strong enough to support this idea were shared;

...a buddy system, so if this one, if the other one is senior he has to be partner with a junior staff so this senior can be a mentor to the junior staff, this should be happen yes but then in the ward I don't see in their team, working as a team, you know I don't see...(Interview 4, International volunteer working in a rural hospital)

Likewise, a desire for nationals to deliver mentoring was echoed by another interviewee;

...what we're trying to do now is have mentoring and not through, not through like expats but find a role model organisation that is doing really well in a particular area and contracting them to do mentoring with the rest of our partners...(Interview 10, International volunteer manager)

Although interviewees thought mentorship worked well in the workplace, it was thought that senior managers were reluctant to share their knowledge with others as it would reduce their senior status;

... you have been in this hospital for 15-20 years, you are the senior doctor, there is an opportunity to go for a directorship position and then you get transitioned to that...and the situation is that in many places directors don't like to share even their knowledge that they have gained while they are in that position of senior management... because knowledge is power is control and knowledge is not shared most of the time (Interview 10, International volunteer manager)

The quote highlights that reluctance to share knowledge could hinder capacity development of new managers which would better prepare them for future management positions.

4.7.2 Ongoing refresher training

The interviewees recognised the need for ongoing refresher training to combat high turnover rates as well as to update and refresh knowledge and skills. However, it was felt that this was not supported at policy level;

... That one training is not enough. We need like on-going supervision, refresher, make up all the time. So, these are the role of our uh, [our] centre but if, if our role is not really reflected in the strategic plan...we don't have the budget to support this activity...So it's sometimes very difficult when the staff of provincial like move out...We have to provide a refresher again...sometime after, the, the department, the provincial department

doesn't have budget to conduct for the training (Interview 1, Khmer, national government official)

One interviewee stated that health workers from the hospital had requested more regular refresher training;

.... they suggested more training like that and then more refresher course every now and then, so they will not forget. (Interview 4, International volunteer working in a rural hospital)

At the community level, it was thought that skills and knowledge were retained following training but that high turnover rates of VHSGs meant that training must be offered regularly to cover newcomers;

...there's high turnover of VHSGs...Then, you know all that knowledge goes with the other VHSG that left...(Interview 5, international public health volunteer working at district level)

4.7.3 Participatory teaching methods

Participatory practical training was believed to be a good way to improve skills and knowledge and was applied by staff at the NCHP when trying to improve relationships between health centres and patients;

... you teach the health staff how to treat patient. You know, ask question, listening, the counselling process and more thing about compassion about...Yeah, so, that training is very participatory ... we take the field work of the daily activity of the health centre and we bring that and we discuss with health staff to see the behaviour (Interview 1, Khmer, national government official)

However, some interviewees reported a lack of participatory training methods by government and some NGOs. Group presentations using flip charts by an instructor seemed to be more regularly applied;

I mean the PHD teaches like that, the OD teaches them like that, it's not in their culture to use participatory, you know even [international NGO] don't use participatory approaches (Interview 5, international public health volunteer working at district level)

This was consistent with another interviewee who indicated that the PHD had been involved in delivering training that took participatory approaches but was unable or unwilling to apply the new

techniques independently and that a revision of the training material and curricula from the national level might encourage them;

... the national curriculum not provide real structure, real instruction for the PHD to provide it, to provide education uh, provide the training by participatory approach yeah. It's just it's just if I see, yeah, more is presentation. (Interview 8, Khmer, NGO Regional manager)

Likewise, another interviewee stated that a revision of curriculum to include participatory exercises may improve practice;

Yeah, like I was speaking to the doctor today and I was like, 'I would like to work with them to see how we can go away from the flip chart and pointing and to do something else', she's like 'I agree'. ... this is an old, this is an old curriculum, we need to change it... (Interview 5, international public health volunteer working at district level)

In contrast, a larger NGO stated that participatory approaches were new to Cambodians and needed time to embed;

... I think it's its baby ... you know kind of participatory approaches are fairly new, so it's, you know its early days really in terms of instilling a more participatory approach. (Interview 7, International NGO director)

Practical, timely application of new skills and knowledge

The importance of applying new skills and knowledge in a practical and timely fashion was also thought to be an important aspect of training that was currently lacking;

...having them practice, practice with you, practice on colleagues, practice on VHSGs, uh really helps because a lot of the time they're uh, absorbing information but are not necessarily practicing right away. (Interview 5, international public health volunteer working at district level)

Interviewees expressed that to build capacity the person should be motivated and have the time to learn;

You have to focus on who is willing, who is willing even though they may have the challenge of low salary or um, poor resources, there will always be someone that wants to learn more, to um, that someone that sees that those needs are real and that they want to help to improve ah what they do and that's the important thing, the most

important element. Find that uh, that person and work with them because they are the ones that can work with others (Interview 10, International volunteer manager)

When training VHSGs a practical approach was suggested to overcome varying levels of education, age and learning styles;

... the level of education [of VHSGs] is low but as the NGO and the government has to design the training to meet their level of education, you know? So, we need to design training that uh, comes with some picture along with the practice after training but not give like a whole literature to them, they will not remember. Because some VHSG they are very old, they cannot remember if you provide whole literature of training to them but if you involve them with, try to make them active, and practice and follow up, behaviour and to do, to do something with them so they can learn, step by step they will learn something so now we need to design appropriate training to meet their level. (Interview 9, Khmer Volunteer Manager)

Some interviewees used role plays to practice new skills which was received well;

We did role plays. The role plays were good...you know when we do ask what else could have been different in this role play, um, you know they're, they're usually good at volunteering information. (Interview 5, international public health volunteer working at district level)

Furthermore, by taking a more inclusive participatory practical approach, not only when delivering education but when designing training, facilitated learning.

And we go through each activity; 'How would you modify it?' 'Do you think that this is appropriate?' 'Would you like to do this differently?' 'Do you feel comfortable?'. We have them practice facilitating using us as audience and then the next day or in the afternoon they would deliver the actual workshop. Yes, or else there's too much, you know, you leave too many days between and they'll have forgotten the material... (Interview 5, international public health volunteer working at district level)

Shared learning

The concept of shared learning was discussed by several interviewees as a method to build capacity. For instance, health workers from different provinces or facilities can learn from each other in a comparative setting;

... maybe Sisapong [health centre staff] can go to Koh Kong [health centre] and see something about the management and then learn from that so they're learning from their, from their own counterparts, you know learning from Khmer people. And they're learning from uh, similar environments with limited resources...(Interview 10, International volunteer manager)

This type of exchange learning was also mentioned by other interviewees in the form of study tours to well-functioning health centres or hospitals and even between PHD/ODs in other provinces.

... like my previous project, I bring the the health centre Director from uh, [one province] to visit the health centre in [another province] (laughs) to see the management, to see the staff attitude, to see the service provided in the health centre. So, when they come back they improve their management, their uh, staff attitude also. (Interview 8, Khmer, NGO Regional manager)

When developing the capacity of VHSGs a slow “step by step” approach was suggested;

...they don't need to start to learn everything at the same time, you know. Step by step, at this day they learn one thing, another they learn another thing. So, they can start to learn step by step in order to improve more knowledge and skill too so they [VHSG] can be able to educate to the people. (Interview 9, Khmer Volunteer Manager)

...she [international volunteer] herself says it's a very slow process, she told me step by step. Sometimes we move two steps and we go back three. You know it's a dance and um, and she said I don't know when we're going to finish the dance but we are still dancing and moving forward and backwards...(Interview 10, International volunteer manager)

4.8 Theme 4: Donor, NGO and international volunteer influences on the Cambodian health system

This theme has four sub-themes and presents the key influences and roles that NGOs, donors and international volunteers have on the capacity development of the Cambodian health system.

4.8.1 Donor and NGO Funding

A large portion of the Health Sector Strategic Plan 2 (HSSP2) was funded by international government aid agencies such as DFAT (Department of Foreign Affairs and Trade, Australia). However, interviewees reported a reduction in aid funding for the current HSSP2 and the upcoming HSSP3 due to the withdrawal of some major international donors such as the Department of International Development from the UK.

Having designated funding was the most cited influence on sustainable capacity building, not only to finance training activities but to provide ongoing refresher training and supervision. Many examples where capacity building plans were stifled by a lack of budget are presented in previous themes. In addition, interviewees stated that funding did not reach the lower levels of the health system such as provincial hospitals, health centres and the community;

... there's money that's around so why doesn't the money get down to the health centres? Something that I always, you can't really ask the question because you can sort of, if you do, nobody will answer that question...(Interview 3, NGO international programme lead working at national level)

As a result, donors and NGOs funded specific health projects or programmes, including top-up salaries, equipment, infrastructure, citizen funds for accessing free health care and research. NGOs with specific project aims often filled gaps in policy implementation created by insufficient government budgets to achieve their outcomes;

...some of the other direct funding to the PHDs has been cut, so we [international NGO] are gap filling to a certain degree but we're gap filling for things that are essential to what we're trying to achieve through our programme.(Interview 7, International NGO director)

Some staff positions were funded or the staff in place would have their contracts revised to do additional or different work;

... A bit of a project paid salaries of staff at the OD level but also um, so the management and coordination staff ...but then also, nurses, lab staff, transportation fees at health

centres as well, it's been, it's about surrounding ODs [with support]...I think that a lot of them might have been staff that were already in place but were just, their contract changed. (Interview 3, NGO international programme lead working at national level)

Incentives, monetary and otherwise, were paid by NGOs and government in the form of per diems to attend training, however insufficient funding to implement activities was reported as a barrier to VHSG functioning. When supported adequately they were active in the communities but without support their interest decreased;

They [VHSGs] be doing the best they can to support and especially when we have [a] campaign or activity that really engage them and work with them and monitor them and um, and support them, so they work for some time, but when we leave them by themselves, so the activity become less and less, so some places you have a volunteer with just the name, and no activity support... it's because it [their role] is volunteer, the work is volunteer, so they can do whatever they want to (laughs) and then the, of course there is a lack of monitoring as well, a lack of incentives, support, like because the rural Cambodia[ns] they they are busy doing something, so when they contribute to uh, the work of the health centre they also expect something after, incentive you know. (Interview 1, Khmer, national government official)

High turnover rates for VHSGs were reported and NGOs had advocated for more sustainable funding for VHSGs through the Commune Councils as part of the decentralisation process;

... so, the government doesn't have budget to give to them, so they work voluntary. So, it's quite challenging for them also because VHSG they have a high turnover, you know for the VHSG, they need to find the work to earn income to support their family, so they only can work for a few days a month, but they cannot commit for more because they need to go out and earn income. And these are usually NGO or national programme, they pay for transport cost and some small per diem for them when they come to do the training...they want the government to put the budget so the commune investment fund through the commune channel, you know, so that they have a budget to support the VHSGs so the VHSG can functioning well in future but it takes time you know, the NGO they introduce the idea to the government, they think that in order to make the VHSG functioning the government should allocate the budget to pay monthly allowance to them. (Interview 9, Khmer Volunteer Manager)

4.8.2 Verticalisation of health programmes

Cambodia is very much structured with vertical health programmes working in silo created by specific donor funding and NGO work streams.

I think the verticalisation has been a real problem um and you know it's interesting just looking at the way that the Ministry is kind of, how its organised...I work with over the years, the National TB Centre, the National Malaria Centre, the HIV Centre and the National Maternal and Child Health Centre...So the verticalisation issue is also very linked of course to donors and so I think with HIV, TB, Malaria, we've had such a huge donor who's been very prescriptive about um, you know implementing arrangements and uh, and its required, its required that verticalisation...(Interview 3 NGO international programme lead working at national level)

The National Centre for Health promotion is one of the only departments at national level that has not in the past had a programme specific agenda. Their responsibility laid more in developing cross cutting skills. Behaviour change communication was discussed by interviewees as a skill required by health workers across a variety of programmes including tobacco control, alcohol use, patient-health worker relations, malaria prevention, complementary feeding, nutrition and integrated management of childhood illness. Behaviour change communication was also mentioned as a requirement for specific vulnerable groups such as garment factory workers, people with disabilities and ethnic minorities. However, such cross-cutting skills were not being funded horizontally but rather funded by individual programmes. Plus, the draft HSP3 was indicating a shift away from this horizontal approach and becoming more programme focused placing the NCHPs role at risk of reduced funding. When one interviewee was asked 'what changes were predicted at the NCHP following the implementation of HSP3?' she described her fears of further verticalisation;

The strategy new, strategy plan is this time is focusing on programmes you know, ...Focus on programme for example uh, tuberculosis, or maternal and child health, something like that, for our centre we are not a programme people, we are more cross cutting, we are supporting, this is very risky sometime ...Some some research says that it's better to work across programmes and not individual...I think in this context....it's not very...I think it's quite challenging to work across the programme like this you know...Because uhCambodia is...we are more vertical, if if you are work[ing] crossing [programmes] like this, then you don't have [a] bunch of priorities in the strategy plan...(Interview 1, Khmer, national government official)

Funding for activities like behaviour change communication, health promotion and education skills, counselling, problem solving and supervision were being cut due to the influence of donor expectations. For example, a large portion of the funding for NCHP at the time of interview was focused on tobacco control, an initiative supported by WHO and other large donors, rather than cross cutting skills. One interviewee explained that by improving capacity through developing cross cutting skills, many primary health care programmes would benefit but there was little support for this approach;

... attention should be given to to to motivate the [national health]centre to do some kind of cross cutting issue otherwise people just you know get my own baby, so yeah... 'you do malaria', 'I do TB', so we have different business you know, but actually we have the same common uh, business a lot, make sure that people apply the skill in public health to contribute to the prevention of TB, prevention of Malaria, prevention of poor nutrition so these are the common skill but now we are not yet in the stage of coordination...I feel that in primary health care there are very difficult challenges...(Interview 1, Khmer, national government official)

Even at the community level different CHWs serve different health programmes, for instance community based distributors (CBDs) deliver family planning interventions, Malaria workers hand out mosquito nets and prevention advice, VHSGs do both in some cases and more. There is a lack of coordination between programmes when employing the help of volunteer CHWs who have had little training in health promotion and education skills. One interviewee explained the challenges of trying to coordinate silo programmes into a single plan;

It's [CHW programmes] quite silo-ed, some, particularly some of the infectious diseases are quite silo-ed because they're funded in a vertical kind of way... you may have heard this. What tends to happen is they'll end up with a plan supported by somebody for their TB programme, and a plan supported by UNAIDS for their HIV programme um and we've [NGO] been trying to help them to put that all into one plan. ... you know, this is an area where I think uh, as I understand it, um, funding is an issue, so just to bring everybody together unfortunately costs money and so, I think it's been the case that if we [NGO] haven't helped that happen, it's not going to happen cause there's not enough money to do it. (Interview 7, International NGO director)

4.8.3 Advocacy

NGOs have some responsibility as advocates and were influencers of policy decisions. They were in a good position as they worked with national bodies and at the grass roots level so could feed information up the hierarchy. For example, International NGOs often had more power than Health Centre Chiefs and acted as advocates to influence government bodies on their behalf.

...so we have an advocacy responsibility as well which is 'you need to extend this facility' or you know, 'you need to spend some of your infrastructure money on the infrastructure' even if we're not, you know we can't cover everything so, you know the Ministry of health should be, that should be. (Interview 7, International NGO director)

4.8.4 Aid dependency

From the quotes above and some presented below, there is evidence of a dependency on international volunteers, NGOs and donors to fill funding and other gaps in the system. PHD and ODs, health centres and VHSGs looked to donors and international NGOs for support. One volunteer explained that activities planned at the national level do not happen at sub-national level without NGO support;

Usually the government budget they don't have uh, the budget to support them, so the government they depend on NGO support or they depend on the funding from partners through the project implementation like TB project or Malaria, or HIV/AIDS which they get the funding from the global fund, so they they can pay per diem rate for OD staff to do follow up. (Interview 9, Khmer Volunteer Manager)

Refresher training is also mainly provided by NGOs who target a specific group or geographical area resulting in unstructured training, for instance an interviewee described how only some health workers received refresher training depending on NGO funding;

And some like this institution [named NGO], sometimes they cater for this only amount of participants and they cannot invite all... Yes, most of the refresher trainings are delivered by NGO because the Ministry of Health they don't give more trainings for this [updates], so they depend more on the NGOs who are doing this for the hospitals and health centres. (Interview 4, International volunteer working in a rural hospital)

An international volunteer programme lead explained that placing international volunteers into the government system to build capacity without a budget was difficult due to a pre-existing financial support expectation;

... For the new partner, they think that they [volunteers] meant [to pay] for higher per diem because they might expect that [our organisation] pay more and they always compare [us] with the big NGO but when we work with them longer they understand now. (Interview 9, Khmer Volunteer Manager)

4.9 Chapter summary

This chapter presented the findings from all three studies. The findings indicate that health workers based in health facilities receive training but they do not always apply the knowledge in the workplace. Across the health sector a dependence on external NGOs for instruction and funding is evident. VHSGs appear to have minimal capacity to independently identify and apply solutions to community health problems and face many challenges from communities. Their identity and credibility in the eyes of the community is strongly influenced by age, status, power, experience and knowledge. The findings also highlight gaps in training, refresher training and supportive supervision that is constructive and enhances capacity building. Managers and leaders are not supported to develop management skills and lack autonomy to make decisions. All three studies provided information relevant to the aims and objectives of the research and enabled a health systems approach to analysis which is interpreted and discussed in the next two chapters.

Chapter 5 Analysis, interpretation and synthesis of findings

This research aimed to gain a better understanding of the public health knowledge, skills and practices required to build capacity within primary health care in low resource settings. It was hoped that gaps in knowledge and skills required to build a comprehensive primary health care workforce would be identified and that the role of key public health actors and policies in this endeavor would be better understood. The research also aimed to recommend strategies and mechanisms to improve public health capacity at PHC levels in Cambodia. The research aims and objectives are presented in Table 18.

Table 18 Research aims and objectives

Aim One – Section 1	Aim two – Section 2
Gain further understanding of the public health knowledge, skills and practices required to build capacity within primary health care in low resource settings.	Investigate the needs and gaps in training and educational provision and identify strategies and mechanisms of improving public health capacity at PHC level.
Research Objectives	Research Objectives
<ul style="list-style-type: none"> • Identify where and what gaps exist in public health knowledge, skills and practices of facility based health workers and CHWs. • Assess policy translation, especially in underserved rural areas. • Analyse the roles and involvement of individuals, communities, organisations and governments in the development of health workers and CHWs. • Explore how the Alma-Ata approach to PHC is understood and implemented, specifically with regards to community participation and empowerment. 	<ul style="list-style-type: none"> • Identify methods currently being used by training providers to build capacity of health workers in Cambodia • Evaluate which methods and mechanisms are considered effective • Critically analyse current methods and mechanisms that restrain capacity development • Explore how contextual factors impact on the application of skills, knowledge and practices

This research applied a PAR approach supported by in-depth interviews to identify key phenomenon that influence and impact on the delivery of comprehensive PHC, community participation and

public health in Cambodia. Working with VHSGs, who are the main public health implementers in rural Cambodia provided an understanding of the challenges and contextual barriers that face volunteers working in a community participation role. The in-depth interviews with health professionals helped to situate the role of health workers based in community health facilities and to understand how public health capacity building efforts have been received and applied by volunteer and paid health workers. The interviews and PAR also served to provide an understanding of the micro and macro factors influencing public health knowledge, skills and practices, including national policy, leadership and management structures, working environments and health worker motivation.

This awareness is also imperative to addressing the second aim of this research which is to identify strategies and mechanisms of reducing the skill gap and improving public health capacity at PHC level. The interplay between PAR, interviews and ongoing literature reviews has led to the identification and recommendation of training methods and support required for health workers to apply public health knowledge and skills in their community context.

This chapter analyses, interprets, and synthesizes the findings with current literature. It is divided into two sections to address each of the aims as presented in Table 18.

5.1 Section 1: Public health knowledge, skills and practices required to build capacity within primary health care in low resource settings.

This section will discuss the motivation, training and likelihood of health workers based in health facilities to undertake public health practices such as health promotion and prevention advice. The section will then provide a critical discussion of key findings related to literature on the level of public health knowledge, skills and practices of VHSGs. Training gaps and needs are highlighted. Finally, the section will provide a more general discussion about community participation in Cambodia and the ability of lay community members such as VHSGs to engage in participatory, democratic processes as agents of social change that are valued by decision makers.

5.1.1 Health facility workers and public health: ‘It’s not my job’

When first undertaking this PhD, the aim was to explore the public health knowledge, skills and practices of health facility workers (trained practitioners based in community health centres and hospitals). However, it soon became clear that health facilities rarely undertake public health roles such as health promotion and that it is the VHSGs who are the main public health actors. The interviews further clarify this. The concept of a people-centred, health promotion and prevention approach to healthcare is not understood or implemented by health workers at health centres or

hospitals. The interviews uncovered a perceived view that health facility workers focused on curative care only, a focus common in other LMICs (WHO 2016b). Having a curative focus can damage patient-health worker relationships as they become limited to the moment of consultation rather than developing an enduring personal relationship that provides comprehensive, continuous, people-centred care (Epping-Jordan 2010). People-centred care means having a responsibility for a person's health along the life cycle including tackling determinants of ill-health and seeing people as partners in managing their own health (Epping-Jordan 2010, WHO 2016b).

The Alma-Ata declaration acknowledged that PHC is the first level of contact for individuals, the family and community (WHO 1978). It is at this point that health workers have an opportunity to facilitate empowerment of individuals and families through knowledge and health promotion in the spirit of self-reliance and self-determination (WHO 2016b). However, health workers minimally engage with the public and do not apply the knowledge they have learned from NGO and government training. Interviewees perceive that this is not due to inability or a lack of knowledge/skills but due to application barriers such as; a lack of compassion, perceived superior positioning, low education levels of community members and low motivation of health workers. Improving motivation amongst staff is reported by several interviewees as key to improving application of skills. Consistent with other research findings in Cambodia and LMICs, motivation is said to be affected by institutional factors such as low salaries, a lack of discipline or consequences for poor performance and little recognition of good work from superiors (Henderson and Tulloch 2008, Ingleby et al. 2013). An interviewee working at the national level summarised how motivational factors affect implementation of skills and knowledge;

The gap, big gap is around application... they know that what will benefit them, so with many factor around like the low salary, the the system, everything to make them discouraged, less motivated, so sometimes they just don't care, and it doesn't mean they don't know what to do, they just don't do it.

Willis-Shattuck et al. (2008) identified key motivational factors as financial rewards, career development opportunities, ongoing training, facility infrastructure, resource availability, management and recognition/appreciation of good performance reflecting the findings in this research. The link between health worker performance and motivation is well established and within Cambodia, several contracting methods have been trialed to improve motivation (Soeters and Griffiths 2003). This includes internal contracting through Special Operating Units or even direct contracting of Health Centre Chiefs which has shown improved health worker performance and

facility use. However, this has not as yet been implemented nationally and does not address the other factors affecting application of public health practices. For instance, even when staff work in private clinics, although communication with the public was perceived by interviewees as better, there was no evidence of applying public health practices like health promotion or prevention advice. If health facility workers do not see themselves as part of the community and they feel their role is purely curative, they are unlikely to apply public health skills regardless of increased motivation. Health facility workers seem to be unaware of the public health approach and the evidence here suggests that they do not understand where the variety of public health training they have received fits in with their work. They also do not have a clear understanding of what people-centred community health care and the concept of comprehensive PHC mean in practice. They function within a hierarchical model of disease-oriented medical care systems that is unsupportive of partnerships and team work between different health workers and community members (Lehmann et al. 2004)

5.1.2 Mind the gap; closing the gap between knowledge and application

The gap between knowledge and practice is the first step to addressing public health knowledge and skills needs of rural PHC workers in Cambodia. The ‘know-do gap’ in public health is the variance between what is known about a health issue or intervention, and what is being done about this in either health promotion or disease prevention (Davison et al. 2015). The knowledge-practice gap amongst health workers has been reported in literature but mainly in respect to clinical application of guidelines and training (Grol and Grimshaw 2003, Rowe et al. 2005, Chakkalakal et al. 2013). There is a shortfall in literature relating to the application of public health skills and knowledge by health workers based in health facilities. However, literature parallels can be drawn between clinical and non-clinical application of knowledge. Historically, development practitioners have assumed that a lack of knowledge and skills was to blame for poor performance of health workers and so efforts have concentrated on delivering training (Rowe et al. 2005). There was evidence of this from the interviews, however, despite training health facility workers, the translation of theories and learned skills into practice was difficult, a phenomenon found by other research in Cambodia (O’Leary and Meas 2001). Understanding the organisational norms, values and beliefs of a health workforce are key factors to changing practices of health professionals (Mead and Bower 2000, Rowe et al. 2005, Davison et al. 2015). The interviews suggest that health facility workers do not see themselves as part of the wider community and so it is perceived that public health skills are outside their scope of work. As one interviewee stated *‘some of the health centre don’t think they are they are the part of the community health yeah. They say that it is a commune business, ‘it’s not my*

business'. In their eyes, community health affected by the wider social determinants of health such as sanitation, poverty and poor health practices is the role of the commune councils and outreach workers like volunteers or VHSGs. Their perceived role is to provide medical services to people who enter the health facility. Teaching public health skills and knowledge to health workers based in facilities is pointless if they do not see the value in application. Therefore, the gap is not entirely based on knowledge and skills but on the value, credibility and acceptability of applying that knowledge in the workplace from the perspective of the health worker (Chakkalakal et al. 2013, Davison et al. 2015). Understanding the motivation and working context of a Cambodian rural health worker functioning within a medicalized health system that does not offer regular supervision, professional development opportunities or adequate wages will facilitate the understanding of why training efforts are not resulting in behaviour changes.

5.1.3 VHSGs skills, knowledge and practice needs

Following the understanding that health facility workers were unlikely to deliver public health practices, the research moved towards understanding the level and needs of public health knowledge and skills of those that did see themselves as actors of community public health, the VHSGs. The findings from the PAR and interviews show that VHSGs fulfill many public health roles requiring a plethora of knowledge and skills. Through the PAR, some public health skills and knowledge competency gaps of VHSGs were identified; however, the gaps and needs varied greatly depending on their age, experience and social positioning. This was demonstrated from the quality of action plans produced by groups in Study 1 compared to Study 2. While the groups from Study 1 produced a very comprehensive action plan, the group from Study 2 struggled with the task. Thus, skills and knowledge gaps are not consistent, but rather exist on a spectrum of knowledge and ability with less experienced, younger VHSGs on one end and elder, more experienced VHSGs on the other. Some of the reasons for this are obvious, such as those who have served for longer have had more time to accumulate skills, knowledge and experience through training and practice.

Some of the newer VHSGs do not have even basic public health knowledge due to the lack of experience and any standardized core training programme. This situation is reversed in CHWs from countries who provide initial training programmes. CHWs that serve longer are less knowledgeable than new recruits because of changes and innovations which are delivered to newly trained CHWs but not updated for longer serving CHWs (Bennibor et al. 2014). This shows the need for not only an initial training programme but for ongoing refresher training.

Furthermore, the spectrum of training needs is affected by the VHSGs status in the community. Holding another community role which commands a higher status and power position with

community members, such as being a Deputy or Village Chief, decreases the need for skills such as conflict resolution with community members, negotiation and trust development as this is already established with the community. The diverse training needs of VHSGs together with an unrecorded, ad hoc training structure delivered mainly by international aid organisations, makes the task of assessing VHSG training needs difficult. It does, however, highlight the fragmented nature of training, supervision and monitoring of public health capacity building efforts. Specific non-technical skill gaps are identified as summarised in Figure 23 and are discussed further in this section.

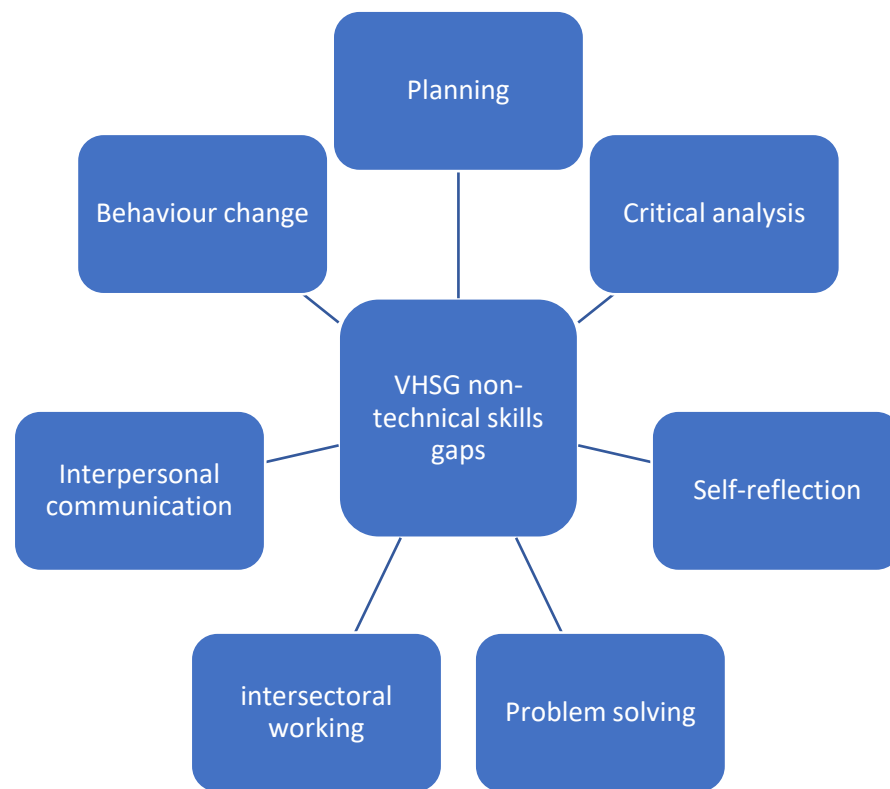


Figure 23 VHSG non-technical skills gaps

Understanding the health needs of rural communities in Cambodia

This research demonstrates the ability of VHSGs to assess and understand community health issues/needs. The findings from photovoice identified numerous health issues faced by rural communities, many of which are structural and environmental and related to the wider social determinants of health. This is consistent with other research and publications and policies devised by the RGC which highlight the need to address the SDOH in poor communities in Cambodia (Soeung et al. 2012, Sokcheng and Kimsun 2014). Yet, the public health approach towards prevention, health

promotion and protection remains undervalued. Access to safe water, excesses of rubbish, poor waste disposal mechanisms and poor hygiene and sanitation practices increase the risk of faecal-oral diseases and affects a family's ability to work and attend school which can create an intergenerational cycle of poverty and ill health. The concern for malaria is not for treatment but for the long unkempt grass, stagnant water and rubbish that provides breeding grounds for the larvae. The animal faeces and rubbish are in the same area where children play causing many health incidents. Toilets in schools still have no water for children to wash their hands and people in villages are practising open defecation which leaks into water supplies. The lack of social care for children, the elderly and the extreme poor add to community health burdens. The problems identified demonstrated the need for a broad public health approach required to prevent and eliminate these risks.

Intersectoral responses are a key part of addressing health inequalities in Cambodia and the Ministry of Rural Development, Ministry of Water Resources and Ministry of Environment need to be part of the process. Some skills delivered by non-health sectors could help improve health locally. For instance, I observed a training workshop delivered by the Ministry for Rural Development for Village Chiefs who were shown how to analyse local needs and to prepare action plans (with a budget) to be submitted to the commune council. However, the participants were informed there was no budget at the current time. While such training is encouraging and would support a more intersectoral approach to health, it is important that this is not purely rhetoric to fulfill an objective set by an external donor.

The health issues identified in this research reflect those cited in other studies of rural Cambodia, including disparities in services, infrastructure and meeting basic health needs (Soeung et al. 2012, Sokchheng and Kimsun 2014, Cambodia National Institute of Statistics et al. 2015). The unmet health needs found in rural Cambodia and strategic plans indicate that a comprehensive PHC system is being abandoned in favour of a selective PHC approach. At the policy level, there appears to be an understanding of what is required to achieve comprehensive PHC through community participation, health promotion and education (MoH-RGC 2008). Previous training programmes delivered by the NCHP provide evidence that health promotion and education skills were key areas for development and that historically there were efforts to take a cross cutting horizontal approach to public health (MoH-RGC 2017). One interviewee working at the national level described her desire to advocate for this model and had a clear understanding of the need for a more horizontal approach. However, the financial backing and political will to support this structure are diminishing as vertical programmes and external agencies dominate priorities including skill development. While policies

are written with the help of international support they are not followed up with detailed workable strategies that define realistic budgets and country wide standards. The training described by VHSGs also reflects a programme-specific agenda with few examples of broader public health skills development.

The risks associated with a selective primary health care approach highlighted in publications in the 80s and 90s are still relevant today. Focus appears to be directed away from the basic health needs of communities such as sanitation and water supply, adequate housing, social services, poverty reduction and environmental factors. Furthermore, there is a gap in understanding how CHWs attempt (or not) to address the SDOH in their interactions with community members and the health system (Theobald et al. 2015). VHSGs highlighted these needs in their communities and discussed some possible solutions, however efforts and resources to advocate for these were diminished by the monopolization of their time by internationally driven health initiatives and a strong hierarchical government system. Internationally imposed health initiatives have been shown to distort national policies in host countries by distracting governments from coordinated efforts to strengthen health systems and to re-verticalize planning, management and monitoring and evaluation systems (Biesma et al. 2009).

Even though research has shown the need for LMICs to develop a more comprehensive intersectoral, participatory primary health care model (Macfarlane et al. 2000) that moves away from a dominating curative treatment based model (Macdonald 1993) this has not occurred in Cambodia. Furthermore, countries that have adopted the selective PHC approach have found that inadequate policy and health reforms have resulted in a delayed technical adaptation to rapid social change (Grundy et al. 2009). Thus socio-economic factors of ill health such as those mentioned here are missed and health inequalities grow. Grundy et al. (2009) argue that there is a need for Cambodia to have greater emphasis on social and political analyses and responses to the reduction of health inequities.

Assessment and analysis, power and patronage

The literature has identified that one of the core competencies required to build public health capacity in LMICs is assessment and analysis (Bennibor et al. 2014, Zwanikken et al. 2014). VHSGs demonstrate that they can assess the health needs and root causes of ill health in their villages and that they understand the links between health and; poverty, income, housing, sanitation, water and food access. They may not be familiar with terms such as SDOH but they fully understand that environmental, economic and social factors affect the health of their communities. Understanding

the effects of SDOH is promoted as a necessary ability for CHWs within the analysis and assessment competency (Lehmann et al. 2004, Bennibor et al. 2014, Theobald et al. 2015). All VHSGs were active in this part of the PAR process and eagerly participated in the communication of needs related to the SDOH. Understanding why and how VHSGs developed the ability to assess health needs provides a window into understanding why other skills have not developed. When we highlighted the VHSGs' ability to assess health problems, the PHD Technical Director was quick to explain that VHSGs have been involved in identifying community needs for over 20 years so they are experienced in this skill. Looking at the wider context, the experience of identifying needs is enhanced by the presence of international aid organisations that act as patrons who come to 'fix' health problems (Leonard et al. 2010). Cambodia's long-term dependency on international aid, highlighted in the literature and in the research here, pre-conditions VHSGs to be ready to display need with the aim of gaining resources and new patron relationships. There was evidence of this when one VHSG presented to me many photographs depicting poor families, thinking I could help in some way. In Sothara's recorded reflection she stated;

...when the VHSG take the picture of them [poor villagers], they think that our [research] team [can] help them by either money or [give] other thing to them, because they always...request [us] to help them buy many things, like make the toilet, the well or [give] the money for them.

The VHSG wanted to help these families by showing their need to me through the photographs, in her eyes I could help in some way. The patron-client relationship structure that underlies Khmer Culture has been transferred into the new world of development, situating outside agencies and their staff as new patrons (Leonard et al. 2010). As argued by O'Leary and Meas (2001) patronage encourages dependence, gratitude and maintenance of unequal relations where the client will take on the role of behaving like a 'little person' who requires the help of the patron. This interpretation was reinforced by one VHSG who was reluctant to move past the identification of needs to the planning stages. He felt that other organisations who had power and resources could solve the issues, but that VHSGs could only assist them. For example, VHSGs were asked to bring community members to be assessed for malnutrition and supplementation in the form of vitamin sachets was dispensed by health facility staff. Whilst health centre staff were involved, VHSGs were not informed of the reason for the programme or about the sachet use. The VHSGs are in a good position to ensure the sachets are understood and used correctly and to give other nutritional advice, however they did not receive any training. This leads to frustrations about organisational processes and relational arrangements that hinders CHWs ability to fully implement their role and gain

empowerment through knowledge (Kane et al. 2016). It also places VHSGs in an inferior position in the eyes of the community and their exclusion undermines any power they may have felt from having a VHSG title. Removal of power from VHSGs reinforces the need for patron relations and could undermine efforts of self-mobilisation.

Thus, in the Cambodian context, the empowerment of community members envisioned by participation policies is replaced by dependence. This fits with Cooke and Kothari's (2001) view that participatory development has the potential for tyranny; they argue that the goal of participation in international development programmes is far from the unjust and illegitimate exercise of power that is found when external agencies come to impose participation ideals. The CPPH was developed in partnership with international actors and is mainly functional only when they have a need for it to function. Thus, control and power remains with outsiders and not with communities regardless of the development of participation policies. This potentially disempowers CHWs and if they do not feel empowered themselves they are unlikely to be able to provide opportunities for community empowerment (Kane et al. 2016). This tyranny mirrors selective, PHC outcomes favored by neoliberalism and restricts the ideology associated with comprehensive PHC and community participation (Cooke and Kothari 2001). Other studies of CHWs in LMICs reflect the feelings expressed by VHSGs in this study such as frustration from a lack of control over their work environment and of being unsupported which results in feelings of powerlessness (Campbell and Cornish 2012, Kane et al. 2016). VHSGs know the health needs of their communities but appear to be stuck in this assessment and analysis stage, unable to move past identification and onto independent solution development. As such, independently creating an action plan seems out of their control and leads to an apathetic approach to health improvement and a need to wait for instruction from others whom they perceive as having more knowledge, power and resources.

Planning

The ability to plan and coordinate a schedule of activities to tackle prioritized health problems is another competency required by CHWs (Bennibor et al. 2014). In addition, public health initiatives that involve CHWs in planning processes increase ownership and the likelihood of sustainability (Naimoli et al. 2015, Tran 2015). In Study 1 the action plans were more comprehensive and the groups were better at identifying solutions. The reason for the differences between the groups in studies 1 and 2 is not clear. It may have been that the group from Study 2 knew they would be required to implement the plan or it may be that the skills and knowledge of the groups were just vastly different. Following Study 1 I felt that the knowledge and skills of VHSGs were misrepresented in the literature which reported gaps in their ability. Yet my research identified that VHSGs can

produce effective plans. However, as the plans were not implemented in Study 1 it is not understood if the activities would have gone forward.

In contrast Study 2 found that VHSGs have minimal planning experience and ability. Their first action plan was basic and lacked detail specific to their individual villages. VHSGs in this study showed little motivation or ability to use initiative and take ownership of health improvement in their communities. The Village Chiefs' attendance at the workshop helped to create a more robust action plan as they have more experience of planning than the VHSGs do. Having a close relationship with the Village Chiefs who are also linked with volunteers in other sectors such as education and rural development may be a better way to encourage intersectoral working. There is evidence that VHSGs discussed the health needs of communities with Village Chiefs, such as the need to fix or add water wells. In this way, they can be advocates for community needs, but this is dependent on the relationship that exists between Village Chiefs and VHSGs. The VHSGs here indicate that this relationship is often weak and a barrier to implementing health initiatives. However, by engaging the Village Chiefs in one workshop for a short amount of time, one VHSG found that the Village Chief worked with her more often.

The absence of planning ability is not surprising when considering that the normal role of VHSGs is limited to transferring information learned from NGO training to the community and not to question a situation, reflect on experiences or identify solutions. They are normally not consulted on which issues should be prioritised, which reflected (when asked) the need to address the wider SDOH. They are often not consulted on how their initiatives are received by community members or how their work impacts their own daily lives. Their role was described as mainly attending training and delivering health promotion messages for the period when they were being supported. The PHD Health Promotion Officer explained that VHSGs were unable financially or personally to support community health improvement without external help and supervision. Thus, the creation of an action plan without identified support and instruction was difficult to grasp as VHSGs do not feel they have the capacity to implement change. The preconceived belief of 'No money, no participation' further reinforces a cynical stance to independent solution finding.

Dependence on aid and the hierarchical organisation of society have contributed to an apathetic approach towards identifying actions/solutions without first being instructed (Ear 2013). This is compounded by the political and education system of Cambodia which does not support independent thinking (O'Leary and Meas 2001). As found in Study 1, a male VHSG almost refused to make an action plan without first consulting the government, using one's initiative was uncomfortable for him and he feared the research was bypassing the normal approval mechanisms.

If VHSGs are not empowered to act in their communities without approval from government officials then their role in implementing change and acting as advocates is potentially restricted. Few studies discuss power and control in developing and implementing participation interventions and there is a need to understand how to contest such power in hierarchical societies to enhance health in rural communities (Asha et al. 2015).

There is evidence that some of the VHSGs could make informal plans with a few steps to follow, for example, Norn planned to collect money and organise the repair of a well and to fix a toilet in the community through engaging school committees and water well committees. Norn's experience and status allows her freedom to make small scale plans, even if they are not recorded in a written format. However, this is not consistent across all VHSGs and is very dependent on the individuals position in the community, age and experience. If Norn and other VHSGs were better supported to develop planning and organisational skills as part of a core training programme or ongoing in-service training through supervision, they might feel more ownership of activities and the needs identified by communities might be better addressed. In Ghana, CHWs have supervisors who help develop their skills in planning and creating action plans by meeting on a weekly basis to develop ideas into plans (Lehmann et al. 2004). In Iran CHWs received initial training in participatory planning with the aim of mobilising communities to prioritise and produce action plans to address health issues faced by community members (Behdjat et al. 2009). These were developed and implemented independently of external influence. In Cambodia, such skills based training is neglected and does not seem a priority for NGOs or government who are more focused on technical training linked to vertically based health programmes. Nigeria also found that CHWs required competency training to develop their skills in planning (Bennibor et al. 2014).

Critical analysis and problem solving

One of the main challenges to VHSG participation in the workshops from Study 2 was, what I initially perceived, as a reluctance to discuss and analyse what was happening when implementing their action plans. Initially VHSGs said they were too busy to implement the plan, then they reported more barriers in the community that they generally faced in their role, but very little in respect to the actions from the plans. When we persevered, we were informed the 'plans were done' and told 'not to worry' indicating a desire to show success regardless of the reality, thus demonstrating an embedded culture of pleasing outsiders to access funding or resources in a patronage like manner. My own positionality was associated with resources and power and therefore, VHSGs were quick to try and assure me that they had achieved the actions in the plan regardless of the reality. Similar experiences when investigating the Health Centre Management Committees, another function in

the CPPH were found by Rushton (2007) who stated that 'Because of the implicit conditionality associated with international NGO assistance, health centre staff members were keen to portray themselves as doing everything that they were meant to' (p193). As discussed in the reflexivity, my position of power had nothing to do with me as an individual but rather what I represented. Previous research has found that 'international development actors produced, marketed, and "sold" participation policies and processes and, in return, offered an implicit promise of resources to the government' (Rushton 2008 p.ii), thus creating an association between internationals like myself and resource allocation. My presence shifted the focus away from reflection on experiences when implementing the action plan to communicating success in order to access further resources. This reinforces the phenomenon of dependence on internationals.

In reality, the visits to the villages showed that the VHSGs efforts to implement the plans had minimal impact and when we tried to encourage the VHSGs to revise the plans and re-implement, they felt there was nothing more they could do. The VHSGs indicated that they lack the ability to problem solve and to learn and adapt new strategies to address negative community health behaviours. One of the competencies required for CHWs is the ability to initiate, direct, and work with community and staff to plan solutions to identified health problems (Bhattacharyya et al. 2001, Bennibor et al. 2014). However, VHSGs seemed unable to plan solutions, and continued to focus on the problems faced when working with communities. They also seemed unfamiliar with critically analysing their own role in the implementation process. Learning from reflection of practice in the field is not an acknowledged concept in Cambodia, rather learning is understood as a formal exercise to be undertaken in a workshop or through training (O'Leary 2006). Learning, in the eyes of the VHSGs, comes from listening to others who are superior in knowledge and power, mainly from NGOs. Theobald et al. (2015) posit that CHWs require training to facilitate critical reflection with communities, as well as with individuals and households. This may promote the identification of practical sustainable solutions and the commitment needed for communities to address SDOH in rural areas.

In Cambodia, there is also a fear of making mistakes, which means losing face through negative criticism of one's practice (O'Leary 2006) and so asking VHSGs to create an action plan that may not work in practice was potentially risky for them. VHSGs chose instead to focus on barriers out of their control, like community behaviour and a lack of power and resources. This is in line with the social structure in Cambodia, it is safer to be critical of those below you or equal to you (O'Leary and Meas 2001), who are not patrons. The VHSGs struggled to identify ways of revising the plan and were dismissive of Sothara's continued quest for ideas to revise the plans with new problem solving

techniques. The cycle of action research had reached an end for this project due to the inability and disinclination of VHSGs to move forward and find new solutions.

Moreover, as the workshops focused on barriers, VHSGs began to show signs of increasing disempowerment. Kemmis (2006) argues that 'unwelcome news' is a part of the PAR process and occurs when the nature and consequences of current situations is explored. Kemmis et al. (2014 p.113) further states that 'the point of communicative action in public spheres is to allow people to handle unwelcome news individually and collectively, with care and consideration for others'. Indeed, the other VHSGs with more power and experience in their communities discussed how historically they too had experienced negative reactions from community members. They were sympathetic to the challenges faced by newer VHSGs and assisted by sharing stories of what they had done in difficult situations. Discussions began to meander through a number of possible solutions. However, suggested solutions did not transfer into actions, as even after this exercise VHSGs struggled to identify ways to revise the action plans and identify solutions. Problem-solving skills were lacking with most of the VHSGs in this study and are a critical training need identified for CHWs to promote behaviour change in communities (Bhattacharyya et al. 2001). One way of improving the ability of VHSGs to critically analyse a situation with a solution focused, problem-solving ethic is through in-service training with opportunities to practice solution finding in the community setting (Redick et al. 2014).

Identifying community assets

The identification of community assets did not come as easily to VHSGs as did the identification of health problems. When discussing community assets, the VHSGs first identified wells and toilets as assets, as the link between health and these facilities was made. When further prompted, they named numerous NGOs who assisted in public health development and described how NGOs could and would solve their community health problems. When asked to identify how other community assets could help improve health at the community level VHSGs had difficulty identifying who and how, whereas identification of NGOs was an easier response. Rushton (2007 p.166) also found that 'International NGOs were so instrumental in developing the participation policy and particularly in implementing it that HCMCs had largely come to be seen as an international NGO activity, rather than a government one.' Likewise, here, VHSGs referred to NGO programmes of work rather than government activities even though they understood they were a part of the government health system. Further prompting for community assets did result in several being identified, however how these could link to improving the health of their communities was less understood in Study 2 and seemed difficult to grasp. Some discussions regarding the use of schools and clubs to promote

health messages took place in both groups but these were quickly dismissed as being geographically too far away. Some of the community assets such as rice banks, animal feeding and sharing schemes, affordable toilets schemes and improved access to education shows their awareness of the impact of other sectors on health.

Developing a community asset approach may be a means to encourage inter-sectoral working and expand the VHSGs ability to identify ways of forming links between sectors. Developing CHW competencies for intersectoral collaboration with workers from other sectors such as agriculture, education, water supply and housing has been reported as a critical principle in furthering public health impact (Lehmann et al. 2004, Zwanikken et al. 2014).

Health promotion, interpersonal communication and behaviour change communication

Additional skills-based competency needs for CHWs identified in the literature include interpersonal skills and communication, situational awareness and understanding of behaviour change frameworks (Ruiz et al. 2012, Bennibor et al. 2014, Tran et al. 2014, Zwanikken et al. 2014). During the PAR process, skills based gaps were identified such as effective interpersonal communication, negotiation, political navigation, behaviour change communication, conflict resolution and public engagement. For example, both the interviews and PAR illustrate that some VHSGs lack confidence in delivering health messages due to verbal challenging by community members as to their status to instruct others, but also because they lack communication skills. This was demonstrated during the BCC training reflection session when VHSGs highlighted that they had previously been unaware of how to; introduce themselves, keep messages simple by using fewer words, and how to listen and respond to community members. This provides evidence of the need to improve communication techniques for VHSGs.

Communication techniques are sensitive to community contexts and any efforts to develop communication skills needs to reflect this (Haq and Hafeez 2009). For example, VHSGs faced difficulties when members said that they could not afford to improve their health practices or to go to the health centre. One VHSG stated that community members told her that if she supplied the money to go to the health centre then they would go, but if not to leave them alone. VHSGs were unsure of how to respond to such comments and how to continue the conversation. Similarly, 'Lady health workers' in Pakistan have asked for training to tackle engrained cultural responses such as 'we are poor, we can't do anything'; or 'a woman's only role is to serve the husband, kids and the family' or 'the life or death of the mother or newborn is the will of God, in which the mortals cannot intervene' (Haq and Hafeez 2009). These responses are context specific and are a result of religion,

culture and poor socio-economic conditions. Interpersonal communication skills which are context specific would better prepare the VHSGs to elicit meaningful responses. CHWs in Kenya and Indonesia also expressed a need for communication and negotiation training (De Koning et al. 2014)

Another example of VHSGs' training needs was highlighted by their struggle to achieve behaviour change of villagers following health promotion sessions. Aboud and Singla (2012) found that programmes that fail to consider theories of behaviour change rarely result in the desired outcome. If VHSGs were trained in basic behaviour change theories such as social learning or simple social marketing techniques they might have more success in achieving outcomes (Haq and Hafeez 2009). The training delivered by the Health Promotion Officer covered some basic aspects to communication but did not cover behaviour change frameworks as suggested for CHWs in the literature (Tran et al. 2014).

Community engagement and VHSG credibility and identity

VHSGs, as agents of community participation, need to have a relationship with community members that will enhance villager cooperation and participation (Khun and Manderson 2008), however most VHSGs could not achieve this. The lack of any structured induction and training programme, uniform or ID, resources or adequate support from Village Chiefs has resulted in villager mistrust and disrespect of younger VHSGs. For example, one of the key problems identified by both VHSG groups was the unclean environment within and around households. When the VHSGs attempted to educate families on the risks caused by rubbish not being disposed of correctly, they faced challenges. When out on visits to the villages, most VHSGs were reluctant to instruct or even talk with fellow villagers about the rubbish collected around the community and water wells. A study investigating community participation in dengue fever prevention in Cambodia also found that villagers were uncomfortable in asking others to help clean the environment or their homes (Khun and Manderson 2008). As VHSGs are first community members before becoming VHSGs they will have internalized the same norms, values and belief systems as the communities in which they work (De Koning et al. 2014, Theobald et al. 2015). Khun and Manderson (2008 p.145) argued that;

Historical, political, social and economic factors have undermined the social institutions and conventions in the study villages that could facilitate community involvement. In particular, poverty and differences in local interests influence the capacity for people to be involved. Villagers regarded the maintenance of the domestic environment as a personal responsibility and were reluctant to extend their action to a wider domain.

Understanding how VHSGs fit into the overall community structure and how they can best communicate with villagers in a way that builds trust and does not come across as challenging is needed for VHSGs to safely and successfully engage communities in public health practices. This is supported in the literature as suggested by Theobald et al. (2015) that CHWs have to negotiate gender and power relationships within households and communities in their routine work. If the challenges become too great for VHSGs they are likely to take a passive approach to participation as seen here.

If VHSGs in Cambodia are to make a difference to community level health practices, efforts to improve community relationships through establishing VHSG credibility and identity as health workers is required. Media campaigns have been shown to improve the credibility of CHWs in other countries. There is some evidence of a coordinated media campaign for tobacco in Cambodia where all levels of the health system were trained to deliver key messages at the same time, however how this impacted the VHSGs is unknown. In Cambodia, previous projects have found that VHSG credibility was linked with higher standards of knowledge and access to essential drugs (MoH-RGC and USAID 2010). VHSGs who took part in IMCI programmes found their credibility with community members increased due to the additional training under this programme (MoH-RGC and USAID 2010). Therefore, core training with refresher training would also improve credibility.

The fragmented nature of training, supervision and financial support has resulted in VHSGs lacking identity (Rushton 2007). Identity issues are further compounded by the presence of disease specific CHWs such as the Village Malaria Workers (VMW). The VHSGs sometimes have dual roles as VHSGs and as VMWs. There is a clear need to synergize these two groups who are often tasked with same actions but with differing governance strategies and policies, training and supervision lines. There is a danger in organizing CHWs according to diseases, in that the wider person-centered approach to tackling community based health care and problems is replaced by tackling one issue and not considering the broader needs of a family. The literature for VMWs discussed widening their role to tackle other issues such as childhood case management and prevention for diarrhea, respiratory problems and fever (Yasuoka et al. 2012, Canavati et al. 2016), but this is also the role of VHSGs'. The CPPH even states that VHSGs may include people who already work as Red Cross Volunteers (RCV), Community Based Distributors (CBD), Village Malaria Workers (VMW), Community Home Based Care Teams (CHBT), Community Direct Observation of Therapy Watchers (CDOTS), Traditional Birth Attendants (TBA), Community-Based Peer Educators for Chronic Disease and Mother Support Groups (MoH-RGC 2008). This myriad of volunteers reflects the vertical approach to health, risks duplication of training and supervision and is likely to confuse volunteer identity and community

members as to which volunteer is for which service (Mogedal et al. 2013). The VHSGs spoke of work undertaken by Red Cross volunteers around sanitation and environment. Sometimes VHSGs were asked by Red Cross and other agencies to be involved and sometimes not. Tey in the PAR research explained how another VHSG was selected for a sanitation project but she was not. VHSGs working in the same areas should be learning and supporting each other, especially when one VHSG is newer and younger, instead it appears that a competition situation arises and volunteers are shopping around to see who will give the most for training and per diems, keeping the opportunity away from fellow VHSGs. If the management of all volunteers was coordinated by the PHD and OD it is likely that a more standardised approach would limit such competition. Furthermore, the association of CHWs time as extensions of NGO programmes only, further distances them from the health system as evidenced here (Tulenko et al. 2013). Studies have found that CHWs feel empowered when they are identified by their communities as being associated with the health system and so this should be encouraged more with the CHWs in Cambodia (Jaskiewicz and Tulenko 2012, Perry and Zulliger 2012, Kane et al. 2016).

This lack of control on their work environment experienced by VHSGs results in attitudes of sitting back and waiting for instruction for fear of stepping out of line. This is the antithesis of community participation and empowerment, rather it questions the role of VHSGs as facilitating social change in communities. The situation could be better controlled by unifying community volunteers with clear policies and guidance, strong leadership and ownership at the provincial level (Mogedal et al. 2013). Other LMICs countries such as Sierra Leone have situated CHWs as overseers of all community based health activities thus preventing fragmented approaches to public health (Government of Sierra Leone 2012). Some LMICs have established community level health committees to organise, plan and manage all CHWs which prevents overlap (Mogedal et al. 2013, Raven et al. 2015).

Based on the research here, identity and credibility as a VHSG also depends on experience, training, age and social positioning within the village. VHSGs who have a strong identity in the community could introduce new VHSGs to community members, smoothing their transition from a lay citizen to a community health worker. Such an introduction might help clarify the role of VHSGs to community members as they would be able to supply examples of the work they have done in the past as an introduction. The health centre is responsible for submitting a list of active VHSGs to the OD who then should provide ID cards to be signed by the PHD. If this process was followed the VHSGs would have a better social standing and be recognised as part of the health system, possibly easing the verbal challenges from community members. Furthermore, selection processes that do

not involve communities, as experienced by Tey who was instructed to be a VHSG by her Village Chief, as she was the only person who could read and write, could jeopardize her relationship with community members. If the community had been involved in her selection she may have received more respect from fellow villagers. Community engagement in the selection process is recommended but managing this requires careful planning and adaptation (Jaskiewicz and Deussom 2013).

‘No Money, No participation’

The term ‘No money, no participation’ was mentioned by VHSGs and others during my time in Cambodia. There was evidence of a belief that Khmer people would not participate in activities unless there was payment or reward of some kind. For instance, the PHD Technical Director felt that VHSGs would not act without remuneration. Some of the VHSGs did not agree with this. They expressed a desire to improve the health of their communities and clearly stated that if there was payment available to attend training they would attend but if there was not, they would still come if work priorities allowed. They took offense at the PHD Directors view and were keen to give examples of times they had attended training without payment. However, when suggesting that the Village Chiefs attend the workshop, the VHSGs were initially adamant that they would not attend without payment. This culture was further reinforced during the interviews when a national Khmer interviewee explained that unless there was a per diem or financial reward attached to a specific project, health workers, PHD/OD staff were unlikely to undertake new activities. Such an ingrained belief could potentially hinder health workers’ application of new skills and knowledge and change their work ethic. Instead of being directed by a sense of care and responsibility to improve health they were driven by financial gain. This interpretation was also reflected by an interviewee who had undertaken a survey to understand health worker motivation. She found that elder staff were driven by care for their community and newer, younger staff were motivated by financial gain.

5.1.4 VHSGs as agents of social change

Whilst I was exploring the needs and gaps in public health skills and knowledge it became apparent that there was a requirement to understand the contextual underpinnings of implementing a participation policy in Cambodia. The culture, social structure, history and political arena in Cambodia affects the ability of VHSGs and other volunteers to participate in decision making processes and mobilize communities. This is discussed in relation to research investigating participation policies from other sectors in Cambodia which found similar phenomena to this study.

The CPPH claims to be a participation policy yet in practice, undertaking community participation as suggested in Alma-Ata within Cambodia is challenged. If VHSGs are to advocate for the community's wider health needs such as those identified in the PAR workshops, like the need for functioning water wells, sanitation and adequate nutrition they must have the power, desire and inclination to influence others and to be the voice of the community. In short, CHWs themselves must be, and feel, empowered (Kane et al. 2016). They also must be listened to and respected by those that have power and resources. However, participation methodologies cannot be simply imported from democratic western societies through the design of a participation policy, without understanding the contextual environment in which the policy is implemented (Ovesen et al. 1996, Ledgerwood and Vijghen 2002). This has been shown through the largely unsuccessful participation and democratic policies implemented in Cambodia, not only in the health sector but within rural development and education (O'Leary and Meas 2001, Pellini 2007, Rushton 2007). The NGO dominance of participation policies has resulted in community representatives in Cambodia being left without meaningful involvement in government decision making processes (Rushton 2008).

One of the factors contributing to the failure of 'westernised' participation policies in Cambodia is an educational system that teaches children to obey and respect others and never to challenge or question authority (O'Leary and Meas 2001). Therefore lay community members require a communication mechanism that does not appear to challenge the knowledge and opinions of elites, one that must work through the established structural organisation of society (Plummer and Tritt 2011). As stated by Rushton (2008) there are tensions between traditional power relationships and the new relationships required by participatory processes. For example, the younger female VHSGs who were perceived as lower in social status by community members do not have or are unable to challenge such power and so rely on Village Chiefs to raise their influence.

Research has suggested that civilian communication in Cambodia must occur through established elites, such as Village Chiefs or Commune Chiefs (Plummer et al. 2013). In this research all VHSGs stated the need to involve Village Chiefs in activities and even took it upon themselves to mention this to the PHD Technical Director during the training. Plummer and Tritt (2011) found that formal committees such as the HCMCs do not provide a safe arena for lay community members to express opinion, and so Village Chiefs informally gather information from elder, respected community members which they then communicate on their behalf. The authors warn that this method excludes some views such as those of women or the poor but generally contributes to the development process in a positive way. Similarly, in the PAR workshops Norn informally supported other VHSGs to speak openly through leading by example, thus creating a 'safer' environment for

them to discuss their problems. Participation facilitators in Cambodia should consider models of working through elites, who can speak openly and facilitate safe open dialogue so that the voices of marginalised community members can be heard. This would allow information to flow up through 'safe', risk adverse channels of communication. Recognising community structures that can be built on, such as this, to encourage community voices to be heard is necessary for community participation in cultures of hierarchy and political oppression. Foley (2001) argues that the health crises in developing countries is often understood solely in terms of the strategies and policies, with little attention given to local hierarchical structures of authority.

VHSGs were also faced with political risks. For instance, VHSGs when selecting community members for health education sessions were criticized by Village Chiefs for choosing members from one party and not the other, when in fact they were trying to control numbers and had chosen randomly. They place themselves at risk when making such decisions, which could jeopardize essential patron relationships and have severe consequences for their livelihood. This fear is further enforced by historical and current authoritarianism leadership that is maintained through fear, mistrust, powerlessness and passivity (O'Leary and Meas 2001). All of the above factors lead to a reluctance to openly discuss, disagree, question or oppose those in power. CHWs function within a political and historical context and policies that fail to recognise and address these risk sacrificing participation and empowerment principles (Maes et al. 2015). Figure 24 presents a summary of the contextual influences on VHSGs ability to act as community participation agents.

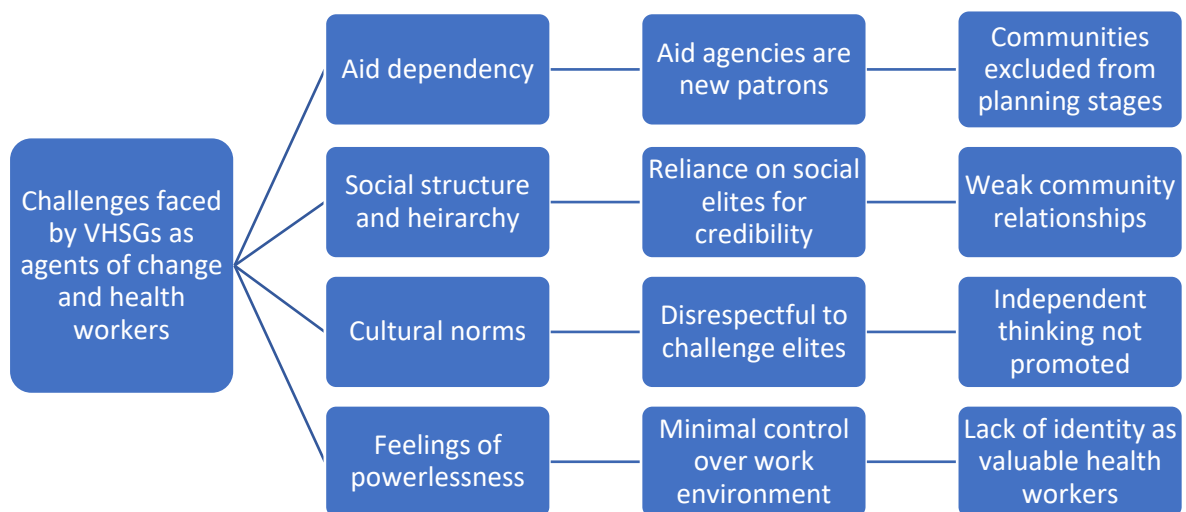


Figure 24 Summary of the challenges faced by VHSGs as community participation agents and public health workers

The CPPH lacks the values associated with community participation as espoused in the Alma-Ata declaration. VHSGs' capacity to empower communities to make changes in the interest of self-reliance or to advocate for basic health infrastructure is limited by culture, social structure and aid dependency. VHSGs are clearly involved in delivering health initiatives instructed by outsiders or even PHDs but this does not equate to community participation. The policy states that one of the objectives is 'Providing an improved framework for all health actors working at the community level to promote the sustainability of community participation' (MoH-RGC 2008 p.9). The findings here suggest that this has not been achieved. Standing and Chowdhury (2008) highlight that CHW policies are defined by two main agendas: a pragmatic agenda where CHWs fill the gap created by health workforce shortages through task shifting practices and a more transformative agenda where CHWs are social agents whose role is to create awareness of the social context of community health and work with communities to tackle this through broader political means such as advocacy. However, in the Cambodian case, CHWs are neither of these, they appear to have a greater role of serving as free NGO labour to implement externally imposed health initiatives than of empowering communities and influencing decision makers to meet community identified health needs. Whilst their public health capacity improves through training from NGOs, the sustainability of their activities, skills and knowledge is neglected. Community empowerment is unlikely under the current policy and should be revisited considering the accomplishments of other countries such as Iran (Behdjat et al. 2009) and parts of India (Campbell and Cornish 2012) that have achieved more meaningful locally led community participation. In addition, as stated by Kane et al. (2016 p.27):

CHW programs need to move beyond an instrumentalist approach to CHWs, and take a developmental and empowerment perspective when engaging with CHWs. CHW programs should systematically identify disempowering organisational arrangements and take steps to remedy these. Doing so will not only improve CHW performance, it will pave the way for CHWs to meet their potential as agents of social change, beyond perhaps their role as health promoters.

Furthermore, the welfare of VHSGs appears to be overlooked by health actors and government bodies. As found in the PAR, three out of eight VHSGs could not attend due to health issues for themselves or their families. They expressed that although they wanted to take part in the research, if there had not been a payment to attend the workshops they might not have been able to come. Daily lives of CHWs here and in other LMICs are a struggle to find enough work to support their families, and even with strong motivation to be a VHSG the challenges they face daily present barriers to their participation (Lehmann et al. 2004). VHSGs should not be pressured to take on roles

that jeopardise their ability to live well, access income or support family members. Health actors should engage with VHSGs to understand the contextual factors that may negatively affect their ability to deliver VHSG responsibilities as well as improve their own personal wellbeing. There is a global responsibility to ensure that externally influenced CHW programmes and policies do not exacerbate inequalities in gender or income (Lehmann et al. 2004). Women from rural LMIC settings in particular already have considerable daily tasks to ensure survival and sustenance, and voluntarily undertaking additional roles risks further lost economic opportunities (Lehmann et al. 2004). Other studies have found that CHWs functioning on the low end of the socioeconomic scale would benefit from paid CHW positions which in turn would improve food access, reduce economic uncertainty, and strengthen the autonomy of male and female volunteers (Maes and Shifferaw 2011). Without government owned, structured remuneration packages that alleviate some of the challenges VHSGs face when attending training, delivering services or health promotion sessions their daily struggles are at risk of being amplified. Current fragmentation of CHWs makes it unclear who is responsible for their welfare and there is a risk that their needs are neglected (Naimoli et al. 2012).

At present the policy implies that it is a participation policy when in actuality VHSGs are community health promoters or outreach workers rather than agents of social change for community mobilization and empowerment, as suggested by the term participation. Their participatory role has not materialized and their capacity to represent the voice of community needs is restricted by historical, political and social structures within Cambodia.

5.2 Section 2: Needs and gaps in training and educational provision and strategies and mechanisms of improving public health capacity at PHC level

Capacity building that is grown and nurtured takes place in; an enabling environment, in organisations and within individuals (UNDP 2009). Breaking each of these down in relation to the development of public health knowledge, skills and practices at the community level provides a starting point to identify strategies and mechanisms for improving public health capacity at PHC level.

5.2.1 Individual level

Gaps in training and educational provision for VHSGs

The CPPH (MoH-RGC 2008 p.20) has a very brief section referring to training and capacity building which states:

‘The PHD and OD are responsible for providing training to HC staff who in turn train the VHSG. VHSG Leaders have the responsibility for coordinating training and capacity building for VHSG Members in their villages’

During this research there was no evidence of appointed VHSG leaders with responsibility for training coordination and VHSGs did not express any responsibility at all to support other VHSGs. Even Norn who acted as a leader within the group did not discuss her role as a training coordinator or VHSG leader. Interviewees and the PHD Technical Director spoke of a lack of finances and capacity of PHDs, ODs and HCs to deliver training and supervision to VHSGs. This is not surprising as the allocation of health finances often does not reach PHC level and the VHSGs are the lowest level of the system (Grundy et al. 2009).

The only other reference to training in the CPPH (MoH-RGC 2008 p.20) is:

‘Support for VHSG training can also be carried out by other structures such as NGOs, MoH, Departments, and National Programs using training packages and/or training materials for VHSG Members approved by the Ministry of Health, such as the C-IMCI Training Curriculum for the VHSG.’

IMCI is Integrated Management of Childhood Illness and the training for VHSGs was around diagnosis and treatment of children suffering from diarrhoea and pneumonia (MoH-RGC and USAID 2010). This was a time limited project undertaken in a specific province and not part of a structured programme across all provinces. Although it was anticipated that following initial trials it would be embedded as a core initiative, the funding to support this (to my knowledge) was not fully identified. VHSGs received mainly technical training on specific health issues such as malaria, TB prevention, and maternal and child health, mainly from NGOs. However, in Kratie the delivery seemed fragmented with some VHSGs having knowledge and some not and no record of professional development.

There was disconnect between what interviewees thought VHSGs had already been trained in and the skills gaps identified through the PAR process. The interviews and reports from international

development partners suggest that training for health promotion and education, behaviour change communication and developing good community relations, had been delivered to VHSGs and health workers. The interviewees proclaimed that the gap was in the application of those skills, not in the ability. One interviewee explained:

We have many health education, counselling regarding to nutrition, uh, ante-natal but it's not really effective yet in terms of translation of those skill into practice...The gap, big gap is around application...

However, during the PAR process, the challenges VHSGs faced in the community reflected gaps in their ability to handle community engagement and effectively change community behaviour. The VHSGs did not discuss ever having received BCC training before and were enthusiastic about the opportunity to learn this new skill. This contradiction between interviewee belief and the actual knowledge of VHSGs is worth exploring. Firstly, newly recruited VHSGs may not have been presented with the opportunity to attend those specific training sessions, secondly, some VHSGs may have missed opportunities and thirdly, the VHSGs, intentionally or not, did not mention all training. They may have decided to keep their options open to potentially gaining more skills, refreshing previous skills and/or gaining financial remuneration by understating the training they had already received. The VHSGs were aware that training sessions offered a good opportunity of gaining financial remuneration and so seeking additional training would benefit them financially.

In addition, the fragmented structure of training for VHSGs means that training varies greatly between regions and the training spoke of by interviewees may not have been delivered in Kratie. This is also a limitation of the management system for training and support for VHSGs which has been highlighted in the policy as the responsibility of PHD/ODs and health centres. At the time of this research there was no record of what training had or had not been delivered and so organisations entered into contract with the VHSGs much as I did, with little understanding about their level of skill and knowledge. Initially, after the first field visit, I had overestimated their capacity due to their ability to create a realistic action plan and identify key needs in their villages, without really knowing what skills they had to enact a plan. It was not until the last few workshops and the training days that it became apparent that the VHSGs had varying degrees of knowledge with most having minimal capacity for public engagement. Furthermore, it became apparent that some VHSGs were unsure of how to introduce themselves to community members and others had little understanding of disease transmission. When we visited the villages, I began to see that only Norn communicated well with the community while others were reluctant to engage with community members.

If PHDs had a better record of training attendance and if international partners worked directly with PHDs to assess VHSG competencies, then it is likely that duplication would be minimised. New programmes could focus efforts on refresher or top up training rather than re-delivering previous training with different slants depending on the programme. At the moment, even the Health Promotion Officer who delivers most public health skills training was unsure of the knowledge level of VHSGs that attended the training and had assumed they knew basic disease transmission and what second hand smoke was when in fact some did not. Ultimately this highlights the fragmented, unstructured delivery of public health knowledge and skills training and the need to assess core training needs for VHSGs to optimise their performance. However, the demands of external agencies coupled with the desire of VHSGs to access per diem payments and learn new skills leaves them in a compromising position whereby they agree to participate in anything put forward to them, regardless of its appropriateness and their ability to implement. The resulting fragmented training delivered to VHSGs poses a risk to their wellbeing and the quality of the services they provide (Naimoli et al. 2012). Standardised training for VHSGs should consider international guidance and research that suggests training should have role and context-specific contents, be competency- and practice-based, include supportive supervision, continuing and refresher training, including pre-training, training and post-training steps, include job aids and ensure that acquired skills are factored into the overall CHW role (Tran et al. 2014). The stepped approach to training suggested above is also suggested by interviewees who explained that any training for VHSGs who have minimal education levels should be delivered in stages so that they may absorb the information and apply it before learning something new. The interviewees believe this would help VHSGs to retain the information for longer. Refresher training is also a key gap in public health training and educational provision identified by the interviewees. Both VHSGs and health facility staff had discussed the need to refresh their knowledge after a period of time as they worried they would forget valuable information which would assist them in delivering quality services and health promotion. Refresher training is as necessary as initial training and is recommended as a key element of CHW and health worker performance (Lehmann and Sanders 2007, Redick et al. 2014).

Who should develop the public health knowledge and skills of VHSGs?

Consideration of who delivers training and supportive supervision will influence the ability of VHSGs to absorb and apply knowledge and skills. One of the interesting findings in this study is how hierarchy within the PAR workshops facilitated conversation rather than hindered it. This was to some extent due to the unofficial leadership skills of Norn, the more experienced elder VHSG who was also a Village Chief. Norn's skills, confidence and experience meant that other VHSGs looked to

her before deciding how much they would contribute to discussions and how open they could or couldn't be. Norn's personality is facilitative and encouraging and in this case helped the RAs to converse with the others. While it is recognised that not all elder, more experienced VHSGs are of the same ilk and some VHSGs with similar power could replicate the more traditional outcome for Cambodia which is to command respect through obedience and following, some people of power like Norn could be supported to lead new VHSGs. In addition, if the training was delivered by experienced VHSGs, others might be able to better associate with them and their experiences. As Cambodia is a hierarchical society it may be an advantage to have a layered progressive professional development system for VHSGs from beginners to trainers to supervisors. This would also provide incentives for personal growth and achievement as well as valuing efforts put in by long term volunteers (Mogedal et al. 2013, Bhutta et al. 2015).

The other benefit of the participatory research with a group of VHSGs is that it provided a shared learning space. Shared learning that supports participation and knowledge exchanges is possibly a cost effective realistic way of better understanding and tackling the challenges faced by VHSGs. Although in this case suggestions were not immediately taken on board, a better structured shared space for learning on a regular basis with senior CHWs as facilitators might have better results. Such shared learning is a form of experiential learning which is recommended for capacity development of CHWs (Ruiz et al. 2012). The interviewees also identified shared learning through exchanges between facilities and between health professionals as an effective means of building capacity, thus supporting the above recommendations.

Gaps in training and education of health facility workers, Health Centre Chiefs, PHDs and ODs

As found in the PAR with VHSGs, the interviews also indicate that non-technical skills such as critical analysis leading to problem solving, solution finding and ultimately taking initiative to implement change are lacking in provincial and district managers and health facility staff. For example, interviewees intimate that while health workers are keen to highlight problems in the work place, they lack the ability to self-reflect on their own practice and to come up with solutions to problems. In addition, interviewees speculate that there is little in the form of training for such skills, especially for managers who are often placed in management roles with little or no previous training or experience. As already discussed above in respect to VHSGs, these skills gaps are not only from the absence of direct education and training but are linked with the social and cultural values instilled in Cambodian society. How social structure, cultural values and political landscape affect an individual's ability and desire to use initiative and actively come up with solutions is discussed.

Hierarchy is an engrained feature of the Cambodian Health System and as described in the interviews and demonstrated in the PAR, hierarchical structure is highly respected and adhered to. However, the values associated with hierarchy in Cambodia are so strong that they appear to impede the ability of managers and health workers to improve key competencies needed to develop an evolving public health workforce. PHD/ODs and Health Centre Chiefs seek advice and permission from above before making any changes or decisions regardless of how small. As highlighted by one interviewee, if there is a weak link in the hierarchy, the system is slowed down as a project cannot continue without approval from the level above. The interviews demonstrate how PHDs/ODs do not challenge NGOs, one interviewee explained the typical process:

...you just submit your work plan in writing. But... you know they did not direct what we did... um, I think maybe they may be afraid to pass up the opportunity by directing too much, um directing NGOs to do ... they're very dependent on funding from from NGO's..

As NGOs are viewed higher up in the hierarchical structure and hold more power through resource ownership, challenging them presents considerable risk and PHDs are reluctant to impose controls on NGOs for fear of losing funding. This response is also likely to diminish ownership of public health initiatives.

Health Centre Chiefs have little power to manage their staff and all decisions, including the implementation of disciplinary action on staff when needed, had to come from the OD. Levels of autonomy are restricted by an overarching necessity to receive orders from above. When Health Centre Chiefs take initiative to raise concerns to OD staff, they are often confronted with punitive actions rather than policy or procedural led solutions to problems. The ability to provide constructive feedback and supportive supervision is another gap identified by the interviews which is consistent with literature on the management of close to community providers (De Koning et al. 2014). Interviewees feel that Health Centre Chiefs and health workers are not receiving feedback that could lead to improved knowledge and practices.

The findings suggest that health workers and managers rarely use their own initiative to instigate changes without instruction. The interpretation by interviewees and initially by myself of health workers' reluctance to take initiative and act without instruction was one of unwillingness to participate. For instance, an interviewee interpreted the silence she received from health centre staff after asking them to pose solutions to a problem; 'it's like they don't want to think, I don't know. It's, I don't know maybe sometimes I, I see them, as they are lazy thinkers, they don't think.' Like me, the interviewee's positionality of coming from a westernised world where independent

thinking and using initiative is rewarded, makes it difficult to correctly interpret the observed actions of health workers and managers. This is a phenomenon also described by Ovesen et al. (1996) who argued that westerners misunderstand the conservative responses of Khmer people as an unwillingness rather than as a quest to re-establish the social order. This belief is supported by O'Leary and Meas (2001) who also found that Khmer individuals with a lower status are reluctant to take initiative unless there is clear approval from above which limits the capacity of individuals to instigate necessary changes. In addition, Khmer people have been exposed to a political and education system that promotes following rather than analysis and active decision making based on choice (O'Leary and Meas 2001). Furthermore, in Cambodia, the culture is to not reveal mistakes for fear of judgement and consequence, but making mistakes creates opportunities for learning. If individuals do not feel safe to try new things or explore new strategies, they will be unable to develop new solutions (O'Leary and Meas 2001).

To build a reactive, supportive environment for public health competencies to develop, health workers and managers must be open and supported to critically analyse current working practices, policies, processes and procedures, to challenge these with senior staff and NGOs, to use their initiative to make changes, even if they are small. However, it is more natural and comfortable for Cambodian health workers to wait for orders and follow instructions rather than independently identify needs and solutions. This was reflected in the interviews when international volunteers observed health workers being inactive, when in their minds there was work to be done. If incentives with clear links to benefits were in place, health workers changed their behaviour to seek access to the incentive, such as the case with a competition to improve health worker performance in the hospital. The interviewee reflected that after the incentive was removed health workers returned to the previous status quo. This could have been that there was no longer clear instruction and orders of what was required.

The question is how to create a health workforce that is trained and supported to use initiative and challenge elites but also to create a willingness and desire to do so. This is not simply a task that requires training but one that addresses social structures and cultural values across the health system. Typical teaching methods employed in liberalised countries are unlikely to transfer directly into the Cambodia context as using initiative is not encouraged in the Khmer culture as it is in liberal societies, often from a young age (Ovesen and Trankell 2010). Although many health systems are hierarchical in nature, the degree to which people can innovate, openly analyse processes and procedures and suggest solutions needs to be assessed and considered. These are key considerations for developing an enabling environment for public health skills, knowledge and

practices to evolve. The non-technical skill gaps of health workers and managers are summarised in Figure 25.



Figure 25 Health workers and manager non-technical skill gaps

Internal Training Structures

Internal structures of capacity building follow the cascade, top-down model of training found in Cambodia which is supported by national staff who feel that this is a cost-effective way to build skills and knowledge. However, flaws in its application resulting from a lack of training skills, resources and finances hinders satisfactory delivery of nationally mandated training programmes at the provincial and community levels. The interviews highlight that PHDs and ODs do not always have the skills to deliver training effectively or to develop practical usable resources which means that facility based health staff and VHSGs are likely to receive poorer quality training. Likewise, health centre staff are expected to deliver training to other health workers and to VHSGs without having been trained in basic educational principles. Poor training of VHSGs results in reduced confidence and a reluctance to deliver health promotion sessions to community members. If the cascade model of training is to be effective staff must first be trained and supported to deliver education through effective teaching and communication.

During the BCC training session, the person allocated to deliver training was the Health Promotion Officer who had delivered training previously in partnership with NGOs and international staff on many public health issues. Her experience was evident, however she discussed her frustrations of trying to evaluate training and deliver resources to health centres and VHSGs following training sessions when funds did not support such activities. The PHD Technical Director expressed the need to monitor changes in community health practices such as using safe water sources but without a budget to monitor, he was unsure if the training was effective. The training delivered by the PHD appeared to be ad hoc, often without structure and the topic, location and learners changed with funding streams. The Health Promotion Officer spoke of developing an annual plan with a budget to deliver training to health workers and VHSGs which was submitted as part of the overall PHD plan but explained that even though plans were approved the funds did not reach her level. PHDs appear to know what training is required to build public health knowledge and skills, however plans were undermined as external agents imposed training without recognising the need to fit in with PHD plans. Thus, there appears to be misalignment between what needs are identified by the PHD and what is funded.

In addition, whilst there was evidence that NGOs present work plans to PHDs, and some ask them for advice and facilitation, not all PHD/ODs are involved in delivery. Some NGOs select which level of the health system to train and do not always follow the cascade training structure. This disregard of structures results in fragmentation of capacity building efforts and disjointed lines of communication which possibly challenges the ability of PHDs to manage and monitor staff development. For instance, by training VHSGs directly rather than following the system of developing the capacity of the PHD, OD and health centre staff to deliver training and supervision, health centres were unaware of VHSG activities. The relationship between VHSGs and health centres is critical to their functioning, when NGOs do not work within the established framework, this relationship is damaged and health initiatives risk losing long-term sustainability. This approach is also likely to weaken the overall capacity of the health system. As stated by capacity building research and international development agencies, developing organisational capacity is as important as developing individual capacity (United Nations Development Programme 2009).

Figure 26 provides a summary of structural improvements that could positively impact training to develop public health skills, knowledge and practices of health workers



Figure 26 Structural improvements to develop public health skills, knowledge and practices of health workers

Training methods

The findings suggest that in-service training which is delivered on-site, is context specific and includes practical, hands-on application of skills and knowledge is the most effective way to build the capacity of health workers and VHSGs. Mentorship and coaching methods are used by international volunteers and some NGO staff to do this. As part of this methodology some employ self-reflection principles to encourage health workers to engage in personal evaluation and problem solving. One to one or team mentoring or coaching has the advantage of taking place in the work setting which provides opportunities to practise skills and learn from immediate feedback (Bluestone et al. 2013). As the mentors are experts in their field of work, the health workers benefit from having a knowledgeable trainer who can provide practical tips, both factors reported in the literature to have positive impacts on the learning experience (Kamiru et al. 2009, Bluestone et al. 2013). However, while this technique was applied to developing technical skills there was little evidence that it was applied to develop public health skills. For instance, to support VHSGs to deliver health promotion in communities or with facility based health workers to assist their understanding of how people centred, health preventative and promotive advice may be applied. One interviewee suggests that on-site coaching is a plausible means to improve public health practices in the work setting.

The importance of delivering training that is context specific to the rural setting is raised as an important factor by the interviewees. The learning and application experience of midwives was given as an example. Their training took place in Phnom Penh with clean, well equipped facilities but the skills would be applied in a rural setting often without water, sufficient equipment or personal support. This highlights the need to have mentors/coaches that understand the local context and can provide solutions that are reflective of daily working practices (Bluestone et al. 2013, Redick et al. 2014). The interviews suggest a need to engage Cambodians rather than internationals in building capacity for this reason. A shared learning approach was also recommended to improve health worker practice. Examples were given where health workers and managers visited other well-functioning facilities to learn from their methods. Some interviewees felt it was important that learning took place from other Khmer workers who work in similar contextual environments. This finding agrees with other research on the importance of learning from local sources. For instance, in south India trained, locally recruited nurse mentors visited facilities allocated to them once every two months, each visit lasting 3 days (Jayanna et al. 2016). They trained health workers to develop action plans to address context-specific needs in small groups over time which achieved improvements in health worker preparedness in preventing and dealing with complications that were common in the area (Jayanna et al. 2016). A similar approach to develop health workers and VHSGs could be applied in Cambodia by developing VHSG and health facility staff mentors. The opportunity to train VHSGs as mentors would also provide a reflexive space to discuss how the participatory, community empowerment role of VHSGs could be enhanced.

The interviews provide support for participatory, interactive teaching methods and express negativity towards more didactic styles of education which is consistent with literature evaluating training methods (Redick et al. 2014). Furthermore, participatory approaches can provide a collective identity and strength of solidarity, develop intergroup empathy, increase the ability to critically analyse structural causes of inequalities and address health issues in the community (Behdjat et al. 2009, Scheib and Lykes 2013, Asuquo and Etowa 2016). NGOs and international volunteers were critical of the training methods delivered by government agencies and some organisation as not being participatory and taking a more didactic, presentational approach. It is thought by some that the Khmer culture is not conducive to participatory methods of training and that didactic approaches are more familiar and likely. Once again, the hierarchal structure and patronage found in Cambodia is a factor here; participatory training methods require an openness to sharing control of sessions with training participants by encouraging and reassuring participants that they could be free to speak their mind without negative consequences. One way of addressing this is to be aware of the status ladder that would be established within a group session and to use

the structure to support a safe communicative environment. For example, participants with higher status could be encouraged to lead discussions, paving the way for others to feel safe to contribute much like Norn's role in the workshops here. Others feel that participatory teaching methods are being introduced to build capacity in Cambodia but that it will take time to embed. Reassuringly, the PHD Health Promotion Officer used interactive participatory methods during the training session for VHSGs such as role plays and practical skills development. The training which had previously been delivered in partnership with NGOs had improved her ability to plan and deliver both technical and non-technical information in a manner consistent with sustainable training evidenced in the literature. Following training it is deemed important that opportunities to apply new skills are available in a timely manner so that information is remembered through application.

Interviewees highlight the need for training to be designed to meet the learners needs. For instance, VHSGs are often elderly with minimal education and it is suggested that pictorial training with the immediate chance of applying new skills in a stepped approach is better for long-term sustained learning. To ensure training is delivered at an appropriate level for health workers it is suggested that training needs assessments are undertaken and that health workers are consulted and included in designing training materials and curricula (Kamiru et al. 2009).

Figure 27 provides a summary of the factors, suggested by the findings and literature, to enhance public health training of health workers.



Figure 27 Factors to enhance public health training of health workers

5.2.2 Organisational level

In public health, the organisation refers to the governments internal structure, policies and procedures that determine their effectiveness. This includes the national MoH and relevant departments/units, PHDs and ODs. It is through these governing bodies that the benefits of an enabling environment are put into action and a collection of individuals come together. The better resourced and aligned these elements are, the greater the potential for growing capacity (United Nations Development Programme 2009). The following discussion deconstructs the key themes identified in this research on, supportive supervision and monitoring, leadership and management.

Supportive supervision and monitoring

Following training efforts there is an understanding that supportive supervision and monitoring is necessary to affect outcomes. However, budgets to support supervision and monitoring were not readily available and so depended on funding from NGOs. This is common in LMICs when supervision is not a defined, planned and budgeted element in health plans as is the case in the CPPH (De Koning et al. 2014). Whilst some interviewees recognise that NGOs funding supervision was not a long-term solution, funding was required to achieve their objectives, as the government funding for this task is not available. This action, however, further removes the responsibility from PHDs/ODs and health centres to undertake supervision duties, thus reducing opportunities to develop supervisory skills.

When funding was available for PHD and ODs to undertake supervision, the skills necessary to deliver effective supportive supervision such as coaching, constructive criticism and problem solving were deficient, as is common in LMICs (Tavrow et al. 2002, Rowe et al. 2005, De Koning et al. 2014). The research here indicated that supervision and monitoring was conducted using a checklist approach put in place by numerous interventions which limited overall assessment of the health centre and staff capacity needs. Feedback and problem solving following supervision of health workers was also challenging and an area identified as a skill gap by interviewees. When performance issues were identified, either actions to improve the situation were not suggested or were delivered in a punitive manner. Supervision that focuses on fault finding and is punitive in nature has been reported to negatively affect the relationship between health workers and government and to demotivate health workers (Enwereji 2012). It also does not result in the development of knowledge and skills.

In the CPPH, health centres were allocated supervision responsibilities of VHSGs, however the interviews found that they often did not know what VHSGs were doing, what training they had

received and how to support them. A pilot project for community case management of childhood illness found that PHD and health centre staff when trained and supported fully, successfully provided supportive supervision and skill development that resulted in increased credibility of VHSGs through their improved knowledge (MoH-RGC and USAID 2010). This suggests that health centre staff can and should provide training and supportive supervision to VHSGs following supervisory training from the PHD/OD level.

A clear outline of how supervisors should work with health workers and VHSGs with an allocated budget to support supervisory duties would likely improve their motivation and development. Providing supportive supervision is a key area identified in the management and development of health workers and CHWs but is lacking in low resources settings (Raven et al. 2015). Without adequate training to develop supervisory skills that create a two-way communication process, with feedback and problem- solving elements delivered in a manner that does not result in punitive actions, supervisors will not be able to undertake this duty (WHO 2007b, Enwereji 2012, De Koning et al. 2014). Furthermore, the use of checklists as a means of supervising needs revision. Supervision means providing feedback to health workers to facilitate their development and refine necessary knowledge, skills and practices. As supervision is a two-way process, supervisors would also benefit from understanding that they have a responsibility to assess and take actions following supervisory visits to support their health workers' development and work setting. That filling in a checklist will not result in improved practices unless the checklist is followed up with key actions.

Leadership and management skills and knowledge required to enhance and support the public health practices of health workers

Research has demonstrated that sustained leadership development training that is developed and owned by local health managers improves public health outcomes (Mansour et al. 2010). Provincial health managers in Cambodia often come from medical backgrounds and few have undertaken public health training which serves to reinforce a medicalized, disease focused public health approach. One interviewee felt that there was a slow increase in management staff undertaking postgraduate public health training, which follows the global trend, (Zwanikken et al. 2014) and should be a long-term aim in Cambodia. However, Filerman (2003) warns that public health competence and general management competence, although interrelated and essential, are very different skill sets which should be addressed in their own right. In Cambodia, PHDs and ODs are responsible for developing and managing human resources within the province through training, supportive supervision and monitoring through the application of policies and disciplinary procedures. Nevertheless, insufficient training, restrictive and sporadic budgets, strict hierarchical

organisational structures, limited opportunities to develop management skills and low wages mean they are not reaching their potential (Dal Poz et al. 2009, Khim and Annear 2013).

Rockers and Bärnighausen (2013) identify that education programmes to develop future managers and on-the-job training programmes for current managers leads to fewer management skill deficiencies. Capacity building of managers at provincial and district level was supported to some extent by NGOs who explained their efforts to work alongside PHDs and ODs, but this did not occur in all cases. In some cases, PHDs would just advise on geographical areas and not be involved in planning, implementation or monitoring for fear of funding withdrawal. Thus, opportunities to develop key competencies in management were missed, a phenomenon also found in other LMICs where NGOs play an active role in health development (Dal Poz et al. 2009). NGOs also reported supplementing wages or even recruiting staff to work at management levels. This weakens provincial and district level health systems as insufficient pay drives managers to receive supplementary pay or even entire job roles from NGOs and private providers, thus drawing them away from their everyday government duties, leaving others to fill the gap with lower pay (Bourdier 2016). Overstretched workloads and low wages also mean that PHDs and ODs select what they work on based on per diems and incentives. In contrast, the Kratie PHD Technical Director stated that they work in partnership with NGOs to deliver training and that they are involved in the process. Inconsistencies reported between interviews and PAR regarding the level of PHD involvement highlight the fragmented nature of management involvement in NGO activities.

A key point from the interviews was the lack of enforcement of human resource management policies and guidelines at the PHD/OD and health centre level. The interviews highlight that if health workers do not receive disciplinary action for poor quality performance or for not being at the facility during working times, they have little incentive to change behaviour. The same interviewee also described a need for PHDs to take ownership of and responsibility for managing their staff effectively. However, the current fragmented state of health delivery by a multitude of organisations and NGOs makes this challenging.

In Cambodia improved management performance is associated with clear job roles and definitions, with functioning ground rules, policies and procedures for conduct (Khim and Annear 2013). Unclear management responsibilities were reflected by one interviewee who explained that although PHDs are responsible for managing and developing relationships between facility based health workers and CHWs, in reality this did not always happen. In one case the PHD who was involved in training Community based distributors (CBDs) to deliver family planning outreach services, did not inform the health centre of their role to support the CBDs with family planning products and supervision.

Without this support, CBDs could not function as intended which risks credibility with the community, quality and safety of services and ultimately wastes training resources. Disconnect between the OD, health centres, and CHWs is likely to negatively affect overall programme implementation and in this case resulted in CBDs not being supervised or provided with resources.

The devolved health system requires that managers make decisions independently of national government, otherwise the system remains a centralized one. Research in Cambodia has shown that greater devolved responsibility increases local ownership in health management and service delivery and resulted in provincial level development of rules related to staff performance (Khim and Annear 2013). However, the power to make decisions at the provincial, district and health centre level here was reported as low.

One of the issues in Cambodia which is not reflected in the literature is the reluctance of managers to pass on management skills to junior team members. It was perceived that some senior staff in hospitals were reluctant to develop management skills with junior staff as this presented risks to maintaining power and hierarchy. One interviewee summed this phenomenon up as ‘knowledge is power is control’. This belief adds a considerable barrier to building capacity within teams and producing effective leaders who see themselves as part of a team rather than as an individual protecting their own position. Other interviewees express the need for leaders to have a team approach to development that is not centered around maintaining power but on instigating change within their organisation. This is consistent with research on developing management competencies in LMICs (Mansour et al. 2010, Daire et al. 2014). There is a need for managers to have social awareness and relationship competencies including the ability to empower others which is often neglected in training (Daire et al. 2014). As summarised by Mansour et al. (2010 p.1) ‘When teams learn and apply empowering leadership and management practices, they can transform the way they work together and develop their own solutions to complex public health challenges.’ However, training alone cannot address the underlying cultural values of hierarchy and security through maintaining positions of power. A government led strategy tackling professional ethics is required with clear guidelines and career development opportunities that institutionally develop leaders over time rather than one off training sessions. Figure 28 provides a summary of the requirements for PHD/OD and Health Centre Chiefs to build capacity of health workers.

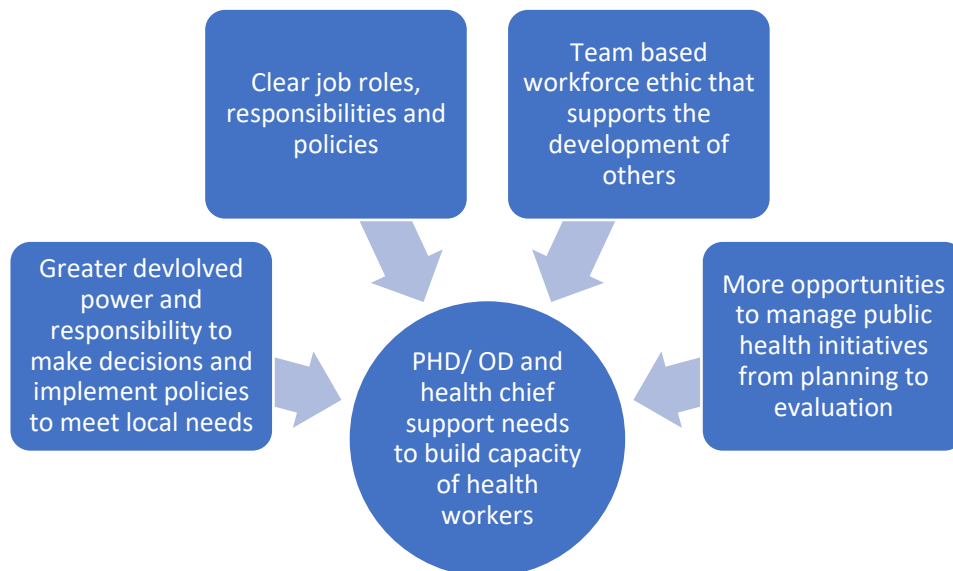


Figure 28 PHD/OD and Health Centre Chief managerial support needs

5.2.3 Environmental level

Developing public health capacity requires an enabling environment for managers and health workers. An enabling environment constitutes the broader social system within which people and organisations function, it includes power relations and social norms that govern civic engagement. The findings suggest a need to create a more enabling environment which supports ownership, autonomy, accountability and the incentive to use one’s own initiative. The research in relation to the literature points to a need to empower individuals to take responsibility for planning and implementation of public health initiatives and to ensure ownership remains with Cambodians and not external agencies.

Country Ownership versus aid dependency

The challenges faced by VHSGs and health workers highlighted here, such as insufficient remuneration to attend training and deliver activities, irregular one-off training sessions without opportunities to refresh knowledge, inadequate resources and travel difficulties have been reported to demotivate and reduce performance in other LMICS (Bhattacharyya et al. 2001, Lehmann and Sanders 2007, Jaskiewicz and Tulenko 2012, Perry and Zulliger 2012). In Cambodia, as is the case in many LMICS who are largely dependent on international aid, the structure, training, delivery and support of health workers are largely influenced by NGOs who work independently of each other to meet the demands of donors. This results in poor planning; multiple competing actors with little coordination; fragmented, disease-specific training; donor-driven management and funding; poor links with the health system; poor coordination, supervision and support, and an under appreciation of VHSGs public health contribution (Lehmann and Sanders 2007, Naimoli et al. 2012, Tulenko et al.

2013, Kok et al. 2015, Saprii et al. 2015). This is in part due to a lack of government funding which results in minimal input from the national health system (Chanboreth and Hach 2008, Ui et al. 2010, Tulenko et al. 2013, Naimoli et al. 2014). However, the importance of government ownership in planning, training, implementing and monitoring CHW programmes has been highlighted in many international guidelines, policies and technical briefs (WHO 2007b, Bhutta et al. 2015, Tran 2015). International volunteer programme leads and volunteers also highlight the importance of ensuring that capacity building efforts are directed by government staff and where possible undertaken by Khmer nationals. Interviewees also spoke of the importance of ensuring that internationals played a supportive role in capacity building and not a leading role. One international volunteer programme lead stressed the importance of ensuring volunteers understood that their role ‘was backstage’ and that outputs never belong to the volunteer but to the placement organisation. NGOs however often come with a pre-set agenda which limits the level of government control on initiatives and training.

An end to fragmentation

Interviewees and VHSGs alluded to the fragmented delivery of health programmes and capacity building. The research here concurs with findings from other LMICs that fragmentation hinders long term sustainable development, wastes resources and leads to a lack of ownership by the country in question (Chhea et al. 2010, Ingleby et al. 2013, Bourdier 2016). The MoH is aware of the problems caused by fragmentation and in the Health Sector Plan that has just ended it states that ‘an effective in-service training system to which health partners will be asked to contribute to avoid fragmentation’ is necessary (MoH-RGC 2008a p.14). The Operational Manual for the HSSP2 refers to a joint partnership arrangement that aims to coordinate development partner initiatives (MoH-RGC 2008b p.53). However, at the provincial level, joint meetings between the PHD and development partners occurred in some provinces but not in others and the function was more to inform the PHD of activities rather than to ensure they had ownership and were coordinating between partners. Reassuringly one NGO staff member interviewed was trying to synergise capacity building efforts for midwives by coordinating with other NGOs trialing different curricula in different provinces. The aim was to have one curriculum which could be presented to the MoH with the hope that it would be adopted. However more involvement from the MoH and PHDs at the planning stages is likely to support improved ownership, financial planning for long term implementation and established refresher opportunities. As evidenced by previous research in Cambodia, capacity building without a long-term financial plan and ownership from the relevant MoH unit results in programmes being discontinued that took a lot of resources and energy to develop (MoH-RGC and USAID 2010, Peou and Pavithra 2011).

It has been suggested that international aid in low income countries be redirected by extending the skills built up at an individual level to the organisational level and by transferring ownership to government as fast as possible (UNDP 2009, WHO 2016b). There has been some effort to do this in Cambodia through pooling funds of major donors which are then channeled through established government strategies with the aim of shifting ownership and control. However, in pooled funds, donors can still define specific objectives and have direct oversight of financial management (Michaud 2005). Some interviewees working at the national level spoke of the importance of ensuring government leaders were ready to move forward with an initiative which would also increase ownership. Conversely the same interviewee referred to the national programme team as an extension of her team. Such terminology reinforces beliefs that NGOs have ownership over initiatives run through national programme units. Equally NGOs spoke of their advocating for needs identified by community members. While this may achieve results due to their level of power within the health system, such actions undermine efforts of community participation within the established government system and do not provide a sustainable answer to participation barriers.

5.3 Chapter summary

The above two sections have presented the key arguments that evolved from triangulating the research findings from all three studies and relating them to relevant literature. The overarching theoretical paradigm of PAR helped to frame the key arguments. How this research makes an original contribution to research related to public health capacity building in LMICs is outlined in the next chapter, as are the final conclusions and practical recommendations.

Chapter 6 Conclusions and recommendations

This research aimed to gain further understanding of the public health knowledge, skills and practices required to build capacity within primary health care in low resource settings and to identify mechanisms and strategies to improve public health capacity of health workers. The skills and knowledge requirements identified by the findings were mainly non-technical skills including planning, problem solving, communication, community engagement techniques, using initiative and identifying solutions. These skill gaps were identified at the provincial, health facility and community level. Whilst some of these can be delivered through training and education, some require additional depth of understanding as they are intrinsically linked to Cambodian societal structure, cultural values, traditional beliefs and the historical and political environment in which skills and knowledge are applied. Although many health systems are hierarchical in nature, the degree to which people can; innovate, openly analyse processes and procedures and suggest solutions needs to be assessed and considered. These are key considerations for developing an enabling environment for public health skills, knowledge and practices to evolve.

The health workforce, particularly those working at health facilities and VHSGs have the potential to contribute significantly to the achievement of SDGs and particularly UHC. However, for this to happen several factors need to be addressed. The findings suggest that there is a good level of understanding of what skills and knowledge are required to build public health capacity. That training and education efforts in, for example, health promotion, education and participation are to some extent being addressed by policy makers, NGOs and provincial/district leaders. However, the resulting application of skills by facility based health workers within the current context of Cambodia is lacking attention and understanding. Health facility workers do not understand or associate with comprehensive PHC values. They do not see themselves as part of a community health agenda and are still focused on curative care and thus health promotion and prevention activities are mostly neglected. Consequently, this research concludes that before any further public health training or educational steps are taken with health facility staff, further research is needed to identify how to nurture a sense of responsibility towards wider community health development. Some of the reasons suggested here for this know-do gap include cultural values, insufficient support from the health system, complex working environments, aid dependency, demotivation and an environment that is not enabling.

The implementation of community participation policies in Cambodia is hindered by traditional hierarchical values, cultural norms of respect and obedience and fear of challenging the elite. VHSGs ability to act as agents of social change is unlikely given the current policy structure and implementing environment. Identifying ways of supporting VHSGs to mobilise and enable communities to be empowered is needed.

6.1 Limitations, strengths and weaknesses of using a PAR approach

It is important that the limitations, strengths and weaknesses of the research and particularly using a PAR approach are identified. These are summarised in Table 19.

Table 19 Strengths, weaknesses and limitations of the research process

Strengths	Weaknesses and overall limitations of the research	
PAR provided a shared learning space to explore the barriers, facilitators and influences on CHWs in rural Kratie	The number of CHWs engaged with are low and province specific	Other provinces and CHWs are not represented
Reflexivity by researchers raised questions of culture, social structure, politics and power in rural and wider Cambodia	Reflexivity is subjective and situation specific	Cross language/cross cultural research has inherent risks to interpretation between cultures
PAR provides a space for critical reflection of a situation and personal practise	Self-reflection and critical analysis in Cambodia is a culturally engrained skill gap, the short-term nature of the PAR did not allow for further development of this skill	In-depth critical reflections of personal practices were not achieved
Local RAs can act as both insiders and outsiders and are the cultural navigators of international research	At times having only one RA during PAR workshops meant that only one interpretation was captured due to the increased demand on the RA	RAs had limited training and would have benefitted from being consulted on methods earlier in the PAR process
Photovoice gave CHWs an opportunity to highlight community health problems for further discussion and debate in PAR workshops	Photovoice has ethical issues, the location where photos are delivered and discussed must be private to protect the subjects in the photographs	CHWs only had one Photovoice coaching session, cameras could have been issued with a mid-point session to discuss any issues and potential questions which potentially could have allowed

		for a more considered approach to photo capture
Community asset identification process presented an opportunity for CHWs to identify positive aspects in their communities	Community asset session was too short, a longer session with further exploration of how assets could be used to improve health in communities would have been a benefit	CHWs did not fully understand the link between assets and health improvement opportunities. Prompts from facilitators to consider assets when designing action plans may have resulted in more specific actions and inter-sectoral working approaches
Multi-method approach allowed for the development of a health systems analysis of public health capacity building	A broad-based overview presents areas for further development but does not investigate each of these in depth	The findings and recommendations provide an overarching understanding of the various areas for improvement, but a more in-depth investigation into each of the phenomena discussed would lead to even more practical solutions to public health development in Cambodia
Clear public health non-technical skill gaps were identified in all three studies	Technical skill gaps such as knowledge of disease transition was not explored further due to the broad scope of technical expertise required by CHWs	The research focused on cross-cutting areas for public health development, not technical skill gaps

6.2 Original contribution to knowledge

This research makes an original contribution to research by taking a broader health systems analytical approach to understanding what is required to build public health capacity of health workers at the primary health care level. It has not only identified what is required from an individual's training and education perspective but has considered the broader health system, including state and non-state actors and the context in which health workers are trying to apply public health skills and knowledge. Figure 29 and the following recommendations emphasize the need for action at each level of the health system to create an enabling environment and a supportive organisation which could optimise the performance of health workers.

This research is also unique as it applied a participatory action research paradigm with the associated values of social justice, equality and co-learning, so that CHWs and local research assistants actively contributed to the development of knowledge. This approach to research added depth of understanding and identified the adverse effects of context, such as engrained traditions, cultures, social structures and political processes, on the ability, desire and likelihood of health workers to act as agents of change. This critical participatory approach to the research identified many barriers to meaningful community participation in health and highlights the need to address these barriers so that community participation policies are not just rhetoric but can realistically be applied in rural complex 'non-westernised' Cambodia. A key finding is the need for safe communicative spaces in which communities can actively participate in health decisions and voice their needs without risking their own welfare.

If UHC is to be achievable, the public health approach must be better understood, applied and supported across the health system, by both governments and international partners. Aid dependency is a risk to sustainable capacity development and has hindered the ability of health workers and managers to independently identify and apply solutions to community health problems. Their identity and role is unclear and they have been disempowered by the current structure of aid dominated public health capacity development in Cambodia. Post-conflict countries, donors and international partners would benefit by learning from the Cambodian experience and identifying mechanisms to avoid developing aid dependency which has resulted in a fragmented, verticalized health system that does not support its workforce to establish a sustainable, evolving public health approach.

Figure 29 shows some of the strategies and mechanisms that are likely to improve public health knowledge, skills and practices of health workers in Cambodia and presents the structure for this chapter. The contextual factors that require consideration and integration when developing the recommendations may be viewed in the outer circle of the diagram. Each organisational level has a role to play and will be the basis for conclusions and recommendations.

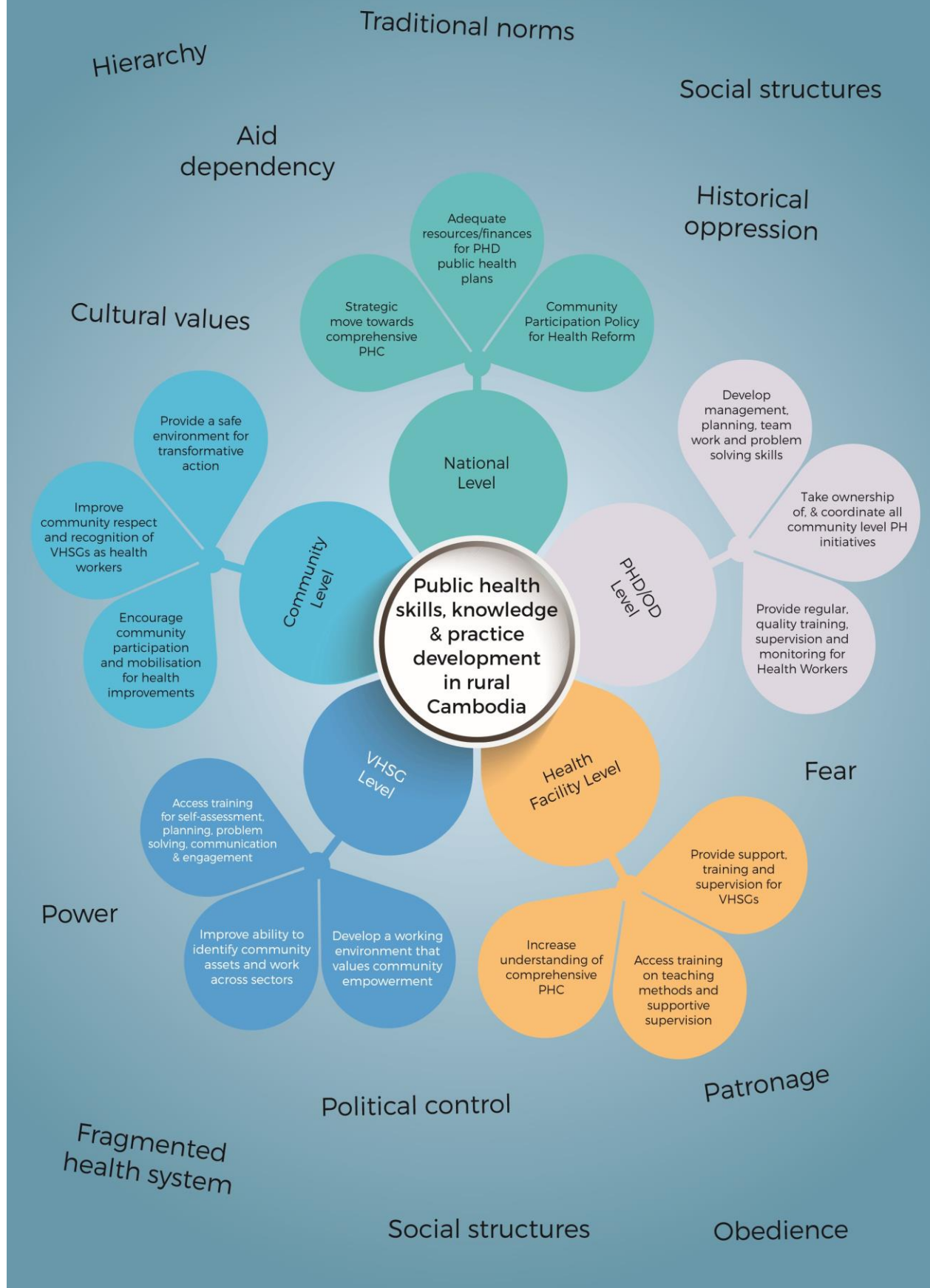


Figure 29 Summary of mechanisms and strategies to improve public health knowledge, skills and practices in rural Cambodia

6.3 National level

6.3.1 *Strategic move towards comprehensive primary health care*

One of the main barriers to developing public health knowledge, skills and practices is the selective primary health care approach found within the Cambodian health system. This has resulted in verticalized health programmes with disjointed government units tackling one disease at a time. While diseases like TB and HIV/AIDS are well funded by external agencies, basic health needs such as access to water, sanitation and nutritional food is neglected. As the new strategic plan comes into effect such verticalisation is being further embedded. A community led, inter-sectoral approach is needed to address basic public health challenges experienced in rural communities. This research concludes that government strategies should re-align health plans with comprehensive primary health care principles.

A new policy design and implementation approach which synergizes and integrates all public health actors is needed. The policy needs to be developed with stakeholders so that the needs of VHSGs, PHD/OD and health centre staff who have a responsibility for the training, management and monitoring of health workers are met. The policy reform process should be government owned and integrated within the existing health system (Zulu et al. 2014).

6.3.2 *Community Participation Policy for Health reform*

In relation to the Community Participation Policy for Health, the findings and analysis suggest that research has not met with policy design or practical application. The research here reflects the gaps in CHW policy design found in other LMICs (Daniels et al. 2012, Zulu et al. 2013, Zulu et al. 2014). Policy setting and reform is hugely political, especially so in LMICs where donor agencies not only influence agenda setting but also the process of development (Ear 2013). As a result, local stakeholders such as CHWs of all varieties, civil society groups and health workers in health centres are not consulted and those with more power develop the policy without addressing local concerns (Daniels et al. 2012, Zulu et al. 2013). Policies developed with minimal stakeholder consultation results in the production of policies that have not considered the contextual influences on application in practice (Daniels et al. 2012, Zulu et al. 2013). This seems to be the case with the CPPH. A new policy design and implementation approach which synergizes and integrates all public health actors is needed. The following policy reform recommendations are suggested.

Community Participation Policy for Health reform with;

- a. public health skills needs assessment with ongoing competency needs assessments,
- b. initial pre-service training, developed in partnership with existing VHSGs, that is regularly offered to new VHSGs and is a prerequisite to practicing in the community. Core training curricula should be developed to enable interactive participatory methods of teaching,
- c. recognition and record of training attended by VHSGs,
- d. opportunities to access new training and refresher training identified and controlled by district level staff, and delivered by health centre staff or VHSG trainers,
- e. accredited VHSGs with visible identification, adequate travel, supplies and tools to do their job,
- f. mass media campaigns to improve community respect and understanding of the VHSG role,
- g. visual promotion and support by senior government officials such as Village Chiefs and Commune Chiefs,
- h. clear lines of continued professional development so VHSGs can progress to trainers and supervisors in partnership with health centres,
- i. shared learning opportunities between VHSGs,
- j. training and resources for health centre staff so that they may provide effective training and supportive supervision to VHSGs,
- k. clear lines of financial support that is structured, allocated and protected by PHDs to ensure accountability, monitoring and evaluation of activities,
- l. Ensure Village Chiefs understand their role in supporting VHSGs and other volunteers in developing action plans.

6.3.3 Adequate resources/finance for PHD public health plans

If PHDs and ODs are to function as intended adequate budgets and funding must reach each level of the health system. There needs to be a political will to provide adequate resources and funds so that PHDs may enact local public health development plans. This includes initial and ongoing public health training, supervision, monitoring and evaluation. Health initiatives are often imposed by external agencies who are not familiar with local PHD plans which also distracts PHD personnel from undertaking their daily jobs. Therefore, the MoH and PHDs must take ownership of external agency initiatives to ensure agency agendas fit into annual provincial plans rather than the other way around.

6.4 PHD/OD Level

6.4.1 Develop management, planning, team work and problem-solving skills

Leaders and managers lack initiative, power and autonomy over health programmes, personnel and volunteers. PHDs would benefit from having a better understanding of their roles and responsibilities and an increased awareness and understanding of how and when to apply policies and procedures for human resource management. Health Centre Chiefs also require more autonomy and power to implement disciplinary procedures with their staff to improve performance and motivation. Whilst there is a need to use disciplinary action in some cases this should be balanced with a supportive environment for staff to raise concerns and problems with the aim of finding solutions. Punitive actions to problems raised will damage relationships and is not conducive to public health skills and knowledge development. Therefore training that is socially and culturally appropriate that takes place where managers work, with their teams, to address practical skills needed for public health development is required (Filerman 2003, Raven et al. 2015). A day to day mentorship approach is recommended as it allows for trial and error over time resulting in improved ability to define a problem, set priorities, identify root causes, delegate to others, develop common goals, utilize flow chart processes and provide corrective feedback as needed (Bradley et al. 2008).

6.4.2 Take ownership of and coordinate all community level public health initiatives

The plethora of health volunteers functioning in rural Cambodia causes confusion and overlap in training and implementation of public health initiatives. The impact of externally funded activities delivered by the various CHWs further adds to a lack of identity of VHSGs. A mechanism to synergise all CHWs is necessary to maximize their potential in rural communities. Management of training, activities and monitoring of CHWs should take place through a central body to ensure effective coordination and distribution. This could be through the establishment of a community health team or through PHD/ODs and health centres. International development partners should respect and honour internal structures of training for VHSGs by strengthening the capacity of PHD, OD and health centres to deliver effective training and supervision to health workers.

6.4.3 Provide regular, quality training, supervision and monitoring for health workers

The research here mirrors the research findings in other LMICs on capacity building of health workers such as the provision of adequate funding, initial and ongoing training with refresher opportunities and supportive supervision. Currently these gaps in provision affect public health practices of health workers and CHWs. At present supervision and monitoring skills are constrained by the checklist approach which appears to have many flaws in application. PHDs and ODs require

training and resources that will enable them to; (a) provide participatory, interactive education on public health skills (b) supportive supervision which includes constructive feedback and leads to actions to improve performance and (c) ongoing monitoring of health workers and VHSGs public health practices and associated outcomes.

6.5 Health facility level

6.5.1 Understanding of comprehensive PHC and community participation

A necessary first step to improving public health practices in rural communities is to work with health workers in facilities to understand why they do not apply public health knowledge following training and how this could be improved from an institutional and individual level. In addition, the principles of comprehensive PHC need to be understood by health workers or they are unlikely to be able to see the value in health promotion or people centered care (Mead and Bower 2000). This should be taught not once or twice but at every opportunity through inclusion in policies, guidelines and procedures, promoting the role of health workers as health educators that are part of a wider community health system (Epping-Jordan 2010). Health workers would benefit from understanding the wider social determinants of health and that they have a responsibility to provide the public with information and education so that they have the knowledge to improve their own health (Epping-Jordan 2010).

They need to understand that their role does not end at the health centre door, but that they are part of the community and have a responsibility to address all aspects of health, not purely medical relief from symptoms. This involves training reforms that include people-centered care in pre-service education and for more experienced health workers; on-the-job training, mentoring or coaching and continued professional development (CPD) to develop understanding and interpersonal skills necessary to deliver public health interventions (Epping-Jordan 2010). Finally, political leadership and commitment to the Alma-Ata principles is needed to truly promote people-centered health care as seen in other countries such as Cuba (Greene 2003). More research is required to understand how and why the gap between learning and application exists amongst Cambodian health workers, how this gap can be better understood and ultimately narrowed so that resources and energy put into building public health knowledge and skills are not wasted.

6.5.2 Training in teaching methods and supportive supervision

Although the CPPH indicates that health facility staff should provide training and supervision to VHSGs, they lack opportunities and capacity to learn and implement these skills. As highlighted above at the PHD level, the health facility staff require training to develop their skills as trainers and supervisors so they may effectively support VHSGs.

6.5.3 Provide support, training and supervision for VHSGs

Following training, health facility staff require resources, materials and structured curricula to develop the skills and performance of VHSGs. This should be developed by the PHDs in partnership with health facility staff and VHSGs so that the training is context specific and reflects local needs. For instance, the educational level of VHSGs requires that health facility staff deliver training in a stepped approach, with pictorial and practical learning methods so that VHSGs may retain and apply new skills. Training curricula should be designed to support participatory teaching methods that meets the learners' needs and can be easily implemented by health facility staff. Health facility staff must also be informed through policy of their role as trainers and supervisors of VHSGs with structured programmes for delivery.

6.6 VHSG and community level

6.6.1 Working environment that values community empowerment and control

One of the steps to achieving comprehensive PHC is to ensure communities are provided with a safe platform to communicate needs and that leaders and stakeholders with resources and power listen. Although VHSGs are the identified agents for community participation they feel disempowered, lack respect from community members and have little control over their work environment. Patron-client relations and hierarchy stifles their ability to speak openly and advocate for community needs. Safe communication channels need exploring so that VHSGs feel more supported to communicate community needs without jeopardising necessary patron relations. One of the key findings is the need for VHSGs to have close relationships with Village Chiefs. VHSGs have the potential to facilitate planning efforts by Village Chiefs so that they meet the needs of the community. Village Chiefs are political and powerful which may restrict communication from marginalised villagers, whereas VHSGs have a more neutral political stance. More research is required on how relationships with people in power, specifically with Village Chiefs can be improved to support VHSGs in their role.

Furthermore, community participation policies are being consumed by international agencies and a result of this is that VHSGs are not empowered to mobilise communities to address their own public health problems. Rather there is a growing dependency on external organisation and an absence of

self-reliance. The Alma-Ata principles that define community participation should be reviewed along with community participation methods applied in LMICs that have successfully achieved meaningful community participation. Further research is required to address the social and cultural values of Cambodia that inhibit community participation.

6.6.2 Skills based training in self-assessment, planning, problem solving, communication and engagement

VHSGs were found to be lacking in non-technical skills such as the ability to create action plans, problem solve, communicate and engage with communities and reflect on their own performance. To improve these skills a pre-service training package and regular refresher or new training should be developed in collaboration with PHDs, ODs, and VHSGs. Training should include opportunities for VHSGs to critically analyse a situation with a solution focused, problem-solving ethic which also involves personal and community critical reflections. Training on communication techniques would benefit from considering context specific communication needs to prepare VHSGs for difficult questions and responses they may receive from community members. Ongoing in-service training which is delivered on-site, is context specific and includes practical, hands-on application of skills and knowledge is needed to develop these skills. Further research is required to understand what is needed in a core training package for VHSGs and who is best placed to deliver it.

6.6.3 Improved community asset identification and inter-sectoral working

Experience of using community assets to address health issues would help VHSGs to understand that their communities have strengths and to dissipate the dependence on outsiders for help. The community asset approach to development is a relatively new concept and one that requires exploration, time and resources beyond the research here. The VHSGs did identify community assets but additional support is required to develop an understanding of how to apply them to health improvement strategies. Using this approach to identify ways of working with other sectors would also foster an inter-sectoral approach to improving basic health needs in communities.

6.7 Contextual factors on the development and application of public health skills, knowledge and practices

Public health development and community participation initiatives show a lack of understanding of the complex contextual environment that has evolved over years. The political climate since the Khmer rouge has been tainted with oppression, fear and severe consequences for speaking out. The hierarchical nature of Cambodian society together with an educational system that promotes 'following' others rather than analysis and independent thinking hinders community participation

and public health skill development and application. Leaders are reluctant to take initiative and try new solutions that may not succeed for fear of judgement and punitive actions from above. VHSGs have to balance necessary patron relationships and NGO demands with participation ideals that present risks to their livelihood.

The dominance of international aid has led to an apathetic approach to addressing health problems and a reliance on others who have resources to come up with solutions. The lack of consideration of context by international agents, policy makers and training providers is negatively impacting the development of public health skills and knowledge, and participation, not only in the health sector but across disciplines. Therefore, the implications of this research are not only relevant within health but can offer other sectors in Cambodia and other LMICs, deliberations when developing public health capacity and community participation in complex environments. More research is required to understand how such contextual influences can be managed and integrated into public health training plans so that managers, health workers and volunteers can maximize their potential.

6.8 Final reflection

I present this thesis as a contribution to health systems research in LMICs on the development and implementation of public health knowledge, skills and practices. The research journey has presented many unexpected twists and turns and has had an impact on the lives of the people who worked on it.

The RAs and I are still in touch and I hear how they have adapted their lives. One RA has now pursued a Masters qualification in gender and development in Thailand and she contacts me to discuss assignments that have grown from her knowledge in this research. She will return to Cambodia to work and add to the development of this complex country. Sophal now informs his tourists, from many countries, of the history and impact of the Khmer Rouge, current political oppression and international aid on Cambodia. He also tells me he provides better informed descriptions of rural communities, based not on pity but on their strengths. Sothara works with her family to build trust in public health facilities and takes an interest in the health of her community.

For me, I have learned how deep cultural values and traditions impact on behaviour without having a conscious awareness. The practice of reflexivity and understanding my own positionality is a skill I will take forward to other research projects. The use of PAR, although more challenging than I expected, is still an approach to research which I greatly believe in. However, now I am aware of the possibility of participation as tyranny, as power sometimes prevails and must be recognised. An output from this research is a peer reviewed article discussing reflexivity, positionality and power in

cross-cultural, cross-language research in the Educational Action Research Journal (Appendix L and M).

The thesis may end here but I am dedicated to the dissemination of the findings, so that they may be shared with those who could use them most, not just with the academic community but with the PHD/ODs and VHSGs. I will pursue funding and opportunities to support development and dissemination of this research in the pursuit of shared knowledge.

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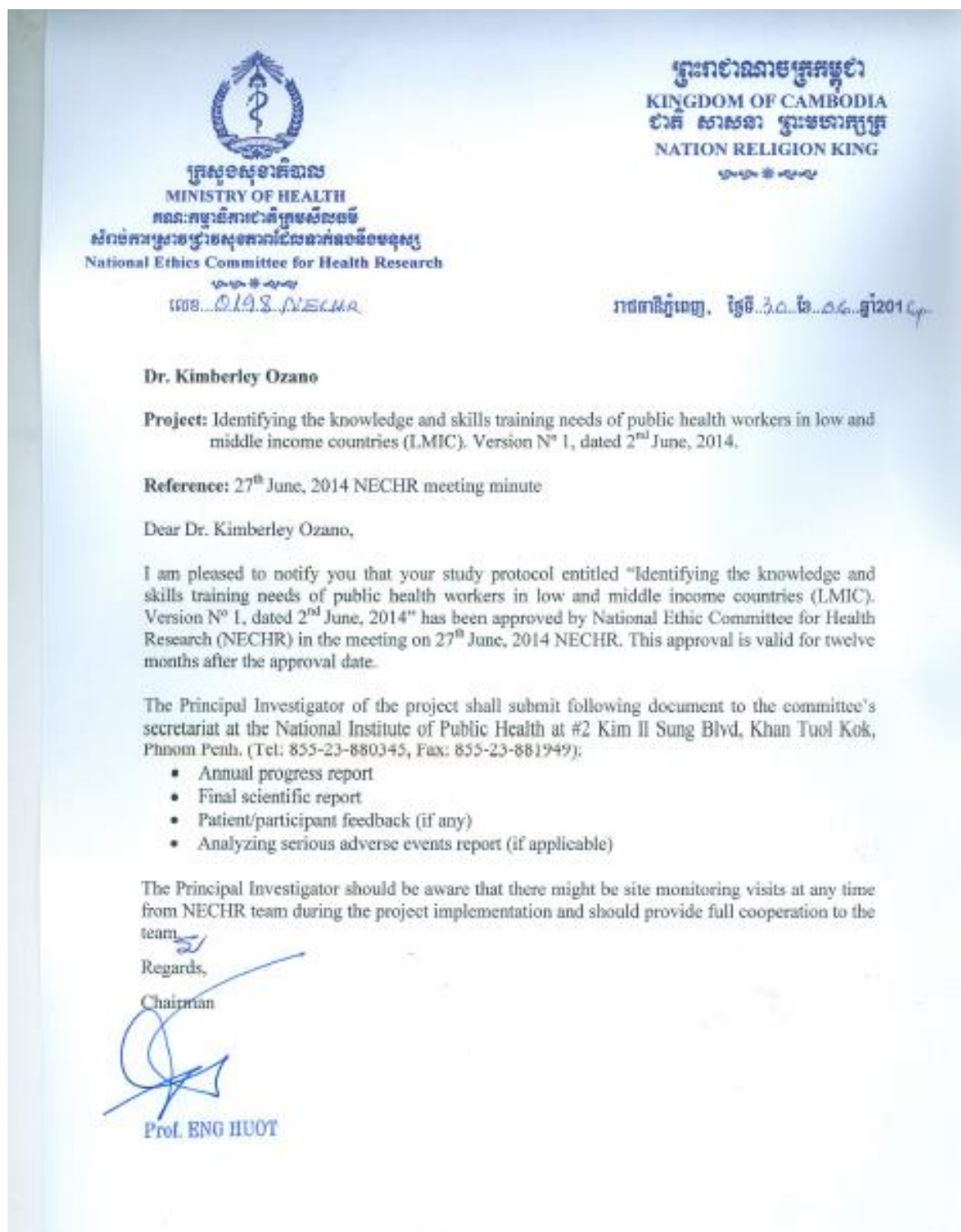
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Appendices

Appendix A Letter of approval from National Ethics Committee for Health Research



Appendix B Email to potential NGO participants for interviews



CPH | CENTRE FOR
PUBLIC HEALTH
LIVERPOOL JOHN MOORES UNIVERSITY

A World Health Organization Collaborating Centre

Draft Email to potential NGO participants for interviews

Dear whom it may concern,

I am writing from The Centre for Public Health (CPH) at Liverpool John Moores University in England, United Kingdom. The Centre for Public Health is a vibrant research and teaching community working at a local, regional, national and international level. The organisation specialises in applied research and educational programmes addressing health issues at all levels from policy development to service delivery. CPH is committed to a multi-disciplinary approach to public health and works in partnership with health services, local authorities, judicial bodies, environmental services and community groups. Influencing health service design and delivery, as well as health related policy, the Centre for Public Health's research has been at the forefront of the development of multi-agency strategies to promote and protect public health. CPH turns information and data into meaningful and timely intelligence. The link for more information is: <http://www.cph.org.uk/>.

As an institution, we are keen to build partnerships and work collaboratively with all levels of the Health system within Cambodia. As you are an NGO that works with health we are keen to hear your views. We would like to discuss the possibility of you taking part in a research study entitled:

Identifying the knowledge and skills training needs of public health workers in low and middle income countries (LMIC).

This would be in the form of an interview lasting approximately 30minutes to an hour. We would discuss public health in Cambodia. If you agree please let me know when is convenient for you.

We look forward to hearing back from you in the near future.

Kind Regards
Kim Ozano

Appendix C Semi-structured interview schedule



CPH | CENTRE FOR
PUBLIC HEALTH
LIVERPOOL JOHN MOORES UNIVERSITY

A World Health Organization Collaborating Centre

Kimberley Ozano

June 10th 2014

Semi-structured Interview schedule for the following research:

Title: Identifying the knowledge and skills training needs of public health workers in low and middle income countries (LMIC)

Introduction to research:

Hello, thank you for agreeing to be interviewed for my research. We will be exploring a few topics during the interview around public health in Cambodia. If at any point, you are not comfortable answering a question or do not understand what is being asked, please inform me and we will discuss further or move on. If you would like to stop the interview at any time please feel free to do so.

Topic 1: The role of your organisation and position in Cambodia

Tell me about your position in Cambodia?

(Suggested areas for prompts if necessary)

- Organisation and aims
- Job title and responsibilities
- How long have you worked in Cambodia?
- Experience of working in Cambodia
- Give me an idea of your day to day work?

Topic 2: Working with Government

Have you worked with government agencies, if so at which levels?

Tell me what it is like working with government health agencies in Cambodia?

(Suggested areas for prompts if necessary)

- Experience and understanding of key government policies related to primary health care or public health
- Experience of working with Provincial Health Departments, operational districts and health centres
- What are the challenges of building capacity at that level?

Topic 3: Primary Health Care

What is primary health care like in rural Cambodia?

(Suggested areas for prompts if necessary)

- Experience of working with primary health care providers (public subsidised and private)
- Examples of recent programmes linked with primary health care
- Do those programmes work well or not and if so why or why not?
- Do health centres follow Alma-Ata principles of:
 - Providing not just selective curative services but also prevention of ill health and health promotion?
 - Health education, promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning;
 - Involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, food, education, housing, public works, communications etc.
 - Community participation in health decisions

Topic 3: Public Health Approaches (non-medical)

Subcategory: Wider social determinants of health

Can you tell me about any public health interventions that have looked at the wider social determinants of health?

(Suggested areas for prompts if necessary)

- Social determinants of health such as; education, housing, employment, inequalities. Possible inter-sectoral working with civil society or other departments/agencies or advocacy
- Family/community engagement – refer to Community Participation Policy for Health, Village Health Support Groups and Health Centre Management Committees
- Lifestyles – health promotion, health education, NCDs
- Surveillance and monitoring of specific diseases and risk factors

Subcategory: Improving Services

What is your experience and understanding of health service improvement at primary health care level?

(Suggested areas for prompts if necessary)

- Service planning at primary health care level
- Integration of primary health care services – non-vertical programming
- Evaluation of public health services and community engagement
- Equity of service access and provision

Topic 4: Education and Training for health workers and active community members

- *What training does your organisation offer to mid-level health workers or community volunteers at primary health care level?*
- *What format is used to deliver that training?*

Topic 5: Health worker's skills and knowledge gaps

In your opinion what skill gaps exist for health workers at primary health care level regarding public health approaches?

(Suggested areas for prompts if necessary)

- Organisation and Leadership, at provincial health department and health centre level
- Assessment and Evaluation of interventions and poor health across the community
- Ability to provide health education for communities, e.g. sanitation and hygiene advice, tobacco and alcohol
- Health promotion skills, communication, engagement, marketing etc
- Ability to identify and treat or refer mental health issues
- Community engagement techniques, especially for the vulnerable; people with disabilities, women, minority social groups
- Ability to take initiative and work with other organisations, non-health based, civil society, religious institutes
- Provide and understand lifestyle advice related to non-communicable disease as well as communicable disease
- Ability to consider wider determinants of health e.g. where patients work, live, funds for access to medical care?

In your opinion what do you feel is needed to narrow that gap?

(Suggested areas for prompts if necessary)

- Resources
- Time from work
- Qualifications
- funds

If training is required what format should this take and what resources are needed for rural health care providers?

(Suggested areas for prompts if necessary)

- Mentorship
- Class based
- Class based with reviews
- Part of initial curriculum
- Bridging training
- In service training

Appendix D Participant information sheet for interviews



CPH | CENTRE FOR
PUBLIC HEALTH
LIVERPOOL JOHN MOORES UNIVERSITY

A World Health Organization Collaborating Centre

LIVERPOOL JOHN MOORES UNIVERSITY

Title of Project: *Identifying the knowledge and skills training needs of public health workers in low and middle income countries (LMIC)*

Name of Researcher and School/Faculty

You are being invited to take part in a research study. Before you decide it is important that you understand why the research is being done and what it involves. Please take time to read the following information. Ask us if there is anything that is not clear or if you would like more information. Take time to decide if you want to take part or not.

1. What is the purpose of the study?

This research is aiming to understand more about public health in rural Cambodia and what can be done to increase the knowledge and skills of public health practice.

2. Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do you will be given this information sheet and asked to sign a consent form. You are still free to withdraw at any time and without giving a reason. A decision to withdraw will not affect your rights/any future treatment/service you receive.

3. What will happen to me if I take part?

You will take part in an interview where you will be asked a few questions about public health in Cambodia. The length of the interview will depend on how the conversation flows but you are free to end the interview at any point. The interview will be recorded either by the researcher taking notes or a verbal recording device and will be transcribed and analysed by the researcher.

4. Are there any risks / benefits involved?

There are no risks to you taking part.

5. Will my taking part in the study be kept confidential?

All data will be confidential and will be kept secure by the researcher. Any data kept in an electronic format will be held securely on an IT password protected computer. A pseudonym will be applied to your interview so that you will remain anonymous. Your consent form will be kept separate from any transcription so that you will not be identified. When using the information for writing of reports, thesis and publication purposes your name will not be used and you will be anonymous.

This study has received ethical approval from LJMU's Research Ethics Committee and Cambodia National Ethics Committee for Health Research

Contact Details of Researcher

Kim Ozano K.A.Ozano@2014.ljmu.ac.uk

Contact Details of Academic Supervisor

Rose Khatri R.J.khatri@ljmu.ac.uk

Appendix E Consent form for interviews



A World Health Organization Collaborating Centre

LIVERPOOL JOHN MOORES UNIVERSITY

Identifying the knowledge and skills training needs of public health workers in low and middle income countries (LMIC)

Kim Ozano from Faculty of Education, Health & Community (Centre for Public Health)

1. I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and that this will not affect my legal rights.

☐

3. I understand that any personal information collected during the study will be anonymised and remain confidential

☐

4. I agree to take part in the above study

☐

5. I understand that the interview will be audio / video recorded and I am happy to proceed

☐

6. I understand that images taken by photographic means or video recording may be collected and used in a workshop for discussion related to the research title only

☐

7. I understand that parts of our conversation may be used verbatim in future publications or presentations but that such quotes will be anonymised.

☐

Name of Participant

Date

Signature

Name of Researcher

Date

Signature

Name of Person taking consent

Date

Signature

(if different from researcher)

Appendix F Translation of acceptance letter from Kratie PHD to conduct
research

KINGDOM OF CAMBODIA

Nation Religious King

Ministry of Health

Kratie Provincial Health Department

Nº: 40 S Kr C

Kratie Province, Date:

09 June 2014

Reference: a letter from VSO on 30 May 2014, in proposing for a support letter for conducting a research on “identifying the knowledge and skills training needs of public health workers in Kratie Provincial Health Department”

Dear VSO’s Health Programme Manager,

Subject: Support for conducting the research to identify the knowledge and skills training needs of public health workers in Kratie Provincial Health Department

In regard to the above reference and subject, the Kratie Provincial Health Department have examined and supported this research initiative in order to identify the knowledge and skills training needs of public health workers in Kratie Provincial Health Department, which will be carried out by VSO health programme in cooperating with phd student from Liverpool John Moores University of England from September to December 2014.

Therefore, I would like to request VSO to send the research specialist to Kratie Province so that she can implement his own tasks.

Sincerely Yours,

Dr. Chheang Sovutha

Director of Provincial Health Department

Appendix G Participant information sheet for PAR workshops



A World Health Organization Collaborating Centre

LIVERPOOL JOHN MOORES UNIVERSITY

PARTICIPANT INFORMATION SHEET

Participant Information Sheet for Participatory Action Research Workshop

Title of Project: *Identifying the knowledge and skills training needs of public health workers in low and middle income countries (LMIC)*

Kim Ozano – Centre for Public Health

You are being invited to take part in a research study. Before you decide it is important that you understand why the research is being done and what it involves. Please take time to read the following information. Ask us if there is anything that is not clear or if you would like more information. Take time to decide if you want to take part or not.

1. What is the purpose of the study?

This research is aiming to understand more about public health in rural Cambodia and what can be done to increase the knowledge and skills of public health practice.

2. Do I have to take part?

No. It is up to you to decide whether or not to take part. You are still free to withdraw at any time and without giving a reason. A decision to withdraw will not affect your rights/any future treatment/service you receive.

3. What will happen to me if I take part?

You will take part in a workshop where you will be part of a discussion about public health skills in Cambodia. The length of the workshop will be one day but you are free to leave the workshop at any point if you are not comfortable. Food and drinks will be provided. The workshop will be recorded either by the researcher or workshop member taking notes or a verbal/video recording device and will be analysed by the researcher and the group. The results will be reflected back at a follow up workshop to ensure they are accurate. The follow up workshop is likely to last half a day unless there are major differences, in which case it may last a full day.

4. Are there any risks / benefits involved?

There are no risks to you taking part.

5. Will my taking part in the study be kept confidential?

All data will be confidential and will be kept secure by the researcher. Any data kept in an electronic format will be held securely on an IT password protected computer. When using the information for writing of reports, thesis and publication purposes your name will not be used and you will be anonymous.

This study has received ethical approval from LJMU's Research Ethics Committee and Cambodia National Ethics Committee for Health Research

Contact Details of Researcher Kim Ozano K.A.Ozano@2014.ljmu.ac.uk

Contact Details of Academic Supervisor Rose Khatri R.J.khatri@ljmu.ac.uk



Liverpool John Moores University

ក្រដាសព័ត៌មានសំរាប់អ្នកចូលរួម

ក្រដាសព័ត៌មានសំរាប់សកម្មភាពអ្នកចូលរួមធ្វើសិក្ខាសាលាដើម្បីស្រាវជ្រាវ
គំរោងស្តីពី៖

ការស្វែងយល់អំពីចំណេះដឹងជំនាញដែលចាំបាច់ក្នុងការបណ្តុះបណ្តាលដល់អ្នកគាំពារសុខុមាលភាព
សាធារណៈនៅក្នុងប្រទេសដែលមានប្រាក់ចំនូនទាបនឹងមធ្យម។

Kim Ozano: មណ្ឌលសុខភាពសាធារណៈ

អ្នកកំពុងត្រូវបានគេអញ្ជើញចូលរួមដើម្បីធ្វើការសិក្សាស្រាវជ្រាវមួយ។

មុនពេលអ្នកសំរេចចិត្តថាមានសារៈសំខាន់អ្នកត្រូវយល់ថា ការសិក្សាស្រាវជ្រាវធ្វើឡើងដើម្បីធ្វើនិង
វាពាក់ព័ន្ធទៅលើអ្វីខ្លះៗ សូមអានព័ត៌មានខាងក្រោមនេះ។

អ្នកអាចធ្វើការសាកសួរមកកាន់ពួកយើងខ្ញុំចំពោះចំណុចដែលអ្នកមិនយល់ឬចង់បានព័ត៌មានបន្ថែម។
សូមធ្វើការសំរេចចិត្តអោយបានច្បាស់លាស់ថាអ្នកចូលរួមឬមិនចូលរួម។

១.គោលបំណងនៃការសិក្សានេះគឺជាអ្វី?

គោលបំណងនៃការសិក្សាស្រាវជ្រាវនេះគឺដើម្បីស្វែងយល់អំពីសុខភាពសាធារណៈនៅតំបន់ដាច់
ស្រយាលក្នុងប្រទេសកម្ពុជា
ថា តើមានកត្តាចាំបាច់អ្វីខ្លះដែលត្រូវអនុវត្តដើម្បីលើកកម្ពស់ចំណេះដឹងជំនាញអំពីសុខភាពសា
ធារណៈក្នុងភូមិ។

២.តើអ្នកត្រូវតែចូលរួមដែរឬទេ?

អត់ទេ! នេះជាការសម្រេចចិត្តរបស់អ្នកដោយផ្ទាល់ដោយគ្មានការបង្ខិតបង្ខំ។
អ្នកអាចដកខ្លួនឬបញ្ឈប់ការចូលរួមរបស់អ្នកដោយខ្លួនអ្នកផ្ទាល់ហើយមិនចាំបាច់ប្រាប់ពីមូល
ហេតុ។ ការសំរេចចិត្តការណ៍របស់គំរោងស្រាវជ្រាវនេះ នឹងមិនមានផលប៉ះពាល់ណាមួយដល់
សិទ្ធិផ្ទាល់ខ្លួន ការរើសអើង ឬសេវាកម្មផ្សេងៗដែលអ្នកនឹងទទួលបាននាពេលខាងមុខឡើយ។

៣.តើវានឹងមានអ្វីកើតឡើងចំពោះខ្ញុំប្រសិនបើខ្ញុំចូលរួម?

អ្នកនឹងចូលរួមក្នុងការផ្តល់យោបល់ក្នុងសិក្ខាសាលាមួយចំនួនដែលពាក់ព័ន្ធនឹងសុខភាព
សាធារណៈនៅក្នុងខេត្តក្រចេះ។

អ្នកនឹងក្លាយជាសមាជិកនៃក្រុមស្រាវជ្រាវដែលប្រើប្រាស់រូបថតដើម្បីបញ្ជាក់នៅបញ្ហាសុខភាពទាំងឡាយដែលកើតមានបន្ទាប់មកទើបយើងនឹងបង្កើតគំរោងសកម្មភាពដើម្បីគាំពារសុខុមាលភាពក្នុងភូមិហើយអ្នកនឹងត្រូវចូលរួមសកម្មភាពមួយចំនួនក្នុងគំរោងសកម្មភាពដែលអ្នកនឹងសមាជិកផ្សេងទៀតបានយល់ព្រមបង្កើតឡើង។

សមាជិកក្រុមសិក្សាស្រាវជ្រាវដែលនឹងត្រូវបង្កើតឡើងរួមមាន៖

VHS68 នាក់មកពីមណ្ឌលសុខភាពថ្មីអ្នកជំនួយការស្រាវជ្រាវ2នាក់មកពីខេត្តក្រចេះ

និងអ្នកស្រាវជ្រាវម្នាក់មកពីអង្គការសមភាពស្រីលីវ៉ែរពូល John Moores

ការធ្វើសិក្ខាសាលាចំណាយពេល5ម៉ោងក្នុងមួយថ្ងៃប៉ុន្តែអ្នកមានសិទ្ធិចាកចេញពីសិក្ខាសាលាគ្រប់ពេលប្រសិនបើអ្នកគិតថាមានបញ្ហាឬក៏មិនមានជាសុខភាព។ ម្ហូបអាហារគឺមានផ្តល់ជូនឲ្យសិក្ខាសាលានិងត្រូវបានថតសំលេងដោយអ្នកស្រាវជ្រាវឬអ្នកជំនួយការអ្នកស្រាវជ្រាវ។ កំឡុងពេលធ្វើសិក្ខាសាលាត្រូវចំណាំថានិងចំណាយពេលលើការថតសំលេង និងវីដេអូដោយប្រើជាក្រុម។

បន្ទាប់ពីធ្វើការសង្ខេបសិក្ខាសាលានីមួយៗរួចហើយនិងធ្វើដោយអ្នកស្រាវជ្រាវអ្នកជំនួយការ។ ការសង្ខេបចំនួននីមួយៗនិងបង្ហាញអ្នកទាំងអស់គ្នានៅសិក្ខាសាលាក្រោយដើម្បីអោយដឹងថាវាគឺត្រឹមត្រូវ។ ប្រសិនបើមានអ្នកអ្នកអាចជួយកែតម្រូវជាលក្ខណៈក្រុម។ អ្នកនិងត្រូវស្នើសុំអោយចូលរួម13ដងឬ13សិក្ខាសាលាដោយចាប់ផ្តើមពីថ្ងៃទី26 ខែមករា ឆ្នាំ2016 ដល់ថ្ងៃទី 19 ខែមីនា ឆ្នាំ2016។

៤. តើអ្នកមានហានិភ័យឬបានផលប្រយោជន៍អ្វីខ្លះ?

គ្មានហានិភ័យអ្វីនោះទេសំរាប់ការចូលរួមរបស់អ្នក ព្រោះអ្នកគ្រាន់តែជាផ្នែកមួយក្នុងការសិក្សា។

៥. តើការចូលរួមរបស់អ្នកជាផ្នែកមួយក្នុងការសិក្សា ត្រូវបានរក្សាទុកជាការសម្ងាត់ឬទេ?

រាល់ទិន្នន័យទាំងអស់ នឹងត្រូវបានរក្សាការសម្ងាត់ ហើយនឹងត្រូវបានរក្សាសុវត្ថិភាពដោយអ្នកស្រាវជ្រាវ ។ ទិន្នន័យទាំងនោះ នឹងត្រូវបានរក្សាទុកក្នុងទ្រង់ទ្រាយអេឡិចត្រូនិចនៅលើកុំព្យូទ័រដែលនឹងត្រូវបានការពារសុវត្ថិភាពដោយ ពាក្យសម្ងាត់។ នៅពេលប្រើក្នុងគោលបំណងសម្រាប់ការសរសេរបាយការណ៍ និក្ខេបបទ និងការបោះពុម្ព ឈ្មោះរបស់អ្នកនឹងមិនត្រូវបានប្រើ ហើយអ្នកនឹងមានត្រូវបានប្រើជំនួសដោយឈ្មោះអនាមិក។ ការវាយតម្លៃនេះប្រហែលជាត្រូវបានប្រើជាករណីសិក្សាដែលជាផ្នែក មួយនៃនិក្ខេបបទបណ្ឌិត ឬការបោះពុម្ព ប៉ុន្តែឈ្មោះរបស់អ្នក នឹងមិនត្រូវបានបង្ហាញ។

ទំនាក់ទំនងបន្ថែមនៃការស្រាវជ្រាវ កញ្ញា គីម អូហ្សាណូ (Kim Ozano) OzanoK.A.Ozano@2014.ljmu.ac.uk

ទំនាក់ទំនងបន្ថែមជាមួយសាស្ត្រាចារ្យ Rose Khatri R.J.khatri@ljmu.ac.uk

Appendix I Consent form for PAR workshops



A World Health Organization Collaborating Centre

LIVERPOOL JOHN MOORES UNIVERSITY

Consent Form for Participatory Action Research

Identifying the knowledge and skills training needs of public health workers in low and middle income countries (LMIC)

Kim Ozano from Faculty of Education, Health & Community (Centre for Public Health)

8. I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily

☐

9. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and that this will not affect my legal rights.

☐

10. I understand that any personal information collected during the study will be anonymised and remain confidential

☐

11. I agree to take part in the above study

☐

12. I understand that the workshop may be audio / video recorded and I am happy to proceed

☐

13. I understand that images taken by photographic means or video recording may be collected and used in future workshops for discussion related to the research title only

☐

14. I understand that parts of our conversation may be used verbatim in future publications or presentations but that such quotes will be anonymised.

☐

Name of Participant

Date

Signature

Name of Researcher

Date

Signature

Name of Person taking consent

Date

Signature

(if different from researcher)



CPH CENTRE FOR
PUBLIC HEALTH
LIVERPOOL JOHN MOORES UNIVERSITY
A World Health Organization Collaborating Centre

សាកលវិទ្យាល័យ LIVERPOOL JOHN MOORES

ទម្រង់កិច្ចព្រមព្រៀងការចូលរួម

- ទម្រង់យល់ព្រមសម្រាប់ការចូលរួមក្នុងសកម្មភាពស្រាវជ្រាវ
ការកំណត់នូវតម្រូវការវគ្គបណ្តុះបណ្តាលចំណេះដឹងនិងជំនាញនៃបុគ្គលិកសុខភាពសាធារណៈនៅ
ក្នុងប្រទេសដែលមានប្រាក់ចំណូលទាបនិងមធ្យម (LMIC)
កញ្ញា Kim Ozano មកពីមហាវិទ្យាល័យអប់រំសុខភាពនិងសហគមន៍ សុខភាពមជ្ឈមណ្ឌល)
(សាធារណៈ

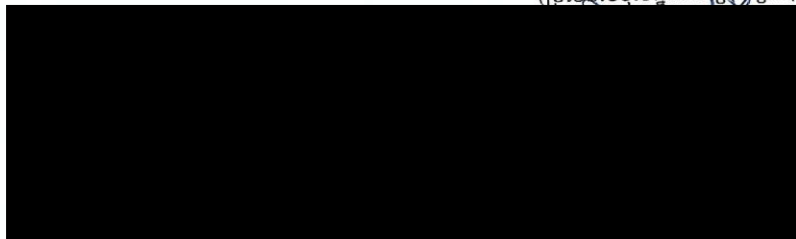
1. ខ្ញុំសូមបញ្ជាក់ថាខ្ញុំបានអាននិងយល់នូវព័ត៌មាន ដែលបានផ្តល់សម្រាប់ការសិក្សាខាងលើនេះ
។ ខ្ញុំមានឱកាសដើម្បីពិចារណានូវព័ត៌មានដែលផ្តល់ឲ្យ សាកសួរនូវសំណួរនិងទទួលបានចម្លើយ
ដែលពេញចិត្ត។ ☒
2. ខ្ញុំដឹងថាការចូលរួមរបស់ខ្ញុំ គឺជាការស្ម័គ្រចិត្តហើយខ្ញុំមានសេរីភាពក្នុងការចូលរួម
ដោយមិនចំបាច់ផ្តល់ហេតុផលហើយវានឹងមិនប៉ះពាល់ដល់សិទ្ធិស្របច្បាប់របស់ខ្ញុំ។ ☒
3. ខ្ញុំដឹងថា ព័ត៌មានផ្ទាល់ខ្លួនរបស់ខ្ញុំ ដែលប្រមូលបានក្នុងអំឡុងពេលនៃការសិក្សានេះនឹងត្រូវបាន
រក្សាជាការសម្ងាត់និងអនាមិក។ ☒
4. ខ្ញុំយល់ព្រមដើម្បីចូលរួមក្នុងការសិក្សាខាងលើនេះ។ ☒
5. ខ្ញុំបានដឹងថាសិក្ខាសាលានេះអាចត្រូវបានកាត់ប្រាក់ទុកអ្វីៗ រឺដេអូ
ហើយខ្ញុំពិតជាសប្បាយរីករាយជាមួយការចូលរួមនេះ។ ☒
6. ខ្ញុំដឹងថារូបភាពដែលបានថតជាប់រួមនឹងអ្វីៗអាចត្រូវបានប្រមូលនិងរក្សាទុកសម្រាប់ប្រើ
ប្រាស់នៅក្នុងសិក្ខាសាលានាពេលអនាគតសម្រាប់តែការពិភាក្សាដែលទាក់ទងទៅនឹង
ប្រធានបទនៃការស្រាវជ្រាវនេះប៉ុណ្ណោះ។ ☒
7. ខ្ញុំបានដឹងថាផ្នែកខ្លះនៃការសន្ទនាអាចត្រូវបានប្រើ ដោយផ្ទាល់ ក្នុងបោះពុម្ពជាសៀវភៅឬការធ្វើ
បទបង្ហាញនាពេលអនាគតប៉ុន្តែសម្រង់នៃការសន្ទនា នឹងត្រូវបានប្រើជាឈ្មោះអនាមិក។ ☒

កាលបរិច្ឆេទ
26/01/2016
ឈ្មោះចូលរួម

កាលបរិច្ឆេទ

ឈ្មោះអ្នកស្រាវជ្រាវ

កាលបរិច្ឆេទ
26/01/2016
ឈ្មោះជំនួយការសិក្សា
(ប្រសិនបើខុសគ្នាពីការស្រាវជ្រាវ)



Appendix K Examples of slides used by the PHD to train VHSGs on Behaviour Change Communication

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វគ្គបណ្តុះបណ្តាលក្រុមប្រឹក្សាសុខភាពភូមិស្តីពី៖
 VHSGs Training about
ការផ្លាស់ប្តូរឥរិយាបថតាមរយៈការប្រាស្រ័យទាក់ទងដើម្បីសុខភាព
 Behaviour change Communication

■ បណ្តុះបណ្តាលលើក្រុមប្រឹក្សាសុខភាពភូមិ នៅតំបន់
 Training to VHSGs in Tmey health center
ក្រុមបណ្តុះបណ្តាលសុខភាព ថ្មី

ចាប់ពីថ្ងៃទី ១៤ ដល់ថ្ងៃទី ១៥ ខែមីនា ឆ្នាំ២០១៦
 From 14th to 15 March 2016

រៀបចំដោយ
Organise by
មន្ទីរសុខាភិបាលខេត្ត
PHD

ឧបត្ថម្ភដោយ
Sponsor by

NCHP ToT BCC/IPC UNFPA

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- 1 ■ បំណងនៃវគ្គបណ្តុះបណ្តាលស្តីពី
The aim of the training
- 2 ■ ការផ្លាស់ប្តូរឥរិយាបថតាមរយៈការប្រាស្រ័យទាក់ទងដើម្បីសុខភាព
Change behaviour by communication for health
- 3 ■ ដើម្បីផ្តល់ចំណេះដឹងដល់ក្រុមប្រឹក្សាសុខភាពភូមិទូទាំងសហគមន៍សុខភាព
• To provide knowledge to VHSGs about health care.
- 4 ■ ដើម្បីប្រកាសព័ត៌មាន និងកម្រិតបែបសង្គមក្នុងការប្រាស្រ័យទាក់ទង
• To share information and facilitate the communication
ដែលនាំឱ្យមានការផ្លាស់ប្តូរឥរិយាបថ មិនល្អ លើសុខភាព
which change bad behaviour to good behaviour
ប្រកបដោយសុខភាពល្អដើម្បីសុខភាពក្រុមគ្រួសារ ក្នុងសហគមន៍
for family health in community.
- 5 ■ យើងមានសុខភាពល្អ ការបង្កបង្កើនជួនចរន្តជីវិត ជីវភាពប្រកបដោយ
• We have good health, increase income, good living standard.

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2

BEHAVIOUR CHANGE COMMUNICATION

4

ប្រធានបទ:
WHAT IS BCC? Topic
ការផ្លាស់ប្តូរឥរិយាបថតាមរយៈការប្រាស្រ័យទាក់ទងដើម្បីសុខភាព

■ និយមន័យ Definitions

- ការផ្លាស់ប្តូរការប្រព្រឹត្តិការណ៍តាមរយៈការប្រាស្រ័យទាក់ទងគឺជាមធ្យោបាយចម្បងក្នុងការលើកកម្ពស់សុខភាព និងធ្វើឱ្យមាននិរន្តរភាពនៃការកាត់បន្ថយផ្លូវការប្រព្រឹត្តិ to promote health and make a temporary reduce ប្រកបដោយគ្រោះថ្នាក់របស់បុគ្គល និងសហគមន៍ដោយធ្វើការផ្សព្វផ្សាយ dangerous behaviour of person and community by ផ្លូវសារសុខភាពតាមរយៈ ប្រព័ន្ធផ្សព្វផ្សាយនានា other media.

គោលបំណង នៃការប្រាស្រ័យទាក់ទងនាំឱ្យផ្លាស់ប្តូរឥរិយាបថ
The purpose of Behaviour change communication
ដើម្បីសុខភាព

ពិពណ៌នាផលប៉ះពាល់ដែលយើងចង់បាន :

Describe the result that we want :

❖ តើអ្នកណាដែលនឹងផ្លាស់ប្តូរ who will change

❖ តើនៅក្នុងមធ្យោបាយអ្វី in what way

❖ ហេតុអ្វីបានជាអ្នកនឹងផ្លាស់ប្តូរ why will they change

❖ ត្រូវការរយៈពេលប៉ុន្មាន how Long

6

ជំណាត់ការបន្តការផ្លាស់ប្តូរការប្រព្រឹត្តិ steps of behaviour change

5 STAGES OF CHANGE

ទស្សនៈ View	និយមន័យ Definition	ការអនុវត្ត Practice
មិនទាន់ដឹងពីបញ្ហា not yet know problem	មិនទាន់ដឹងពីបញ្ហា មិនទាន់គិតថាអ្វី not know the problem, ផ្លាស់ប្តូរ not think to change	បង្កើនការយល់ដឹងពីតួនាទីនៃការផ្លាស់ប្តូរ increase knowledge about change
គិតថាអ្វីផ្លាស់ប្តូរ think to change	គិតថាអ្វីផ្លាស់ប្តូរក្នុងពេលខាងមុខ Think to change soon ឆាប់ៗ	ជំរុញទឹកចិត្ត ជំរុញការអនុវត្ត ដើម្បីធ្វើផែនការកំណត់ encourage and push to practice plan
រៀបចំការផ្លាស់ប្តូរ prepare to change	រៀបចំផែនការដើម្បីផ្លាស់ប្តូរដោយបើកពីគោលបំណង prepare the plan to change with purpose	ជួយក្នុងការធ្វើផែនការច្បាស់លាស់ Help in making a clear plan.
ការអនុវត្តទៅតាម the plan. ការរៀបចំពីមុន practice follow the plan.	អនុវត្តផែនការសកម្មភាពដែលបានកំណត់ which has set	ជួយដោយផ្តល់នូវព័ត៌មានត្រឡប់, ការជួយដោះស្រាយបញ្ហា, ការគាំទ្រពីសង្គម និងការពង្រឹង Help by giving feedback, deal problem, support and strengthen from society.
រក្សាការផ្លាស់ប្តូរ Keep changing	បន្តអនុវត្តសកម្មភាពដែលចង់បានឬក៏ធ្វើសារឡើងវិញនូវជំហានតាមសំណូមពរ continue to implement action that we want	ជួយដោយព្យាយាម រំលឹក, រកវិធីផ្សេងៗ, ចៀសវាងការប្រថុយ បោះបង់ Try to remind, find other ways avoid giving up.

or redo the step
follow suggestion.

ឧទាហរណ៍: ការយោគាធិការផ្លាស់ប្តូរឥរិយាបថ

Example: Campaign of new product can change behaviour

- | | |
|--|--|
| <ul style="list-style-type: none"> ■ មិនទាន់ដឹងពីបញ្ហា
not know the problem ■ គិតថាមិនផ្លាស់ប្តូរ
think to change ■ រៀបចំការផ្លាស់ប្តូរ
Prepare to change ■ ការអនុវត្តទៅតាមការរៀបចំពីមុន
practice follow the plan ■ រក្សាការផ្លាស់ប្តូរ
Keep changing | <ul style="list-style-type: none"> ■ មិនទាន់ដឹងពីម្សៅសាប៊ូដែលប្រើរាល់ថ្ងៃមិនល្អ
don't know soap which use daily is not good ■ បន្ទាប់ពីប្រើសាប៊ូថ្មី ដែលគេឱ្យប្រើជាមួយមុន
After using new soap which was given, know ■ សំរេចចិត្តផ្លាស់ប្តូរ ដោយសាកសួរពីតម្លៃ និងគុណភាព
decide to change by asking the price and buy ■ ទិញសាប៊ូថ្មីមកប្រើ
Buy new soap for using ■ បន្តទិញ និងប្រើប្រាស់សាប៊ូថ្មីនេះ រហូតដល់មាន
continue to buy and use this new soap
ផលិតផលថ្មីល្អជាងមុន
until there are better soap |
|--|--|

កត្តាទាំង៦នៃការផ្លាស់ប្តូរការប្រព្រឹត្ត: Six factors of behaviour change:

- កត្តាសុខភាពផ្លូវកាយ Physical health
- កត្តាចំណេះដឹង Knowledge
- កត្តាអាកប្បកិរិយា និងអារម្មណ៍ behaviour and feeling
- កត្តាជំនាញរបស់បុគ្គល personal skill
- កត្តាគ្រួសារ និងមិត្តភក្តិ family and friends
- កត្តាសង្គមសេដ្ឋកិច្ច Society economy

Appendix L Manuscript accepted by Educational Action Research Journal

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