Empowerment, Health Promotion and Behaviour Change: Applying Health Psychology Across Multiple Areas of Professional Practice

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Contents

Abstract

This portfolio details work undertaken towards fulfilment of the five competencies forming the Professional Doctorate in Health Psychology.

Professional Practice: The trainee worked in the roles of Assistant Psychologist, Senior Assistant Psychologist and Behavioural Psychologist at OPEN Health, an independent healthcare communications organisation, and carried out independent private practice to fulfil the competencies demonstrated in this portfolio. Professional practice is evidenced throughout the portfolio as the trainee demonstrates their work in line with the HCPC standards of proficiency and relevant codes of conduct including those outlined by the BPS. Evidence of and reflections on professional practice are detailed in the Practice Log and Reflective Commentary respectively.

Consultancy: The trainee sought independent consultancy work by engaging with the University of Central Lancashire to deliver a bespoke lecture to a cohort of dental students on managing dental anxiety. A case study, consultancy report and contract are enclosed detailing the process and outcomes.

Behaviour Change Interventions: Two case studies have been developed by the trainee detailing a one-to-one, face-to-face dental hygiene intervention and an online mindfulness-based group intervention.

Teaching and Training: A five-part teaching series designed to increase health psychology knowledge and understanding was conducted and documented in a case study, accompanied by a reflective diary outlining a number of teaching and training experiences.

Research: The trainee produced three original pieces of research contributing to the health psychology evidence base. A systematic review explored the existing evidence for positive psychology interventions in prostate cancer. Empirical paper one used a qualitative methodology to investigate the domains associated with patient empowerment in healthcare. Empirical paper two built upon the evidence generated in empirical paper one and outlined the development, pilot testing and psychometric evaluation of a novel measure of patient empowerment.

Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Thank you to the rest of the 2020 Prof Doc cohort. It was so reassuring knowing you were alongside me on this journey, particularly during that difficult first year during the pandemic. Thank you for everything you taught me during that time. To anyone who has participated in any of the activities that I have written up in this portfolio, including my consultancy partnership, attendees of my training sessions, intervention participants and research participants, thank you. I couldn't have done this without you. To Siobhan, I can't thank you enough for being in my corner. You have contributed to my success in completing this training in so many ways, and I will be forever grateful for your support.

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Portfolio introduction

This portfolio contains evidence of my experience and proficiency across the key competency areas required for the Professional Doctorate in Health Psychology. My professional experiences leading up to where I am today have included positions in public relations, healthcare advertising and honorary positions in healthcare services before moving into a health psychology role. I believe that these previous career experiences have equipped me with an array of skills and attributes that have allowed me to develop and grow as a well-rounded practitioner during my Professional Doctorate training.

My current position is Behavioural Psychologist within the Patient Engagement team at OPEN Health. OPEN Health is multi-faceted healthcare communication and consultancy organisation that partners with pharmaceutical companies as clients. The work of the Patient Engagement team focuses primarily on patient experience and disease burden research, patient and public involvment in drug development and clinical trial design, patient engagement strategy consultancy and population-level behaviour change intervention design.

My scope of interest within health psychology is not contained specifically to one area, and this is reflected in the variety of professional activities I have undertaken while demonstrating my ability in the key competency areas. I developed a training plan at the start of the course that changed in a number of ways due to shifts in opportunities and inevitably due to the Covid-19 pandemic, which shaped a significant portion of my experience during the training period.

My consultancy competency was achieved through developing a professional partnership with the University of Central Lancashire School of Dentistry to deliver a bespoke lecture to a mixed cohort of students on managing dental anxiety. This also provided me with additional teaching and training experience. In some ways, this was the competency I felt most confident in as I have a good amount of consultancy experience from my workplace roles.

The behaviour change interventions (BCI) competency is presented through two case studies. I delivered a one-to-one, face-to-face intervention with an individual referred to me through my professional network. The intervention targeted increased tooth brushing, and was delivered over five sessions. In constrast to the consultancy, this was the activity I was most nervous about completing, as one-to-one interventions are outside of the scope of my day-to-day role in my workplace. The second case study demonstrates the delivery of a mindfulness-based group

intervention with a team within my workplace. The intervention was carried out remotely online and incorporated daily mindfulness practice with the aim to improve psychological wellbeing scores and trait mindfulness.

Throughout the training period I have gained experience delivering a number of teaching and training sessions both in person and online, and these are detailed within my Teaching and Training Diary. To fulfil this competency, my Teaching and Training Case Study outlines a series of training sessions delivered to a multidisciplinary team within my workplace, covering the principles of health psychology and how it is applied within the setting we work.

I started my research competency by completing a systematic review into the evidence for positive psychology interventions in prostate cancer. This topic was inspired by wanting to take a deeper dive into the evidence after developing a mindfulness-based intervention through my workplace for those with prostate cancer. My two empirical papers were connected. I was given the opportunity through my workplace to dedicate some time to looking into the opportunity to develop a measure of general healthcare service user empowerment. My first empirical paper was a qualitative investigation into the domains associated with empowerment in healthcare. Utilising this evidence along with a further review of the literature and existing measures, my second paper describes the development, pilot testing and psychometric evaluation of the novel measure of patient empowerment.

My professional development, learnings and growth are captured in the Reflective Practice chapter of this portfolio. My Reflective Practice commentary presents my overall reflections and meta-reflections looking back across my training period. My Practice Log is presented in an accompanying document, which outlines the work I have completed on a weekly basis throughout the Professional Doctorate.

The order in which the competency activities were completed differed from the original plan of training, so I have included a table below that outlines the order in which they were carried out:

Timeline	Activity	Competency
Throughout	Practice Log	Professional practice
2020	Plan of Training	Professional practice
2021	Systematic Review	Research
2022	Teaching and Training Case Study	Teaching and training
	Consultancy Case Study	Consultancy
2023	Empirical Paper 1	Research
	Teaching and Training Diary	Teaching and training
	Behaviour Chance Intervention Case Study 2	Behaviour change interventions
	Behaviour Chance Intervention Case Study 1	Behaviour change interventions
	Empirical Paper 2	Research
2024	Research Commentary	Research
	Reflective Practice Commentary	Professional practice

This portfolio presents evidence of competencies in the following order, with relevant appendices included within each chapter:

1. Planning training in health psychology
2. Consultancy
3. Behaviour change interventions
4. Teaching and training
5. Research
6. Professional practice.

Planning Training in Health Psychology

This section contains the initial Plan of Training developed at the start of the Professional Doctorate training period, as well as the initial training timeline and a SWOT analysis.

Plan of Training

Placement overview

My current workplace role is Assistant Health Psychologist within OPEN Health, which is a private healthcare communications organisation specialising in patient communication, research, branding, and market access in partnership with pharmaceutical companies and healthcare charities. My role sits within the Patient Engagement practice.

As an Assistant Health Psychologist working in this environment, my day to day role is varied. I partake in the development of patient support programmes, which largely include digital psychological interventions targeted at patient populations living with a certain health condition, such as a specific form of cancer or rare disease. Another aspect to my role is research, and I am regularly involved in data collection such as qualitative interviews or focus groups with patients, qualitative data analysis and the dissemination of research results. A third aspect to my role is consultancy and business development, meaning I am often involved in presenting proposals to potential new pharmaceutical clients to advocate for the inclusion of health psychology research and practice within their business model, with the aim to enhance the quality of life of their patient populations.

Teaching and training competency outline

<u>Series of five training sessions with OPEN Health employees</u>

My practice at work has recently grown due to members of the wider organisation joining our team. The Patient Engagement practice now comprises research specialists, account management, copywriters and designers as well as Health Psychologists. To increase knowledge within the team and improve the offering from our team to our clients, I plan to host a series of five educational sessions with new members of the practice. The purpose will be to educate them on health psychology, its remit, what my team of health psychologists do and how health psychology benefits our clients, their patients and the wider healthcare arena.

The aim of this training programme will be to ensure that all new members of the Patient Engagement practice at OPEN Health understand the basic principles of health psychology and how it applies in our setting. Not only will this benefit the team's understanding of our roles as psychologists and trainee psychologists, but it will allow the team to seek out new settings in which

health psychology can be applied to projects with our clients, and to spot unmet needs that could benefit from input from a Health Psychologist.

Some of the content that I will focus on within these training sessions will include:

1) The principles of health psychology and where it is applied
2) A focus on two key models or theories in health psychology, e.g. the theory of planned behaviour
3) An activity to discuss why a Health Psychologist would be relevant in certain settings
4) An overview of the work that my team of health psychologists does within our organisation, and some of the activities that we do on a regular basis
5) An overview of research in health psychology, and how it has helped to solve some of the problems that our clients have approached us with.

To assess the initial training needs of the group I will send out a short survey with questions to gauge the participants' existing knowledge base. The training programme with then be structured around their needs as a group. There will be between 5-7 individuals in the training group, and the session will be designed for interactive learning where possible, with an even split of teaching, group discussion and learning exercises. To support the training programme, PowerPoint slides will be developed, and handouts will be given so that the attendees can do further reading between each session should they wish.

I will aim to host one session each week of approximately an hour long, and the training sessions will be observed by my workplace supervisor who is a Registered Health Psychologist. During the sessions she will be taking notes of my performance and will compile a written assessment. During the final session there will be a quiz to test the learning of the team. At the end of the training programme, the attendees will be given a questionnaire, which I will use to gain feedback on the session.

Training output: Teaching and training case study, teaching diary.

<u>Training session with dental students</u>

This piece of work will be focused around delivering a one-off training session to a group of 13-15 dental students. I will be aiming to offer a cohort of first year dental students training at University of Central Lancashire (UCLan) a guest lecture on a health psychology issue relating to practising dentistry. I will aim either for one of the dentistry course supervisors, or for a third party qualified teacher to be present to observe the session.

Before developing the training materials I will discuss with a programme lead at UCLan to assess the existing knowledge of the students and to gain an understanding of any current health psychology-related material that will be taught as part of their dentistry degree (outlined further in 'consultancy competency outline'). One proposed subject matter for this session is the biopsychosocial model and how this can be a useful tool for dental practitioners. With this, I would use practical examples from existing research to demonstrate how this model can be applied, and in what ways it would be beneficial to their practice.

I will develop a review sheet that will be given to all attendees at the end of the session and will ask them to provide both quantitative and qualitative anonymous feedback on various metrics relating to the training, including its usefulness, relevance and effective delivery. This feedback will be reviewed afterwards to assess whether the training session was successful and completed its objectives, and it will allow me to reflect on my teaching and training competency.

The teaching method for this session will be less interactive and more of a desk learning, or 'chalk and talk' style, due to the larger size of the group. To support the learning, I will develop a handout to share with the group, containing the key messages from the day and references for where they can access further information.
Training output: Teaching diary.

Consultancy competency outline

<u>Training session with dental students</u>
To demonstrate my competency in this area I plan to approach a cohort of dentistry students to offer a training session (outlined further in 'teaching and training competency outline'). In order to establish a professional working relationship and to propose my offer of consultancy, I will reach out to the Senior Clinical Teacher at the School of Dentistry at UCLan to make initial contact, and to establish a key client contact. My initial email will be an introduction and informal proposal of the training session, outlining the benefits of this session for the dental students and also how this will benefit me as part of my professional doctorate portfolio. Following this initial email contact, if the client is interested in this activity, I will propose a telephone conversation to discuss details further and to allow the client to express their expectations and desires relating to the teaching session, and to discuss a potential teaching plan for the session. During this conversation I will explore whether the cohort are expected to receive any other health psychology-related training during their course and establish where an unmet need may exist in their training, to ensure that the session will be

appropriate, relevant and beneficial for the students. This conversation will form the basis for the formal proposal and contract. After this initial telephone consultation, I will put together a formal proposal document and contract. These documents will outline all the key details, including:

- When the session will be
- Timings and how long it will last
- A recommendation of a topic and teaching plan for the training session
- What UCLan School of Dentistry students can expect to gain from this session
- What I will gain from hosting this session
- What information the client can expect to receive ahead of the session
- A timeline for next steps

These documents will be shared with the client over email, and the client will be asked to respond to confirm in writing that they are happy with, and agree to, to the terms of the contract. Following this, the training session will be delivered as outlined in 'teaching and training competency outline'.

After the session has been completed, I will make contact with the client over email to thank them for their participation in this activity, and to ask for any formal feedback on both the consultancy process, and the training session itself. I will also provide a formal summary of the training session, outlining the information I delivered and the new knowledge and skills that the cohort are expected to have gained. Following this, I will develop a complete case study to outline the process, which will include critical reflection on the process and how it could be improved for future consultancy activities.

Training output: Consultancy contract and report, consultancy case study

Behaviour change interventions competency outline

<u>Workplace sleep intervention</u>

To demonstrate this competency, I will be offering a sleep intervention to professionals working within my office building. Intervention will be offered to organisational teams outside of my area of the business, to avoid any potential professional conflict and to ensure the intervention is not offered to anyone that I already have a personal relationship within the workplace. This 'sleep clinic' will be aimed at those self-reporting insomnia symptoms who aren't receiving other clinical interventions, e.g. from their GP, and would like to improve their sleep. The intervention will take place in a one-to-one, face-to-face setting.

For each client I will assess their sleep behaviour, and the behavioural and environmental causes of any sleep concerns. I will also identify specific objectives and personal goals with the client to establish what they would like to achieve from the intervention. Intervention designs will be based on established theory and methodology, and will likely encompass psychoeducation on sleep hygiene, mindfulness and breathing and CBT techniques. Clients will receive approximately six sessions each, but this may vary depending on the initial assessment and client goals. The intervention structure will be developed along with supporting materials that the client can take away with them.

A case study will be written based on one client, outlining my assessment of their needs, how I formulated and delivered the intervention, and a reflection on the intervention including any changes I would make if I were to do it again.
Training output: Intervention case study 1

Online group intervention

A pharmaceutical company, Client D has approached my organisation, OPEN Health, in February 2020 to develop an online psychological intervention to be offered to patients living with diffuse large B-cell lymphoma (DLBCL) that have been prescribed a novel immunotherapy that is manufactured by Client D. Client D is interested in sponsoring the development of a psychological intervention based on their insights that their patient group often experiences anxiety linked to relapsed or refractory cancer and commencing a new treatment pathway, and some experience PTSD linked to their previous line of oncology treatment.

The intervention will be designed and developed in full by OPEN Health on behalf of Client D. It will then be supplied to appropriate healthcare professionals within the NHS at relevant treatment centres, who will give suitable patients access to the online platform. The intervention will be designed to be self-led, so that the patients can access it online, at times most suited to them.

I have been given the role of health psychology lead on this project and will develop and formulate each step of the intervention under supervision of a registered health psychologist within my team. I will first conduct research which will comprise several stages. I will review existing patient research undertaken by Client D, conduct a literature review to understand the psychological needs of this group, undertake a 'social listening' exercise to understand the questions and concerns that are being raised online, and conduct patient interviews followed by a thematic analysis to gain a rich

understanding of their psychological needs. Based on these findings I will formulate an intervention that best suits the needs of this population.

The intervention will most likely include a series of video content, written articles or podcasts. For each of these I will write the psychological content, and it will be presented in a report before the online intervention is built. This will be reviewed by my workplace supervisor, Client D, and potentially an advisory board of healthcare professionals for validation. Any changes or comments on my intervention will be documented.

Third parties from within my organisation or specialists outside my organisation will be involved with the production and delivery of this intervention, for example, digital specialists to create an online platform, or voiceover artists to record podcasts, however I will oversee this process in full, and ensure it is in line with the overall intervention design.

The intervention will be designed so that its effectiveness can be evaluated through screening and patient reported outcomes pre- and post-intervention. This will likely take the form of an online self-report questionnaire, which will be embedded into the online platform. For the purposes of my portfolio, the client name and product name will be redacted from the case study.
Training output: Intervention case study 2.

Research competency outline

Systematic review

To demonstrate my ability to review systematically a body of health psychology knowledge I intend to complete a systematic review of positive psychology interventions in prostate cancer. As positive psychology is still a relatively new area of research compared with more traditional domains, there have been a number of empirical research papers published in recent years exploring the impact of positive psychology interventions as they apply to various populations and settings.

One application of positive psychology interventions that I find particularly interesting is in prostate cancer. As prostate cancer, even in advanced stages, is increasingly able to be managed as a chronic condition, traditional psychological interventions targeted at acute forms of cancer are not always appropriate in this setting. Several studies have explored the effects of positive psychology interventions in men living with prostate cancer. I feel that it would be beneficial to explore this research in a systematic review to provide an overview of the research in this area.

The review will be written for submission to an appropriate journal for publication, such as the British Journal of Health Psychology, that particularly welcomes systematic review submissions. Because of this, the review procedure will follow the guidelines of the journal, and it will be written to the journal's specifications. Whilst completing this review, I will also document the process to inform a full research commentary covering all my research activity throughout my training.
Training output: Systematic review, research commentary.

Research project 1

For my first area of novel research, I would like to take a qualitative approach and use semi-structured interviews with a sample of around 10-12 practising physiotherapists in London, to investigate the day-to-day implementation of the biopsychosocial model. It has been recommended by NICE in recent years that physiotherapists should utilise the model, and some research has been conducted focusing on how it is used in specialist areas. Within this research project I would like to build upon existing research in this area either by taking a closer look on a specialist area within physiotherapy, to gain an understanding of how physiotherapists perceive the biopsychosocial model to help their practice, and the perceived benefit to patients.

Ethical approval with be sought from Liverpool John Moores University (LJMU) Research Ethics Committee before the study begins. The research will be submitted to an appropriate journal for publication, and research activity will all be logged in an ongoing practice diary and will be used to build a reflective commentary on the research I have conducted throughout the course of the professional doctorate.
Training output: Empirical paper 1, research commentary.

Research project 2

For the second novel piece of research that I plan to undertake as part of my training I would like to explore attitudes to sickness absence due to mental health in workplace environments within the UK. Within the research I would like to explore the extent to which adults hold different attitudes to taking sick days from their place of employment for mental health reasons as opposed to physical health. In particular, I would be interested to explore the extent to which participants who have experienced mental health difficulties would feel comfortable taking sickness absence from work and disclosing that it was for mental health reasons.

Before starting the research, ethical approval with be sought from the LJMU Research Ethics Committee. The participants for this study will be recruited on a voluntary basis using an

opportunity sample of employees working within a number of organisations of various natures in the UK. I aim to collect data through an online self-report questionnaire from adults working in office environments, and questions will be chosen to explore the strength of attitudes along with another domain such as personality. Responses will be converted into quantitative data for statistical analysis and the final empirical paper will be submitted to an appropriate journal for publication.

Training output: Empirical paper 2, research commentary.

Professional practice overview

Throughout my training and beyond, I will be adhering to a number of professional standards deriving from my workplace, the HCPC, the BPS and LJMU.

Any of the activities I will be submitting as part of my portfolio that have been conducted through my work placement at OPEN Health will be underpinned by a professional code of conduct. I will also receive regular supervision from my workplace supervisor, and take part in weekly MDT team meetings, during which my team shares learnings that can benefit our practice. Within my workplace environment I receive regular training and updates, including training on important professional issues that could impact my practice such as GDPR standards and regulations on pharmaceutical industry communications, as well as client-required training on adverse events reporting and patient-oriented programmes.

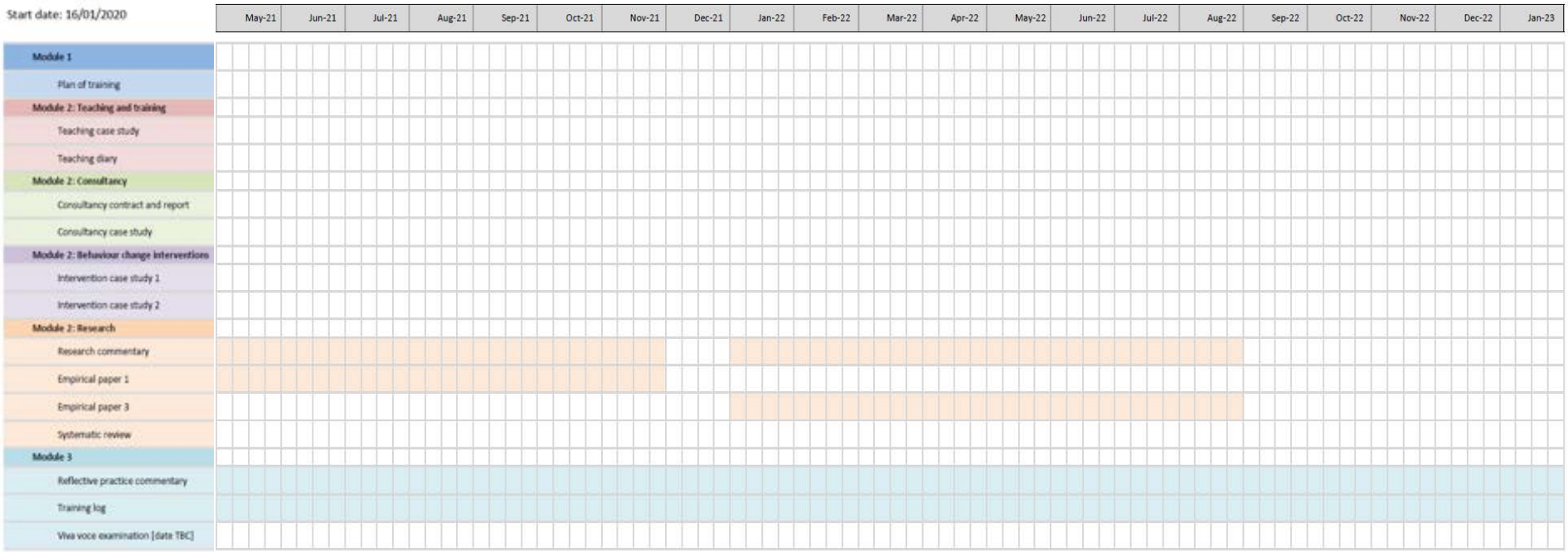
My practice will follow the HCPC guidance on conduct and ethics for students, the BPS code of ethics and conduct, and I will be supported by guidance from LJMU including regular supervision. I believe it is my responsibility, throughout my career, to continue to learn and develop my skills as a professional, and this includes knowing when is appropriate to ask for advice or support from colleagues. This is something I will be practising throughout my training, alongside keeping a continued professional development log.

During my training period I will keep a practice log, which will document my professional activities each week, what I learned and any feedback I received. I will also maintain a reflective diary and ensure I am reflecting on my practice on a very regular basis, practising both reflection and meta-reflection.

Training output: Reflective practice commentary, training log.

Original training timeline

A Gantt chart outlining the initial timeline for my training over the course of the professional doctorate can be seen below.


Start date: 16/01/2020
May-21
Jun-21
Jul-21
Aug-21
Sep-21
Oct-21
Nov-21
Dec-21
Jan-22
Feb-22
Mar-22
Apr-22
May-22
Jun-22
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
Jan-23
Module 1
Plan of training
Module 2: Teaching and training
Teaching case study
Teaching diary
Module 2: Consultancy
Consultancy contract and report
Consultancy case study
Module 2: Behaviour change interventions
Intervention case study 1
Intervention case study 2
Module 2: Research
Research commentary
Empirical paper 1
Empirical paper 3
Systematic review
Module 3
Reflective practice commentary
Training log
Viva voce examination [date TBC]

SWOT analysis

Strengths

One of the key strengths to this training plan is that the timing has been considered carefully and the training activities are spread evenly throughout the first two years of training, as far as opportunities allow. Each research project is separated so that there are no overlaps, which I feel is very important. Planning to work on multiple research projects at the same time could be a threat to the quality of the research, as I would have limited time to complete both projects at once and research can be very time consuming in nature.

Towards the end of the plan, I have fewer training activities planned. This allows a realistic timeframe in the later stages of the professional doctorate to ensure I have time to complete the final write-up required for my portfolio. Additionally, many of the activities are flexible in terms of time, and should I need to, I can reschedule the dates I have planned to complete them.

Within the timeline, I have planned to begin research activities in early 2020. I believe this is a strength of the plan as research can often be unpredictable and timings can extend further than expected due to unforeseen circumstances. Starting the research early means I will be able to extend the time I need to complete it if necessary, without delaying the completion of my overall training.

The research projects I have outlined in my plan are all designed to be completed outside of my role at OPEN Health. Although this means that I won't have the opportunity to save time by meeting this competency in my workplace, for example by utilising any research I will be conducting with pharmaceutical clients, a strength of this approach is that I will have complete control over the research, including the design, protocol and timings.

The research projects themselves are varied, both in the nature of the research and in the initial proposed methodology. I perceive this to be a strength of the plan, as it allows me to demonstrate my competency in both qualitative and quantitative research methods and allows me to expand my knowledge base in multiple areas.

The activities within my plan of training are all underpinned by professional guidance and compliance, as outlined in 'professional practice overview'. Abiding by the HCPC guidance on conduct and ethics for students, the BPS code of ethics and conduct and professional regulations within my workplace will ensure that the work I do both within and outside of the realms of my

training complies with the standards upheld by appropriate professional bodies, and that the clients and patients that I work with are suitably protected. Having worked in a professional industry for five years I feel that I have a suitable understanding of professional practice and procedures, and that this will be of benefit during my training.

One strength of this plan is that it allows me the opportunity to complete training in other settings outside of my full-time role at OPEN Health. Operating on an individual basis delivering consultancy and training and partnering with another organisation will be beneficial for my personal and professional growth. These experiences will allow me to gain additional knowledge and insight into new ways of working and challenges associated with different health-related industries. It will also allow me to practice within new subject areas that I do not have regular exposure to in my full-time employment and to maximise learning opportunities.

Weaknesses

One weakness of my training plan is that my proposed research projects are only at the early stages of conception, and I haven't yet fully scoped out the research questions or methodology. This is a weakness as it means there is a potential risk that, after further exploration of the projects, an issue could arise that could mean my research areas of focus may have to be altered. In order to reduce this risk, I will need to further scope out my research ideas as soon as possible and have discussions with my university supervisor on the feasibility of these ideas.

A second weakness identified with this plan is that my group behaviour change intervention will involve a number of other colleagues. This means I will need to take a lot of care to ensure that my role is clearly defined, and I can demonstrate that the work I have completed is my own, individual work. I will need to have conversations with my university supervisor to ensure that the nature of other colleagues' involvement is acceptable and will meet the criteria outlined for the doctorate programme.

One further aspect of my plan that could be considered a weakness is that that it covers multiple areas of health psychology and isn't focused on one single area of specialty. This could be a potential weakness as it means that, although I will be learning and developing in a number of areas, I will need to dedicate time to ensure I am suitably competent and knowledgeable in multiple areas. Were I to focus my activities on one particular area of health psychology, I may be able to save time in learning around this subject area and potentially combining multiple competencies together.

However, although I would like to be as efficient as possible during my training, my primary aim is to gain as much experience as possible and to learn as much as I can.

Another weakness within my plan of training is that many of the activities I have included will be completed outside of my full-time role at OPEN Health. This could be a weakness, as it means I will need to manage my time carefully and balance training activities with work responsibilities, and this could lead to time constraints at particularly busy periods of both training activities and work.

A final weakness linked to my plan relates to my teaching and training competency activity. As I am planning to complete this with OPEN Health employees, this will be classified as internal training. A potential weakness of this approach is that potential client priorities and deadlines could mean that participants fail to attend some of the sessions that they will have agreed to attend. A requirement of this case study is that the scaffolded learning training programme is carried out with a consistent cohort of participants, and so I will need to minimise the risk of drop-out as part of my plan.

Opportunities

The training activities in this plan cover different areas of health psychology, from mental health, to sleep, to interventions for long-term illnesses. I interpret this feature to be an opportunity to expand my knowledge and expertise in a wide range of fields and to gain a broader understanding of techniques, research, theories and insights into areas that I might otherwise be unfamiliar with.

I feel that there are many opportunities for further teaching and training opportunities based on the activities within my plan. If the internal health psychology training programme within OPEN Health is successful, an opportunity to repeat the programme with other areas of the business may arise. This would allow me to expand on the initial programme by applying learnings and reflections, and to further improve my teaching and training abilities. There are around six other teams of this size within other divisions of the company in London and surrounding areas, so it is feasible that I could develop bespoke plans based on the existing knowledge of these teams and continue to practice and improve on my teaching and training abilities.

There is also an opportunity to expand on the teaching session with dental students both from a training and a consultancy perspective. If the training session is successful, this could lead to further opportunities to host training sessions with other groups of dental students perhaps from other year groups within the university. It would also give me the opportunity to use this consultancy model to reach out to other groups of healthcare professionals for which this training would be relevant, and

to develop bespoke training programmes. Combining one of my teaching and training sessions with a consultancy exercise has also allowed an opportunity for efficiency. This has allowed me to combine learnings and to be able to demonstrate multiple competencies within one project.
As a graduate member of the British Psychological Society, and the Division of Health Psychology, there are opportunities for further training and experiences to expand upon my training plan. I aim to attend the Division of Health Psychology Annual Conference 2020, which will allow me to learn about new and upcoming research, network with other professionals in the field, and to listen to presentations and talks which will hopefully allow me to reflect on my own training and presentation skills and to learn new techniques.

My current role within OPEN Health means I work closely with a team dedicated to research. This allows me the opportunity to become involved with any upcoming internal or external research projects that I am available to take part in, to develop my skills in this area. The nature of the work is fast-paced, and there will also be regular opportunities to take part in online group intervention work over the course of my training. This means that I should have further means of demonstrating these competencies should any of my existing activities within this plan become threatened.

A further opportunity that comes with my role is linked to working within a team of Health Psychologists. The two registered Health Psychologists within my team have different backgrounds and a breadth of experience between them, which means I have daily opportunities to learn from them. My workplace supervisor also works in clinical role within the NHS one day a week, and we have discussed the opportunity for me to look into voluntary experience at the hospital she works at, which would develop my clinical practice skills. OPEN Health is also part of a larger network of healthcare communications, consultancy and research organisations, which gives me the opportunity to work with professionals from other fields, building on my professional skill set and providing a further opportunity for learning.

As outlined in more detail within ‘Strengths’, the activities within my plan will afford me the opportunity to gain knowledge and experience in areas of health psychology outside of my usual day-to-day practice. This could give me a chance to discover new strengths and capabilities, as well as to find new areas of practice that I am interested in, which could shape the direction of my career.

Threats

Within the research competency, the threat exists that one of my areas of research could be undertaken and published by another researcher before I complete the write up of my paper. Although publication is not a requirement within the professional doctorate, it would be preferable to complete a novel review that could contribute publicly to the body of knowledge within health psychology.

A further threat that I have identified is associated with the group intervention outlined in my plan. The scope of this intervention is quite substantial, and it is being invested in by a pharmaceutical company at a European level. If the intervention is successful, it will be executed in five markets within Europe, but with this comes a pressure for the intervention to comply with the constraints and desires of stakeholders within these markets. This could threaten my ability to retain complete ownership of the intervention, and I will need to ensure that I have maximum visibility as the health psychology owner of this intervention within my own organisation to allow me to execute this fully. A related concern is that the priorities or strategic direction of Client D could change, and that this project could be cancelled or significantly change to the point of it being inappropriate to use as a case study for the behaviour change intervention competency. Although this is relatively unlikely to happen once a contract is agreed, I need to remain aware of other opportunities to meet the group intervention competency as a contingency plan.

On a personal level, certain traits of my personality mean that in some situations I naturally spend more time listening, observing and thinking or reflecting within group discussions rather than contributing to the discussion itself as it is happening. Although I am confident in participating in group discussions and sharing my viewpoint, there will be times I will need to consciously push myself to do this, as not engaging to my maximum potential in these settings could pose a threat to me getting the most out of the doctoral training programme.

As I completed by Health Psychology MSc in 2015, there is a risk that due to time passing, I may have forgotten some elements of the training I completed during this course. Although I have been maintaining and building upon my health psychology knowledge since the MSc, there are some areas that I have not practiced, such as the utilisation of certain software such as SPSS. To avoid this threatening the quality of my work, I will need to ensure that I engage in any additional training required to make sure that my knowledge is maintained in these areas, should I identify an area of weakness.

Delivering teaching and training is not an activity that I partake in regularly, and I am not completely confident in a public speaking setting, potentially due to lack of regular experience. To minimise the risk of this affecting my success with the teaching and training competency activities I have planned, I will aim to schedule additional teaching opportunities where possible throughout my training plan and capture these in my teaching and training diary.

A final perceived threat to my training plan is that, although I have received training on one-to-one intervention design during my MSc and have worked on group intervention designs during my work at OPEN Health, I have limited experience delivering interventions on a one-to-one basis. This lack of experience could threaten the success of my behaviour change intervention programme. To minimise this risk, I will ensure to seek regular supervision from both my university and workplace supervisors, and to ensure I am not practising outside the realms of my capability.

Consultancy

This section contains one case study outlining a piece of consultancy work, with accompanying consultancy agreement, deliverables and report included in the appendices. As the core deliverable of this consultancy was a lecture, further reflection on the delivery of this work can be found in the Teaching and Training Diary.

Consultancy Case Study

Introduction and background

Dentistry in the UK has undergone a sea change over the past few decades, led by a shift from a paternalistic biological model of health and disease to more of a biopsychosocial approach that takes into account the psychological and social factors that contribute to health (Deep, 1999). Dental fear and anxiety is a health concern that affects around 36% of adults in the UK (Beaton, Freeman, & Humphris, 2014), and can have a direct impact on oral health (McGrath & Bedi, 2004). In line with this shift in dental care, it is increasingly important for dental professionals to understand and be confident in managing patients who experience dental anxiety. This case study outlines a consultancy project in partnership with the University of Central Lancashire (UCLan) School of Dentistry to provide a lecture to a group of trainee dental professionals on the topic of dental anxiety.

The contact to my client was established through a member of my professional network who is a registered dentist. During a discussion with this person around patient-centred approaches in dentistry and the current dental training curriculum in the UK, we reflected on the management of patients with dental anxiety. They shared with me that many patients present with anxiety and it can sometimes be difficult for newly qualified dental practitioners with limited patient exposure to recognise anxiety and feel confident in managing it.

A questionnaire-based UK study reported that despite dentists receiving training in managing anxious patients during their degree, 65% of dentists who participated in the research shared they felt less than adequate in the use of psychological techniques (Ayn, Robinson, Nason, & Lovas, 2017). I established that it could be beneficial for a lecture or training seminar to be delivered to dental students from a health psychology specialist to provide additional education on managing patients with dental anxiety from a psychological perspective. With this in mind, I decided to approach a UK dental school with an offer to provide consultancy in this area.

Utilising the 'Seven Cs of Consulting' framework developed by Mick Cope (Cope, 2003), I followed a systematic methodology to plan, manage, monitor, and evaluate the consultancy, which I will reference in this case study.

Establishing a consultancy relationship

Before contacting a potential client, I felt it was important to carry out some background research to form an initial understanding of some of the potential needs associated with this client group. Firstly, I arranged a meeting with my registered dentist contact to hear more of their perspective on the potential needs of university dentistry programmes in this area. Secondly, I undertook a period of desk research to examine the structure and content of UK Bachelor of Dental Surgery (BDS) programmes to gain a deeper understanding of the current curriculum in terms of managing patients with dental anxiety. Based on this preliminary research, I constructed a consultancy proposal (Appendix 1), which was enclosed in an introductory email (Appendix 2) to my potential client, Dr Charlotte WIllmot, Senior Clinical Teacher at the UCLan School of Dentistry. Within this document I considered some of the details that a potential client may be interested in while considering a consultancy partnership, including project milestones and the anticipated scope of the consultancy. The client responded with interest and I arranged a meeting to further discuss their needs.

According to Cope's framework, the first 'C' of consultancy to focus on is the client. It describes the process of understanding the client's perception of the current situation, their goals and what power they have to influence the outcome. This builds the foundation of a positive client partnership, and a strong consultancy. When preparing for my first client meeting, I aimed to ascertain their current perception of the consultancy need, any goals they hoped to achieve from the potential consultancy work, and if there were any additional stakeholders that needed to be included in the planning and execution of the work. Drawing from my previous experiences in providing consultancy and managing client relationships, I prioritised building a relationship based on trust, integrity and open communication.

In the beginning stages of the consultancy during which I was preparing to make initial contact with the client, I felt hesitant in how to best approach this relationship. Upon reflection, my uncertainty was around the level to which my potential client may or may not be interested in my proposal, and if there may be an unbalanced power dynamic. Cope's framework helped me to understand and articulate this. Cope suggests a client relationship can be mapped onto two axes of dynamics; the first being familiarity and the second being push vs pull, i.e., the extent to which the consultant is selling versus their consultancy being sought by the client. Ahead of my first call with the client I could ascertain that having a mutual professional connection established a slight familiarity that would not have existed in a cold contact, but I was still uncertain as to the push versus pull dynamic. Our initial conversation allowed me to understand that the client was interested in my proposal and

therefore the push versus pull felt quite balanced. This informed the tone of my further communications. During the call, I made sure to establish ways of working including modes of communication and the level of contact the client could expect from me. The format of a video call meant that a visual connection could be made with the client, allowing for body language including eye contact, non-verbal listening cues and positive facial expressions to be conveyed. This allowed me to build a rapport with the client, and I closed the call feeling confident we had established a friendly working relationship.

According to Earll and Bath's chapter in *'Health Psychology in Practice'*, it is important to clarify the role of the stakeholder within their organisation, including understanding whether any other stakeholders need to be involved in the consultancy process upfront (Earll & Bath, 2004). Successful management of a client relationship means understanding the key stakeholders involved in their work and navigating balancing the needs of the consultant, the client, and their stakeholders. Cope refers to this as the 'three legged stool', and states that problems can occur if one stakeholder is left partially satisfied (Cope, 2003). For this client, an important stakeholder was the target student body of the university, and I recognised that it would be crucial for me to pay close attention to the needs of the students alongside the needs of my client and the university itself.

Defining the consultancy scope

Cope names the second 'C' of consultancy 'Clarify' (Cope, 2003). During this stage, it is important to determine the exact and specific nature of the problem that is being addressed, who is to be included in the change, and what may pose a risk to this change happening. I began this process by gathering information from the client on the educational needs of the students, as well as the desired outcomes for the client themselves. In this stage, I aimed to mirror the process consultation model (Schein, 1999) in which the consultant and the client work together to identify the problem and through the leadership of the consultant, collaborate on a solution that the client feels a sense of ownership of. During this process, I began to elicit and prioritise the needs of my client as well as the needs of the target student group.

One of the client requirements was that the lecture material should be applicable to a varied audience of students, all with different levels of clinical experience. The student group would comprise dental therapists along with fourth and fifth year BDS students, and some of these students would be qualified and experienced dental nurses who are now training in dental surgery. My client also shared that while the fourth and fifth year BDS students would have clinical experience, they are

likely to have only seen approximately 30 patients, and none of these patients will have had a high level of dental anxiety. This meant that I needed to ensure my content was accessible to all levels of clinical experience. I considered this to be a key priority when forming the content of the lecture and opted to begin with a 'back to basics' introduction of what anxiety is, and how it might manifest in the dental setting. I also honoured this requirement by ensuring I provided definitions to any words or concepts I considered may be unfamiliar to the group and allowing for questions to be asked throughout the lecture.

When consulting with my client, I also made sure to discuss what success would look like from the client perspective, and I asked what the desired outcome would be in terms of how their students approach patients with dental anxiety. This informed me of the client's expectations and allowed us to form a joint vision of a goal for the consultancy as a whole.

Developing a contract

Based on the requirements and deliverables that were discussed during the first client call, I prepared a consultancy agreement containing the agreed scope of work, as well as assurance and positioning on regulatory compliance, confidentiality, liability and closure (Appendix 3). It is important that nothing in a consultancy contract is a surprise to the client when they see it, so I made sure to discuss the arrangements first with the client before solidifying the details in writing. I found this negotiation process a challenge during the first call, as it was my first live interaction with the client, and I needed to balance gauging their level of interest while discussing more specific parameters and the potential scope of the consultancy. In previous consultancy experience working as part of a large company, the initial client contact would usually have been established and solidified before very specific details of the scope of the project were defined. On reflection, an alternative approach could have been to have two shorter calls; the first to connect with the client and gauge interest, and the second to discuss the specific details of the consultancy ahead of contract development. During this process I opted to combine the two so as not to ask for too much time from the client upfront, but the alternative approach is something I will consider in the future. Once I finalised the contract, I shared it with the client and invited them to review and confirm if any changes were needed. The client was satisfied with the contract and returned a signed version on the same day.

Planning and managing the consultancy

The third stage of Cope's framework is 'Create' (Cope, 2003). This is a critical phase, which covers the development of a sustainable solution that is measured against clear success criteria. Based on the meeting I had with the client to understand their needs, and the scope defined in the contract, I began to construct top-level recommendations for the lecture content. The first key milestone of the consultancy planning was to develop a proposed lecture outline document (Appendix 4). The purpose of this was to present a lecture overview, aims, learning objectives and content outline to the client. I felt it to be an important checkpoint in the client relationship and in the consultancy planning, as the client would be able to sign off in writing on some of the agreed parameters and outcomes that had been discussed. Cope describes the development of a successful consultancy solution to be a process of managed creativity between the consultant and the client (Cope, 2003). By including this checkpoint within the process of building a solution, I allowed the client to be directly involved with the journey of developing the materials, thus ensuring a collaborative approach.

Earll and Bath advise that measurable aims and objectives need to be clearly specified to the client (Earll & Bath, 2004). Therefore, I ensured that the overall aims of the consultancy were communicated in the contract and discussions, while the aims of the lecture itself were enclosed in the lecture outline document. Once this was approved by the client, I moved on to researching and developing the final lecture materials. The lecture was to be hosted virtually, using *Microsoft Teams*. I drew upon my own experiences of delivering teaching and training, as well as the education I have received on teaching methodologies, combined with additional research into the education of dental students to develop the lecture materials.

I initially aimed to develop an interactive lecture that combined didactic teaching with peer-group learning and participation. According to a recent scoping review of dental training in the UK, didactic teaching is widely used to convey theoretical information in dental schools, and the content is often enhanced by audio-visual means during teaching sessions (McGleenon & Morison, 2021). Additionally, educational research shows that dental students indicate a preference for visual learning and place high value on engaging content (Murphy, Gray, Straja, & Bogert, 2004; Schönwetter, Lavigne, Mazurat, & Nazarko, 2006). During one communication, my client shared that the nature of teaching such a mixed group of students meant that some of the group may have reservations in actively participating in front of other members of the group. This meant that I had to develop engaging activities that could be completed anonymously. I opted not to utilise any peer-

learning as it felt it would not be appropriate in this setting. I utilised the 'Polls' feature built into *Microsoft Teams* as a tool to support student engagement and interactivity. Using this feature, I devised anonymous polls that would generate percentage-based answers and word clouds. I felt it was important to retain these interactive elements as research into online learning engagement strategies has shown that online collaboration and peer-to-peer engagement are rated by students to be educationally beneficial (Martin & Bolliger, 2018). This would also maximise the likelihood of students fully attending to the lecture contents, which would be important in order for change to happen.

I conducted a review of the relevant literature in this area and synthesised a broad range of research to create the lecture content. There are several recent qualitative and quantitative studies and reviews outlining evidence of successful interventions in dental anxiety, and many relevant insights from patients with dental anxiety on their experiences in the dental setting. Based on this literature review, I prioritised what I considered to be the most important topics, which included: an overview of anxiety; how and why anxiety may manifest in the dental setting; how anxiety can be recognised; and how dental anxiety can be best managed by the dental team using behavioural and communication techniques.

Research shows that triggers of dental anxiety can be different in adults versus children, and it is important for each patient group to be managed accordingly (Morgan et al., 2017; Shindova & Belcheva, 2021; Vanhee, Mourali, Bottenberg, Jacquet, & Vanden Abbeele, 2020). The dental team can learn to recognise patients with dental anxiety through observing their behaviour and communication (Zimmermann et al., 2011) and dental anxiety can be measured through formal instruments if needed (Yon et al., 2020). Behavioural management of dental anxiety has shown to be effective in a number of settings, and I provided the students with a range of behavioural and practical tools that could apply to their practice (Appukuttan, 2016; De Jongh, Adair, & Meijerink-Anderson, 2005; Newton, Asimakopoulou, Daly, Scambler, & Scott, 2012; Wide Boman, Carlsson, Westin, & Hakeberg, 2013). The use of storytelling and gamification has shown to be successful in reducing dental anxiety in paediatric patients, and so I opted to include information on additional resources that the dental team could provide to patients (Abbasi et al., 2021; Alsaadoon, Sulimany, Hamdan, & Murshid, 2022).

While building the lecture materials, it was important to ensure that the interventions and guidance I recommended were appropriate and relevant for an NHS setting. Many published behavioural

interventions, while successful, are not necessarily feasible to carry out in a time and resource-restricted environment. Including these interventions in the lecture would run the risk of not providing accessible or relevant information and may reduce buy-in from students. I also made sure to closely follow the agreed structure and outline of the materials that had been agreed with the client. I planned to set up a call with the client should I believe that the materials needed to deviate from the original plan, but this was not necessary.

During the consultancy process, my client suggested that the lecture should meet the criteria of verifiable CPD for the students and requested that the students received a CPD certificate for their attendance. In order to meet this need, I researched the requirements of the UK General Dental Council for verifiable CPD, ensured that my content met those criteria, and created and distributed certificates to attendees following the lecture. I was keen to fulfil this request as I have never delivered CPD to healthcare professionals and trainees, and I knew it would be good experience for me to research and carry out this process. This request was out of scope of the initial consultancy agreement, however, due to the *pro bono* nature of this work and my personal interest in wanting to gain this experience, I didn't feel it necessary to raise this with the client. Reflecting back on this decision, I know that if I was charging a fee for this work, I would have felt comfortable in addressing that this was out of scope, even if I was not adjusting the fee or contract accordingly.

When psychologists engage in interprofessional collaboration as consultancy, it is vital to be able to remain adherent to ethical standards, and practice within your scope (Arredondo, Shealy, Neale, & Winfrey, 2004). This means that consideration must be made to potential challenges and anticipated situations in which an ethical dilemma may present itself. I felt it important to clarify any potential professional boundaries upfront. Therefore, I ensured to include an upfront communication within the lecture to outline that my material will only cover psychological and behavioural management of anxiety in the dental setting, and I cannot advise on pharmacological solutions, e.g., sedation. I developed a verbal action plan with my client which addressed the risk of a student asking a question that may be beyond my scope of practice. This involved stating my professional scope and deferring the inquiry to my client, who would be present during the lecture and could field any clinical questions if they wished to.

The fourth stage of Cope's model is 'Change', which he describes as a process of understanding the fundamental aspects that drive and underpin the change process, with a particular focus on the human factors that need to be managed. A consultancy solution often involves challenging the

current status quo. Led by Cope's framework, I considered both tangible and intangible change factors that could influence the effectiveness of the consultancy project. The key tangible element to this process was to ensure that students would attend and engage with the lecture itself, providing them with the opportunity for behaviour change. By providing a CPD certificate, and crafting an engaging lecture title and outline, I created an incentive for students to attend the lecture, ensuring a condition where this tangible change element had a good chance of being implemented. I considered the key intangible change factor to be students' motivation and intentions to change their current behaviour with regards to the management of dental anxiety. In order to ensure a change was made, I needed to address any pre-existing beliefs in the students that may hinder the change process. I planned to begin the lecture by sharing an overview of the reasons why better management of anxious patients would have a benefit to the dental team as well as to the patient, with the aim to target any existing personal attitudes, and to follow this with information on how the anxious patient can be supported in a regular NHS setting, to highlight that the students can make a difference, targeting their current perceived level of behavioural control.

Research with students has shown that engagement with real-world scenarios increases engagement, and this is an important factor for change (Martin & Bolliger, 2018). Applying the behavioural solutions within the lecture to real-life examples of how anxious patients may present based on research allowed for the learnings to be sustainable, as the students were provided with tools that they can use in their ongoing practice. Finally, I ensured to emphasise the importance of adapting any communication techniques to their own style of communication, in order to increase the likelihood of the students adopting these techniques into their everyday language, maximising the opportunity for long-term change.

The final deliverables and outcomes

The lecture was delivered to a group of 40 students along with some teaching staff and registered dentists from the UCLan School of Dentistry. I joined the video call early in order to set up the interactive elements including polls and encountered a problem. The functionality for the *Microsoft Teams* Polls add-on wasn't configured for use on the client's platform and the client was unable to add it. Initially I felt concerned that the lecture would not be as engaging, and that my slides wouldn't be accurate to the activities. I managed to quickly come up with an alternative solution, and asked students to use the interactive responses on Teams (for example, 'thumbs up') to engage with the activities instead. This meant that I needed to adapt the questions I was asking the group to evoke 'yes' or 'no' answers only. As I had five minutes to spare before the lecture began, I edited the

relevant slides to remove any instructions relating to the Polls feature. This allowed me to feel more in control of the situation, and I was thankful to have the spare time to make this change. Upon reflection, this was a key learning moment. In future, I will endeavour to test the exact technology set-up beforehand to troubleshoot any issues of this nature. The lecture was given as planned, and I felt confident in my delivery of the material.

Following the lecture, I developed a consultancy report, and shared this with my client (Appendix 7). The purpose of the report was to summarise the consultancy process and what was delivered, reflect back on the initial objectives and how these were met, and provide recommendations to the client. The initial recommendation of the consultancy was to host the lecture to equip students with knowledge and skills in this area of learning. I provided the client with recommendations for the future, in order to ensure a lasting change. These included the recommendation to repeat this training in future years and with future cohorts, as well as to host a more interactive face-to-face session where students can put their skills into practice in a safe setting through the use of role-plays and other group activities.

Evaluating the process

A key stage of Cope's model is 'Confirm'. This is the fifth stage of the process and outlines the need to ensure that the anticipated change has taken place, using quantitative and qualitative measures. In order to measure the success of the consultancy, it was important to gain feedback from both the students and the client. The evaluation of a consultancy project must be clearly linked to the initial aims and objectives (Earll & Bath, 2004). Therefore, the consultancy could only be deemed successful if the students found the lecture informative and beneficial to their practice, and if the client felt that the lecture met the needs of the School of Dentistry. I developed an online feedback form, which was shared with the students by my client after the lecture. Thirteen students completed the form and the results were positive. 100% of respondents felt more confident in managing patients with dental anxiety following the lecture, which confirmed that the fundamental aim of the consultancy had been met. Full student feedback is documented within the consultancy report (Appendix 7).

Once the lecture had been delivered and I had shared the final report with the client, I asked for their final feedback and reflections on the consultancy process. I provided them with feedback prompts, and the client gave written feedback (Appendix 8). I was pleased to receive positive feedback on both the overall consultancy process and on the final report. The client noted that the lecture was informative and supported the students in developing their clinical practice to support

the community of anxious patients, which confirmed that the client also believed that the aim of the consultancy had been met.

The penultimate phase of Cope's framework is 'Continue'. Cope defines this as a process of ensuring that change will be sustained using learnings that emerge from the transition, the skills of the change agents and the sharing of new knowledge and skills. The framework suggests evaluating whether there are any barriers to sustained change, such as potential push back from administration on the client side (Cope, 2003). As the client was on board with the consultancy deliverables throughout and communicated that their position on the importance of this particular education was echoed by their colleagues in the School of Dentistry, I believed there to be no barriers in this respect. Secondly, Cope suggests that knowledge transfer must take place in order to maximise the continuation of the efforts delivered by the consultant (Cope, 2003). By providing the students with knowledge and skills that can be directly applied to their own practice, I believe that a strong opportunity for continuation of this change has been created.

The final stage of Cope's framework is 'Close'. This stage covers the end of the consultancy relationship. Cope emphasises the importance of understanding and reflecting on the final outcomes, considering new learnings and investigating any future consultancy opportunities (Cope, 2003). At the end of the guest lecture, I stayed on the call with the client and reflected on the delivery and consultancy so far, which was a good opportunity to gain some immediate client feedback. The client commented that she would be happy for me to return the following year to deliver another guest lecture for a new cohort, which was a great sign of client satisfaction and a continued relationship. The close of the consultancy was marked by the client's final feedback on the consultancy report, in which they mentioned an opportunity for a continued relationship, and further consultancy work in the future. I ensured to end our current engagement with a positive interaction and plan to re-contact the client in the future to gauge the opportunity for more work.

Final reflections

Documenting and analysing the consultancy as a whole for the purposes of this case study has allowed me to reflect throughout the process, and track learnings and opportunities for change. There are some key areas of growth for the future that I can recognise. Cope suggests contracting the client before moving into the 'Clarify' stage of the consultancy, where the change process is scoped out in detail (Cope, 2003). During this consultancy, I carried out a substantial amount of the clarification stage before the contract was signed. Upon reflection, an alternative approach would

have been to carry out more of a high-level clarification process in order to establish details to inform the contract, before moving on to a more in-depth clarification phase. Although the consultancy went ahead as planned, this decision created an unnecessary risk where I was carrying out work including researching the problem and asking the client clarification questions without a consultancy agreement in place. In future consultancy work, I will endeavour to carry out the clarification phase of the work after a contract is in place, to protect my time.

Another key reflection on my consultancy was during the contracting phase. Once I had developed the proposed contract, I felt a lack of confidence and a feeling of awkwardness when presenting this to my client. I didn't expect to have this feeling, as I have carried out this process numerous times in the past as an employee of a healthcare communications company. Upon reflection, the distinction here is that I have previously contracted the work of an entire team of people, whereas in this project I was contracting entirely my own work, and it felt more personal. It encouraged me to reflect further on my own perceptions of the value of the work I was offering and question whether I had any unhelpful beliefs that may be limiting my confidence in this area.

I decided to offer this consultancy *pro bono*, so I could focus on the process of consultancy itself and use it as a learning experience as part of the Professional Doctorate. I think this was a good decision for this project, but it means that a challenge in the future will be to develop a pricing model for future consultancy work.

Carrying out this consultancy process has developed my skills in a multitude of areas and given me a deeper understanding of the requirements of a successful consultancy partnership. Sharing insights, research, and learnings from the field of health psychology with other healthcare professionals is a vital skill to have, and I am confident that my learnings from this consultancy will benefit me for the rest of my career.

References

Abbasi, H., Saqib, M., Jouhar, R., Lal, A., Ahmed, N., Ahmed, M. A., & Alam, M. K. (2021). The efficacy of little lovely dentist, dental song, and tell-show-do techniques in alleviating dental anxiety in paediatric patients: a clinical trial. *Biomed Research International, 2021*.

Alsaadoon, A. M., Sulimany, A. M., Hamdan, H. M., & Murshid, E. Z. (2022). The Use of a Dental Storybook as a Dental Anxiety Reduction Medium among Pediatric Patients: A Randomized Controlled Clinical Trial. *Children, 9*(3), 328.

Appukuttan, D. P. (2016). Strategies to manage patients with dental anxiety and dental phobia: literature review. *Clinical, cosmetic and investigational dentistry, 8*, 35.

Arredondo, P., Shealy, C., Neale, M., & Winfrey, L. L. (2004). Consultation and interprofessional collaboration: Modeling for the future. *Journal of Clinical Psychology, 60*(7), 787-800.

Ayn, C., Robinson, L., Nason, A., & Lovas, J. (2017). Determining recommendations for improvement of communication skills training in dental education: a scoping review. *Journal of Dental Education, 81*(4), 479-488.

Beaton, L., Freeman, R., & Humphris, G. (2014). Why are people afraid of the dentist? Observations and explanations. *Medical Principles and Practice, 23*(4), 295-301.

Cope, M. (2003). *The seven Cs of consulting: The definitive guide to the consulting process*: Pearson Education.

De Jongh, A., Adair, P., & Meijerink-Anderson, M. (2005). Clinical management of dental anxiety: what works for whom? *International dental journal, 55*(2), 73-80.

Deep, P. (1999). Biological and biopsychosocial models of health and disease in dentistry. *Journal-Canadian Dental Association, 65*, 496-497.

Earll, L., & Bath, J. (2004). Consultancy: What is it, how do you do it, and does it make any difference? *Health psychology in practice*.

Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. *Online Learning, 22*(1), 205-222.

McGleenon, E. L., & Morison, S. (2021). Preparing dental students for independent practice: a scoping review of methods and trends in undergraduate clinical skills teaching in the UK and Ireland. *British dental journal, 230*(1), 39-45.

McGrath, C., & Bedi, R. (2004). The association between dental anxiety and oral health-related quality of life in Britain. *Community dentistry and oral epidemiology, 32*(1), 67-72.

Morgan, A. G., Rodd, H. D., Porritt, J. M., Baker, S. R., Creswell, C., Newton, T., . . . Marshman, Z. (2017). Children's experiences of dental anxiety. *International journal of paediatric dentistry, 27*(2), 87-97.

Murphy, R. J., Gray, S. A., Straja, S. R., & Bogert, M. C. (2004). Student learning preferences and teaching implications. *Journal of Dental Education, 68*(8), 859-866.

Newton, T., Asimakopoulou, K., Daly, B., Scambler, S., & Scott, S. (2012). The management of dental anxiety: time for a sense of proportion? *British dental journal, 213*(6), 271-274.

Schein, E. H. (1999). *Process consultation revisited: Building the helping relationship*: Addison-Wesley Reading, MA.

Schönwetter, D. J., Lavigne, S., Mazurat, R., & Nazarko, O. (2006). Students' perceptions of effective classroom and clinical teaching in dental and dental hygiene education. *Journal of Dental Education, 70*(6), 624-635.

Shindova, M. P., & Belcheva, A. B. (2021). Dental fear and anxiety in children: A review of the environmental factors. *Folia Medica, 63*(2), 177-182.

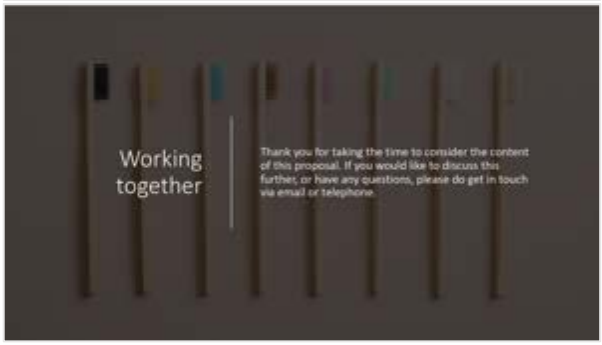
Vanhee, T., Mourali, S., Bottenberg, P., Jacquet, W., & Vanden Abbeele, A. (2020). Stimuli involved in dental anxiety: What are patients afraid of?: A descriptive study. *International journal of paediatric dentistry, 30*(3), 276-285.

Wide Boman, U., Carlsson, V., Westin, M., & Hakeberg, M. (2013). Psychological treatment of dental anxiety among adults: a systematic review. *European journal of oral sciences, 121*(3pt2), 225-234.

Yon, M. J. Y., Chen, K. J., Gao, S. S., Duangthip, D., Lo, E. C. M., & Chu, C. H. (2020). *An introduction to assessing dental fear and anxiety in children.* Paper presented at the Healthcare.

Zimmermann, C., Del Piccolo, L., Bensing, J., Bergvik, S., De Haes, H., Eide, H., . . . Humphris, G. (2011). Coding patient emotional cues and concerns in medical consultations: the Verona coding definitions of emotional sequences (VR-CoDES). *Patient Education and Counseling, 82*(2), 141-148.

Appendix 1. Dental anxiety consultancy proposal



Appendix 2. Initial email to client

Subject: Guest lecture/training seminar - dental anxiety
Date: Sunday, 18 September 2022 at 16:17:47 British Summer Time
From: Morris, Helena
To: Personal identifiable details redacted
Attachments: Dental Anxiety Guest Lecture Proposal_Sept22_v1.0.pdf

Dear Personal identifiable detai

Your contact details were kindly shared with me by Personal identifiable details redacted . By way of introduction, my name is Helena Morris; I'm a Health Psychologist in Training, currently completing a doctoral programme in Health Psychology at Liverpool John Moores University. I have worked in healthcare communications for the past six years and also have an MSc in Health Psychology.

I'm contacting you to offer to provide a one hour guest lecture/training seminar for one of your cohorts in the school or one of the DECs on the topic of managing patients with dental anxiety.

I understand that the prevalence of patients with dental anxiety is high, and that trainee dentists could benefit from gaining a deeper understanding of the mechanisms of anxiety, as well as some behavioural solutions including communication frameworks that may help to improve their confidence and make efficiencies in their clinical practice.

Should you be interested in me hosting this session, I have attached a PDF with more information on my proposal, along with my initial suggested outline of lecture content. Of course, this framework is purely a suggested starting point and it would be great to work around your specific requirements and tailor the content to complement the scope of your training programme.

I would be offering this pro bono as part of my doctoral programme involves the demonstration of teaching and training competency in a number of settings.

It would be fantastic to discuss this further with you over a video call if this would be of interest to you – please let me know. I look forward to hearing from you.

Best regards,
Helena

Appendix 3. Consultancy contract

CONSULTANCY AGREEMENT

This Agreement is entered into effective as of 17th October 2022, between Personal identifiable details redacted, University of Central Lancashire (hereinafter "CLIENT") and Helena Morris, hereinafter "CONSULTANT.")
The Client wishes to engage Consultant to develop an educational solution to meet the needs of the Client under the following terms and conditions:

1. RATE
100% pro-bono.

2. PAYMENT SCHEDULE AND TERMS
N/A

3. CONSULTANCY PROJECT SCOPE
The Consultant's responsibilities shall include, without limitation, the following activities (hereinafter collectively referred to as "Services"):

- Discussion and liaison with the Client to evaluate the Client's needs and the needs of the associated student group
- The development of tailored recommended education material, informed by the evaluation of the Client needs to provide students with an understanding of how to recognise and manage dental anxiety
- Liaison with the Client to refine and amend educational material content
- The delivery of a one hour educational session to students
- The evaluation and summary of the final deliverable, summarised in a final written report

The evaluation, discussion and liaison Services may be performed via telephone, email, telephone call or remote video call. In each instance, the Consultant shall perform the Services only upon the Client's approval and directly pursuant to the scope of the Services approved by the Client.

4. PROJECT TIMELINE

Activity	**Timing**
Evaluation of Client need. To include: - Up to 1 hour discussion with Client - Email correspondence	1 week
Development of first draft of recommended educational materials outline - To be developed in Word for the purpose of detailed review	1 week
Client review and amends to educational materials. To include: - Up to 1 hour discussion with Client as needed - Email correspondence - Updates to educational materials outline	10 days
Development of final educational materials. To include: - Client final review of materials - Email feedback to be provided by the Client - Final refinement of materials by the Consultant as necessary	1 week
Delivery of one hour educational session to student group	1 day; specific date defined by the Client
Development and delivery of final report	1 week

This timeline is only an estimate. Consultant will undertake all reasonable efforts to perform services within the timeframe(s) identified above. Client acknowledges and agrees that Consultant's ability to meet schedules will be dependent upon Client meeting its obligations to provide materials, approvals, and/or instructions to

Consultant in a timely manner as contemplated under this agreement. Any delays in Client's performance or changes in the Services that the Client requests may delay Consultant's delivery of the Services.

5. COMPLETION/DELIVERY OF PROJECT
Any alteration or deviation from the above specifications involving extra or third party costs will be executed only upon approval with the Client. Any delay in the completion of the project due to actions or negligence of Client, unusual transportation delays, unforeseen illness, or external forces beyond the control of the Consultant, shall entitle the Consultant to extend the completion/delivery date, upon notifying the client, by the time equivalent to the period of such delay.

6. COMPLIANCE WITH LAWS AND REGULATIONS; REPRESENTATIONS AND WARRANTIES
In the performance of the Services hereunder, Consultant shall comply with all applicable national and local laws, regulations and guidelines. Consultant shall also comply with Client's polices when on Client premises. The Consultant represents and warrants to the Client that (i) it will provide the Services identified in this agreement in a professional manner and in accordance with all reasonable professional standards for such services, (ii) except for third party materials and Client Content, the Services and deliverables will be the original work of the Consultant.

7. LIMITATION OF LIABILITY; INDEMNIFICATION
Consultant shall not be liable to Client for any loss incurred in the performance of their Services hereunder unless caused by Consultant's intentional misconduct. Client agrees, at its sole defence, to indemnify and defend the Consultant from and against any damages, claims or suits by third parties against the Consultant arising from the performance of the Consultant's Services hereunder unless caused by the Consultant's intentional misconduct.

8. TERM AND TERMINATION
This Agreement will commence upon the last date of signature below. The Agreement will then remain effective until either the services under this Agreement are completed and delivered, or the project is terminated by either party as set forth below. This Agreement may be terminated at any time by either party: (i) effective immediately upon notice, or by the mutual agreement of the parties, or (ii) if any party becomes insolvent, files a petition in bankruptcy, makes an assignment for the benefit of its creditors, or (iii) if any party breaches any of its material responsibilities or obligations under this Agreement, which is not remedied within ten (10) days from receipt of written notice by the other party of such breach.

9. ASSIGNMENT
Neither party may assign this Agreement or any interest herein, or delegate any of its duties hereunder, to any third party without the other party's prior written consent. Any attempted assignment or delegation without such consent shall be null and void.

ACCEPTANCE OF AGREEMENT:
The above specifications and conditions are hereby accepted and effective as of the last date of signature below. The Consultant is authorised to execute the project as outlined in this Agreement.

CLIENT'S SIGNATURE:
PRINT NAME:
DATE:

CONSULTANT'S SIGNATURE:
PRINT NAME:
DATE:

Appendix 4. Dental anxiety lecture outline

Title
"I hate the dentist!" – recognising and managing dental anxiety using psychological and behavioural techniques

Delivery date: 09/11/22 **Time:** 12:30 - 13:30 GMT

Overview
One in three people experience at least a moderate level of dental anxiety. This session will provide a psychological overview of how members of the dental team can better communicate with and manage anxious patients using simple behavioural techniques, with the aim to reduce stress for both the practitioner and patient, boost efficiency and improve health outcomes.

Aim
To provide a psychological understanding of the mechanisms of anxiety in dental patients, and how to recognise and manage the anxious patient using psychological and behavioural techniques.

Learning objectives
By the end of the session, attendees should be able to:

- Recall and explain of the psychological mechanisms of anxiety including why it occurs and some common triggers in the dental setting
- Recognise patients with anxiety and understand how to communicate with them about their anxiety
- Recall and apply practical and behavioural interventions to help manage a patient's anxiety in their own practice

Target GDC development outcomes for CPD

A) Effective communication with patients, the dental team and others across dentistry, including when obtaining consent, dealing with complaints, and raising concerns when patients are at risk
D) Maintenance of skills, behaviours and attitudes which maintain patient confidence in your and the dental professions and put patients' interests first.

Outline

- Welcome and introduction
- Dental anxiety overview
    - What is anxiety? Back to basics
    - Why should the dental team care about dental anxiety?
    - Fear contagion and stress
- Dental anxiety in the real world
    - Dental anxiety in adults
        - Recognising dental anxiety
        - Measuring dental anxiety
        - Causes and triggers of anxiety in the dental setting
    - Managing dental anxiety in adults
        - Working with the tools we have
        - Addressing the patient's anxiety

        - Communicating with the anxious patient
        - Practical considerations and behavioural adaptations
    - Dental anxiety in children
        - Recognising and managing dental anxiety in children
- Dental anxiety scenarios: what tools could you use based on our discussion today?
- Conclusions and summary
- Questions and close

Previous knowledge assumed

No previous psychological knowledge of anxiety is needed. This is designed as Continued Professional Development to supplement the ongoing training of dental professionals and trainees.

Logistics

Remote session, delivered by MS Teams call.
A CPD certificate will be provided upon completion.

Training provider

Helena Morris, BSc, MSc, MBPsS
With training in Health Psychology, Helena has 7+ years of experience working in healthcare communications. She is currently completing the final stages of a Professional Doctorate in Health Psychology with Liverpool John Moores University.

Contact: H.c.morris@2020.ljmu.ac.uk

Appendix 5. Lecture slides

I hate the dentist!

Recognising and managing dental anxiety using behavioural techniques

9th November 2022
Helena Morris

Outline for today's session

- What is anxiety? Back to basics
- Why should the dental team care about managing the anxious patient?
- Recognising dental anxiety
- Causes and triggers of dental anxiety
- Managing anxious patients
  - Communication
  - Environmental considerations
- Managing children with dental anxiety
- Resources for patients

A little bit about me…

- BSc Psychology MSc Health Psychology; MBPsS
- Final stages of Doctorate of Health Psychology at Liverpool John Moores University
- Trained in applied health psychology in the Dental Setting, and teaching and training health psychology research and techniques
- 7+ years working in healthcare communications – brand and patient engagement solutions with pharmaceutical and charity sector clients in healthcare

How confident do you feel in managing patients with dental anxiety?

What is anxiety and how can we recognise it?

What is anxiety?

- Anxiety is a state of being characterised by feelings of unease, tension, worried thoughts and physical changes[1]
- It's a natural, inherent human response to situations that could be perceived as stressful. In an evolutionary sense, anxiety and fear can help you stay alert and respond efficiently to threats
- Threat perception is a component of our nervous system that keeps us safe, but in the modern world, sometimes our stress responses can be unhelpful
- Up to 60% of adults worldwide experience some level of dental anxiety[2,3,4]

1. American Psychological Association (2013); 2. Kvale et al. (2002); 3. Rea Byrne et al. (2004); 4. Kvale et al. (2004)

Three components of anxiety

Cognitive

- Irrational beliefs and cognitive distortions (catastrophising, overgeneralisation)
- Negative feelings (apprehension, dread)
- Impact on sensory processing

"They're going to take all my teeth out!"

"I won't get enough LA and I'll be in constant pain!"

Physiological

- Increased heart rate
- Pulsation in the carotid and temporal arteries
- Dry mouth or excessive saliva
- Muscle tension, restlessness
- Sweating
- Strong startle response
- Nausea

Behavioural

- Hyperactivity, pacing
- Speaking faster, stumbling over words
- Outbursts of emotions
- Sitting on the edge of the chair, leaning forwards
- Avoidance

"I brush my teeth and do everything you're supposed to do except visit the dentist"

Why should the dental team care about managing the anxious patient?

For your patients…

- **Poorer oral health:** poorer oral function and higher incidence of oral diseases[1,2]
- **Broader psychosocial impact:** Long-standing anxiety can lead to psychological and social problems[3]

For yourself and your team…

- **Improved relationships:** better communication, increased trust, reduced complaints
- **Efficiency:** managing anxiety can improve efficiency and reduce no-shows
- **Reduced stress:** A British study found that 91% of dentists *(n=418)* said they felt stressed when treating dentally anxious patients[4]

Fear contagion

- It's evolutionarily adaptive for us to pick up on fear from others, for our own safety
- It can happen intrinsically, or from fear-related behaviours being modelled by others. The fear can be temporary or can become more permanent (anxiety)
- Anxious patients are more likely to have parents who are anxious about visiting the dentist[1]

Grange Dental
@grange_dental

Ok dental folk, hands up, which one of you keeps kneeling on patients chests to remove teeth?

It must be one of you because I keep hearing about how 'the last dentist put his knee on my chest'.

'Fess up!

Source: Twitter

1. Kent & Croucher (1999)

Recognising dental anxiety

Measuring dental anxiety

- The Modified Dental Anxiety Scale (MDAS)
- 5x questions
- Evidence for validity and reliability in many UK samples
- Numerous translations available
- Cut-off determined for extreme dental anxiety

Modified Dental Anxiety Scale

CAN YOU TELL US HOW ANXIOUS YOU GET, IF AT ALL, WITH YOUR DENTAL VISIT?

PLEASE INDICATE BY INSERTING 'X' IN THE APPROPRIATE BOX

1. If you went to your Dentist for TREATMENT TOMORROW, how would you feel?
2. If you were sitting in the WAITING ROOM (waiting for treatment), how would you feel?
3. If you were about to have a TOOTH DRILLED, how would you feel?
4. If you were about to have your TEETH SCALED AND POLISHED, how would you feel?
5. If you were about to have a LOCAL ANAESTHETIC INJECTION in your gum, above an upper back tooth, how would you feel?

Not Anxious | Slightly Anxious | Fairly Anxious | Very Anxious | Extremely Anxious

Causes and triggers of anxiety in the dental setting

Causes and triggers of anxiety in the dental setting

Lack of information leading to catastrophising	Root canal treatment	Concern that dentist will make them feel ashamed about their oral health	Feeling judged/condescension from dentist
Anticipated pain	Tooth extractions	Blood-related injury	Needle phobias, fear of seeing a needle
The feeling of being injected	Unexpected procedures	Previous bad experiences, especially in childhood	Sound of drill and suction

Managing patients with dental anxiety

Managing dental anxiety: working with the tools you have

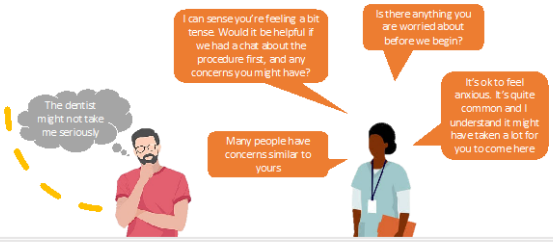
- Behavioural interventions by the dental team: actions change cognitions
- Behavioural interventions for the treatment of dental anxiety can decrease anxiety and increase the acceptance of dental care[1]
- The causes and triggers of anxiety can vary, so the management isn't one-size-fits all
- As well as considering referring a highly anxious patient to a specialist, it might be appropriate to suggest they speak to their GP about access to a psychologist. Remember, patients may experience stigma, embarrassment and shame relating to their anxiety, and may not fully utilise mental health resources

Addressing the patient's anxiety: some *dos* and *don'ts*

Feeling understood and supported increases patient satisfaction and collaboration.

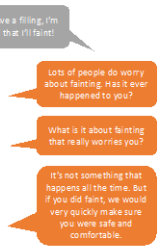
Do	Don't
• Ask open-ended questions to understand the causes or triggers of their anxiety • Acknowledge their fears and take them seriously • Use active listening (eye contact, nodding, repeating important information) and express sympathy	• Minimise their fears by saying things like *"there's nothing to be afraid of"* • Dismiss or ignore their anxiety. Recognising and normalising their fears won't make it worse. It's likely to reduce their anxiety

Addressing the patient's anxiety



Anxiety-informed communication

- Clear, honest, open communication with sympathy, understanding and patience can go a long way to addressing and managing your patient's anxiety
- **Non-verbal communication:** calm voice, eye contact, smiling (even behind a mask!)
- ***Positive judgment:*** can reduce shame and enhance self-esteem in patients, which in turn can reduce anxiety. In research, patients have described it as 'life changing' to hear a dentist say *"we've seen it all"* and *"this wasn't as bad as you explained it, I've seen worse than this."*
- ***Positive reinforcement:*** praise even small efforts, including them being open with you about their concerns
- ***Cognitive restructuring:*** can you ask open questions and gently challenge their beliefs?



Shared decision making

- All patients appreciate well managed shared decision making, but you may need to tailor your approach to anxious patients.
- Research on anxious patient perspectives shows they want to make shared decisions and not passively receive treatment. However, they want to feel the dentist knows what they're doing. **You need to take control of the conversation and invite the patient to contribute where they can.**

Prognosis: an honest prognosis can reduce long-term anxiety and build trust. If the treatment fails it won't cause the same level of anxiety because they were prepared that it might happen.

Tailored treatment plan: share information on any discomfort they might feel after, as well as costs, treatment time, how many appointments are needed, risks, benefits etc.

Providing information

- A high level of predictability, e.g. how long things will take, how long you will use the drill for, etc. can reduce anxiety

Tell	Show	Do
• Tell the patient what will happen • Share procedural information, but also sensory information • Don't avoid potentially triggering words like 'drill'	• Show or demonstrate the procedure • Keep instruments away from their mouth • Patients may not want to see images of real teeth or even to see their own teeth with a mirror (unless it is necessary)	• Carry out the procedure exactly as you explained and demonstrated

Enhancing control to relieve anxiety

- Dental anxiety is often linked to a fear of helplessness, and loss of control is often cited as anxiety-provoking. Allowing patients choices can help to reduce their fears.

A 'stop signalling' communication system where patients can raise their hand to stop can give control to anxious patients

Providing patients with a mirror if they want to watch the procedure can give them a sense of control

Research shows that if dental practitioners provide anxious patients with a calm and holistic approach, a positive judgement and predictability, these patients will feel understood and cared for, regain their self-esteem, and feel secure and in control.

Patients identified this as leading to their outcome of "alleviated dental anxiety".

Environmental adjustments

Offer soothing music, or for the patient to bring their own headphones: relaxation and distraction

Use pleasant, ambient smells e.g. lavender which can lower cortisol

Suggest they bring a friend or family member that helps them to feel more at ease

Addressing specific fears

COGNITIVE DISTRACTION

In adults, cognitive distraction (thinking about something else) can help, but only if the adult is informed that it is likely to reduce anxiety

- Listen to music
- 'Wiggle your toes during this procedure'

EXPOSURE-BASED TECHNIQUES

Gradually increasing exposure to fear-inducing stimuli

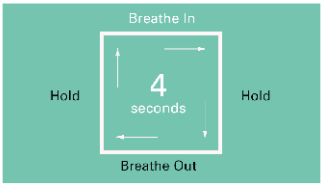
- Gradually increasing treatment
- Expose to a hierarchy of fearful situations while remaining relaxed

RELAXATION AS A COPING SKILL

Encourage patients to practice relaxation at home as well as during their appointment

- Breathing techniques
- Progressive muscle relaxation
- Mindfulness

Box breathing



Dental anxiety in children and adolescents

Dental anxiety in children and adolescents

Dental fear and anxiety in children can cause poor co-operation during appointments, which can compromise treatment outcomes, create stress for dental staff and can cause discord between dentists and parents of patients[1]

In April 2019 - March 2020, the most common reason for hospital admission in 5 to 9-year-olds was tooth decay[2]

Dental anxiety in childhood is a significant predictor of dental avoidance in adulthood[1]

Recognising and measuring anxiety

How anxiety might manifest

- Behaving hesitantly or cautiously, not smiling or chatting
- Crying, clinging to parent, refusing to open their mouth
- Defending themselves physically and trying to disrupt treatment in some cases

Measuring anxiety

- Among the vast assessment method options available today, self-report assessment, parental proxy assessment, observation-based assessment, and physiological assessment are the four major types for dental fear and anxiety in children
- Modified Child Dental Anxiety Scale[1]
- Children's Experiences of Dental Anxiety Measure (CEDAM)[2]

Paediatric triggers of anxiety

Seeing needle	Feeling an injection	Tooth extraction	Drill vibrations
Seeing a drill	The chair	Seeing blood	Tasting blood
Fear of the unknown	Unpleasant sensory experiences	Smell of dental materials	Not being able to see what's happening
Invasive procedures	Having a stranger touch them	Fear of choking	Dental pain

Managing children with dental anxiety

Communication and practical tips

Providing information

- You can adapt the communication and practical tips we discussed earlier to children. Many of them still apply, particularly giving them control over things like the environment
- Children don't have uniform information needs and often want to know information even if its unpleasant to hear. Give them the option so they can say yes or no[1]

Fear contagion and the impact of family and caregivers

- Parents/caregivers are normally present, so consider the impact of fear contagion
- Address this with the parent/caregiver if appropriate – can someone else attend the appointments instead? Can they wait outside?
- Managing the parent/caregiver can be difficult. It may be appropriate to sensitively address any anxiety-inducing comments that they make in front of the child

Communication and practical tips

Modelling

- Modelling is a form of social learning where an observer imitates the behaviour of a role model
- This can be done by showing a video, and can reduce fear of the unknown[1]
- The person they see needs to be similar age, gender and level of anxiety, they need to see them enter and leave the dentist without any negative consequences, and be rewarded for non-anxious behaviour[1]
- If a child come with siblings, non-anxious sibling can go first to model positive behaviour

Positive associations with dentistry

- **Exposing children to positive information regarding dentistry:** positive images or storybooks of enjoyable dental activities can reassure them and psychologically prepare them for their dental visits. The use of stories in healthcare has several goals: educating patients and their families, promoting specific traits, and enhancing certain behaviours[2]

Resources for patients

Questions?

Some resources that can be shared

Some resources that you can share with adult patients and parents of paediatric patients include:

- Information on accessing CBT, or self-led CBT resources to reduce anxiety
- NHS resources on dental anxiety
- Educational videos of dental procedures for familiarisation, if appropriate
- Treatment information to take home with them - they might not remember what is being discussed at the time due to anxiety

For children:

- **Books and videos modelling good visits to the dentist:** Peppa Pig, Mr Men
- **'Little lovely dentist' mobile game:** engages children on how the dentist will perform different treatments on them and has shown some results in reducing anxiety[3]
- **'Your teeth you are in control':** resources developed by the University of Sheffield to support children with dental anxiety

Why do I need a crown on my tooth?

Thank you for joining

- You will receive a short feedback form to please complete (2-5 mins completion time)
- Once you have completed the feedback form, verifiable CPD certificates will be sent to you individually by email

H.c.morris@2020.ljmu.ac.uk

Thank you

Appendix 6. Student CPD certificate

CERTIFICATE

of

CONTINUING PROFESSIONAL DEVELOPMENT

This is to certify that

INSERT NAME HERE

GDC registration number: INSERT

has participated in the following training session:

Recognising and managing dental anxiety using behavioural techniques

Aim: To provide a psychological understanding of the mechanisms of anxiety in dental patients, and how to recognise and manage the anxious patient using behavioural techniques.

Targeted GDC development outcomes: A; D.
This CPD activity has been quality assured.

I can confirm that the information contained in this certificate is full and accurate.

Date of CD activity: 09/11/2022

No. of CPD hours: 1

Training provider:
Helena Morris, BSc, MSc, MBPsS
Health Psychologist in Training

Appendix 7. Consultancy report

Prepared for: Dr [Personal identifiable details redacted], University of Central Lancashire (UCLan)	**Prepared by:** Helena Morris, consultant	**Date of preparation:** 28th November 2022

This report presents the outcomes of a consultancy project conducted by Helena Morris in partnership with University of Central Lancashire School of Dentistry in November 2022.

Executive summary

Anxiety is a common phenomenon experienced by patients in the dental setting[1], and dental fear and anxiety can have a direct impact on the oral health of patients[2]. Research has shown that dental students may not appreciate the importance of the dentist-patient relationship, particularly with patients who are dentally anxious, and could benefit from further integration of communication skills within dental training programmes.[3]

Following a consultancy process, a guest lecture was developed and delivered to a cohort of UCLan School of Dentistry students, to provide additional training in managing patients with dental axiety. The success of the consultancy was measured through student feedback. Students responded positively to the lecture and felt it was relevant to their practice and improved their confidence in managing dentally anxious patients. The success of this lecture delivery suggests students could benefit from ongoing training of this nature in the future.

Consultancy overview and process summary

The key objective defined within this consultancy project was to provide additional training to a cohort of UCLan dental students on the mechanisms of anxiety in dental patients, and how to recognise and manage the anxious patient using psychological and behavioural techniques. An initial scoping meeting was conducted to outline key priorities for UCLan and the student cohort. Following this, three earning objectives were defined:

By the end of the lecture, students should be able to;

- *Recall and explain of the psychological mechanisms of anxiety including why it occurs and some common triggers in the dental setting*
- *Recognise patients with anxiety and understand how to communicate with them about their anxiety*

- *Recall and apply practical and behavioural interventions to help manage a patient's anxiety in their own practice.*

The cohort for this lecture comprised Dental Therapy (BSc) students along with fourth and fifth year Bachelor of Dental Surgery (BDS) students. Therefore, the learning materials were based on recent literature in the field of psychology in the dental setting and assumed no prior knowledge on the mechanisms of anxiety or the management of anxious patients, to ensure a foundation of baseline knowledge was provided.

The lecture materials were developed in line with the General Dental Council (GDC) enhanced continuing professional development (CPD) guidance in order to qualify as verifiable CPD for the lecture attendees. Two GDC CPD development outcomes were targeted:

- ***Development outcome A:*** *Effective communication with patients, the dental team and others across dentistry, including when obtaining consent, dealing with complaints, and raising concerns when patients are at risk.*
- ***Development outcome D:*** *Maintenance of skills, behaviours and attitudes which maintain patient confidence in you and the dental profession and put patients' interests first.*

The lecture was delivered via Microsoft Teams, with up to 40 students attending. Following the lecture, CPD certificates were delivered to all students who provided email addresses for receipt.

Guest lecture delivery		
Date: 09/11/2022	**Time:** 12:30 – 13:30 GMT	**Duration**: 1 hour

Consultancy activities	**Status**
Initial consultation call to scope needs of UCLan and student cohort	*Complete*
Development of lecture outline with client review	*Complete*
Development of final lecture materials	*Complete*
Delivery of one hour guest lecture	*Complete*
Student feedback requested and obtained	*Complete*
CPD certificates disseminated	*Complete*

Results: student feedback

Following the lecture, students were shared a feedback form and asked to share opinions on three key success outcomes in order to measure the success of the lecture from the students' perspective.

Thirteen students shared their feedback, outlined below:

- 84.62% of students rated the *speed and clarity of delivery of the lecture materials* as '**excellent'**, and 15.38% as **'good'**.
- 100% of respondents **strongly agreed** that the *lecture materials were appropriate and relevant to them*.
- When students were asked *'After the lecture, to what extent do you agree that you feel more confident in managing patients with dental anxiety?'*, 69.23% **strongly agreed**, and 30.77% **agreed.**
- Students left additional free-text feedback including:
    - *"The lecture was very clear, concise and well delivered by Helena."*
    - *"Very informative and useful, thank you!"*
    - *"Really useful. Thank you."*
    - *"A very well presented synopsis of theory and practice. Thank you very much!"*
    - *"Was very beneficial."*
    - *"The content and delivery were really engaging and informative. I think this has given me a good understanding to take forward into my future practice. Thank you so much!"*
    - *"Fantastic lecture, full of very helpful tips, thank you."*
    - *"Extremely enjoyed the lecture and the way Helena presented the information."*

Student responses were positive across each feedback question, confirming that:

1) Students understood the materials and felt they were relevant to them
2) After the lecture, students felt more confident in managing patients with dental anxiety.

Recommendations

The initial aims of the consultancy were met, as evidenced by the student feedback. Student comments reflect that there is an appetite for additional education on managing dental anxiety using behavioural techniques, and that it is beneficial to their clinical practice.

Following the success of this delivery, the following recommendations could be made to UCLan School of Dentistry:

1) Incorporate further training on behavioural management of dentally anxious patients into the curriculum of future cohorts.
2) Repeat this annual training from a health psychology perspective as an optional guest lecture for future cohorts.
3) Provide face-to-face training, or training in smaller groups to encourage inter-student interactivity and the opportunity for new skills to be practiced in role-plays.
4) Provide additional training sessions on more specialist behavioural management for specific patient populations (e.g., patients with learning disabilities).

References

1. Beaton, L., Freeman, R., & Humphris, G. (2014). Why are people afraid of the dentist? Observations and explanations. *Medical Principles and Practice, 23*(4), 295-301.
2. McGrath, C., & Bedi, R. (2004). The association between dental anxiety and oral health-related quality of life in Britain. *Community dentistry and oral epidemiology, 32*(1), 67-72.
3. Ayn, C., Robinson, L., Nason, A., & Lovas, J. (2017). Determining recommendations for improvement of communication skills training in dental education: a scoping review. *Journal of Dental Education, 81*(4), 479-488.

Appendix 8. Client feedback

Dental anxiety guest lecture consultancy: client feedback

Client name: Dr [redacted], Senior Clinical Teacher, University of Central Lancashire

Date: 30/11/2022

University of Central Lancashire
UCLan

Please provide feedback on the consultancy process as a whole:

Helena has made the whole process seamless, from the initial concept to understanding the needs and background of the students to building the learning outcomes and finally to delivery which was of an excellent calibre. I was well informed in the whole process and would be thrilled to have Helena provide us with further training in the future.

Please share feedback on the consultancy report:

The report is very comprehensive and reflects exactly the process that was completed. The feedback provided from the students demonstrates the quality of the final presentation and exactly how useful this informative session was, to supporting the community of anxious patients and the dental undergraduates in their developing clinical practice.

Behaviour Change Interventions

This section contains two case studies. The first outlines a one-to-one, face-to-face behaviour change intervention focusing on oral health behaviours and tooth brushing. The second covers an online group intervention targeting increased psychological wellbeing and trait mindfulness.

Behaviour Change Intervention Case Study 1: An individual intervention to increase tooth brushing

This case study outlines an assessment, formulation, intervention and evaluation carried out with a private practice client. The client, Sam[1] was referred to me through a connection who had shared my contact details and information about my role as a trainee Health Psychologist with them. Sam contacted me and explained that they were interested in support with dental health behaviours, specifically tooth brushing. Before entering into a therapeutic relationship, I engaged with supervision to discuss the opportunity to provide this intervention. I made sure to reflect on my scope of practice as a trainee, and consider the BPS Code of Ethics and Conduct (BPS, 2018), and HCPC Standards of Proficiency (Health & Care Professions Council, 2023), with a particular focus on SOPs 1, 2, 6, 7 and 9.

Assessment

All sessions were conducted in-person. The initial session was used to conduct an assessment and begin to develop a formulation. We began with introductions, rapport building, and I outlined boundaries of confidentiality, safeguarding and my role as a health psychologist in training. I answered questions and discussed the client agreement document before gaining consent (appendix 1). I used a biopsychosocial approach to conduct a semi-structured assessment interview in order to gain a holistic overview of Sam's situation (Belar & Deardorff, 2009; Engel, 1977). This approach allows the practitioner to understand a broad range of factors that influence and maintain a person's presenting problem (Bull & Dale, 2021). I obtained background information and history, including information on their current situation and experiences, thoughts, feelings, beliefs, the impact of their lifestyle and social world, and any strengths that would help them to succeed in this intervention. A comprehensive assessment is vital in order to reach a shared understanding with the client and to guide appropriate intervention planning (Johnstone & Dallos, 2013). Sam had struggled to maintain a consistent oral hygiene routine ever since their teenage years, and the behaviour was inconsistently reinforced and modelled during childhood. They had had some periods where their habits were more consistent than others, typically when their routine was hinged upon another person's such as a partner or family member. The sensory experience of tooth brushing often felt overwhelming to Sam, which they linked to autism, and they also had fears relating to discovering an exposed nerve in a tooth while brushing, likely caused by a distressing childhood experience of a broken tooth. Sam had growing concerns about their oral health that was impacting their self-esteem and said they would sometimes wake in the night worrying that their teeth would rapidly decline in health.

[1] Name changed for anonymity purposes.

According to the British Psychological Society (BPS) the professional practice of psychologists is underpinned by four key ethical values; respect, competence, responsibility and integrity (BPS, 2018). During the assessment interview it was important to work towards forming the beginnings of a trusting relationship with the client based on these values (Andrasik, Goodie, & Peterson, 2015). Sam shared that their long-term goal was to brush and floss their teeth twice a day, in a habit that felt completely automatic and fitted into their daily routine. Based on the information they had shared, we agreed to schedule four weekly sessions with a review of progress after this, to consider whether additional sessions needed to be scheduled.

Formulation

The aim of a case formulation is to understand the presenting problem in terms of causal history and present conditions of maintenance, drawing on theory, research and explanatory models, to develop a workable intervention programme (Nikcevic, Kuczmierczyk, & Bruch, 2009). I used the five Ps framework (Macneil, Hasty, Conus, & Berk, 2012) in order to conceptualise the information gathered during assessment (Table 1). The clinical application of the biopsychosocial model means all categories of information received about the person must be considered, allowing for the integration of information that may seem conflicting or contradictory at first (George & Engel, 1980). This allows the practitioner to ensure a person-centred approach, with a broad understanding of the individual. The five Ps approach can provide a comprehensive overview of a client's problems (Bull & Dale, 2021). I considered this to be a particularly useful approach for this formulation as it allowed me to draw out previous experiences and childhood factors which I perceived to be relevant to a thorough understanding of Sam's situation.

Table 1. formulation

Predisposing factors	Biological: Distressing experience age 8: broken front tooth, crown fitted. Distressing experience age 14: crown failed, exposed nerve for multiple days – prolonged nerve pain, limited eating, developed an associated fear of discovering an exposed nerve while brushing. Autism, self-described as mild impacting sensory aversion to tooth brushing experience Psychological: Inconsistent behavioural reinforcement during childhood. Avoidance behaviour - cold water in mouth when brushing teeth triggers fear of discovering an exposed nerve Social: Lack of behavioural modelling of tooth brushing in childhood from parents. Tooth brushing has rarely been an independent activity since childhood

	- often hinged to others' routines. Parent modelling of inconsistent oral health behaviours. Parent with dental anxiety
Precipitating factors	Biological: Recent perceived tooth discoloration. Dentist recently suggested they may need a filling Psychological: Increased fear of worsening oral health Social: Covid-19 lockdowns removed regular social activities that were a consistent cue for tooth brushing, leading to reduced brushing
Perpetuating factors	Biological: Occasional mouth ulcers that make teeth brushing painful. Lack of consistent behavioural routine 'in the mouth' Psychological: Sensory aversion to wet hands and temperature changes of mouth and hands. Generalised distrust of dentists. Functional behaviour of avoidance providing them with more free time. Belief that brushing teeth means other activities and chores must be completed too Social: Distance from bathroom within household. Lack of positive reinforcement from new dentist. Lack of morning and night-time routines to anchor behaviour
Protective factors	Biological: Good general physical health, mental health and current oral health Psychological: High self-efficacy. Ability to reflect, insight into behaviours. Ability to modulate affect. Fear of worsening oral health. Perceived social stigma and societal norm around teeth brushing Social: Good relationships with family, friends and community groups. Social support in home. Financial means. Hobbies and leisure activities.

Intervention design and delivery

It can be helpful to combine the five Ps framework with another tool that focuses on intervention strategies in order to develop a full formulation (Bull & Dale, 2021). Based on the formulation, I utilised the COM-B model and behaviour change techniques taxonomy v1 (Michie et al., 2013; Michie, Van Stralen, & West, 2011) to conceptualise the factors that contribute to Sam's current situation along with drawing out which factors could be targeted in order to increase regular tooth brushing behaviour. Appendix 2 outlines a list of behaviour change techniques (BCTs) that were incorporated into the intervention. The COM-B model places a significant emphasis on health-related behaviours, and I considered it to offer enough complexity to suit this intervention, while providing a model that would lend itself well to being understood easily by my client. I also considered my own personal experience with utilising different models for formulation and intervention design and felt comfortable in using COM-B for this purpose. I used the model to determine that the intervention should focus primarily on psychological capability, and reflective and automatic motivation, with two supportive BCTs focusing on the opportunity COM-B domain to provide a holistic intervention.

In designing interventions to improve tooth brushing, the interaction between the client and the practitioner is a key enabler to the behaviour, with encouragement and respect as vital components (Claessen, Bates, Sherlock, Seeparsand, & Wright, 2008). It is also vital to practice within the scope of your own ability and training. Therefore, I felt comfortable in using an integrative approach, drawing upon principles of motivational interviewing and some aspects of cognitive behavioural therapy (CBT) to support intervention delivery.

Detailed session notes are included in appendix 7.

Intervention session 1

I shared a summarised diagram of the formulation in a COM-B format with Sam (appendix 3), explaining that this was a working document based on initial indications of factors that could be useful to target. We discussed that this could be adapted together as our shared understanding of the situation evolves. I utilised a motivational interviewing approach (Miller & Rollnick, 2012) to engage Sam in sharing their understanding, positioning them as the expert in their own lives. I used the elicit-provide-elicit technique to verbally share details from the five Ps formulation. Sam presented as psychologically minded and reflective, and I provided some brief psychoeducation on how behaviour can be viewed through the COM-B lens. While exploring the formulation, Sam described finding it very interesting to view their situation in this way. They thought it captured their situation well and added more details and information.

We discussed how we could address the information in the formulation. I suggested that we begin with defining outcome measures and what success looks like for Sam and begin to focus on how the new behaviour can be carried out and monitored through action planning and problem solving. Then, over the next sessions, focus on some of their beliefs and motivation related to tooth brushing and its outcomes, increase their self-efficacy with carrying out the behaviour through learning and practising an 'in the mouth' routine, gaining more information on health consequences, and put systems in place to support them including social support, behavioural cues and incentivisation.

Sam shared that they would ideally like to create a long-term goal of brushing and flossing twice a day. We discussed what a manageable first goal could be, as it is important to encourage clients to aim for small and manageable behaviour changes to avoid the discouragement of failure to achieve goals that may be initially out of reach (Gardner, Lally, & Wardle, 2012). Sam decided on brushing twice a day, with the aim to add in flossing once they had achieved this goal. Success to Sam was habit formation and automaticity in the behaviour of tooth brushing twice a day. Therefore, we opted to use two

measures; 1) a weekly brushing frequency score and 2) a self-report weekly score of how automatic tooth brushing feels as a behaviour (0-10 scale). Starting or increasing positive health behaviours can be difficult as they often do not have an immediate effect, thus lacking a direct psychological link between the action and the outcome (Claessen et al., 2008). Support and encouragement from others, and self-incentivisation were encouraged to increase perceived rewards. As homework, Sam agreed to engage with their housemates and seek social support and encouragement in sticking to their new routine. They also agreed to consider incentives to reward their behaviour. These two BCTs targeted social opportunity and automatic motivation, respectively. Sam initially suggested a powerful personal incentive could be to have their teeth whitened in six months' time, should they achieve their goal. Sam's main action between this session and the next was to carry out the desired tooth brushing behaviour, record frequency of brushing and reflect on the feeling of automaticity.

Intervention session 2

We first checked in on the outcome measure scores. They noted that they had brushed their teeth more regularly than they had done in the past three months or more. Sam also shared that they felt particularly motivated to complete the behaviour during the mornings, as this is the time of day they would typically brush most consistently in the past. Sam was keen to share that they had booked a dentist and hygienist appointment after feeling motivated by their consistency with the desired behaviour over the past week. Targeting reflective motivation, we reflected on their accomplishment, then explored Sam's beliefs around their routine through motivational interviewing questions with the aim to reframe tooth brushing as an activity independent of other chores. Sam was keen to share they had successfully sought support from their housemates and had also been considering environmental changes since the previous session. We explored how Sam could experiment with some changes including a different toothbrush, different flavoured toothpastes and alternative water temperatures to address the sensory experience. Targeting physical and psychological capability, and automatic motivation, I also shared informational videos (appendix 4) on effective brushing techniques and health consequences as Sam expressed not being sure if they were brushing correctly, and avoidance can be linked to low self-efficacy relating to carrying out the behaviour well (Bandura, 1977). One video provided modelling and broke the behaviour down into manageable steps in order to develop a script for the 'in the mouth' behaviour. The provision of health behaviour information relating to the potential for reducing dental caries and improving tooth brushing technique have been used as critical components of published tooth brushing interventions (Marshman et al., 2021). We concluded by discussing Sam's focus for the following week. They agreed to watch the videos again in their own time, and to continue to work on carrying out the tooth brushing behaviour, recording frequency and reflecting on automaticity between each of the subsequent sessions.

Intervention session 3

Sam came to this session sharing that they had felt a positive shift in how automatic tooth brushing felt as part of their morning routine. However, they were still having some ambivalent thoughts in the evening, which made them debate whether or not they should carry out the behaviour. Implementing tooth brushing into a new routine where there is a current lack of behaviour is considered to be implementing a high level novel script element, requiring significant motivation (Aunger, 2007). To work on reflective motivation, I supported Sam to carry out a decisional balance exercise (appendix 5), which has been shown to increase goal commitment and increase motivation for continued change (LaBrie, Pedersen, Earleywine, & Olsen, 2006; Plotnikoff, Blanchard, Hotz, & Rhodes, 2001). After completing the exercise Sam noted that the 'pros' of the new behaviour all relate to relieving a psychological burden and reducing negative emotions for them and reflected that their new routine could be beneficial for their mental health as well as their oral health. We discussed the health information videos. Sam shared that the information on health consequences had had a big effect on them, and they had learned more information about how oral health can have an impact on the whole body, which they found uncomfortable and impactful. Over the next week, Sam agreed to focus on consistency with their 'in the mouth' brushing routine, and to keep a thought record, to pay attention to the nature of any ambivalent thoughts occurring relating to their evening tooth brushing.

Intervention session 4

We reflected on Sam's thought record from the previous week, then as this was our final planned session, we discussed whether more sessions might be needed, and it was mutually agreed that they were not at this time. We focused on revisiting Sam's goals and setting new goals for the future to support behavioural maintenance. Targeting psychological capability, I supported Sam in action planning and problem solving relating to any situations in the future that might make it more difficult to carry out the behaviour and encouraged Sam to set themselves an incentive relating to their new goal. When addressing future planning, Sam described how their new tooth brushing routine had made them feel "more like a proper member of society". We spent some time focusing on self-image and self-identity relating to the behaviours in question, and Sam reaffirmed that their new behaviours fit with their concept of self. This felt an important change moment for Sam, and is an important principle to consider in behaviour change (Claessen et al., 2008). We completed the final outcome measures and Sam reviewed their progress charts (appendix 6) and considered the changes in their scores. Sam expressed pride in their progress and felt they did not need any further support in the form of any more sessions at this time. They expressed that they felt significantly more confident in maintaining this behaviour than they had at the start of the intervention, and that they felt comfortable in being able to monitor their behaviour and set small goals to ensure they stay on track.

Evaluation

In order to evaluate intervention effectiveness, two measures were obtained. We used a self-report measure of perceived automaticity of the behaviour on a scale from 0-10, where 0 describes a conscious effort being needed to carry out the behaviour each time, and 10 describes the behaviour feeling completely automatic as though a habit has formed. This was Sam's main reported personal measure of success, and it was directly relevant to their own evaluation of whether the intervention was successful. At the end of the intervention, Sam said that for the first time in a long time they felt in control of their oral health, and they didn't have persistent worried thoughts about their teeth. Sam's automaticity score started at 1 pre-intervention, and increased to 8 between week one and two, then steadily increased to 9 by week four. Sam attributes this to a number of factors but in particular due to their increased self-monitoring and new knowledge on the effects of poor oral hygiene. An objective measure of behavioural frequency was also used. Sam's tooth brushing increased from 9 times per week up to 14 times per week during intervention week two, but then decreased to 12 times per week by week four. They attribute this decrease to some changes in their other routines during the week, and this was targeted with action planning. Sam felt comfortable that they could maintain their progress. It is also important to consider that a key factor behind the success of the intervention during the intervention period could be the momentum and support of the weekly sessions, therefore it was important to ensure that Sam felt they had enough resources and skills to self-manage and maintain the behaviour after the intervention ended.

Final reflections

Sam was a client who I perceived to be reflective and motivated to change, which I believe made for a successful intervention. I found the process of delivering, reflecting upon and writing a case study of this intervention to be an invaluable experience contributing to my professional growth. The scope of the behaviour change work at my core workplace placement is typically focused on group-level and online intervention delivery, so I endeavoured to take on additional independent learning and seek an appropriate level of supervision and guidance to ensure I was practising within my scope of capabilities, assessing for any risks and prioritising client wellbeing, in line with HCPC SOP 1 – practise safely and effectively within your scope of practice (Health & Care Professions Council, 2023). Psychologists and trainees should undertake regular supervision to ensure their safe and effective practice (BPS, 2018). I utilised supervision as well as seeking additional generalised guidance and peer-support from colleagues, reading research and guidance around best practice, and utilising accredited training materials to deepen my understanding of how to translate my experience and knowledge into the 1:1 setting. Ensuring that I adhered to the HCPC and BPS guidelines was pivotal to guiding my practice and the support that I sought along the way.

This reflective practice has allowed me to identify a number of learnings. One of my key learnings was to be flexible to the client and to allow myself to be led by Sam's progress rather than directing their journey, following a set plan. New information came along during each session, evolving the formulation, which took the intervention in slightly new directions as new priorities emerged or new insights were unlocked. When Sam expressed their negative thoughts impacting their night-time brushing at the end of session 2, I felt I had failed to pick up on this sooner. I used this information to structure some of the discussion and activity during session 3 to address this and was glad I made this decision as Sam expressed that this helped them take a step back and look at these thoughts through a critical lens. If I were to repeat this, it may have also been beneficial to utilise a measure linking to the psychological burden and impact of Sam's previous situation, through a standardised scale such as the Oral Health Impact Profile-14 (OHIP-14) (Slade & Spencer, 1994), as this could be an effective measure of change. There are numerous learnings I have taken from this experience working with Sam, that I will take forward with me and build upon as I continue to grow and evolve in my practice.

References

Andrasik, F., Goodie, J. L., & Peterson, A. L. (2015). *Biopsychosocial assessment in clinical health psychology*: Guilford Publications.

Aunger, R. (2007). Tooth brushing as routine behaviour. *International dental journal, 57*(S5), 364-376.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review, 84*(2), 191.

Belar, C. D., & Deardorff, W. W. (2009). Clinical health psychology assessment.

BPS. (2018). *Code of ethics and conduct*. Leicester: British Psychological Society.

Bull, E., & Dale, H. (2021). Assessment in Health Psychology clinical practice. In *Health Psychology in Clinical Practice* (pp. 98-116): Routledge.

Claessen, J. P., Bates, S., Sherlock, K., Seeparsand, F., & Wright, R. (2008). Designing interventions to improve tooth brushing. *International dental journal, 58*(S5), 307-320.

Engel, G. L. (1977). The need for a new medical model: a challenge for biomedicine. *Science, 196*(4286), 129-136.

Gardner, B., Lally, P., & Wardle, J. (2012). Making health habitual: the psychology of 'habit-formation'and general practice. *British Journal of General Practice, 62*(605), 664-666.

George, E., & Engel, L. (1980). The clinical application of the biopsychosocial model. *American journal of Psychiatry, 137*(5), 535-544.

Health & Care Professions Council, H. (2023). Standards of Proficiency: Practitioner Psychologists. Retrieved from https://www.hcpc-uk.org/standards/standards-of-proficiency/practitioner-psychologists/

Johnstone, L., & Dallos, R. (2013). Introduction to formulation. In *Formulation in psychology and psychotherapy* (pp. 21-37): Routledge.

LaBrie, J. W., Pedersen, E. R., Earleywine, M., & Olsen, H. (2006). Reducing heavy drinking in college males with the decisional balance: Analyzing an element of Motivational Interviewing. *Addictive behaviors, 31*(2), 254-263.

Macneil, C. A., Hasty, M. K., Conus, P., & Berk, M. (2012). Is diagnosis enough to guide interventions in mental health? Using case formulation in clinical practice. *BMC Medicine, 10*, 1-3.

Marshman, Z., El-Yousfi, S., Kellar, I., Dey, D., Robertson, M., Day, P., . . . Innes, N. (2021). Development of a secondary school-based digital behaviour change intervention to improve tooth brushing. *BMC Oral Health, 21*, 1-9.

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., . . . Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine, 46*(1), 81-95.

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science, 6*(1), 1-12.

Miller, W. R., & Rollnick, S. (2012). *Motivational interviewing: Helping people change*: Guilford press.

Nikcevic, A. V., Kuczmierczyk, A. R., & Bruch, M. (2009). *Formulation and treatment in clinical health psychology*: Routledge.

Plotnikoff, R. C., Blanchard, C., Hotz, S. B., & Rhodes, R. (2001). Validation of the decisional balance scales in the exercise domain from the transtheoretical model: A longitudinal test. *Measurement in Physical Education and Exercise Science, 5*(4), 191-206.

Slade, G. D., & Spencer, A. J. (1994). Development and evaluation of the oral health impact profile. *Community dental health, 11*(1), 3-11.

Appendix 1. Client agreement

Client Agreement

Helena Morris, Health Psychologist in Training is registered on the Professional Doctorate in Health Psychology, at Liverpool John Moores University (LJMU) and receives supervision from Professor Helen Poole and Dr Rachel Tarling.

As a Health Psychologist in Training, Helena is permitted to conduct Health Behaviour Interventions, via talking therapies, adopting appropriate intervention models and techniques. The Health Psychologist in Training, may offer bespoke 1-1 individual sessions or group based interventions.

You will agree an intervention relevant to your needs with the Health Psychologist in Training, and this will include agreement surrounding frequency, duration, costs if occurred. It will also clarify your expectations and intervention tasks to be carried out in between sessions.

Agreed number of sessions: 4 sessions with a review for additional sessions if needed

Type of intervention offered: Behavioural intervention targeting increasing oral health behaviours, specifically teeth brushing, through talking therapy

Frequency: Weekly

Fee per session: No fee requested

Client Records and confidentiality:

The trainee complies with GDPR and confidentiality regulations as per LJMU policy, the Health and Care Professions Council (HCPC) guidance on conduct and ethics, and the British Psychological Society (BPS) code of ethics and conduct. Client notes are maintained in accordance with the Data Protection Act 2018. Client notes are minimal. Any request for a copy or sight of these records under the Freedom of Information Act 2000 can be made in writing to the Co-Programme Directors for the Professional Doctorate in Health Psychology. Computer records are kept on a very secure IT system, accessed only by the Trainee and their supervisory team.

Some of the data collected is made anonymous and may be used to evaluate the intervention and to support the evidence for a Professional Doctorate in Health Psychology portfolio submission. In such circumstances, all personal identifiable data is removed from any text.

Any personal information that you share during the intervention is confidential, unless the Trainee has concerns about the immediate safety of yourself or anyone else, in which case they will discuss this with Professional Doctorate supervisors (as named above) and may need to involve other people. If this becomes necessary, we will try to talk to you about this first.

Attendance at sessions:

In order for this intervention to be consistent and effective, it is important that you attend regularly. If you are not able to attend a booked appointment, please give as much prior warning as possible so that this appointment can be offered to another client. We understand that sometimes there are genuine emergencies that prevent clients attending appointments and cannot be foreseen. Should this happen, please make contact within 24 hours of your scheduled appointment to explain the reason for not attending. If you do not make contact further appointment sessions maybe cancelled.

Complaints Procedure, Monitoring and Evaluation:
I encourage clients to provide both positive and negative feedback in order to improve my intervention offer. An evaluation form will be distributed at the end of intervention. Anonymous data on outcomes may be collected and used for evaluation purposes and for Professional Doctorate evidence submission. You can decline to consent to this.

If you feel you have cause to complain about the intervention you have received, you can contact the co-directors of the Professional Doctorate in Health Psychology. Making a complaint will not adversely affect the service you receive.

I understand the above points and am willing to proceed with therapy:

Client's Name:

Client's Signature: **Date:**

I consent to data collection and use for Professional Doctorate Portfolio submission, research, evaluation and publication: Yes / No

Taking Care of Yourself

Remember to give yourself time and space to make use of the therapy and ensure you are getting enough rest and nourishment.

Sometimes during the course of therapy, difficult emotions can come up or events can happen in the week which can cause more distress. Your safety and support is very important to us.

If emotions are becoming very overwhelming it is important that you let someone know how you are feeling. Think about who you could tell (e.g. a friend or relative), in order to support you.

After hours, contact:

- Crisis Advice Line: 0845 608 0525,
- Sane Line 0845 767 8000,
- Samaritans 116 123 or
- Umbrella Crisis Nightline 020 7226 9415, a night-time phone line for anyone with difficulties relating to a mental health problem, open every night from 12:30am – 6am

In the unlikely event that the feelings get worse and if you feel that you are at risk of harming yourself, or others, at any time, please make an urgent appointment with your GP or go immediately to Accident and Emergency and ask for an urgent mental health assessment.

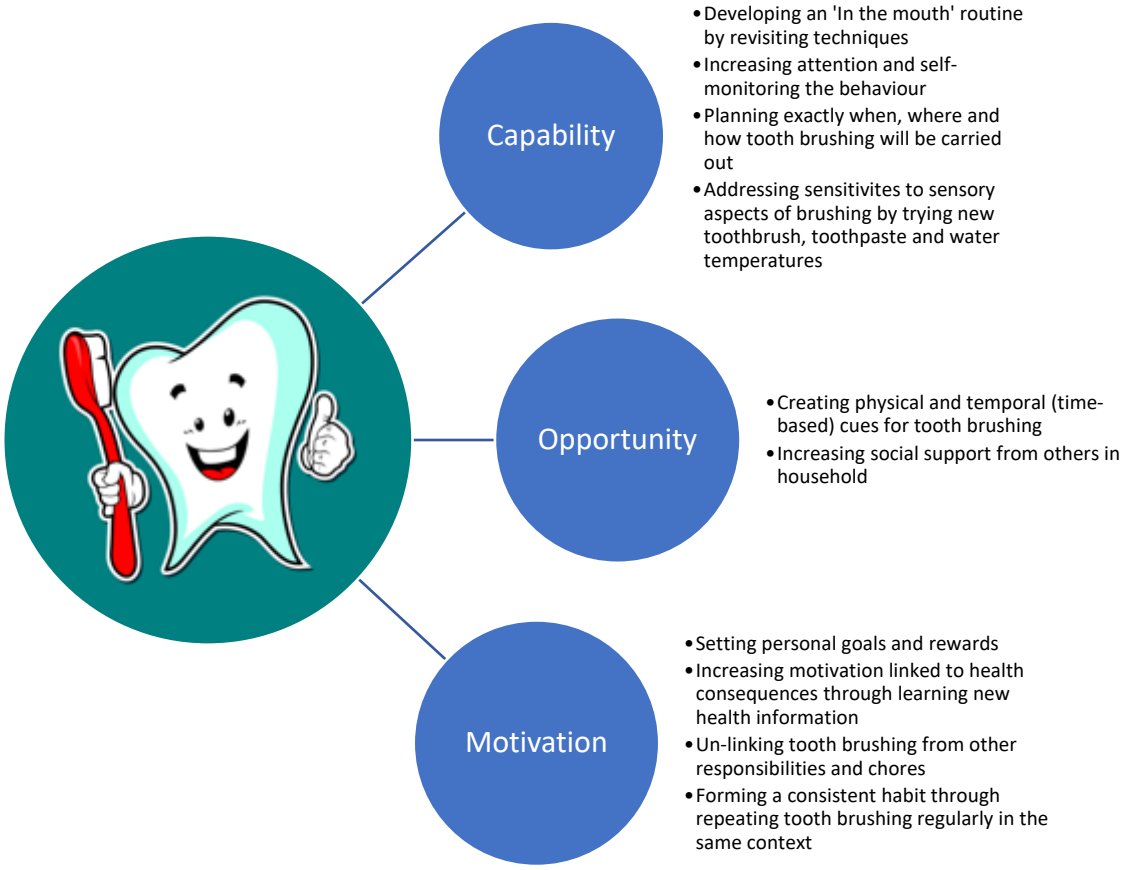
Appendix 2. Behaviour change techniques utilised

Target behaviour barrier/ facilitator		BCT Code	Behaviour Change Technique
Physical Capability	Lack of 'in the mouth' routine	*6.1*	*Demonstration of the behaviour* - Provide an observable sample of the performance of the behaviour, directly in person or indirectly e.g. via film, pictures, for the person to aspire to or imitate (includes 'Modelling')
		9.1	*Credible source* - Present verbal or visual communication from a credible source in favour of or against the behaviour
Psychological Capability	Lack of self-monitoring of tooth brushing behaviour	*2.3*	*Self-monitoring of the behaviour* - Establish a method for the person to monitor and record their behaviour as part of a behaviour change strategy
		2.4	*Self-monitoring of outcomes of behaviour* - Establish a method for the person to monitor and record the outcome(s) of their behaviour as part of a behaviour change strategy
	Behaviour avoidance due to sensory aversions Flexible schedule and financial means allows for creation of new routine with new equipment	*1.2*	*Problem solving* – Prompt the person to analyse factors that influence the behaviour and generate strategies to overcome barriers/increase facilitators (coping planning)
		1.4	*Action planning* – Prompt detailed planning of the performance of the behaviour: context, frequency, duration and intensity
		12.1	*Restructuring the physical environment* - Change, or advise to change the physical environment in order to facilitate performance of the wanted behaviour or create barriers to the unwanted behaviour
Reflective Motivation	Ability to set personal goals	*1.1*	*Goal setting (behaviour)* – Goal setting to increase self-monitoring and behavioural intentions
		1.3	*Goal setting (outcome)* – Set or agree on a goal defined in terms of a positive outcome of wanted behaviour
		1.5	*Review behaviour goals* – Review behaviour goals jointly with the person and consider modifying goals or behaviour change strategy in light of achievement
		1.7	*Review outcome goals* – Review outcome goals jointly with the person and consider modifying goals in light of achievement
	Desire to be motivated by health consequences	*5.1*	*Information about health consequences* - Provide information about health consequences of performing the behaviour - why tooth brushing is important and the consequences of not tooth brushing
		9.3	*Comparative imagining of future outcomes* - Prompt or advise the imagining and comparing of future outcomes of changed versus unchanged behaviour

	Belief that tooth brushing must be linked to other responsibilities and chores	*13.2*	*Framing/reframing* - Suggest the deliberate adoption of a perspective or new perspective on behaviour (e.g. its purpose) in order to change cognitions or emotions about performing the behaviour (includes cognitive structuring)
Automatic Motivation	Fear triggered by cold water in mouth when brushing teeth associated with fear of exposed nerve	*5.1*	*Information about health consequences* - Provide information about health consequences of performing the behaviour - why tooth brushing is important and the consequences of not tooth brushing – with focus on prevention of nerve exposure due to cavities (no visual information) *Mental rehearsal of successful performance* - Advise to practise imagining performing the behaviour successfully in relevant contexts
	Lack of consistent tooth brushing routine, lack of habit	*8.3*	*Habit formation* - Prompt rehearsal and repetition of the behaviour in the same context repeatedly so that the context elicits the behaviour
		10.7	*Self-incentive* – Plan to reward self in future if there has been progress in the behaviour
		10.9	*Self-reward* - Prompt self-praise or self-reward if there has been effort and/or progress in the behaviour
Physical Opportunity	Lack of physical cues to tooth brushing	*7.1*	*Prompts/cues* – Introduce or define environmental or social stimulus with the purpose of prompting or cueing the behaviour. The prompt or cue would normally occur at the time or place of performance - identify cues that be used to remind them to brush their teeth
Social Opportunity	Social support available in household, opportunity for social influence and modelling Regular tooth brushing perceived as social norm	*3.2*	*Social support (practical)* - Advise on practical help (e.g. from friends, relatives, colleagues, buddies or staff) for performance of the behaviour

Appendix 3. Client COM-B formulation sheet

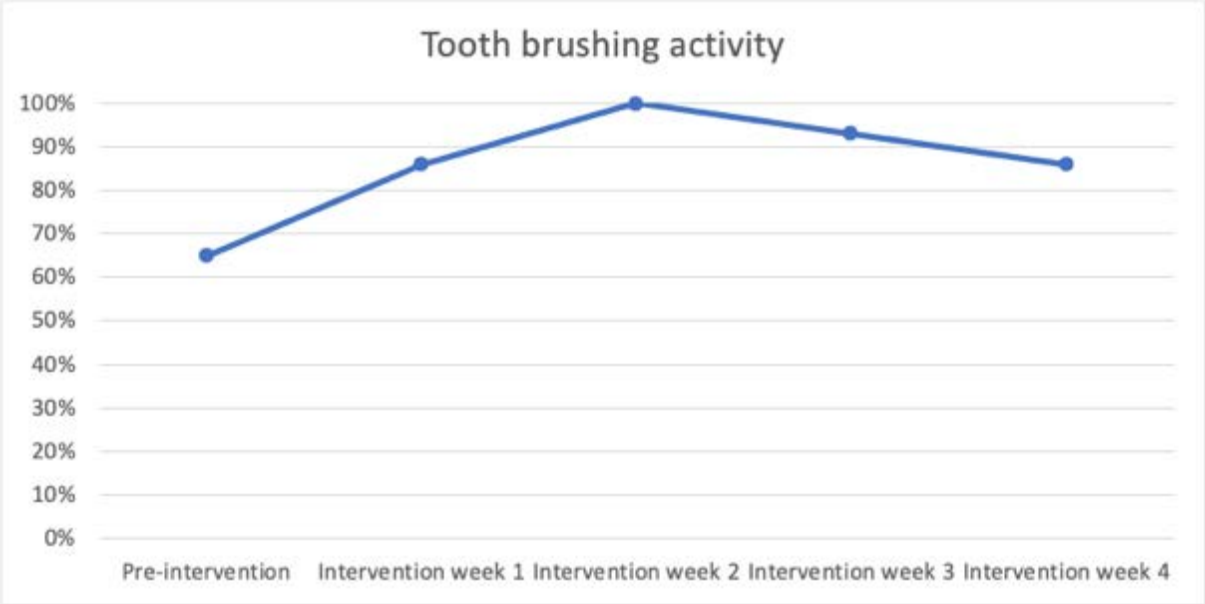
COM-B Model

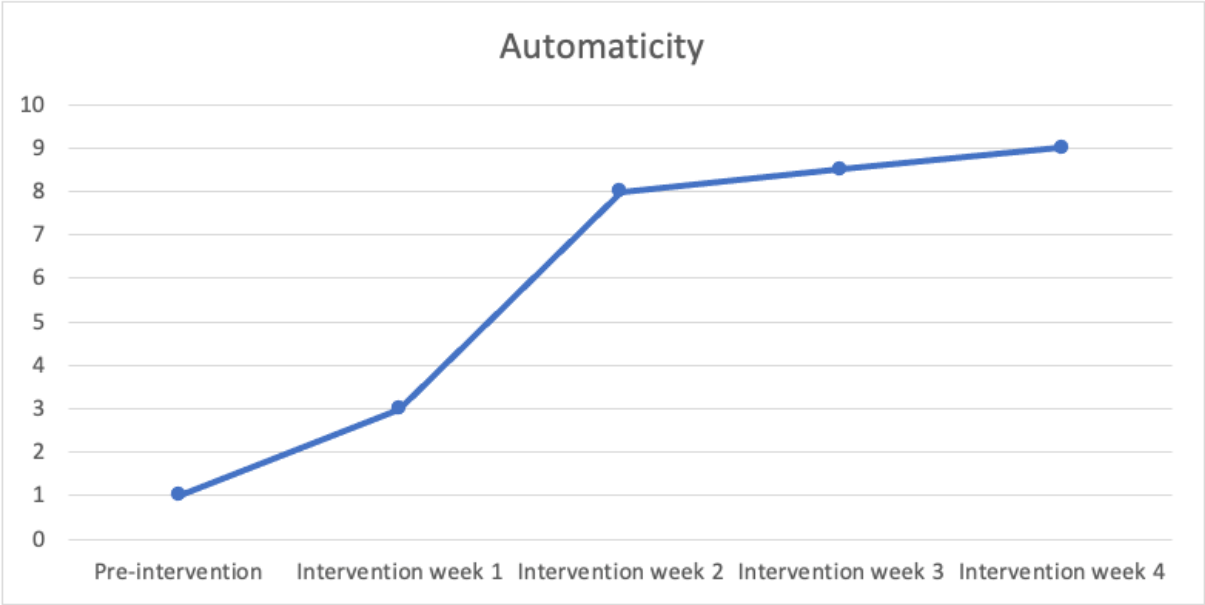


Appendix 5. Decisional balance exercise

Not changing	**Changing**
1. What are the advantages of the tooth brushing habits you had originally?	4. What are the advantages of the new behaviour?
2. What are the disadvantages of your previous habits?	3. What is the downside of changing your habits?

Appendix 6: Client outcome measure charts





Appendix 7. Session notes

Assessment session

We began the assessment session with introductions, rapport building and ensuring Sam was comfortable with the logistics. We discussed the client agreement document, attendance, matters of confidentiality and safety and my scope as a trainee. Obtained consent and left space for any questions. Sam presented as keen to continue and I began an initial intake discussion and interview to understand Sam's situation. Interview took a biopsychosocial approach. Explored reasons for seeking support, history, current situation and difficulties, and current goals and motivations. We discussed beginning with four interventional sessions, and checking in at that point as to whether they think more are needed.

Sam is a 33 year-old woman who works in a hybrid office/home-based role in the technology industry. They have good relationships with friends and family, and in their spare time reads, cycles and plays football. Sam expressed that they have an inconsistent tooth brushing routine, and it is something they have found difficult on and off throughout their life. Sam would like to create a consistent tooth brushing habit (twice a day) that fits into their lifestyle. Sam had inconsistent reinforcement and modelling of tooth brushing behaviours in childhood, dental anxiety and inconsistent oral health behaviour displayed by parents, and inconsistent independent habit formation. Avoidance behaviour motivated by fears of discovering an exposed tooth nerve, linked to previous negative dental-related experiences in childhood. Autism impacting sensory tolerance, self-described as mild.

Sam displayed excellent insight into precipitating and perpetuating factors. The Covid-19 lockdowns removed regular social interactions that motivated the behaviour. New dentist said Sam may need a filling in the future, triggering fear of worsening oral health and new sense of perceived tooth discoloration. Sam experiences occasional mouth sores (unrelated to brushing) that can make brushing painful, and has a sensory aversion associated with brushing (wet hands, changes in temperature of mouth). They have inconsistent brushing habits, and although they typically brush their teeth once a day, this is not at a set time (though typically mornings) and sometimes a few days can go by without brushing. Avoidance provides a function of perceived extra free time. Tooth brushing is cognitively associated with other self-care activities and chores (e.g. running errands outside of the house), meaning Sam feels the burden of these additional activities in association with

teeth brushing. At home, Sam lives on a different floor to the bathroom, and does not have a consistent morning or night-time routine in general.

Sam expresses having good general physical, mental and oral health currently. They exhibit high self-efficacy, high levels of insight and self-reflection, ability to modulate affect and a motivation to change. Sam expresses feeling pressures of societal norms and perceived stigma associated with lack of tooth brushing, and a fear of poor oral health. Sam has social support within their home from housemates and financial security. Client agreement updated with initial session numbers and shared with Sam.

Intervention session 1

Shared and explored the formulation together. Provided psychoeducation on how behaviour can be viewed through the COM-B lens before we looked at the details of the formulation. Sam agreed with formulation and provided more details. Used motivational interviewing techniques including open questions, summarising and reflecting to elicit more information on their current thoughts and beliefs relating to the behaviour. Sam said it was interesting to view their situation in these categories, and that they think the content of the COM-B diagram seemed like the right behavioural aspects to be targeting. Sam expressed that they were keen to explore the health information, and said they love to watch children's style animations to learn new things. Noted to explore video information rather than written. Allowed space for storytelling to elaborate on the current formulation and for Sam to provide more context. Sam shared that they had increased their levels of social consumption of alcohol and smoking levels in recent months, to a level of engaging in these once or twice per week. This was not a behaviour they wanted to change currently but expressed that it had motivated them to take better care of their oral health for cosmetic reasons.

Discussed outcome measures. Sam expressed that the most valuable progress measure to them was to measure a subjective self-report feeling of automaticity (0-10 scale) relating to the behaviour. They had mentioned their goal was to brush twice daily, so we also agreed on a second outcome measure of behavioural frequency per week. Took initial measure from them of both outcomes over the past week. Sam shared that they had already felt more motivated to engage in the behaviour since the assessment, and their frequency had increased. I took a self-report measure from Sam of their baseline pre-assessment behaviour too, as I felt this would be a valuable reflection point for them to see progress. Sam said they found it difficult to recall frequency of previous behaviours, as

they felt they weren't completely aware of the true frequency of their brushing and had to spend time considering this.

Discussed goal setting, how to set helpful goals. Sam shared that ideally they would brush and floss twice a day. Discussed setting small, achievable goals, and what may be feasible. Sam felt brushing twice a day was a manageable goal as they typically brush once a day, and that they would not aim to incorporate flossing into their routine just yet until they had achieved their first goal. They set a goal to brush once before 11am and once before they went to sleep at night. They felt their evening routine would be the most challenging time of the day to stay on track. Began exploring action planning, with a particular focus on the evening routine. Sam engaged in problem solving, to explore barriers to the behaviour in the past, what had been helpful, what had made it more difficult. Worked to develop a clear and realistic action plan for how the behaviour would be carried out in the morning and in the evening. Discussed cues to behaviour and if they had any in place, including any physical and environmental cues. Sam expressed that they had tried to set alarms on their phone, but expressed feelings of resistance to these. Explored what the best cues would be, and Sam opted for temporal cues linked to waking up and going to the bathroom in the morning, and going to the bathroom at night. We explored how Sam could use the positive relationships with their housemates as a form of social support. Sam expressed they would share their goals with their housemates and would seek encouragement in performing the behaviour, particularly during the evening routine. I set Sam the task of becoming more aware of their tooth brushing frequency, and keeping a brief behavioural diary to begin self-monitoring how often they were brushing their teeth. They were asked to keep a note each day when they get in bed of how many times they've brushed their teeth that day, even if it was zero.

Intervention session 2

Session began by checking in on outcome measure scores. Sam expressed that they are having the thought that prompts them to do the behaviour more often than not, before the temporal cue happens. Sam expressed that since they had been monitoring tooth brushing, they identified an additional barrier in the mornings. When they brushed their teeth, they said it felt like it takes hours for their mouth to return to feeling 'neutral', which was the state they required it to be before having breakfast, and this thought had prevented them from brushing their teeth in the past. I encouraged Sam over the next week to pay attention to this experience, and to check in with how their mouth felt at intervals of a few minutes after they brush their teeth, to explore this belief further and to 'fact check' this, which they were keen to do.

Sam seemed excited to share that they had made changes to their physical environment to support the new behaviour. When working from home, they had began working at a desk instead of working from their bed and had found the transition to the desk in the morning to be a very helpful cue to the behaviour. We discussed other aspects of the environment that could be potential barriers or facilitators to the behaviour. Sam shared that they had been considering buying a new electric toothbrush with a timer on it to support the behaviour, and we discussed their thoughts and beliefs around this. We explored whether using a different temperature of water or a non-mint toothpaste may improve the sensory experience of brushing for them, and Sam said they were keen to experiment with this.

Sam was also eager to share with me that they had booked a check-up with both a dentist and hygienist. I felt it important to spend time exploring this, as they had previously expressed this to be a challenging task during assessment. They shared that their motivation to complete this task after our last session had taken them by surprise. We explored their thoughts and emotions at the point of booking the appointment and immediately after. My client reflected that they felt pride and a sense of accomplishment at this task, and I utilised an evidence-based compliment to focus a moment on their achievement. As Sam had previously used minimising language, 'my problem is ridiculous; I should just be able to do it', I was particularly interested to note how they might respond to this. I perceived them to respond positively and I considered this to be an effective component of our conversation in that moment.

We spent some time exploring Sam's beliefs that mean their tooth brushing is linked to a necessity to complete a number of other tasks and chores, as part of a wider 'self-care' routine. I asked some guiding questions to explore their thinking and to encourage them to reflect. Sam expressed that ideally they didn't want tooth brushing to be linked to the other chores, but that they had just ended up thinking this way. We discussed reframing tooth brushing as an activity that is independent of these other tasks, and Sam said that this would make the task of tooth brushing seem less burdensome to them.

We then discussed what Sam had originally mentioned about wanting to develop an 'in the mouth' routine, and wanting to learn more about oral health in order to motivate them. I shared the thumbnails of two videos containing relevant health and behavioural information to support them. I also included one 'bonus' video that was an animation style video aimed at children as Sam had

expressed a fondness for this style. Sam expressed an excitement and anticipation to engage with these videos and said they will put aside time that evening to watch. Sam had expressed to me that they regularly use breathwork and meditation, so I encouraged Sam to use a visualisation technique while they were in a state of relaxation to visualise their 'in the mouth' routine being successfully carried out, after watching the video on best practice with brushing. At this point, Sam expressed that while they had been monitoring their behaviour more, they had become aware of feeling a reluctance to perform the behaviour during the evenings. I encouraged Sam to start to monitor these thoughts and feelings over the next week, so that we could explore them more during the next session.

Intervention session 3

I gained consent for audio recording the session for the purposes of supervision and Sam expressed being happy for this to be done. Sam shared that they felt they had made great progress as their morning tooth brushing was feeling much more automatic. Sam is finding it more difficult to complete the behaviour in the evening due to negative and ambivalent thoughts that they are working to counter. Introduced the decisional balance exercise to explore Sam's thoughts about the behaviour more. Sam expressed an interest in this exercise and I explained the purpose and activity in more detail. Worked through the decisional balance exercise, exploring: the advantages of the original habits, the disadvantages of the original habits, downside to new behaviour and advantages of the new behaviour. Sam was using change talk during this exercise. Sam read out their 'pros' of the new behaviour and had a reflection that that they all relate to emotions and relief of a psychological burden that has the capability of improving or maintaining their mental health, which they place a lot of value in. Sam mentioned feeling an increase in feelings of self-care and self-respect linked to their increased tooth brushing.

Checked in on the health behaviour information videos shared during the previous session and reflected on Sam's experience of this, any reflections and feelings relating to the content. Sam shared that the health behaviour impact video had had a big impact on them. They had learned new health information that motivated them to brush their teeth more including the link between oral health and the rest of the body. The video on correct brushing technique made Sam realise they do know how to correctly carry out the behaviour, and typically do follow the same routine in their mouth, but they could create more of a habit by being more mindful and monitoring their behaviour more closely while carrying it out. Checked in on the outcome measure scores over the past week.

Intervention session 4

During the final session, Sam was keen to share straight away that they had attended appointments with both their dentist and a hygienist in the past week. Sam was pleased they had attended these appointments. They said they entered the room with more confidence than they normally would, and said they felt they could 'look them in the eye' and say they were brushing their teeth. They had also discussed their oral health with dental professionals and put a plan in place to return in 6 months for another session with hygienist. Sam shared that they had discussed their new teeth brushing behaviour with the dental team, and received some further health information and guidance on teeth brushing, which had made them feel more confident that they were now taking good care of their teeth.

We revisited the outcome measures and logged their final scores from the previous week. Reviewed progress charts. Sam reflected that they felt good that their tooth brushing frequency had not dropped to pre-intervention levels and said that they felt proud of their progress. Sam reflected that they 'had come so far' since the first time we met, and I affirmed their efforts and successes, and highlighted their strengths relating to engaging with the intervention. They shared that they were able to look at some of their thoughts relating to avoiding teeth brushing through an objective lens after they spent time reflecting on the decisional balance exercise.

We revisited their existing goals and Sam set a new behavioural goal for the future, that involved maintaining current tooth brushing levels and incorporating flossing into their new routine within the next three months. We discussed how they could set small goals themselves to achieve this bigger goal. They also set themselves a new incentive, which was to begin tooth whitening after six months of their new routine being put into practice.

We then focused on coping planning for the maintenance phase of their new behaviour and explored situations where they may find it more difficult to stick to their new routine over the next few months. Sam considered that the times they might struggle the most would be when all of their housemates were away, and times when they might be on annual leave from work for more than a few days at a time. We worked through an action planning exercise, considering these two situations, and Sam planned the details of how they could maintain their tooth brushing routine in these two contexts. They made a plan for creating additional environmental cues in these scenarios, and seeking social support from a trusted friend to encourage their habits during these times. Sam shared they felt "more like a proper member of society" since increasing their tooth brushing.

Discussed what this means to Sam, and how the new behaviours relate to their sense of self (congruence). Discussed this being our last planned session and whether Sam felt they would like any further sessions. Sam felt they did not need any further sessions at this time as they felt significantly more confident in their tooth brushing routines and able to self-monitor and set small goals to maintain the behaviour.

Behaviour Change Intervention Case Study 2: A remote mindfulness group intervention

Background

This case study outlines the development, delivery and evaluation of an online, group mindfulness intervention. The client group comprised staff members who were part of the Patient Engagement team at OPEN Health, my primary workplace placement during the Professional Doctorate. Mindfulness has been described as as moment-to-moment, non-judgmental awareness cultivated by paying attention to the present moment as non-reactively, and non-judgmentally as possible (Kabat-Zinn, 2015). There is evidence to suggest that mindfulness-based interventions can have a moderate effect on emotion regulation (Kral et al., 2018), stress reduction (Zhang, Lee, Mak, Ho, & Wong, 2021) and quality of life (de Vibe et al., 2017), along with reducing symptoms of depression and anxiety (Blanck et al., 2018). Increasingly, mindfulness interventions are being utilised in workplace settings to improve performance and enhance the wellbeing of employees (Good et al., 2016; Olano et al., 2015). Within the workplace, mindfulness-based interventions have been shown to increase workplace functioning, and have a moderate effect on stress, anxiety, depression and burnout (Glomb, Duffy, Bono, & Yang, 2011; Lomas, Medina, Ivtzan, Rupprecht, & Eiroa-Orosa, 2019).

Needs assessment and formulation

A mindfulness component is often included in many psychological interventions designed by the Patient Engagement team, and the benefits of mindfulness are known by the group. However, I had a baseline anecdotal understanding that the majority of the team do not regularly practice mindfulness in their own lives, though many have said they would like to be able to. As the team was experiencing a particularly busy period with a high workload and high stress, I conceptualised the idea of assessing the appetite for a mindfulness practice group, with the aim to increase trait mindfulness and improve psychological wellbeing.

While the benefits of mindfulness are often widely acknowledged, evidence suggests that certain biopsychosocial barriers exist to individuals incorporating mindfulness practice into their everyday life and participating in mindfulness-based interventions.

- *Practical barriers:* Key practical barriers are related to time, including a lack of spare time and a lack of dedicated time within a daily routine to practice mindfulness (Birnbaum, 2008).
- *Individual barriers:* Person-related barriers include a lack of motivation, lack of social support, difficulty initiating and maintaining practice, and ambivalence about mindfulness practice

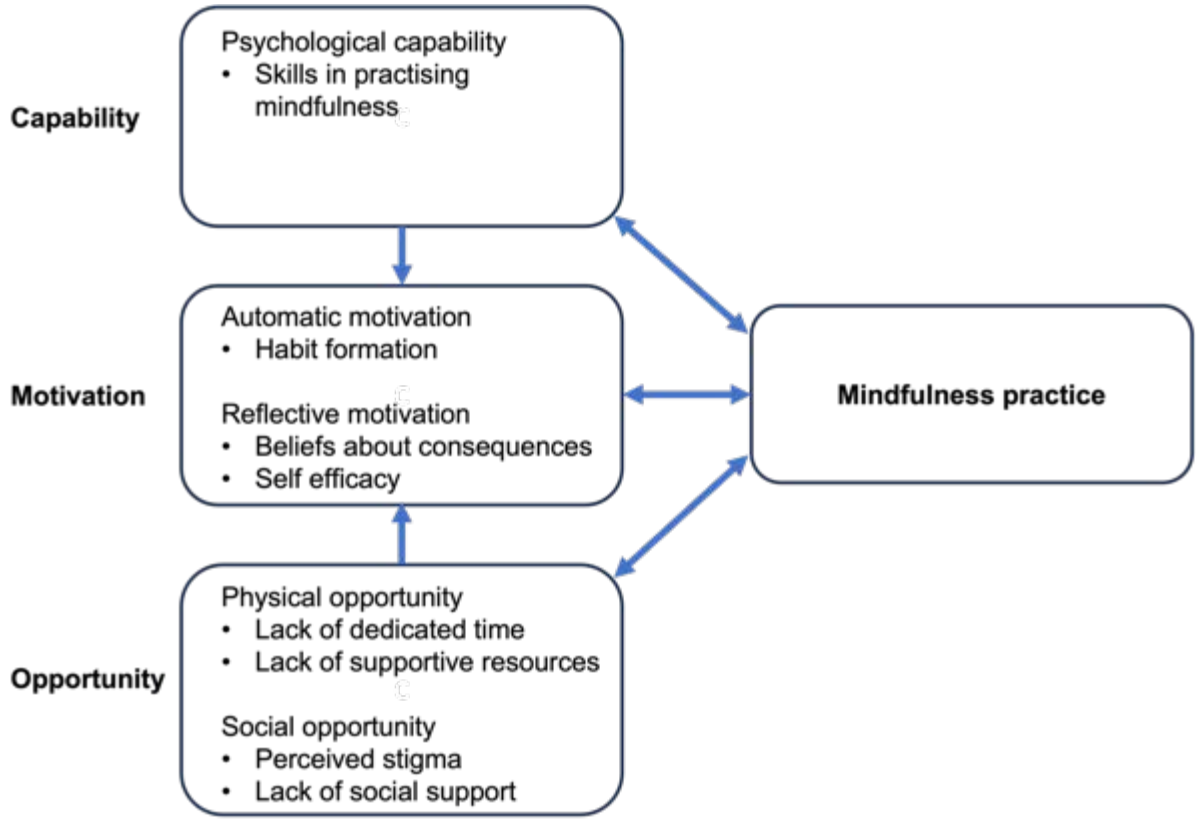
(Birnbaum, 2008; Kennedy, Haley, & Evans, 2022; Toivonen, Hermann, White, Speca, & Carlson, 2020).

- *Knowledge barriers:* Knowledge-related barriers include misconceptions and knowledge gaps relating to what mindfulness is, the benefits of mindfulness and a lack of understanding of how to practice mindfulness (Duggan & Julliard, 2018; Toivonen et al., 2020).

In order to supplement this information, I conducted a further informal assessment with the target group to gauge whether the barriers emerging in research were also present in this population. I hosted individual, voluntary, confidential brief consultations with five members of the team to gauge their appetite for a mindfulness intervention, and to probe potential barriers to mindfulness practice. I informed the team of my intentions to host these confidential conversations with the aim to potentially offer a mindfulness intervention, and gained consent from those who volunteered themselves to use the information they shared with me to inform a potential intervention.

From this consultation process, it was clear that there was a desire and motivation to increase their own mindfulness practice and abilities with the goal to improve general psychological wellbeing, and for some, to become 'more mindful'. Through discussions, I interpreted this second goal as a desire to increase trait mindfulness, and to increase frequency of state mindfulness. The assessment meetings provided me with a solid understanding of a cross-section of the group's previous experiences, current practice, attitudes, and beliefs related to mindfulness. Key barriers to implementing mindfulness practice included time restrictions, a lack of dedicated time and space, low self-efficacy relating to performing the behaviour, a lack of understanding as to how to begin practising mindfulness, and some stigma associated with meditation. I utilised the assessment information and behavioural barriers to map the behavioural targets for change using the COM-B model (Michie, Van Stralen, & West, 2011) in order to inform the intervention design (Figure 1.)

Figure 1. COM-B targets for behaviour change



Intervention design and delivery

As the team were in various locations, in different time zones and employing flexible working hours, I opted to deliver this intervention online. This allowed for a broader number of team members to participate and allowed the group to align the intervention with their own schedule.

There are various models and theoretical frameworks to support robust intervention design. The Theoretical Domains Framework (TDF) provides a comprehensive, theory-informed approach to identifying determinants of behaviour, which can support intervention design (Atkins et al., 2017). The TDF builds on the systems identified in COM-B, and use of COM-B can help identify the TDF domains that are pivotal to behaviour change (Cane, O'Connor, & Michie, 2012). I used this to further define the intervention (Table 1) and identify relevant behaviour change techniques from a well-established taxonomy (Michie et al., 2013).

Table 1. Intervention functions and behaviour change techniques

COM-B component	Barriers	Selected intervention functions	TDF domain and constructs	Behaviour change techniques
Psychological capability	Lack of skills in practising mindfulness	Education Training Enablement	Knowledge • Knowledge • Procedural knowledge Skills • Skills • Competence / ability / skill assessment • Practice/ skills development Behavioural regulation • Action planning	4.1 Instruction on how to perform the behaviour 12.5 Adding objects to the environment
Social opportunity	Perceived stigma Lack of social support	Enablement Modelling	Social influences • Social support • Group identity • Group norms	3.1 Social support 12.2 Restructuring the social environment 6.3 Information about others' approval
Physical opportunity	Lack of dedicated time and supportive resources	Enablement	Environmental context and resources • Resources/ material resources • Person x environment interaction	7.1 Prompts/cues 12.5 Adding objects to the environment
Automatic motivation	Lack of habit	Enablement	Behavioural regulation • Habits	8.3 Habit formation
Reflective motivation	Beliefs about consequences Low self-efficacy	Education	Beliefs about capabilities • Self-efficacy • Perceived behavioural control • Empowerment Beliefs about consequences • Beliefs • Outcome expectancies Behavioural regulation • Self-monitoring Intentions • Transtheoretical model and stages of change	5.1 Information about health consequences 2.3 Self-monitoring of the behaviour 2.4 Self-monitoring of outcomes of the behaviour 1.4 Action planning

Eighteen people that comprised the Patient Engagement team were invited to participate in a four week mindfulness practice group and eight opted in to take part. Six participants were based in the UK, while one was in France and one was in the USA. The majority were female, with one male.
In line with the HCPC Standard of Proficiency (SOP) 2 – practice within the legal and ethical boundaries of your profession, (Health & Care Professions Council, 2023) before beginning the intervention, I made sure to inform all potential participants on my role as a Trainee Health Psychologist, and gained consent from all participants to take part, and for me to include their anonymised data in my portfolio. It was important to ensure that participants understood that this intervention was voluntary and optional for them, and that there was no expectation for them to participate from our company. I also informed them of how their data would be stored securely, and pseudonymised with a code that only they would know.

The intervention was designed to include six key components.

1) Information meeting

A virtual information meeting was held the week before the intervention began, to explain the aims and format of the intervention, provide upfront information and time for questions. I provided training and guidance on how to practice mindfulness using the provided mindfulness podcasts. The group was encouraged to put aside a dedicated ten minutes at a point in time of their choice, both before work and after work, to listen to practice mindfulness for five minutes each time, using the guided audios. Employees were encouraged to close their email application and set their Microsoft Teams status to 'do not disturb' so that they wouldn't be interrupted by calls, messages or emails during their mindfulness practice. Repeating the behaviour twice a day promoted habit formation (Gardner & Rebar, 2019), which was an important goal for many of the participants.

As the group were in different time zones with varying schedules and working hours, I encouraged the group to create their own electronic calendar reminders to prompt the behaviour twice a day at their chosen times, but to ensure that the setting and time of day was consistent for them individually, to further promote habit formation (Cloughesy, Mrazek, Mrazek, & Schooler, 2010). It was also emphasised that the mindfulness group was supported by the senior leadership team, as buy-in from leadership is shown to be a facilitator to successful implementation of interventions of this nature (Byron et al., 2015). I perceived the information meeting to have been well received by the group. They were engaged in the conversation and felt all their questions had been answered,

gauged by verbal feedback. One person shared, *"that meeting made me feel motivated to get started and put aside some 'me time' every day for this".*

2) Self-guided mindfulness podcasts

The provision of mindfulness meditation guidance by audiotape has been documented to be a successful mode of delivery in controlled mindfulness research (Klatt, Buckworth, & Malarkey, 2009; Toneatto & Nguyen, 2007). The group was provided with a selection of seven recorded guided mindfulness podcasts, which included a range of mindfulness approaches including breathwork, body scan and visualisation techniques (mindfulness podcast transcripts in Appendix 1).

The guided mindfulness meditations were written as scripts, then individually recorded by a voiceover artist, and saved as individual mp3 audio files. The purpose of these podcasts was to provide a guided mindfulness meditation for the listener. Each audio was between 3-10 minutes long. The mindfulness podcast content included varied techniques including body scan, visualisation and breathing exercises, to provide the listeners with a range of options to suit them, and to allow them to listen to different audios each time if they wish.

3) Psychoeducation materials on the benefits of mindfulness

Information on the benefits of mindfulness was provided (Appendix 2). Psychoeducation as part of a mindfulness-based programme has been shown to enhance participants' perceptions of the credibility of mindfulness itself (Del Rosario & Beshai, 2022). I opted to provide psychoeducation materials on what mindfulness is, the consequences of mindfulness as a behavioural practice, and some introductory mindfulness exercises. I used publicly available online materials from *Mind*, a reputable provider of mental health education, as this is a trusted source that staff members were likely to be aware of and trust.

4) Weekly messages

I understood that motivational communication has been shown to improve adherence to health behaviours, and increase participation in interventions (Palacio et al., 2016; Toivonen et al., 2020). Therefore, I set up a private Microsoft Teams channel with the group members, as the group were familiar with this platform and use this daily in their work. A Teams channel using our company account would also offer a secure and private online location for the participants to communicate, ensuring their data was managed securely, in line with HCPC SOP 6 – understand the importance of and maintain confidentiality (Health & Care Professions Council, 2023). Within this channel, I sent

three messages per week that prompted action planning, and peer support, and provided encouragement and some psychoeducation on the benefits of regular mindfulness practice (Appendix 3).

5) Messages and open forum in group Teams channel

Peer support is a widely utilised and recommended technique to facilitate lasting behaviour change (Boothroyd & Fisher, 2010; McEvoy et al., 2018). Utilising the Microsoft Teams channel, I encouraged the group to share their experiences of regular mindfulness practice. I prompted group discussions and input to facilitate social support and establish a group identity, as aligned with BCTs identified in the behaviour change taxonomy (Michie et al., 2013).

6) Mindfulness tracking

I provided each person with a mindfulness tracker document (Appendix 4) and encouraged the group to track their behaviour by ticking a box each time they completed their mindfulness practice. Recording their participation in the daily activities allowed for self-monitoring, and has been utilised in successful interventions of this nature (Klatt et al., 2009). The document also contained space for reflections after each practice. I encouraged the group to reflect on their thoughts and feelings after their mindfulness practice, using prompts within the document, to facilitate self-monitor the outcomes of the behaviour, which is another BCT identified in the utilised behaviour change taxonomy (Michie et al., 2013).

Evaluation

Seven participants completed the intervention to the end, while one dropped out after the initial information meeting as they felt unable to build the mindfulness practice into their schedule.
The Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003) is a well-established 15-item scale designed to measure an individual's tendency to be mindful of moment to moment experience. Before the intervention began, the group were asked to complete this measure to provide a baseline score of trait mindfulness, and they completed it again one week after the end of the intervention (week five). The group also completed the 14-item Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Tennant et al., 2007) before and after the intervention, following the same timings as the MAAS. The WEMWBS scale is used to measure subjective wellbeing in adults, including the ability to maintain a sense of autonomy, self-acceptance, personal growth, purpose in life and self-esteem. Data was collected through *Question Pro* and participants were asked to generate a six-string pseudonym for data confidentiality.

Five participants showed an increase in their MAAS scores at the end of the intervention, though individual scores decreased for two participants. The mean score increased by 0.14 (PRE: M = 3.18, SD = .75; POST M = 3.32, SD = .86; see Figure 1). While MAAS scores increased overall, the shift in scores is modest. Evidence has shown that increased trait mindfulness through regular meditation practice is highly variable to the individual (Kiken, Garland, Bluth, Palsson, & Gaylord, 2015) and a longer intervention may be needed to show an increase in scores across the group. WEMWBS scores were variable, though the mean score increased by 0.85 (PRE: M = 43.29, SD = 4.72; POST M = 44.14, SD = 6.26; see Figure 2). On an individual level, two people showed a decrease in scores. It is important to note that the WEMWBS scores should be interpreted with caution as the authors recommend a sample of 30, though for this purpose it is beneficial to observe trends. Through observing the data, it was noted that the same two individuals showed a decrease in both MAAS and WEMBWS scores, which suggests there could be an additional external factor influencing these scores. See Appendix 5 for individual participant scores.

Figure 1. Mean MAAS scores pre- and post-intervention

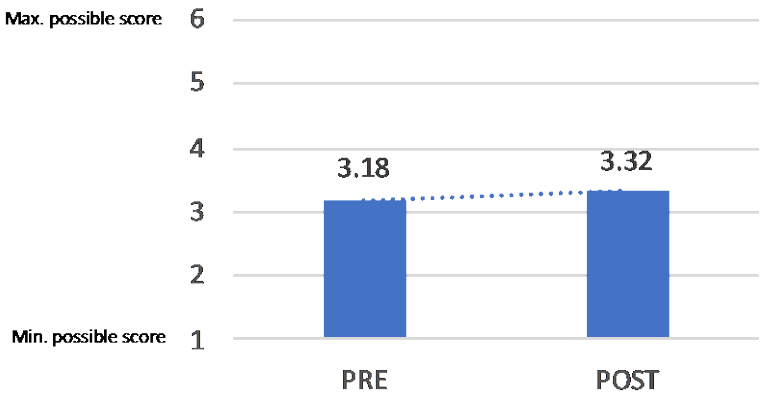
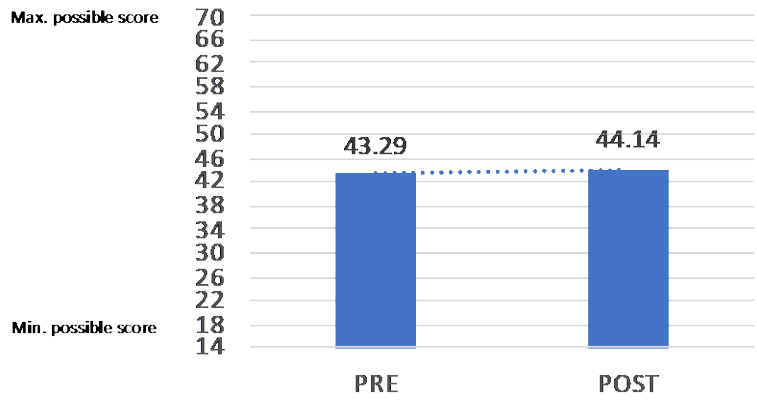


Figure 2. Mean WEMWBS scores pre- and post-intervention



I also collected optional anonymous qualitative feedback on the intervention from the group. Three participants provided voluntary feedback, and all gave positive comments on their experience:

- *"The mindfulness felt like the end of a yoga class each time and it was very relaxing. I am going to do it regularly!"*
- *"Glad I took part in this group. It was hard to focus at the start but I noticed it get easier as the weeks went on and I could clear my mind more. Thanks for setting this up."*
- *"Good experience and I already feeling the benefits. The information on mindfulness and the podcasts were brill."*

Final reflections

Utilising the TDF as a complementary framework alongside the COM-B model was useful as it allowed me to pinpoint specific influencers of behaviour, which facilitated the development of specific intervention components and selection of behaviour change techniques. Mean scores for both outcome measures increased, and the final qualitative feedback provided by three group members was positive and showed that the intervention had had a perceived beneficial impact on those individuals. One member noted that they had recognised a positive change in their ability to focus on the mindfulness practice, and it could be that the reflective prompts within the tracker may have facilitated this understanding, though this is not confirmed. Informal feedback received from some of the group members after the intervention ended confirmed that the mindfulness tracker was well received, and along with the calendar reminders, helped the group to stay on track with their twice daily practice. Conversely, there were some aspects of the intervention which were not as successful as hoped. Only two members of the group contributed to the Teams chat. Upon reflection, there could be a number of reasons for this lack of engagement with the peer support aspect of the intervention. Firstly, it was made clear that this was optional, which could have made some members disregard it, particularly if they are not familiar with having reflective discussions of this nature. Secondly, I have reflected that the prompts could have been more directive, and I could have utilised some initial closed questions to ignite the discussion, followed by more broad, open questions once the group became more comfortable. Additionally, MS Teams channels within the workplace are typically very transactional and not forums for reflections or longer discussions, so the context may have been prohibitive to this BCT.

I have learnt a lot through delivering this intervention in the workplace, and if I were to repeat this, there are some changes I would consider. Firstly, I would consider incorporating a follow-up measure a number of weeks after the intervention ended to repeat the outcome measures, to check in on

whether independent mindfulness practice had been continued over a more long-term period. This would allow for insights into whether a sustained change had been made. As the intervention only took place during the working week (Monday - Friday), it meant that a regular mindfulness habit was not necessarily being committed to on the weekends, although it was encouraged. The mindfulness tracker only covered working days. An adaptation could be to include weekends to allow group members the option of continuing the habit across a seven day week. Implementing the intervention to be adaptable to a seven-day week may have shown improved results.

I felt disappointed when one participant dropped out at the start of the intervention due to concerns they would not be able to integrate the practice into their daily routine, and it prompted me to critically reflect on the intervention design. The intervention was fairly complex in the sense that it had a number of components. Upon reflection, if I were to repeat this intervention it is likely that I would consider reducing the number of components and streamline the intervention more. Some components were better received by the group than others, and it is possible that aspects such as the open forum Teams channel for group discussions could be removed or re-thought in order to improve the intervention. In order to enhance the intervention, it may have also been beneficial to conduct assessment interviews with all of the participants who opted in, as this would have been achievable given the final group size and may have illuminated more targets for behaviour change. Reflecting on the design, delivery and evaluation of this intervention through this case study has cemented many learnings for me, which I will take with me when developing future interventions.

References

Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., . . . Grimshaw, J. M. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation science, 12*(1), 1-18.

Birnbaum, L. (2008). The use of mindfulness training to create an 'accompanying place'for social work students. *Social Work Education, 27*(8), 837-852.

Blanck, P., Perleth, S., Heidenreich, T., Kröger, P., Ditzen, B., Bents, H., & Mander, J. (2018). Effects of mindfulness exercises as stand-alone intervention on symptoms of anxiety and depression: Systematic review and meta-analysis. *Behaviour Research and Therapy, 102*, 25-35.

Boothroyd, R. I., & Fisher, E. B. (2010). Peers for progress: promoting peer support for health around the world. *Family Practice, 27*(suppl_1), i62-i68.

Brown, K. W., & Ryan, R. M. (2003). Mindful attention awareness scale. *Journal of personality and social psychology*.

Byron, G., Ziedonis, D. M., McGrath, C., Frazier, J. A., deTorrijos, F., & Fulwiler, C. (2015). Implementation of mindfulness training for mental health staff: Organizational context and stakeholder perspectives. *Mindfulness, 6*, 861-872.

Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation science, 7*, 1-17.

Cloughesy, J. N., Mrazek, A. J., Mrazek, M. D., & Schooler, J. W. (2010). Planning to practice: action and coping plans increase days of meditation practiced. *Psi Chi J Psychol Res, 25*(2), 203-209.

de Vibe, M., Bjørndal, A., Fattah, S., Dyrdal, G. M., Halland, E., & Tanner-Smith, E. E. (2017). Mindfulness-based stress reduction (MBSR) for improving health, quality of life and social functioning in adults: a systematic review and meta-analysis. *Campbell Systematic Reviews, 13*(1), 1-264.

Del Rosario, N., & Beshai, S. (2022). Do you mind? Examining the impact of psychoeducation specificity on perceptions of mindfulness-based programs. *International Journal of Environmental Research and Public Health, 19*(15), 9621.

Duggan, K., & Julliard, K. (2018). Implementation of a mindfulness moment initiative for healthcare professionals: perceptions of facilitators. *Explore, 14*(1), 44-58.

Gardner, B., & Rebar, A. L. (2019). Habit formation and behavior change. In *Oxford research encyclopedia of psychology*.

Glomb, T. M., Duffy, M. K., Bono, J. E., & Yang, T. (2011). Mindfulness at work. In *Research in personnel and human resources management*: Emerald Group Publishing Limited.

Good, D. J., Lyddy, C. J., Glomb, T. M., Bono, J. E., Brown, K. W., Duffy, M. K., . . . Lazar, S. W. (2016). Contemplating mindfulness at work: An integrative review. *Journal of management, 42*(1), 114-142.

Health & Care Professions Council, H. (2023). Standards of Proficiency: Practitioner Psychologists. Retrieved from https://www.hcpc-uk.org/standards/standards-of-proficiency/practitioner-psychologists/

Kabat-Zinn, J. (2015). Mindfulness. *Mindfulness, 6*(6), 1481-1483.

Kennedy, D. P., Haley, A., & Evans, R. (2022). Design of a mindfulness-based intervention to support teachers' emotional regulation behaviors. *Current Psychology*, 1-14.

Kiken, L. G., Garland, E. L., Bluth, K., Palsson, O. S., & Gaylord, S. A. (2015). From a state to a trait: Trajectories of state mindfulness in meditation during intervention predict changes in trait mindfulness. *Personality and Individual Differences, 81*, 41-46.

Klatt, M. D., Buckworth, J., & Malarkey, W. B. (2009). Effects of low-dose mindfulness-based stress reduction (MBSR-ld) on working adults. *Health Education & Behavior, 36*(3), 601-614.

Kral, T. R., Schuyler, B. S., Mumford, J. A., Rosenkranz, M. A., Lutz, A., & Davidson, R. J. (2018). Impact of short-and long-term mindfulness meditation training on amygdala reactivity to emotional stimuli. *Neuroimage, 181*, 301-313.

Lomas, T., Medina, J. C., Ivtzan, I., Rupprecht, S., & Eiroa-Orosa, F. J. (2019). Mindfulness-based interventions in the workplace: An inclusive systematic review and meta-analysis of their impact upon wellbeing. *The Journal of Positive Psychology, 14*(5), 625-640.

McEvoy, C. T., Moore, S. E., Appleton, K. M., Cupples, M. E., Erwin, C., Kee, F., . . . Woodside, J. V. (2018). Development of a peer support intervention to encourage dietary behaviour change towards a Mediterranean diet in adults at high cardiovascular risk. *BMC Public Health, 18*(1), 1-13.

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., . . . Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine, 46*(1), 81-95.

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science, 6*(1), 1-12.

Olano, H. A., Kachan, D., Tannenbaum, S. L., Mehta, A., Annane, D., & Lee, D. J. (2015). Engagement in mindfulness practices by US adults: Sociodemographic barriers. *The Journal of Alternative and Complementary Medicine, 21*(2), 100-102.

Palacio, A., Garay, D., Langer, B., Taylor, J., Wood, B. A., & Tamariz, L. (2016). Motivational interviewing improves medication adherence: a systematic review and meta-analysis. *Journal of General Internal Medicine, 31*, 929-940.

Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., . . . Stewart-Brown, S. (2007). The Warwick-Edinburgh mental well-being scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes, 5*(1), 1-13.

Toivonen, K., Hermann, M., White, J., Speca, M., & Carlson, L. E. (2020). A mixed-method, multi-perspective investigation of barriers to participation in mindfulness-based cancer recovery. *Mindfulness, 11*, 2325-2337.

Toneatto, T., & Nguyen, L. (2007). Does mindfulness meditation improve anxiety and mood symptoms? A review of the controlled research. *The Canadian Journal of Psychiatry, 52*(4), 260-266.

Zhang, D., Lee, E. K., Mak, E. C., Ho, C., & Wong, S. Y. (2021). Mindfulness-based interventions: an overall review. *British medical bulletin, 138*(1), 41-57.

Appendix 1. Mindfulness podcast transcripts

Guided visualisation – a walk in the forest

Script

Spending time in nature…has long been known…as a source of healing…wisdom…and relaxation… For the next 15 minutes…we are going to take some time… to enjoy some of the benefits…that can come…from tuning into the natural world around us…This is a guided visualisation called…'A walk in the forest'.

[PAUSE FOR 5 SECONDS]

[Guided Visualisation]

Make yourself comfortable…and when you're ready…gently allow your eyelids to close. As you sit or lie there…with your eyes gently closed… start to notice your breathing….I'd like you to imagine…that with each breath you take…you are inhaling ease…and relaxation into your body…and each time you exhale,…all the tension…is draining out of your body…With each breath out…your body is beginning to sink down…more and more comfortably…into the chair…Take five breaths like this, each time you breathe out, sinking more and more deeply into relaxation.

[PAUSE FOR 8 SECONDS]

If at any moment…you notice your mind starting to wander away… just try to focus back on the breath…and the sound of my voice.

[PAUSE FOR 5 SECONDS]

I would like you to imagine yourself…at the beginning of a forest trail…It is a beautiful clear day…Before you, you see a long forest trail…winding gently off into the distance…You see there are tall, leafy trees on either side. These trees are all the colours of autumn… deep reds, yellows, oranges and browns…

[PAUSE FOR 5 SECONDS]

You look up…to see the sun shining through the tree tops…warming your forehead…cheeks…and nose.

[PAUSE FOR 5 SECONDS]

You start to slowly walk along the quiet forest trail…, noticing the soft ground beneath your feet as you walk.

[PAUSE FOR 5 SECONDS]

You also notice the cool air on your face…neck…and hands….You take a few deep breaths in…to enjoy the fresh, clean air…passing in through your nose…[3 seconds] and out your mouth [3 seconds], invigorating your mind and body.

[PAUSE FOR 10 SECONDS]

As you continue to walk…, you now become aware…of any smells that might be around you… The smell from any fallen leaves you may notice around you…the aroma of any other plants that might be in the forest,…or maybe there is no smell at all,…just crisp,…clean air.

[PAUSE FOR 5 SECONDS]

There is no one else around you… and the forest is quiet except for the sounds of nature around you… This might be the gentle rustling of leaves…or perhaps the sound of a bird…far off in the distance…

[PAUSE FOR 5 SECONDS]

You continue walking down the trail …noticing all the things you can hear…smell…see… and feel.

[PAUSE FOR 10 SECONDS]

If you notice your mind has started to wander…simply try to focus back on your breathing…and the sounds of my voice.

[PAUSE FOR 5 SECONDS]

As you keep walking,…you gradually become…more and more aware…of the sound of soft,…trickling water…You come across a stream,…gently bubbling alongside the trail…There is a bench by the stream…where you sit… and rest for a short while...

[PAUSE FOR 5 SECONDS]

You take a few moments to watch the water pass by…What do you see?...Maybe the light glinting off the surface…or little leaves and sticks gently washing past…Can you see anything else in the water?

[PAUSE FOR 5 SECONDS]

What smells can you notice here...? Perhaps the fresh, damp smell of the moss…along the edge of the stream…or something else?

[PAUSE FOR 5 SECONDS]

Imagine placing your hand in the cold water… Notice what sensations you experience as you dip your hand into the chilly forest stream…is it refreshing or soothing?...

[PAUSE FOR 10 SECONDS]

Why not spend a few more moments by the stream… and simply enjoy the feelings of calm…and relaxation in your body in this moment…Enjoy this feeling for a little longer….breathing in the fresh forest air and breathing out any tension and stress.

[PAUSE FOR 10 SECONDS]

When you’re ready…begin walking back up the trail towards the entrance….As you do so,…notice again the sounds you can hear…as you walk up the track. Are there any new sounds this time?

[PAUSE FOR 5 SECONDS]

Are there any smells?

[PAUSE FOR 5 SECONDS]

What can you see around you?

[PAUSE FOR 15 SECONDS]

As you approach the end of the trail…remember that this walk in the forest…and the feelings of peace and calm…are always here to come back to…any time that you feel stressed…and in need of relaxation during your day.

[PAUSE FOR 5 SECONDS]

Return and Conclude

Now…when you are ready… wiggle your fingers and toes…and slowly open your eyes…And come back to full consciousness.

[END OF SCRIPT]

Grounding tree meditation

Script

Often we find our mind running away from us…and we lose focus and attention on the task at hand…We can become stressed…imagining what may happen in the future,…or thinking back…on things that may have happened in the past…This simple technique…will help you…to bring your attention…back to the present moment…to focus on the here and now.

[PAUSE FOR 5 SECONDS]

Begin by making yourself comfortable…by sitting in a chair… with the bottoms of both feet…placed flat on the floor…your spine straight and tall…your hands sitting loosely in your lap… When you're ready…gently allow your eyelids to close.

[PAUSE FOR 5 SECONDS]

As you sit there with your eyes closed…I'd like you to become aware of your breathing… Breathe in slowly and deeply…through your nose…and then slowly breathe out…through your mouth…Repeat this a few more times …breathing slowly and deeply… in through your nose…and then slowly breathe out through your mouth.

[PAUSE FOR 5 SECONDS]

As you breathe in and out…try to notice…any areas of tension in your body,…any areas…where you might be holding onto some stress…Each time you breathe out,…imagine you are breathing out that tension…and feeling more relaxed.

[PAUSE FOR 5 SECONDS]

[Roots]

Continuing to gently breathe in…and out…I'd like you now…to focus on your feet…Gently push…the bottoms of your feet…into the floor… Imagine that you…are like a tree…and that your feet…are roots planted into the ground…As you continue to press your feet into the ground…and take root,…notice any tension that happens in your ankles,…calves,…thighs…and buttocks…Continue to notice…how it feels…to press your feet…into the ground…for a few more moments.

[PAUSE FOR 5 SECONDS]

If you notice at any time…that your mind has started to wander…try to focus back on your breathing…In through your nose…and out through your mouth…Then turn your attention…back to the sensations…in your feet and legs.

[PAUSE FOR 5 SECONDS]

[Trunk]

Now…move your attention from your feet…..to your legs….. stomach and chest…imagine this area is like the trunk of your tree….Here I want you to take a deep breath in through your nose…and notice… your stomach and chest expanding and filling with air…..Then breathe out through your mouth…and notice your stomach and chest…deflating and emptying.

I want you take another deep breath in through your nose…and this time…notice your shoulders gently lifting….now breathe out through your mouth…and notice your shoulders…moving back down.

Remember to make sure that your spine is straight and you are sitting tall in your chair….this will give your lungs the best possible chance to fill and empty with air.

[PAUSE FOR 5 SECONDS]

It can also help to notice the sensations in your trunk filling and emptying with air by placing your hands on your belly and chest.

[PAUSE FOR 5 SECONDS]

Continue to breathe in…and out…like this now for a few more times… noticing the sensation of your trunk gently filling and emptying with air.

[PAUSE FOR 5 SECONDS]

Now…I'd like you to move your attention away from your trunk…towards your head and mind…Now it's time to use your mind to reach out with your awareness…like the branches of a tree…into the world around you.

[PAUSE FOR 5 SECONDS]

Continuing to breathe in…slowly through your nose…and out through your mouth,…open your eyes…and notice three things you can see around you.

[PAUSE FOR 5 SECONDS]

Now…notice three things you can hear.

[PAUSE FOR 8 SECONDS]

Now…notice one thing you can taste…in your mouth…It may be…that you can't taste anything in your mouth right now…..simply just notice that.

[PAUSE FOR 5 SECONDS]

Now…notice one thing you can smell…Again…you may not be able to smell anything…but simply notice that.

[PAUSE FOR 5 SECONDS]

Finally…notice three things you can feel….Perhaps the clothes against your skin.....the air on your face and hands…or the chair…against your back and thighs.

[PAUSE FOR 5 SECONDS]

Take a few more moments to notice anything else from the five senses…and when you are ready…begin to gently wriggle your fingers and toes …and have a stretch.

Remember you can use this tree exercise to refocus and bring your attention back to the present moment whenever you feel your thoughts are taking you away…..You can also make this exercise…as short or as long as you like.....just by spending more or less time at each stage…. you can use this exercise…almost anywhere…..

[END OF SCRIPT]

3 minute breathing space

Script

Find a quiet space….. make yourself as comfortable as you can…. allowing your gaze to be soft…. or somewhat unfocused if your eyes are open….. at any point you can close your eyes if you want to.

Start by bringing your awareness to how you are sitting in your chair…. What do you notice about it? Maybe adjusting your body so that you are sitting with your legs uncrossed and feet flat on the floor…… are you sitting upright but not stiff? Adjust yourself as best as you can…. allow the crown of your head to point towards the ceiling and your chin to lower slightly… Remember…. Always feel welcome to adjust your body when you need to do…

[PAUSE FOR 5 SECONDS]

Take a few moments to get in touch with the movements of your breath… and the sensations in the body…..bringing your awareness to the physical sensations of how your breath is coming into the body….notice how your breath comes in…. through your nostrils…..past the back of your throat… down into the lungs….and notice how it goes out….

[PAUSE FOR 5 SECONDS]

As you breathe in the air moves into your lungs….your chests lifts slightly…. And your belly may gently push out…..making room for more air to fill the bottom of your lungs…. As you breathe out notice how your belly goes back in… towards your spine….like you've let the air out of a small balloon….. notice your lungs gently release the air back out through the back of your throat and out of your nose….

Take a few minutes to feel the sensation of your breath…. As you breathe in and as you breathe out…. noticing your breath as it comes in…. and out…..

[PAUSE FOR 5 SECONDS]

There is no need to try and control your breath in any way…… just pay attention and watching the breath as it comes in and goes out….

Breathe in….1….2….3…..and out…..1...2…3…… let's try that again… breathe in…1….2….3……and out….1…2…3……

[PAUSE FOR 5 SECONDS]

And ….. sooner….. or later…. Your mind will wander away from the focus on the breath to thoughts, planning….daydreams….. drifting along…..this is perfectly okay…… it's simply what our minds do……

[PAUSE FOR 5 SECONDS]

And when you're ready….bringing your awareness back in the room….. where you are sitting….. maybe rolling your shoulders a little bit….. wiggling your fingers and toes….and then opening your eyes… tell yourself that you will come back to this…. As you teach your body and mind to pay attention in a different way than you usually do….

[END OF SCRIPT]

Deep relaxation

Script

Begin by making yourself as comfortable as you can be..... If you can, find a quiet space without distractions….

Now, start by taking a deep breath in through your nose.... then slowly breathe out through your mouth.... Take a few moments to focus on the natural rhythm of your breathing…. breathe slowly

through your nose..... and out through your mouth.... Don't try to control the pace…. just let it happen....

[PAUSE FOR 5 SECONDS]

Whilst breathing….feel the sensations of your bodily movement… the movement of your abdomen raising and falling as you breathe.....

[PAUSE FOR 5 SECONDS]

Notice how your body takes control of your breathing for you, allowing you to drift into a state of relaxation.....deep relaxation……

[PAUSE FOR 5 SECONDS]

You may find that your eyelids are feeling a little heavy..... Feel the area around your eyes relax and soften, and let your eyes gently close if you feel comfortable.....

I'd now like you to become aware of your body, and the weight of it against the surface you are resting on..... Feel your body relaxing and sinking down deeper as you exhale.....

[PAUSE FOR 5 SECONDS]

Take a moment to draw your attention to the different areas of your body… bring your awareness to each part of your body….you can allow yourself to let them go and drift into an even deeper state of relaxation.....

[PAUSE FOR 5 SECONDS]

Continue to breathe deeply.... feel the weight of your head and relax your neck muscles.... let your shoulders soften as you exhale....

[PAUSE FOR 5 SECONDS]

Now move your awareness to your chest and torso..... feel the breaths entering and leaving your body..... with every breath….let any tension melt away.....into deep, deep relaxation…. the more you allow your body to relax the more your body is preparing to drift into a deep and tranquil sleep.....

Feel the weight of your arms, and let them relax right down to the tips of your fingers and finger nails….

If thoughts come into your mind, that's ok..... Let the thought enter your mind, then release it and let it go as you breathe out.....

Allow yourself to just focus on the present moment.....

Feel the length of your legs and let them sink down and relax…from your thighs..... to your knees..... right down to your feet and your toes..... Release any tension and let your body lie still as you breathe deeply in..... 1….2…3…and out..... 1….2…3….

[PAUSE FOR 5 SECONDS]

Images from your day may appear in your mind..... allow the image to enter your mind and then let the images or thoughts fade away..... allow yourself this time to completely calm your mind and body, knowing that any thoughts you have can be dealt with later.....

Feel your breaths deepen.....

How are you feeling….. are you feeling relaxed and heavy.....Lie still and concentrate on slow, rhythmic breathing..... allow yourself to feel heavier with every breath.....

Your mind is clear..... Let your body relax into a state of tranquillity.....

[PAUSE FOR 5 SECONDS]

Now… gently…and softly… open your eyes… and take another deep breath… bringing your awareness back in to the room….. you might want to stretch out your arms…and legs…. And allow yourself to feel refreshed… ready for the rest of your day….

[END OF SCRIPT]

Overthinking? – 5 minutes time-out

Script

When your mind is racing and you need a moment to calm your thoughts… taking five minutes to meditate can make a difference… Start by making yourself comfortable…. sitting or lying down…gently closing your eyes…I'd like you to really pay attention to your breathing…slowly…inhaling through your nose… and exhaling through your mouth…you can do this as many times as you are comfortable… Every time you exhale….I want you to imagine one of your worries… leaving your body… Now let's do this together a few more times…

1…..breathe in 1…2…3……..and……..out…1..2…3….

1…..breathe in 1…2…3……..and……..out…1..2…3….

1…..breathe in 1…2…3……..and……..out…1..2…3….

[PAUSE FOR 5 SECONDS]

Throughout your listening journey…if your mind wanders off…remember… that is ok…try to bring It back by focusing on my voice.

[PAUSE FOR 5 SECONDS]

Whilst focusing on your breathing I invite you take a journey….. a journey through a peaceful place…I want you to picture this place…what does it look like? Who is with you or are you alone? … What kind of colours do you see? Is the place warm or cold?…. I want you to imagine this peaceful place is surrounded by a beautiful blue lake… with clean and pure water.….

[PAUSE FOR 5 SECONDS]

Imagine yourself taking steps towards the clean, blue water… you start by soaking your feet in…the coolness… or… the warmth of the water calms…..and relaxes you…… Whilst soaking your feet… continue taking deep breaths in… and out… As you inhale and exhale…you can feel the fresh, clean air inside of your lungs….the air going through your lungs….to your chest and all around your body….. it feels so cleansing…

Now imagine… with every breath you breathe out… any negative feelings and worries are slowly releasing into the water……through the bottom of your feet…imagine all the worries and stresses leaving your body with each breath…let them go… just for this moment…

Breath in….1…2…3…..and out….1..2…3…. and again…breath in…1…2..3…and out..1…2..3….

[PAUSE FOR 5 SECONDS]

Just like a lake… our mind can also be filled with a depth of lots of thoughts…sometimes these thoughts can swirl around your mind… and can become overwhelming… Allow yourself to gently observe these thoughts…as they come… then to let them go… back into the water….

Take this present moment to reflect on this… use this time as a way to relax and rejuvenate yourself….. without any distractions…any unhelpful thoughts crowding your mind…. allow yourself to be in this moment… in YOUR peaceful place… feeling….. calm….and relaxed….. whilst walking through the beautiful….blue…ocean…. take these five minutes… just for you….

[PAUSE FOR 5 SECONDS]

And when you're ready….tell yourself you will revisit this peaceful place….take a mental imagine of this place…… It is your safe place… it will always be here for you….

[PAUSE FOR 5 SECONDS]

Slowly taking a deep breath….when you're ready... I want you to slowly wiggle your fingers… and toes…… and gently open your eyes…

[END OF SCRIPT]

Finding your inner light

Script

Start by settling into a comfortable position and allow your eyes to close or if you feel comfortable, keep them open with a soften gaze...

Bring your attention to your breath….take your time…focus on your breath….begin by taking several long slow deep breaths….. Breathing in from your nose…….1….2….3…. and exhale out from your mouth…1…2…3 breathe in….1…2….3 and breathe out…1….2…3…. breathe in….1…2….3 and breathe out…1….2…3….

Allow your breath to find its own natural rhythm….. bring your full attention to noticing each breath in as it enters your nostrils….. travels through your lungs….. and causes your stomach to expand……slowly let your attention drift away from your breath…. and observe your thoughts arising naturally…

[PAUSE FOR 5 SECONDS]

In this relaxed state…. Listen to the sound of my voice…and if your attention drifts… that's ok… bring your attention back by following the sound of my voice…

Sometimes we might not like our thoughts… but it can be helpful to try not to judge them or their content… and instead observe them from afar…. If a thought arises… observe it with curiosity for a moment…. and then let it gently pass you by… like a log floating under a bridge…

[PAUSE FOR 5 SECONDS]

It's perfectly normal to find yourself lost in thought or distracted… when practicing mindfulness….and if you do…. gently return your attention to your breathing… and continue letting your thoughts come and go…..

[PAUSE FOR 5 SECONDS]

You may find that the same thoughts keep arising….this is completely normal…being aware of thought patterns is part of this process… if you do notice any patterns of thoughts…acknowledge these patterns exist… and let them pass you by…

[PAUSE FOR 5 SECONDS]

Now return your attention to the sensation of breathing…. Breathe in for 1…2…3… and out for 3 and out…. and again…breathe in..1…2..3… and in and out 1…2..3…

We often get overrun with negative thoughts… that can impact the way we feel…. and we may lose sight of the positive things in our life… Bringing attention to these positive things, allows us to find our inner light even when negative thoughts seem overwhelming……

[PAUSE FOR 5 SECONDS]

At this present moment… I would like you to try to think of something positive you have experienced recently, or something you are grateful for …. This could be anything from a nice cup of tea…. to receiving a smile from a stranger…

[PAUSE FOR 5 SECONDS]

Try to picture this positive thing ….and notice how it makes you feel…. How does this make you feel…? Acknowledge this feeling…. Where do you feel it in your body?

[PAUSE FOR 5 SECONDS]

Now think of one more positive thing… that you are grateful for… it could be the sunshine… the warmth of your clothes… or something about yourself that you like….

[PAUSE FOR 5 SECONDS]

Sit with that warm feeling… and allow it to expand and grow within you… in your body….

[PAUSE FOR 5 SECONDS]

It is important we realise that no matter how we feel… it is possible to give ourselves a boost of positivity….or to shine a small light in our lives… We might not always be able to control the outside world… but by focusing on the positives that have been…that could be…and that are…we realise we have the strength to influence our mind…and our feelings…

Take a moment to think about this…

[PAUSE FOR 5 SECONDS]

When you're ready…gently return your attention back to your breathing....back to the present moment.... allow yourself to notice the natural rise and fall of your stomach…take a deep breath in…..hold it….and release…..and again…. gently breathe in…. and out…. gently open your eyes… remember to tell yourself you will return to this mindfulness audio again…..

[END OF SCRIPT]

Calming your mind

Script

Begin by making yourself as comfortable as you can be... If you can find a quiet space without distractions, where you feel comfortable enough feel safe in your surroundings….

Start by taking a deep breath in through your nose... then slowly breathe out through your mouth...

Take a few moments to focus on the natural rhythm of your breathing… breathe slowly through your nose... and out through your mouth... Don't try to control the pace…. just let it happen.....

[PAUSE FOR 3 SECONDS]

Take your time…focus on your breath….begin by taking several long slow deep breathes….. Breathing in from your nose for three counts.....1….2….3…. and exhale out from your mouth…1…2…3 breathe in….1…2….3 and breathe out…1….2…3…. breathe in….1…2….3 and breathe out…1….2…3….

Allow your breath to find its own natural rhythm…..

Notice any areas of tension within your body…and with each breath out…let these areas relax , take several deep breaths….with each breath out, feel your body becoming more relaxed…notice how your muscles become looser and looser… sink deeper into this state with each breath out …

Breathe in 1…..2….3….and out 1….2….3, breathe in 1….2…..3 and out 1…2….3….feel your body loosening with each breath out ….it's normal to begin to feel your body sinking into your bed….or even floating ….continue to take deep breaths…… and allow yourself to become more and more relaxed with each breath….

[PAUSE FOR 5 SECONDS]

Now your body is calmer…you may find your mind wandering….try and focus your attention on the darkness behind your closed eyes….

Imagine you are looking out through a point between your eyebrows….focus on this point….look deep into this space and notice any visual patterns that might be occurring

[PAUSE FOR 5 SECONDS]

If thoughts begin to arise…. gently turn you attention back to this space…

It can often be difficult to fully switch off when trying to relax….sometimes our thoughts can seem impossible to get away from…instead of wishing them away…try and focus on looking deep into this space ….although thoughts may continue to rise….you now have a distraction from racing thoughts…..and you can return to this point of focus at any time if you notice yourself getting caught up in thoughts….

[PAUSE FOR 5 SECONDS]

Notice any lights or flashes that may be occurring in this space... you may see different colours…swirling patterns….or maybe a purely black void…try not to force anything….simply become curious of whatever is happening behind your closed eye…breathing deeply …. Become more and more intrigued…..

[PAUSE FOR 5 SECONDS]

When you're ready…tell yourself that you will use this technique to help you focus and stay present in the moment….. slowly coming back to your breathing… take slow deep breath…. Breathe in 1..2...3… and out 1…2..3…feel free to do this several times, and if you like, try and focus on the space behind your eyes if you're finding it difficult to concentrate…. Deep breaths in..1..2.3… and out 1..2..3….

And when you're ready…..Slowly open your eyes….take your time….stay lying or sitting….look around the room… and observe your surroundings….. for a few more minutes….

[END OF SCRIPT]

Appendix 3. Intervention communications to group

Timing	Rationale	Mode of delivery	Content
Pre-intervention	Introductory email to wider team	Email to whole Patient Engagement team	Hi everyone, I've spoken to many of you already, but I'm happy to share that I'll be start a four-week mindfulness practice group, open to anyone in the team to join in. Busy periods in work and busy lifestyles can soon have us feeling increased stress, and regular mindfulness practice is a great way to manage stress and increase wellbeing. I have attached a PDF with information from Mind about the benefits of mindfulness on mental wellbeing. **What is the mindfulness practice group?** Mindfulness can be practiced at any time, anywhere, but to get into a habit of being mindful, it's great to have some dedicated time put aside to practice. The mindfulness group will get you into a routine of regular mindfulness practice (on your own, remotely, using guided audio podcasts) in short periods of time that can fit into your daily workday routine. If you're not a regular practitioner of mindfulness (or even if you are!) why not give it a go and see if trying something new for a few minutes a day can have a positive impact on how you feel. This will all take place remotely so that wherever you are, you can join in. **If I join the group, what will happen?** If you think you'd like to join the group, I'll first ask you to fill in a confidential and anonymous short questionnaire. After that, the fun begins! I'll share with you some mindfulness audio clips and ask you to put 5-10 minutes aside before you start work each day, and at the end of your working day to listen to a guided mindfulness audio. We'll set up a Teams chat for those who are joining, and I will be sending check-in messages and encouragement, and giving you some information on mindfulness and how you can incorporate it into your life as we go. At the end of the four weeks I'll ask you to fill in the questionnaire again, and we will check in and see if you notice any benefits, and reflect on how you feel about mindfulness and whether it's something that you think is a beneficial addition to your life. If you have any questions or you'd like to join the group, please send me a message/email and I'll then send the group more information and we can get started! Thanks everyone, Helena
After information meeting	Instructions reminder and links to relevant materials	Email to intervention group	Hi everyone, Thank you very much for your interest in taking part in the mindfulness practice group, and for attending the information meeting. Please find some information below to recap next steps:

			1) Before we begin, please complete the following questionnaire 2) Please put aside 10 minutes before the start of your working day, and again at the end of your working day. Listen to a mindfulness podcast of your choice for 5 minutes in the morning before you begin work, and at the end of the day when you log off from work. There are a host of podcasts in the link here. Some of these are longer than 5 minutes, so feel free to either listen to the full audio, or just a 5 minute section for your dedicated practice. 3) Keep a personal record of completing the mindfulness practice each time using the Mindfulness Practice Tracker sheet to keep yourself on track, and to note any thoughts, feelings and reflections each time. This is a personal log, just for your own benefit, and I won't be asking to see this tracker. 4) I will set up a Teams chat for those in the group. As discussed, after each mindfulness practice, if you feel comfortable, please share in the group any reflections you have. Otherwise, please stay tuned in the Teams chat for reminders, updates and mindfulness information as we go. 5) At the end of the four weeks, I will send you a link to a second questionnaire similar to the one linked above, to measure progress or changes. The plan is to begin our mindfulness practice on Monday, so get ready to begin before work starts on that day. I will send a reminder in the morning 😊 Please get in touch if you have any questions. Thanks, Helena
Week 1	Action planning	Message in MS Teams intervention group	Today is the first day of our mindfulness practice! Before you begin, take a minute to think through the steps you will take in order to complete the practice. *What time of the morning will your practice take place?* *Where will you sit?* *How will you make sure you are not disturbed during those dedicated few minutes?* *How will you make yourself comfortable and relaxed?* Thinking through the steps we are going to take before starting a regular behaviour like this helps us to stay on track with our plans.
	Psychoeducation	Message in MS Teams intervention group	Hi everyone, how is your mindfulness practice? Mindfulness is a great tool that can be practiced anywhere, at any time. I encourage you all to see if you can start incorporating some mindful moments in your day to day life, and why not try to continue your practice over the weekends? Some people set aside specific tasks to focus in on the present moment – this

			could be as simple as while you're washing the dishes, or going for a walk outside.
	Peer support prompt	Message in MS Teams intervention group	Hi everyone! It's the last day of our first week of mindfulness! Remember, this group is a space to share your experiences if you would like to. How has this week been for you? Does anyone have any reflections they would like to share?
Week 2	Self-monitoring of behaviour	Message in MS Teams intervention group	Hello everyone, how is your mindfulness practice going? Don't forget to track when you complete your mindfulness practice each day using the tracker document. This can be a great way to keep yourself on track, and also to notice any changes in how you feel – is it getting any easier? Are any new thoughts or feelings arising during week two? 😊
	Encouragement and psychoeducation	Message in MS Teams intervention group	Well done everyone for staying on track and practising mindfulness regularly. Repeating a behaviour like this at the same time each day and in the same setting is very helpful in forming a long-term habit. Make sure to try and complete your practice in the same context each day.
		Message in MS Teams intervention group	We're well into week two of mindfulness! How are you all finding it? Does anyone have any feedback they'd like to share with the group about their experience so far?
Week 3	Prompt to complete behaviour	Message in MS Teams intervention group	Today is the start of a new mindfulness week! Don't forget to put ten minutes aside each morning before you start your work day to take some time to be in the present and centre yourself.
	Psychoeducation	Message in MS Teams intervention group	Mindfulness has many positive benefits, including reducing stress and improved general health. Read more here: https://positivepsychology.com/benefits-of-mindfulness
	Reflective motivation	Message in MS Teams intervention group	Did you get a chance to take a look at the article I linked above? Why not take five minutes to consider how some of these benefits could apply to you, and feel free to share your thoughts in the group.
Week 4	Prompt to complete behaviour	Message in MS Teams intervention group	Just one week of our group mindfulness practice left, how is everyone feeling? Taking five minutes to be present and practice mindfulness is also a great way to separate the working day from your evening.
	Psychoeducation	Message in MS Teams intervention group	Incorporating mindfulness practice into your daily routine can have many benefits. One of the benefits of mindfulness in the workplace has shown to be reduced work-related stress.
	Prompt peer support and reflections	Message in MS Teams intervention group	We have two days left of our group mindfulness activity. Has anyone noticed a change in how they feel while practising mindfulness this week compared to during week one?
Post-intervention	Outcomes measures	Email to intervention group	Hi everyone, Thank you for taking part in the mindfulness practice group. As mentioned, please could you complete the questionnaire linked here. Please do let me know if you have any questions, or any additional feedback beyond the questionnaire. Many thanks, Helena

Appendix 4. Mindfulness Practice Tracker

Mindfulness Practice Tracker

Use this space to keep track of your mindfulness practice and any reflections you have each time. Use the reflective prompts below to help you.

Mindfulness prompts

How did you feel before vs. after mindfulness practice?
What thoughts did you have during the practice?
Did you have any unexpected thoughts or feelings?
How did you feel during the mindfulness practice?
How easy/difficult did you find it?

Week 1

	AM	AM reflections	PM	PM reflections
Monday	☐		☐	
Tuesday	☐		☐	
Wednesday	☐		☐	
Thursday	☐		☐	
Friday	☐		☐	

Week 2

	AM	AM reflections	PM	PM reflections
Monday	☐		☐	
Tuesday	☐		☐	
Wednesday	☐		☐	
Thursday	☐		☐	
Friday	☐		☐	

Week 3

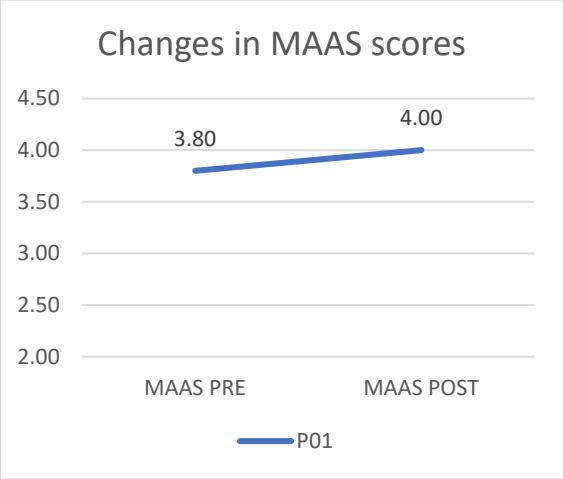
	AM	AM reflections	PM	PM reflections
Monday	☐		☐	
Tuesday	☐		☐	
Wednesday	☐		☐	
Thursday	☐		☐	
Friday	☐		☐	

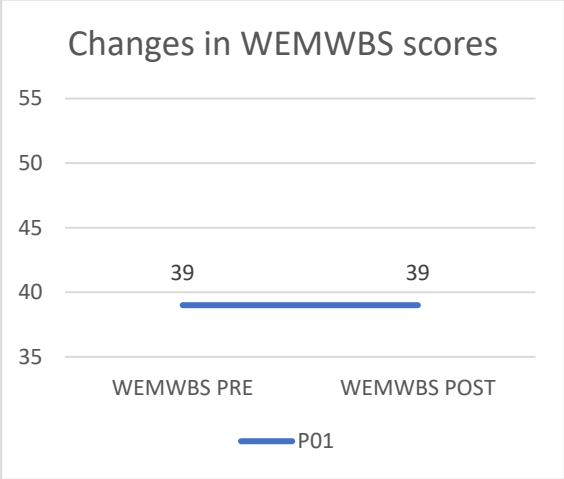
Week 4

	AM	AM reflections	PM	PM reflections
Monday	☐		☐	
Tuesday	☐		☐	
Wednesday	☐		☐	
Thursday	☐		☐	
Friday	☐		☐	

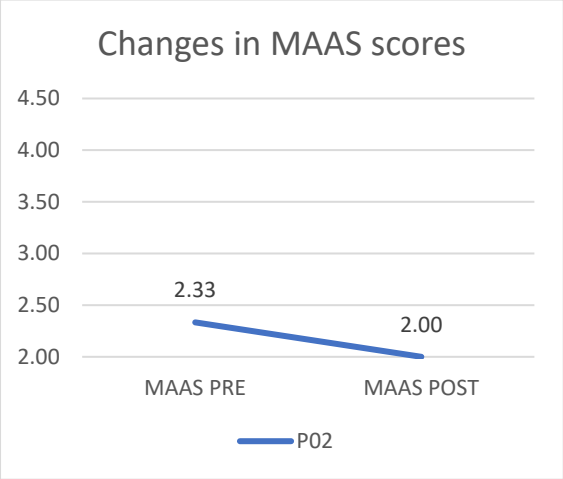
Appendix 5. Individual participant scores

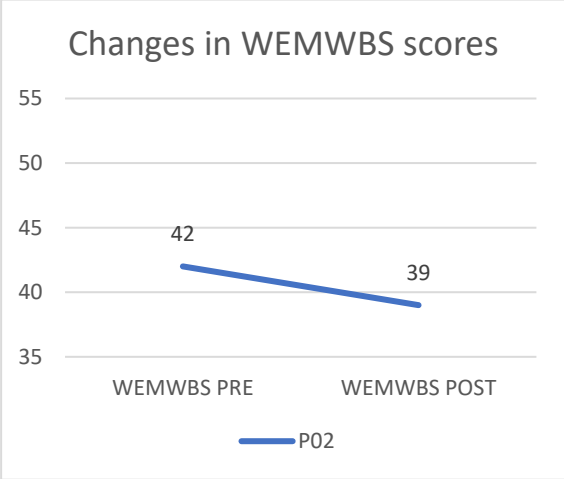
Participant 1.



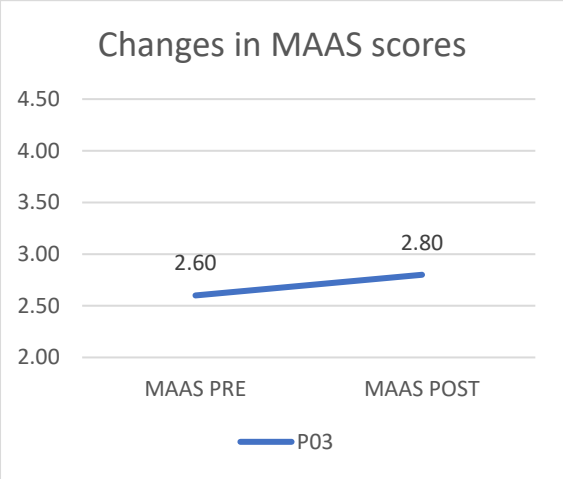


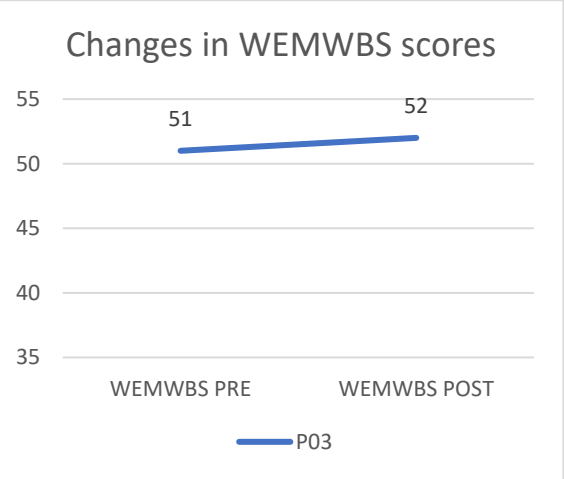
Participant 2.



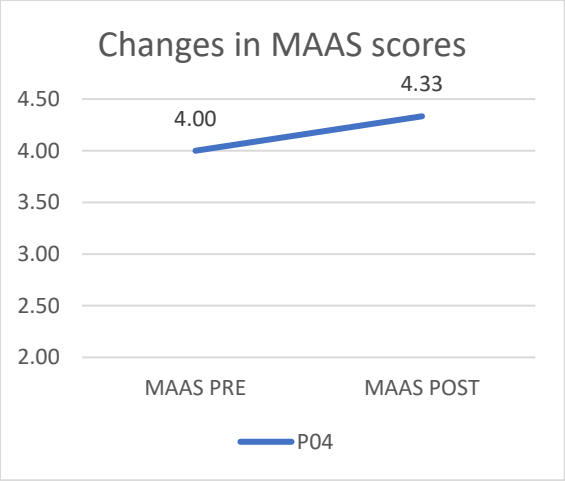


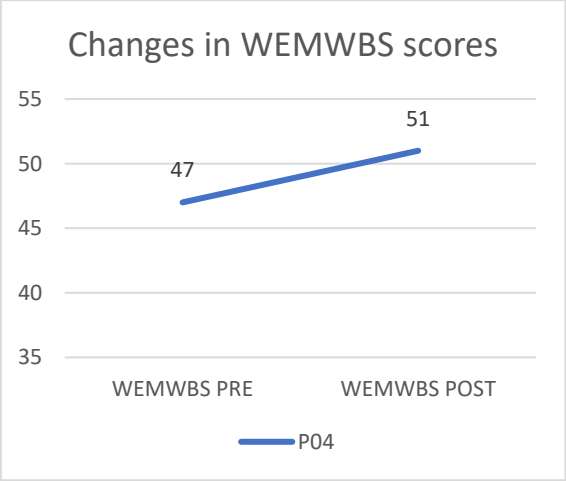
Participant 3.





Participant 4.





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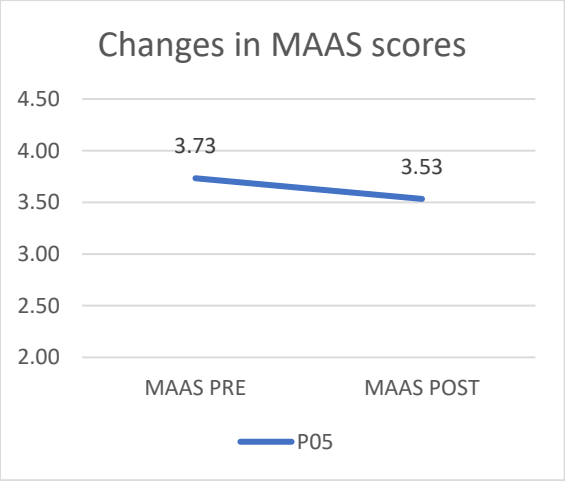

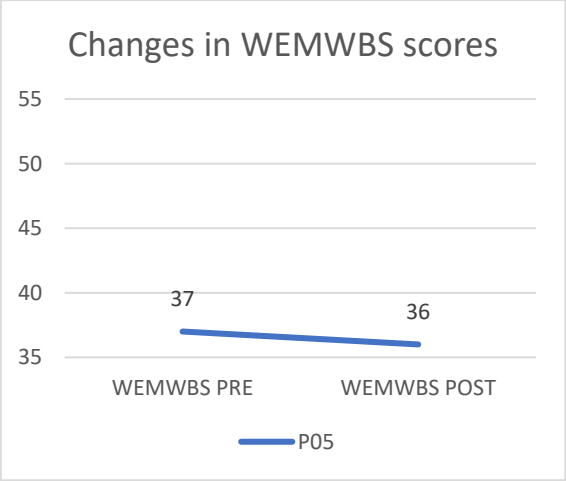

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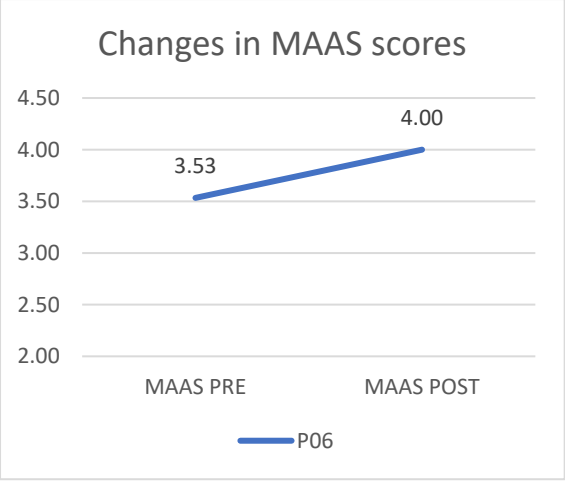

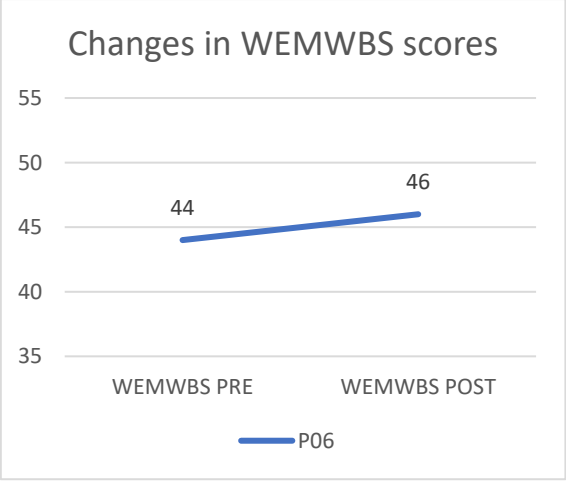

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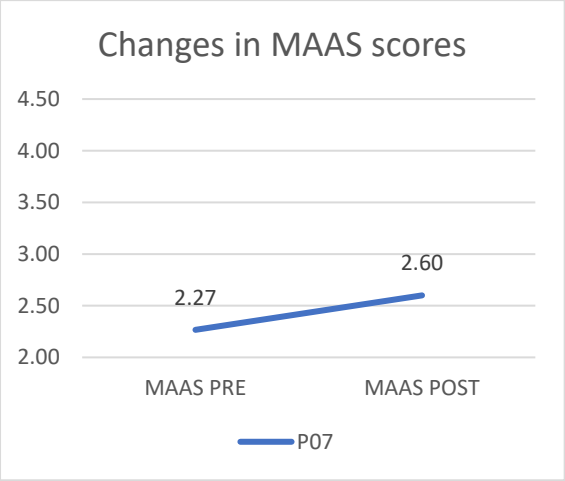
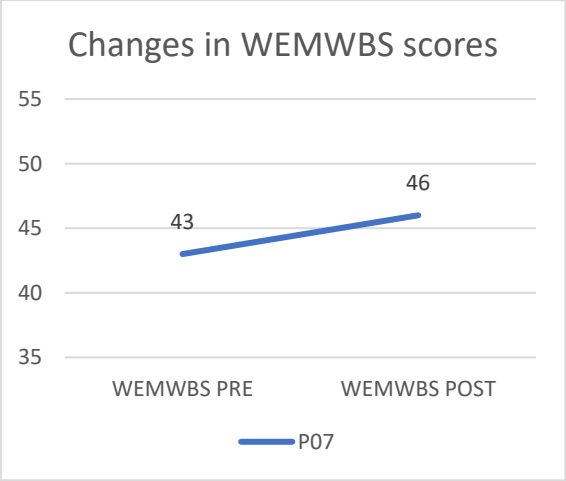




Teaching and Training

This section contains a case study, which describes my experience designing, delivering and evaluating a five-part teaching series on the fundamentals of health psychology to a multidisciplinary team within my workplace. Also contained in this chapter is a Teaching and Training Diary, which hosts descriptions of and reflections on a number of teaching and training sessions I have delivered throughout the Professional Doctorate.

Teaching and Training Case Study

Competency in teaching and training is a vital skill for a Health Psychologist. The ability to disseminate scientific information, and to share knowledge with healthcare professionals and patients alike, is crucial to the field. Working within a multidisciplinary team in healthcare communications and patient support afforded me the valuable opportunity to upskill and educate my team of colleagues on the principles of health psychology and how it is applied within the setting we work in. A recent restructure of our department meant that some members of the team had never worked with health psychologists before, and most team members are required to be able to consult with pharmaceutical clients and patient advocacy organisations on how health psychology may support their business. I approached the senior leadership team with a proposal to host a series of five training sessions to ensure the whole team had at least an elementary level of understanding and knowledge of health psychology.

Assessing training requirements

The team comprised commercial consultants, copywriters, researchers and project managers, all with various levels of understanding of health psychology, as well as psychologists and assistant psychologists of various backgrounds. It was important to ensure I gauged the baseline knowledge level of the group as a whole and presented information in a way that was appropriate to the audience collectively. After careful consideration, I opted not to use a formal measure of baseline knowledge. Before planning and developing the training sessions, I had the opportunity to work closely with each individual member of the team, and naturally developed an understanding of their level of health psychology understanding from workplace conversations and shared project work. I used this experience to assess the training needs of the group.

After considering the collective baseline knowledge of the group, I decided to develop the training course with an assumption of no prior knowledge of health psychology from the attendees. Although some attendees were trained in health psychology, the course was developed primarily to upskill members of the wider multi-disciplinary team, so that collectively, the team's understanding of health psychology was increased and they had a shared baseline level of understanding. Thus, it felt vital to ensure everyone's needs were considered and the knowledge base of the wider team was prioritised, while those trained in health psychology could join as a refresher course, and to apply their existing knowledge to the current workplace setting. Upon reflection on this decision, I consider it to be the correct choice; after completing the training sessions, attendees who were trained in health psychology commented that they found it to be a helpful knowledge refresher, and some even learned

something new. Meanwhile, members of the wider multi-disciplinary team shared that they learned a lot of new information.

Crafting the content outline

Drawing from my experience of receiving education and training in health psychology, referring to handbooks such as Jane Ogden's 'Health Psychology' (Ogden, 2012), consulting with psychologists in the team and considering the professional relevance of various knowledge areas to the training group in question, I developed learning objectives for five training sessions (Appendix 1). Due to the varying backgrounds and knowledge levels of the training group, I dedicated training session one to a wide-scoping introduction to health psychology as a field. Subsequent sessions then focused on health beliefs and significant theories and models within health psychology; health literacy; the application of health psychology in the pharmaceutical industry and research methods. The content was designed to facilitate knowledge building over the course of the programme by introducing information, terminology, and concepts from the first session, referring back to these items in later sessions and adding depth. This purposeful technique of building upon previous knowledge in each session means that learning can happen in manageable steps, with students making connections between the concepts with the support of a teacher (Fani & Ghaemi, 2011).

Developing a training programme

There is an ever-growing evidence base guiding effective teaching methodology. In order to develop an effective training programme, it is helpful to consider the learning styles and individual differences of the training group. Kolb's experiential learning theory (Kolb, 1984) outlines a four-stage cycle of cognitive processes that occur in order for an individual to acquire knowledge. The stages move from the individual having a concrete experience, to reflective observation on the experience, to abstract conceptualisation, i.e., learning from the experience, and then to active experimentation involving testing out what was learnt. I made sure to allow the students to experience these stages of learning throughout the programme by engaging them with activities that required thinking and participation to provide a concrete experience, allowing the learner to immerse themselves into the subject matter. I encouraged reflection during the teaching sessions by asking for questions and involvement throughout, and then recapping what had been learnt at the end of the session, allowing students to share any additional thoughts. Reflection on a broader scale was encouraged at the end of session five, when students were asked to reflect on whether their confidence of the subject matter had increased. As the sessions progressed, more opportunities for abstract conceptualisation arose. Theoretical frameworks were introduced and discussed in session two, and then recapped and referred to in future

sessions, to allow students to build a theoretical understanding of the new concepts that had been presented. The fourth stage of Kolb's experiential learning theory, active experimentation, is activated when students apply their learnings to their real-world roles, and I prepared students for this by drawing links between their new knowledge, and their current responsibilities in the workplace.

It was likely that members of the group would also have different learning styles and preferences, and so would receive and process new information optimally through varying modalities. Building upon Kolb's theory of learning styles, Honey and Mumford developed the Manual of Learning Styles (Honey & Mumford, 1986). This theory proposes four learning styles; activists learn by participating in a hands-on style, theorists learn by understanding the theory behind why something is the way that it is, pragmatists learn by drawing connections to how this learning can be put into practice in the real world, and reflectors learn by observing others, gathering information, and drawing conclusions. In order to ensure that my programme was as accessible as possible, I used this framework to ensure that there was space for all four types of learning to occur within my training programme. I endeavoured to allow for group discussion and participation, while allowing others to reflect and read information on screen. When theories and models were shared, I made sure to introduce real-life comparisons. When teaching a group remotely, I considered that it would be difficult to tailor my teaching to the learning styles of each person individually, so concluded that allowing for all styles to be explored was the next best approach. Research also suggests that tailoring to individual learning styles isn't pivotal to the educational success of the student (Dinçol, Temel, Oskay, Erdoğan, & Yılmaz, 2011), and that exposing students to a variety of teaching styles can stimulate learning and flexibility in learning (Cavanagh & Coffin, 1994).

When considering the most appropriate teaching approaches, I also assessed the previous learning experiences of the group. All attendees had experience of undergraduate and some postgraduate university teaching in scientific subject areas that meant they were likely have been exposed to a number of teaching styles and settings, particularly a didactic approach. With this in mind, I devised the training programme to combine short periods of didactic teaching for efficiency, with interactive experiences involving the whole group. With an undergraduate level of education noted as a baseline, the seven principles of good practice in undergraduate education (Chickering & Gamson, 1987) were also consulted in the development of the training course. The authors theorise that learning is enhanced when the students feel part of a team rather than a sense of competition between themselves. I utilised this principle by encouraging students to discuss ideas between themselves, and to respond to each other's thoughts. This allowed students to learn from each other and forged a sense

of collaboration in the shared goal of learning. Chickering and Gamson (1987) also define learning as "not a spectator sport". Although some short periods of didacticism were required, I put a focus on active learning, encouraging students to relate concepts to past experiences and current issues in their work. Building on this, teaching theory also advises that presentation of emotional material and allowing students to find relevance in the materials to current events and 'real life' scenarios can deepen learning (Persellin & Daniels, 2015). Therefore, real-world applications, for example, of behaviour change, health literacy and research ethics were discussed and shared during the training programme.

In drawing upon and integrating teaching styles into the training programme, I was aware of my own preferred personal style of teaching, mindful of the notion that a teacher who is adopting their own preferred style will have more successful outcomes (McKimm & Jollie, 2007). I am more confident in teaching in the style of a facilitator for learning rather than as an expert imparting knowledge, and so I made sure to adopt this style as it applies well to small groups of students.

According to Vaughn and Baker, using a variety of teaching styles can encourage adaptability and lifelong learning in students (Vaughn & Baker, 2001). Deepening my understanding of pivotal teaching and learning theories during my research and preparation for this training programme meant that I was able to draw from many valuable methodologies and utilise the most suitable approaches throughout the teaching of the programme.

Remote learning and delivery

Because of work-from-home government and company-wide guidance due to the Covid-19 pandemic, all sessions needed to be delivered remotely using *Microsoft Teams* video calling technology. I didn't anticipate that learning would be hindered by the virtual environment, as workplace operations had moved online 12 months earlier due to the pandemic, and previous research has shown virtual learning to be at least equivalent to traditional face-to-face learning in terms of effectiveness (George et al., 2014). The nature of delivering these sessions virtually meant that I had to make certain practical considerations that would not have applied in a face-to-face setting. Remote delivery meant that it was more difficult to gauge the engagement level of the group using visual cues, particularly if attendees did not have their camera turned on during the session. Therefore, I made sure to pause often to ask if the group had any questions and sought frequent verbal input throughout the sessions.

The Community of Inquiry theoretical framework (Garrison, Anderson, & Archer, 1999) was a key model of learning that I consulted when designing this learning programme for online delivery. This framework posits that the three elements of social presence, cognitive presence and teaching presence are crucial components of a successful educational experience in an online learning environment. Facilitating social presence through affective engagement, open communication and group cohesion is key to creating a virtual climate that encourages questions, contributions and criticisms of ideas from the students (Garrison, 2011; Rogers & Lea, 2005). Cognitive presence can be encouraged through critical discourse of a problem including conceptualisation, reflection and questioning to facilitate critical thinking and the construction of meaning (Moore, 2019). Teaching presence has been labelled as the unifying force in developing a community of inquiry (Moore, 2019) and is defined by the design, facilitation and direction of cognitive and social processes (Anderson, Liam, Garrison, & Archer, 2001). To embed this theory into my practice, I drew from Garrison's principles that guide teachers to create and sustain a community of enquiry. These principles include planning for the creation of open communication, establishing purposeful inquiry dynamics and sustaining respect and responsibility (Garrison, 2011). Aiming to develop a community of inquiry in the online setting allowed me to prioritise and focus my intentions and behaviours throughout the programme with the goal of eliciting social and cognitive presence.

Creating supportive teaching materials

In order to support the verbal delivery of the training programme, I developed a series of *PowerPoint* slides for each training session (Appendix 2). Within these slides I aimed to include a combination of both text-based information and visuals including imagery and diagrams. Mayer's cognitive theory of multimedia learning reasons that people have a limited capacity for information processing in verbal and visual channels, and for meaningful information processing to occur, the learner must be able to select, organise and integrate new information with prior knowledge (Mayer, 2008). Therefore, it understood it to be important to balance the use of verbal and visual information in a conscious way to maximise the learning potential of the student group. Rudolph outlines twelve principles of multimedia design to effectively engage the learner in the learning process, including collated published theories on visual presentation of information and directing attention (Rudolph, 2017). I aimed to incorporate learnings from these theories including the signalling principle (signposting information with call-outs and gradual presentation of information on the slides), the spatial contiguity principle (presenting images and related words as close together as possible) and the temporal contiguity principle (verbalising instructions and information in tandem with a visual presentation of the subject matter).

When developing the training programme, I also made careful consideration to the language I used in both the materials and my own delivery. All attendees were either native or fluent English speakers with high literacy skills. This gave me a gauge as to how best to communicate the materials in terms of language. I was also mindful of the individual differences principle in Mayer's cognitive theory of multimedia learning that posits that the instructor should speak in a conversational style rather than a formal style, to enhance learning (Mayer, 2009). I made sure not to make any avoidable assumptions of knowledge of technical or health-related terms or acronyms, to ensure the programme was as accessible as possible to a wide audience.

In addition to the materials presented during the training sessions, I also developed and shared, via email, a reference list of sources I had cited, as well as a short list of further reading resources should the attendees be interested in learning more (Appendix 3). This allowed attendees to continue their learning between the training sessions and provided them with trusted sources of information.

Delivering the training programme

The teaching sessions were arranged to be delivered on a fortnightly basis, and I planned for each session to last no longer than 40 minutes. The workplace environment means that meetings and video calls are often scheduled on the hour, and it was likely that attendees had another engagement following shortly after the training session. On occasion, colleagues need to leave meetings and calls early to allow for 5-10 minutes to prepare for the next call. I anticipated that allowing a potential 20-minute break in calls would mean that attendees would be able to focus for the duration of the session, without needing to leave early to prepare for their next commitment, maximising their learning potential.

The sessions were attended by between eight and eleven members of staff collectively. There were eight consistent attendees, which allowed for scaffolded learning and knowledge progression to be built from session to session. On two occasions, additional staff members to the core eight could not attend the live session, and so watched a recording of the session afterwards to catch up on the content. When this happened, I encouraged the staff members to reach out to me with any questions they had, to ensure they were comfortable with the content before they attended the next session.

Session 1 reflections: Introduction to Health Psychology

At the start of the first session, I encouraged the group to reflect on their current level of understanding of what health psychology is, and what it means to them. I used MURAL, a virtual whiteboard technology, to present an illustration of a ladder, with the rungs numbered from one to ten. I encouraged the group to write their name next to their level of current knowledge, with ten being the highest. Whilst allowing the group to reflect on their current level of understanding, this also allowed me access to a quantified score of their knowledge that I could measure again in the final session.

While delivering the first session, as a product of the work-from-home setting, my personal internet connection was not performing adequately, and my audio connection was intermittent during *Teams* calls earlier in the day. Because of this, I decided to turn off my video camera once I started slide-sharing during the teaching session, to limit the amount of broadband usage, in an effort to minimise disruption. This decision meant that the audio connection and presentation worked well and there were no interruptions to communication. However, I did not communicate my reasons for turning the video camera off to the group of attendees. Upon reflection, I believe I didn't communicate this due to feeling nervous, and this may have caused some confusion. A virtual teaching environment with video cameras turned off means a reduction in the availability of visual cues and body language, and potentially a reduced sense of presence and togetherness (Liang, da Costa Junior, & Piumarta, 2020). Although the internet difficulties were beyond my control, if this were to happen again, I would vocalise why I was going to turn my camera off for part of the session in efforts to retain a sense of togetherness with the group.

Session 2 reflections: Health Beliefs and Changing Behaviour

During session two, I shared an introduction to health beliefs and behaviour change theory. Before this session began, I reflected on the levels of participation in session one, and how they could be enhanced. I was aware that attendees may be more reluctant to participate in discussions in the virtual environment as I had observed a reduction in contribution levels since moving from face-to-face meetings to online. I intended to give the participants as many options to vocalise questions or thoughts as possible. At the beginning of each session, I encouraged attendees to raise a virtual hand, contribute verbally or use the 'Chat' function of *Teams* if they have any questions. At the end of each presentation slide I again asked if anyone had any questions before we moved on and left at least five minutes at the end of each training session for any further questions.

During this session I noted that the group was reluctant to participate in the interactive parts of the training session where open questions were asked. Because of this, the session ended ten minutes earlier than I had anticipated, as I had factored in time for participation that wasn't utilised in full. Some subject matter experts were in attendance, including a Senior Psychologist and the Head of Health Psychology and Research. This could have impacted other attendees' confidence to offer answers to questions as they may have felt reluctant to speak up in this setting. In addition, as the sessions were being recorded, it is possible that some students may have been reluctant to contribute verbally, due to their participation feeling more permanent.

To target this, I adapted the way I asked questions in the following sessions in two ways. Firstly, I allowed slightly more silent time after answering a question, to leave enough space for attendees to think of an answer and then contribute, and secondly, I prepared some example answers to my questions that could serve as prompts to begin a discussion.

Session 3 reflections: Health Literacy

Session three focused on health literacy, its importance and how an understanding of health literacy can be applied to the work that the team does on a day-to-day basis. Reflecting on the adaptations I made in order to encourage more participation and question answering, I felt that this had been effective. Leaving longer silences after asking questions initially felt uncomfortable, but it meant that at least one person each time offered an answer, and perhaps the group needed that extra time to build confidence to answer, or to think of a suitable response. When responses were limited, I shared some example answers first, which also felt to be effective as it encouraged attendees to build upon the example answer I shared. When reflecting on this session once it had ended, I felt confident that it had been delivered successfully. This topic was one that I felt the most comfortable in discussing and delivering, as it is a topic I am passionate about. Upon reflection, I think this helped me to feel relaxed and confident, and in turn, encouraged the attendees to relax and engage more. At this point in the training programme, I also felt that the attendees were becoming increasingly comfortable and engaged, as they knew what to expect from the programme.

Session 4 reflections: Applied Health Psychology in Pharma

During session four, I covered the application of health psychology within the pharmaceutical industry. During this session, I referred back to some of the health psychology models that I had introduced during session two and was pleased to note that the group responded well to this and had retained an understanding of these models. This demonstrated that a knowledge base was being built throughout

the training programme. The group were also even more vocal during this session. I suspected that this was due to the application of health psychology to the pharmaceutical industry being a topic that they are more familiar with than the topics of previous sessions. I also felt that the group had gained confidence in their knowledge and understanding of health psychology, and felt more able to volunteer thoughts, suggestions and answers to questions.

Session 5 reflections: Health Psychology Research

Session five was the final session. During this session I focused on the topic of research, followed by a ten minute recap and quiz based on the previous sessions. I ended the session by revisiting the 'confidence ladder' that was presented during session one. Before I began teaching the content on research, I prepared the attendees for the quiz at the end, so they knew that participation was required. At around fifteen minutes into delivering this session, I found myself speaking increasingly quickly. At this point I considered that I may have overestimated the amount of material we were able to cover in this session. I covered all the content that I intended to cover, but upon reflection, I may have created a sense of rushing and urgency. If I were to repeat this session in the future, I would remove some of the lower priority content to allow for a better pace of delivery.

The quiz covered topics from all of the previous sessions and the attendees were able to enthusiastically answer all of the questions. I was pleased with their learning and felt a sense of achievement that they had gained knowledge and showed evidence of progression. Following the recap and quiz, I asked attendees to revisit the 'confidence ladder' that was presented during session 1, and to share an update on their score. The benefits of this were two-fold. Firstly, attendees reflected on their learning, and it gave them a valuable opportunity to actively consider the knowledge they had gained. Secondly, it allowed me to understand how much their knowledge had increased, as a measure of success for the training course.

Measuring success

In order to measure the success of the training programme, I gathered a number of data points. The most important measure was the assessment of whether the learning objectives of each session were met, and the attendees gained an increased understanding of health psychology. I assessed this in a number of ways. Throughout the training programme, I referred back to information and concepts shared during previous sessions and asked questions in order to gain a sense of whether knowledge had been retained. The responses from students inferred that they had retained an understanding and had built knowledge between the sessions. The informal quiz in session five also demonstrated that

students had retained information from the previous sessions and were able to answer questions on these topics. The confidence ladder scores provided a valuable insight into the student perspective. The confidence scores of all students increased between session one and session five, suggesting students felt an increased confidence in their understanding of health psychology and how it can be applied (see Appendix 4).

To gain more formal feedback, after the final session I emailed all attendees with a link to a digital feedback form. The form was designed to collect anonymous feedback on the content and delivery of the training programme, the level of knowledge gained, and any other comments or observations. Seven attendees completed feedback forms and the feedback was positive in all domains (Appendix 3). Four attendees shared additional written feedback in the free text response box provided, which commented on the sessions being engaging, the presentation style being clear and noting some new knowledge that had been gained. My lowest feedback score was a 3 out of 5 ('fair') from one student, when asked 'Please rate the training provider's speed and clarity of delivery'. No additional comment was shared on this score, but upon reflection, I feel this may be directed towards the speed of my delivery in the second half of session 5, as I was rushing to cover all the material I had planned. Most students strongly agreed that they had expanded their knowledge of health psychology, that the sessions were interesting, and the materials used were of good quality.

The training course was also attended by my workplace supervisor, who is a Registered Health Psychologist, and the Head of Health Psychology and Research within my department. She observed the training and provided written feedback after the final session had been delivered (Appendix 6). The feedback received from this qualified observer was very helpful in my understanding of how the programme was perceived by others, and how it could be improved.

Final reflections

This process, from conception to delivery, has given me the confidence, skills and knowledge to apply theoretical teaching frameworks to the development of a training programme. I have increased my understanding of best practice in teaching and gained confidence in overcoming any unexpected hurdles and adapting my training style to the needs of the student group.

From reflecting on previous teaching and training experiences, I know that my style of speaking is calm, informal when I am relaxed. I am aware, however, that I can sometimes take a few minutes to relax into the session, and if I am feeling nervous I can be inclined to talk faster. This is something I prepared

for ahead of the sessions by focusing on relaxation for a few minutes prior to the training starting to ensure I was in a prepared mindset, but I was keen to reflect on my style in practice. As I had recorded the training sessions via *Teams*, I was able to watch back and reflect on my delivery. I observed that, as I had anticipated, I spoke quite quickly at the beginning of the training sessions, but as I relaxed into the session I slowed to a more comfortable pace. I also noted that I faced my second monitor where my slides were being shown more often at the start of each session. I believe that this was a sign of being nervous too, because as I relaxed, I focused more towards the *Teams* call and the camera, which was more engaging. Across the five sessions, I gradually became more confident in teaching, and this was also observed when I watched back the video recordings.

If I were to repeat this training programme in the future, I would make some small adjustments. As the input from students was variable from session to session, I would make sure to prepare additional activities to increase engagement, that I would be able to utilise if needed. I would also spend a couple more minutes at the beginning of the session trying to engage the group in a more informal, welcoming conversation. I feel this would be appropriate given the size of the group and could perhaps build confidence in the attendees being active vocal participants in conversations throughout the training.

Overall, the experience of delivering, documenting and reflecting on this training programme has offered me extremely valuable learnings and insights into best practice teaching and training, and how I can continue to improve and develop my teaching methods throughout my career.

References

Anderson, T., Liam, R., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context.

Cavanagh, S. J., & Coffin, D. A. (1994). Matching instructional preference and teaching styles: a review of the literature. *Nurse Education Today, 14*(2), 106-110.

Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE bulletin, 3*, 7.

Dinçol, S., Temel, S., Oskay, Ö. Ö., Erdoğan, Ü. I., & Yılmaz, A. (2011). The effect of matching learning styles with teaching styles on success. *Procedia-Social and Behavioral Sciences, 15*, 854-858.

Fani, T., & Ghaemi, F. (2011). Implications of Vygotsky's zone of proximal development (ZPD) in teacher education: ZPTD and self-scaffolding. *Procedia-Social and Behavioral Sciences, 29*, 1549-1554.

Garrison, D. R. (2011). E-learning in the 21 st Century: A framework for research and practice (second).

Garrison, D. R., Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The internet and higher education, 2*(2-3), 87-105.

George, P. P., Papachristou, N., Belisario, J. M., Wang, W., Wark, P. A., Cotic, Z., . . . Car, L. T. (2014). Online eLearning for undergraduates in health professions: a systematic review of the impact on knowledge, skills, attitudes and satisfaction. *Journal of global health, 4*(1).

Honey, P., & Mumford, A. (1986). The manual of learning styles Peter Honey. In: Maidenhead.

Kolb, D. A. (1984). The experiential learning theory of development. *Experiential learning: Experience as the source of learning and development*, 132e160.

Liang, Z., da Costa Junior, M. G., & Piumarta, I. (2020). *Opportunities for improving the learning/teaching experience in a virtual online environment.* Paper presented at the 2020 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE).

Mayer, R. E. (2008). Applying the science of learning: evidence-based principles for the design of multimedia instruction. *American Psychologist, 63*(8), 760.

Mayer, R. E. (2009). *Multimedia Learning* (Second ed.). Cambridge: Cambridge University Press.

McKimm, J., & Jollie, C. (2007). Facilitating learning: Teaching and learning methods. *London: London Deanery*.

Moore, M. G. (2019). *Handbook of distance education* (Fourth ed.). New York: Routledge.

Ogden, J. (2012). *Health Psychology* (Fifth ed.). London: McGraw-Hill/Open University Press.

Persellin, D. C., & Daniels, M. B. (2015). *A concise guide to improving student learning: Six evidence-based principles and how to apply them*: Stylus Publishing, LLC.

Rogers, P., & Lea, M. (2005). Social presence in distributed group environments: The role of social identity. *Behaviour & Information Technology, 24*(2), 151-158.

Rudolph, M. (2017). Cognitive theory of multimedia learning. *Journal of Online Higher Education, 1*(2).

Vaughn, L., & Baker, R. (2001). Teaching in the medical setting: balancing teaching styles, learning styles and teaching methods. *Medical teacher, 23*(6), 610-612.

Appendix 1. Teaching and training programme learning objectives

Session	Title of session	Learning objectives
1	Introduction to Health Psychology	After attending this session, attendees should be able to… • Explain what the field of health psychology is, broadly, and how it is defined • Describe the relationship between psychology and health • Describe the premise of the biopsychosocial model of health and how it differs from the biomedical model • Recall some of the different roles health psychologists can be employed in
2	Health Beliefs and Changing Behaviour	After attending this session, attendees should be able to… • Define health beliefs and health behaviour • Recall the purpose of models of behaviour change • Explain an overview of the Theory of Planned Behaviour and a reason why it might be used • Explain an overview of the COM-B framework, and define capability, opportunity and motivation • State the purpose of the behaviour change wheel and describe its categories
3	Health Literacy and Communication in Healthcare	After attending this session, attendees should be able to… • Define health literacy and convey its relevance in healthcare • State examples of the impact of poor health literacy on health outcomes • Recall examples of readability and accessibility guidelines • Name one tool that can be employed to measure the readability and accessibility of written materials
4	Applied Health Psychology in Pharma	After attending this session, attendees should be able to… • Outline some overarching benefits of working with a health psychologist • State some examples of how health psychology can benefit the pharmaceutical industry as well as patients • Identify how health psychology is applied within some of the work that we do at OPEN Health
5	Health Psychology Research	After attending this session, attendees should be able to… • Recall the fundamental principles to be considered when designing research • Describe multiple ethical principles in psychological research • Analyse the ethical integrity of a piece of research • Critically analyse a psychological research paper to a basic level

Appendix 2. Presentation files collated

Session 1 - Introduction to health psychology

Introduction to Health Psychology

2021

Overview of our five sessions

1) **Introduction to health psychology**
2) Health psychology models and changing behaviour
3) Health literacy and communication in healthcare
4) Applied health psychology in pharma
5) Health psychology research

Confidence ladder

My understanding of health psychology, what it is, and how it can be applied.

Where did health psychology come from?

The biomedical model:

- illness arises from biological changes
- illness should be treated with pharmacological treatment, vaccination, surgery, chemotherapy or radiotherapy to change the physical state of the body
- The responsibility for treatment is of the HCP
- The mind and the body function independently of one another (the mind-body split)
  - i.e. the mind is abstract and holds feeling and thoughts, and the body is physical matter

In health psychology:

- Humans are seen as complex systems, illness is caused by a number of factors
- The individual isn't a passive victim to ill health, people can be responsible for influencing their own health and illness
- The whole person should be treated, not just the physical changes that have happened
- Health and illness exist on a continuum
- Psychological factors are not only a consequence of illness, but they can contribute to it at all stages from healthy through to ill

Defining health psychology

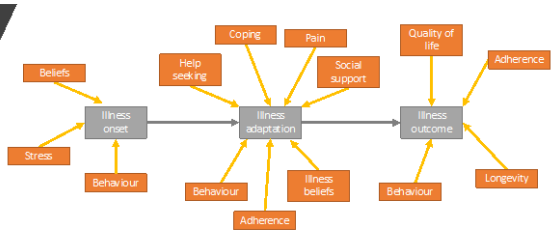
*"Health is a state of **complete physical, mental and social well-being** and not merely the absence of disease or infirmity."*

- WHO current definition of health

*"The goal of health psychology is to study the **psychological processes underlying health, illness and health care**, and to apply these findings to the **promotion and maintenance of health**, the analysis and **improvement of the health care system and health policy formation**, the **prevention of illness** and disability, and the **enhancement of outcomes** for those who are ill or disabled."*

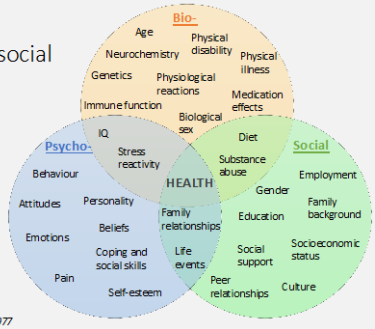
- British Psychological Society description of health psychology

The relationship between psychology and health



Health as a continuum with psychological factors playing a role at each stage (Ogden, 2012)

The biopsychosocial model of health



Adapted from Engel, 1977

Applying health psychology

Understanding and explaining health:

- The role of behaviours in the development of illness
- Predicting unhealthy behaviours
- The link between psychology and physiology (e.g. stress, pain)
- The experience of illness (alleviating physical and psychological symptoms)
- How we can manage illness (e.g. behaviour change)

Putting the theory into practice:

- Promoting healthy behaviours – targeting beliefs that predict behaviours
- Preventing illness – changing beliefs and behaviours, modifying stress, behavioural interventions during illness

- 1:1 psychological interventions (therapy) – NHS, private settings
- Population-level interventions
- Legislation and public health
- Consultancy
- Education: training other HCPs
- Research

What we've covered today

A brief background of health psychology	• Where did it come from? • What is the biomedical model and why was it challenged?
Definitions of health psychology	• Definitions of health and health psychology
The relationship between psychology and health	• Psychological factors that are linked to the health continuum
Looking at health using the biopsychosocial model	• Psychological, environmental and biological factors that influence health
How health psychology can be applied	• Understanding and explaining health, promoting healthy behaviour and preventing illness

Thank you

Session 2 – Health beliefs and changing behaviour

Health Beliefs and Changing Behaviour

2021

Overview of our five sessions

1) Introduction to health psychology
2) **Health beliefs and changing behaviour**
3) Health literacy and communication in healthcare
4) Applied health psychology in pharma
5) Health psychology research

Health beliefs and health behaviour

Health behaviour = any action relating to preventing/detecting disease, or influencing health and wellbeing[1]

Health beliefs = any belief that is related to health

Health beliefs are:

- Important in understanding illness variation
- A key predictor of health behaviour

1. Gochman, 1997

Attribution theory

Internal vs external	"I didn't get that job due to my poor interview answers"	vs	"I didn't get that job due to interviewer prejudice"
Stable vs unstable	"My failure will always follow me"	vs	"It was just a failure for that job only"
Global vs specific	"The cause of that failure also affects other things in my life"	vs	"It doesn't affect any other areas of my life"
Controllable vs uncontrollable	"The cause of me not getting the job was controllable by me"	vs	"I didn't get that job due to interviewer prejudice"

Heider, 1958; Kelley, 1971

Health locus of control

Applying the controllable/ uncontrollable dimension to health

Internal

- My health is controlled by me
- Positive health results can come from my own efforts and willpower

External

- My health is not controlled by me
- My health is subject to my environment
- My health is at the mercy of other forces:
  - Healthcare professionals
  - Fate or chance
  - Supernatural or spiritual forces

INTERNAL ⟷ EXTERNAL

Norman & Bennett, 1995

Risk perception

Unrealistic optimism

- "Compared to other people your age, how at risk are you of this health problem?" – most people believe they are less likely[1]

Risk compensation

- "I smoke but it's fine because I go to the gym"

Self-affirmation theory[2]

- Some people are less persuaded by risk data – they can ignore unwelcome information or find a reason to reject it
- People are motivated to protect their sense of self-integrity
- Self-affirmation techniques can help to reduce the tendency to resist threat information[3]

1. Weinstein, 1983; 2. Harris & Napper, 2005; 3. Harris & Epton, 2009

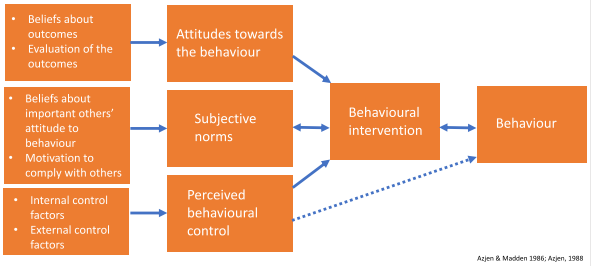
Models of behaviour change

Our thoughts, beliefs and past experiences all influence our behaviour.

Social cognition models have been developed to examine the process of behaviour change. They can:

- Provide an approach for understanding why someone might perform/not perform a behaviour, and why there is variation between people
- Provide information on how to change health behaviours

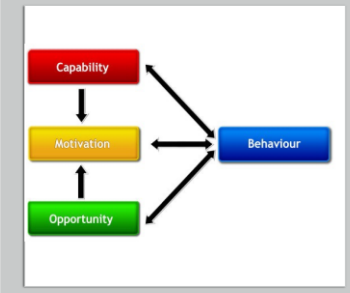
Theory of Planned Behaviour



Ajzen & Madden 1986; Ajzen, 1988

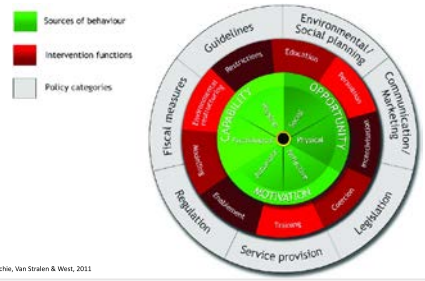
COM-B

- Behaviour occurs as a result of interactions between three necessary conditions:
  - Capabilities
  - Opportunities
  - Motivation



Michie, Van Stralen & West, 2011

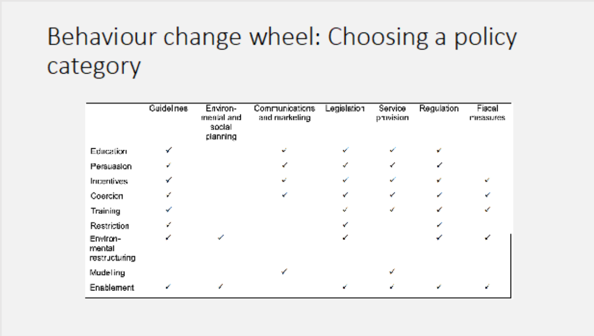
The behaviour change wheel



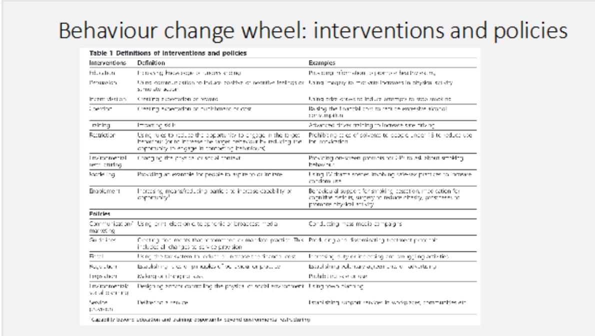
Michie, Van Stralen & West, 2011

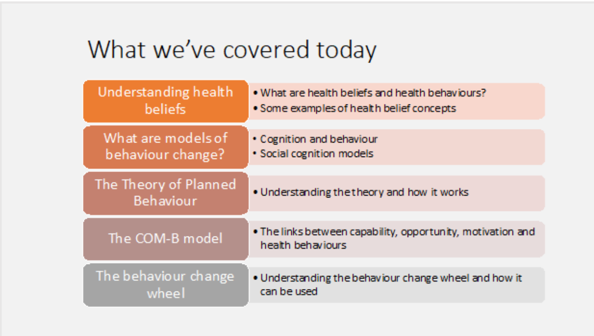
Behaviour change wheel: Choosing an intervention function

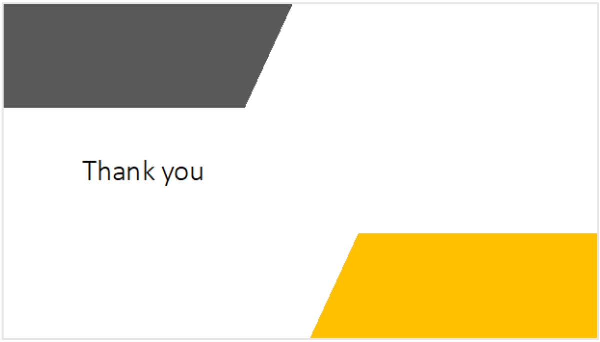
	Capability	Opportunity	Motivation
Education	✓		✓
Persuasion			✓
Incentives			✓
Coercion			✓
Training	✓	✓	✓
Restriction		✓	
Environmental restructuring		✓	✓
Modelling		✓	✓
Enablement	✓	✓	✓



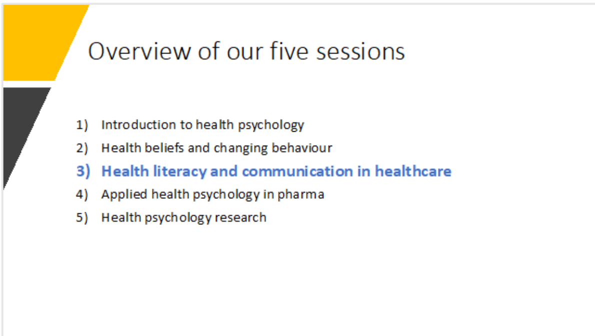
	Guidelines	Environ-mental and social planning	Communications and marketing	Legislation	Service provision	Regulation	Fiscal measures
Education	✓		✓	✓	✓	✓	
Persuasion	✓		✓	✓	✓	✓	
Incentives	✓		✓	✓	✓	✓	✓
Coercion	✓		✓	✓	✓	✓	✓
Training	✓			✓	✓	✓	✓
Restriction	✓			✓		✓	
Environ-mental restructuring	✓	✓		✓		✓	✓
Modeling			✓		✓		
Enablement	✓	✓		✓	✓	✓	✓

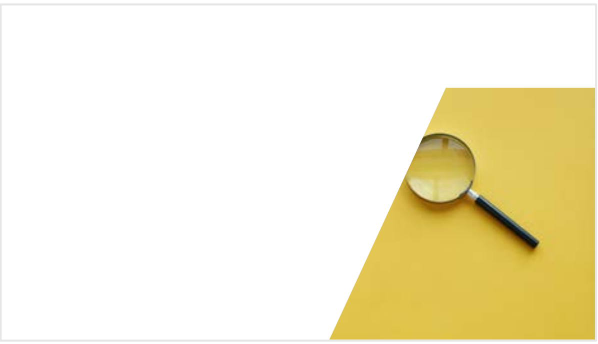






Session 3 – Health literacy





Health literacy definition

> *"Health literacy is people having the **skills** (language, literacy and numeracy), **knowledge, understanding** and **confidence** to **access, understand, evaluate, use** and **navigate health and social care information and services.** Health literate health and social care organisations are also critical to improved health literacy"*

Raynor, 2012

Why is health literacy important?

42% of adults age 16-65 in England are unable to make use of everyday health information[1]

The average reading age of an adult in the UK is:

11 years old

- Those most in need of health information have the least access to it
- Health texts are written at levels that exceed average public reading skills[2]

1. Rowlands et al., 2015; 2. Rudd et al., 2007

Health literacy is a key determinant of health

Limited health literacy predicts:

- Poor diet
- Lack of physical activity
- Limited knowledge and understanding of disease or symptoms
- Poor adherence to medication
- Less participation in disease detection activity (e.g. screening)
- Less participation in disease prevention actions (e.g. sunscreen use)
- Riskier health choices e.g. smoking, drug abuse
- More workplace accidents
- Diminished management of chronic conditions such as diabetes, HIV and asthma
- Less effective use of the emergency services
- Increased hospitalisation, increased morbidity and premature death

WHO (2013); Public Health England (2015)

Health literacy is a key determinant of health

People with low health literacy compared to the general population:

- Are 1.5 - 3x more likely to experience hospitalisation or death, and to have depression
- Make more use of A&E and have longer inpatient stays

Some population groups have been identified as experiencing disproportionately low or inadequate health literacy. These are:

- More disadvantaged socioeconomic groups
- Migrants and people from ethnic minorities
- Older people
- People with long-term health conditions
- Disabled people (including those who have long-term physical, mental, intellectual or sensory impairment)

WHO (2013); Public Health England (2015)

Health literacy in context

"Epistaxis" = a nose bleed

"Contusion" = a bruise

"Xerostomia" = a dry mouth

Health literacy in context

Annual immunisation against flu is a very important health protection measure for many of our patients - those who are over 65 and those who have increased risk factors such as lung disease, heart disease, diabetes, kidney disease, neurological disease, and those with a weakened immune system. A wealth of evidence supports the safety and effectiveness of immunisation. For further information visit NHS Choices www.nhs.uk.

The Practice will be running special flu clinics dedicated to giving flu injections and where appropriate pneumococcal and shingles vaccinations to our patients. It takes around two weeks after the vaccine to develop immunity so these clinics enable us to reach more of our patients as soon as possible after the vaccine becomes available.

Please ring the surgery on 01782 333333 to make an appointment if you would like to have an influenza vaccination.

Health Literacy Matters (2020)

Readability and accessibility guidelines

General guidelines

- Short familiar words and sentences
- Everyday, personal language
- Repeat important points
- Be conversational
- Focus on what the patient needs to know and needs to do

Speech-specific

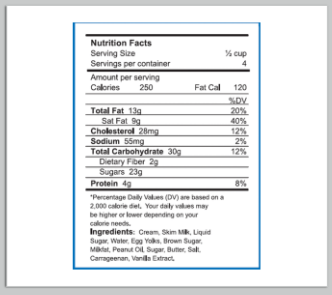
- Avoid technical jargon
- Use a slow, steady pace
- Use the 'teach back' approach to ensure patients understand what they've been told
- Encourage questions: "what questions do you have?"

Print-specific

- One idea per paragraph
- Short headings that stand out
- Break copy into readable bitesize chunks
- Use bold to take the reader to keywords
- Type as large as possible
- Leave blank space
- Use bullets for lists
- Pictures and graphs don't necessarily help if they're too complex

Newest Vital Sign (NVS)

1. If you eat the entire container, how many calories will you eat?
2. If you are allowed to eat 60 grams of carbohydrates as a snack, how much ice cream could you have?
3. Your doctor advises you to reduce the amount of saturated fat in your diet. You usually have 42 g of saturated fat each day, which includes one serving of ice cream. If you stop eating ice cream, how many grams of saturated fat would you be consuming each day?
4. If you usually eat 2,500 calories in a day, what percentage of your daily value of calories will you be eating if you eat one serving?
5. Pretend that you are allergic to the following substances: penicillin, peanuts, latex gloves, and bee stings. Is it safe for you to eat this ice cream?
6. *(if patient responds 'no')* Why not?



Nutrition Facts

Serving Size	½ cup
Servings per container	4
Amount per serving	
Calories 250	Fat Cal 120
	%DV
Total Fat 13g	20%
Sat Fat 9g	40%
Cholesterol 28mg	12%
Sodium 55mg	2%
Total Carbohydrate 30g	12%
Dietary Fiber 2g	
Sugars 23g	
Protein 4g	8%

*Percentage Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Ingredients: Cream, Skim Milk, Liquid Sugar, Water, Egg Yolks, Brown Sugar, Milkfat, Peanut Oil, Sugar, Butter, Salt, Carrageenan, Vanilla Extract.

Checking readability and accessibility

- **HemingwayApp.com**
  - Works like Grammarly. Measures readability, suggests how to simplify sentences and make your writing more clear. Provides estimated reading level and read time
- **Readabilityscore.com**
  - Paste text into the tool and it gives you a readability level
- **Fleisch Reading Ease Score**
  - A score out of 100, where 100 is the highest level of readability.
  - A score of 80+ matches reading age 11
  - Can be viewed in Word as part of Spelling and Grammar checks
- Co-creation with patients

What we've covered today

Understanding health literacy	• What does health literacy mean? • Why is health literacy important?
Understanding the impact of health literacy on communication	• Understanding how health literacy directly impacts health • Looking at health literacy in context
Readability and accessibility guidelines	• Improving accessibility in written and verbal communication
Checking readability and accessibility	• Newest Vital Sign (NVS) • Tools and techniques we can use to improve our work

Thank you

Session 4 – Applied health psychology in pharma

Applied Health Psychology in Pharma

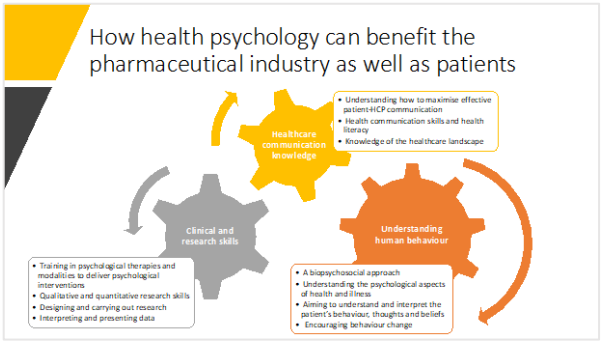
2021

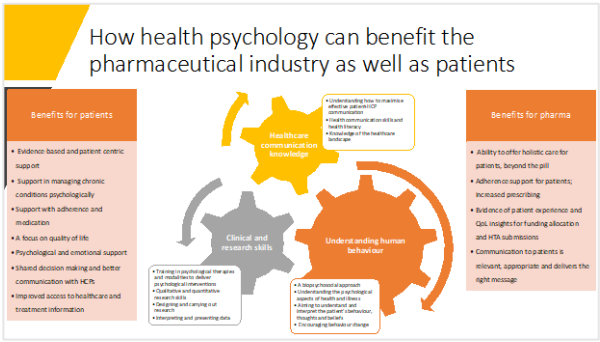
Overview of our five sessions

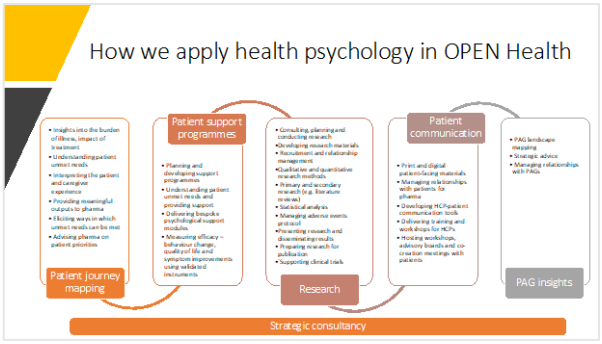
1) Introduction to health psychology
2) Health beliefs and changing behaviour
3) Health literacy and communication in healthcare
4) **Applied health psychology in pharma**
5) Health psychology research

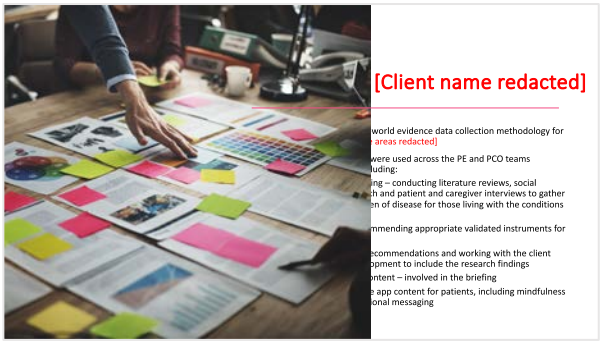
The benefits of working with a health psychologist

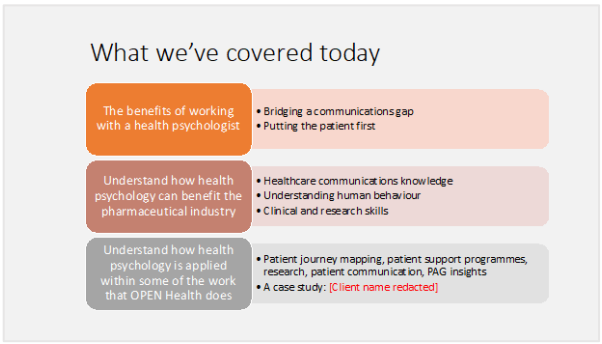
- Bridging the gap to patients, HCPs and pharmaceutical companies:
  - Communication with patients and HCPs
  - Interpreting patient outcomes and delivering them to pharma in a useful way
- Protecting patients' wellbeing by adhering to codes of conduct (BPS, HCPC etc)
- Knowledge of ABPI code and regular CPD
- Constant work with patients, pharma and PAGs: an understanding of the landscape of patient needs
- Research skills

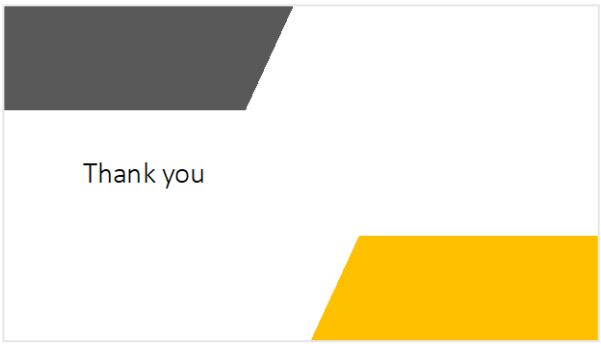




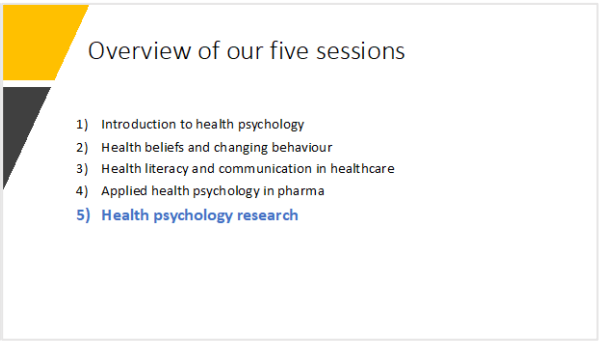


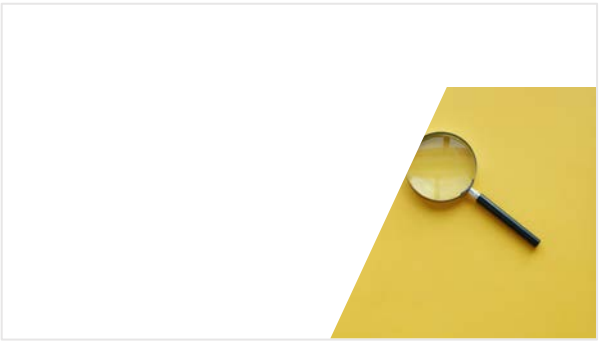






Session 5 – Research in health psychology





Research design in psychology

There are lots of things to consider when designing a research protocol, including:

Research question or hypothesis
- What do you want to find out?
- Aims of the research
- Primary and secondary outcome measures

Approach
- **Quantitative:** testing hypothesis using statistical analysis. Can make predictions and test relationships between variables.
- **Qualitative:** interpreting phenomena, e.g. peoples' perceptions, experiences, behaviours. Capturing the human experience.

Research design
- Experimental
  - E.g. laboratory experiment, quasi-experiment, field experiment
- Comparison groups
  - E.g. independent groups, repeated measures
- Non-experimental
  - E.g. Case study, observational study, interviews, surveys, questionnaires, reviews (literature review, systematic review, meta-analysis)

Sample and recruitment
- Inclusion/exclusion criteria
- Sampling process
  - E.g. convenience sampling, self-selected sampling, snowball sampling, random sampling
- Sample size
- Screening
- Randomisation

Data collection and analysis
- Primary vs secondary data
- Quantitative (numerical)
  - Collection: E.g. experimental tasks, surveys
  - Analysis: E.g. statistical analysis
- Qualitative (non-numerical)
  - Collection: E.g. observation, interviews, focus groups
  - Analysis: E.g. content analysis, thematic analysis - IPA, grounded theory etc

Being critical of research

Some questions to consider...
- Is there a clear rationale for why the research was done?
- How many participants were there? Was the sample representative?
- What biases could be at play?
  - E.g. researcher bias, demand characteristics
- Has the data been analysed and interpreted correctly?
- Could there be other variables that haven't been considered?
- Is the research reliable? Will results be consistent if it was replicated?
  - Test-retest methods, inter-observer methods or statistical tools can assess reliability

Assessing validity

Face validity: does the test measure what it's supposed to measure, at face value?

Ecological validity: can you generalise these results to other settings or real life?

Temporal validity: can the findings be generalised to time periods in the future?

Ethical issues or concerns...

Ethical principles in psychological research

Some important ethical considerations for planning and conducting psychological research:

Informed consent
- Consenting freely and voluntarily
- Given enough information to enable them to make an informed choice
- Information should cover: aims, data collection, risks, time commitment, privacy, research outcomes and benefits

Right to withdraw
- Informed of the right to withdraw at any time with no adverse consequences
- Participants should know how to withdraw

Debriefing
- Participants should be debriefed on the nature of the investigation
- Debriefing is particularly relevant if any information has been withheld or there has been any deception

Protecting participants
- The risk of harm to participants should be no greater than they would encounter in ordinary life

Deception
- Can cause harm and should only be used where there are no alternatives
- Deception is inappropriate if, when revealed, participants are likely to feel discomfort or have objections

Confidentiality
- Must adhere to data protection laws where the research takes place, e.g. Data Protection Act (2018) in the UK

Recap and quiz: introduction to health psychology

Session 1 covered...

Where health psychology came from
- A changing view of illness
- Is the mind separate from the body, or should we consider them as one?
- Challenging the biomedical model of health

The relationship between psychology and health
- Factors influencing illness onset (e.g. beliefs, stress, behaviour)
- Factors influencing illness adaptation (e.g. help seeking, social support)
- Factors influencing illness outcomes (e.g. behaviours, adherence)

The biopsychosocial model of health
- Considering biological, psychological and social factors, how they interact, and how they influence health and wellbeing

Quick quiz
1. Name one example of a **biological** factor of health that you might consider when taking a biopsychosocial approach
2. Name a **psychological** example
3. Name a **social** example

Recap and quiz: health beliefs & changing behaviour

Session 2 covered...

What are health beliefs and health behaviours?
- Health beliefs are important in understanding illness variation and predicting health behaviour
- Health locus of control: internal or external attributions
- What are models of behaviour change

The Theory of Planned Behaviour
- Behavioural intentions are the outcomes of a combination of several health beliefs, including control factors, attitudes towards the behaviour and subjective norms

The COM-B model
- Behaviour occurs as a result of interactions between capability, opportunity and motivation
- The behaviour change wheel and how it can be used

Quick quiz
1. Why might someone want to use the Theory of Planned Behaviour?
2. Name one example of a subjective norm that might withhold someone from carrying out a healthy behaviour

Recap and quiz: health literacy and communication

Session 3 covered...

What is health literacy and why is it important?
- 42% of adults age 16-65 in England are unable to make use of everyday health information[1]
- Health literacy can predict health outcomes including poor diet and activity levels, poor adherence to medication, riskier health choices, less effective use of the emergency services etc.

Readability and accessibility guidelines
- Consider accessibility in terms of general comprehension, general literacy and health literacy (e.g. avoiding jargon, short sentences)

Checking readability and accessibility
- Hemingway App
- ReadabilityScore.com
- Fleisch Reading Ease Score

Quick quiz
1. Can you remember... what is the average reading age of an adult in the UK?
2. Name one other readability or accessibility consideration that you can make

1. Rowlands et al., 2015

Recap and quiz: applied health psychology in pharma

Session 4 covered...

The benefits of working with a health psychologist
- Bridging the gap between patients, HCPs and our clients
- Protecting patients' wellbeing
- Clinical and research skills, healthcare communication knowledge, understanding human behaviour

How health psychology can benefit the pharmaceutical industry and its patients
- Patient benefits include: patient-centric support, a focus on QoL, improved access to healthcare information, etc
- Pharma benefits include: offering holistic care, potential increased prescribing, evidence of patient experience for funding or HTA submissions

How psychology is applied within OPEN Health
- PJM, PSPs, research, patient communication, PAG insights, consultancy etc

Quick quiz
1. Can you name one other benefit of working with a health psychologist for the end-user patient, or the pharmaceutical company?

What we've covered today

Research methods in psychology	• Things to consider when designing research, e.g. research question or hypotheses, approach, design of the study, sample and recruitment, data collection and analysis • Being critical of research
Ethical principles in psychological research	• Informed consent, right to withdraw, debriefing • Protecting participants, deception, confidentiality
Recap of our five sessions	• An introduction to health psychology, health beliefs and changing behaviour, health literacy, applied health psychology and research

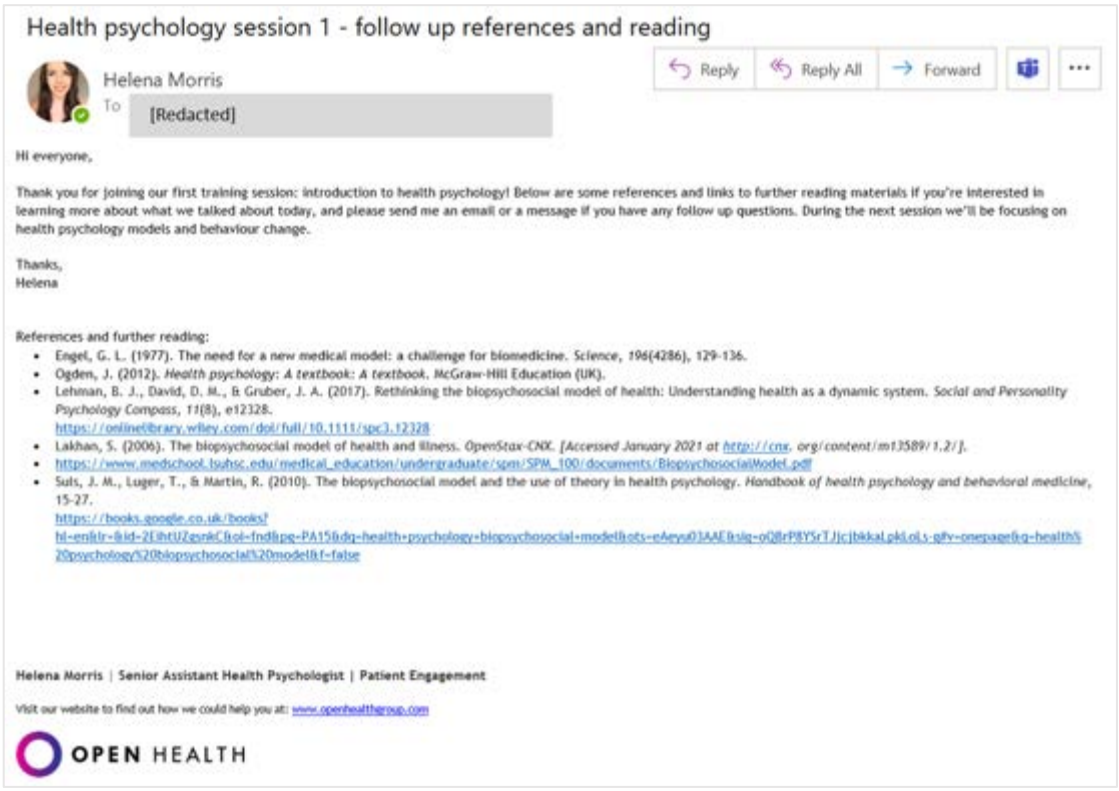
Confidence ladder

at it is, and
how it can be applied.

Thank you

Appendix 3. Follow-up emails to students

Session 1 follow-up



Health psychology session 1 - follow up references and reading

Reply | Reply All | Forward

Helena Morris

To [Redacted]

Hi everyone,

Thank you for joining our first training session: introduction to health psychology! Below are some references and links to further reading materials if you're interested in learning more about what we talked about today, and please send me an email or a message if you have any follow up questions. During the next session we'll be focusing on health psychology models and behaviour change.

Thanks,
Helena

References and further reading:

- Engel, G. L. (1977). The need for a new medical model: a challenge for biomedicine. *Science*, *196*(4286), 129-136.
- Ogden, J. (2012). *Health psychology: A textbook*. McGraw-Hill Education (UK).
- Lehman, B. J., David, D. M., & Gruber, J. A. (2017). Rethinking the biopsychosocial model of health: Understanding health as a dynamic system. *Social and Personality Psychology Compass*, *11*(8), e12328. https://onlinelibrary.wiley.com/doi/full/10.1111/spc3.12328
- Lakhan, S. (2006). The biopsychosocial model of health and illness. *OpenStax-CNX. [Accessed January 2021 at http://cnx. org/content/m13589/1.2/]*.
- https://www.medschool.lsuhsc.edu/medical_education/undergraduate/spm/SPM_100/documents/BiopsychosocialModel.pdf
- Suls, J. M., Luger, T., & Martin, R. (2010). The biopsychosocial model and the use of theory in health psychology. *Handbook of health psychology and behavioral medicine*, 15-27. https://books.google.co.uk/books?hl=en&lr=&id=2EihtUZgsnkC&oi=fnd&pg=PA15&dq=health+psychology+biopsychosocial+model&ots=eAeysa03AAE&sig=oQBrP8YSrTJjcjbkkaLpkLoLs-g&v=onepage&q=health%20psychology%20biopsychosocial%20model&f=false

Helena Morris | **Senior Assistant Health Psychologist** | **Patient Engagement**

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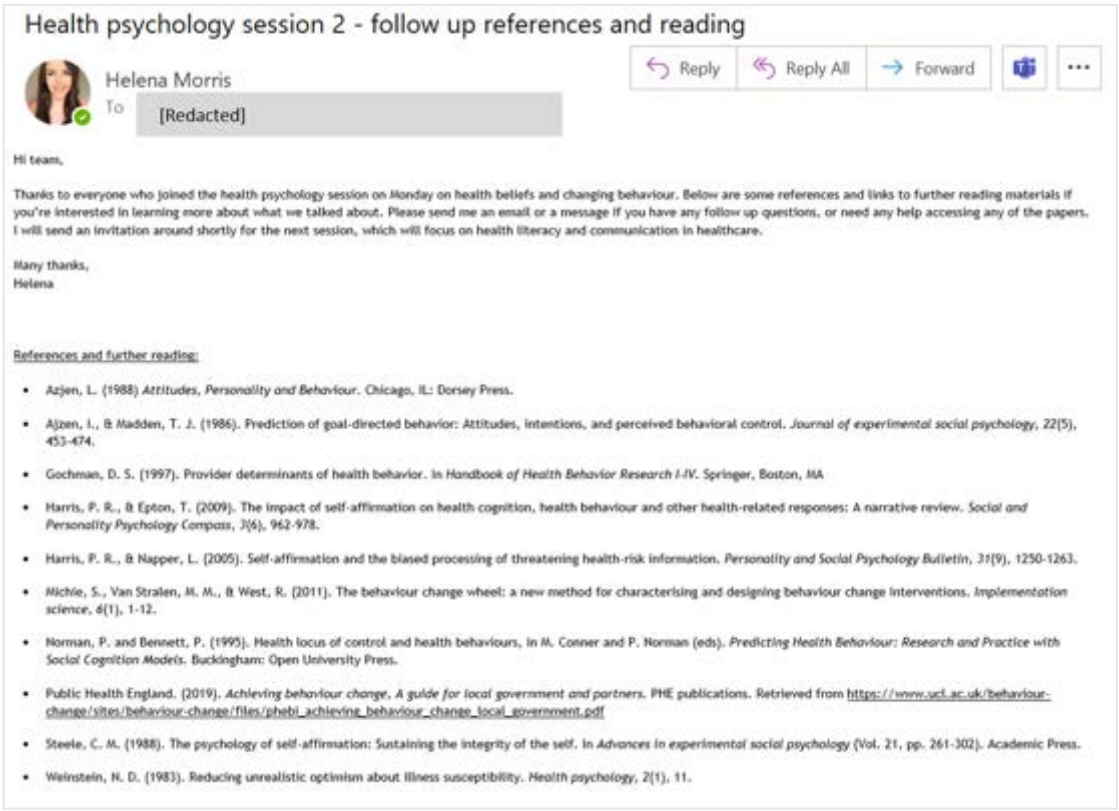
OPEN HEALTH

Session 2 follow-up



Health psychology session 2 - follow up references and reading

Reply | Reply All | Forward

Helena Morris

To [Redacted]

Hi team,

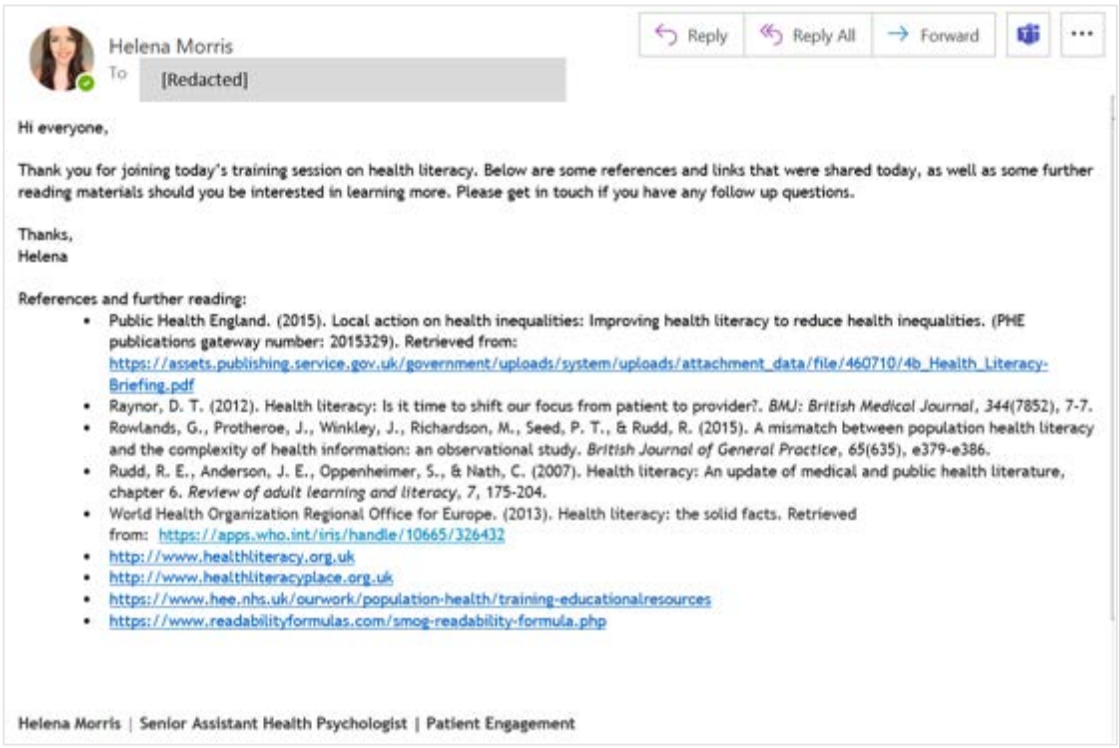
Thanks to everyone who joined the health psychology session on Monday on health beliefs and changing behaviour. Below are some references and links to further reading materials if you're interested in learning more about what we talked about. Please send me an email or a message if you have any follow up questions, or need any help accessing any of the papers. I will send an invitation around shortly for the next session, which will focus on health literacy and communication in healthcare.

Many thanks,
Helena

References and further reading:

- Azjen, I. (1988) *Attitudes, Personality and Behaviour*. Chicago, IL: Dorsey Press.
- Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of experimental social psychology*, *22*(5), 453-474.
- Gochman, D. S. (1997). Provider determinants of health behavior. In *Handbook of Health Behavior Research I-IV*. Springer, Boston, MA
- Harris, P. R., & Epton, T. (2009). The impact of self-affirmation on health cognition, health behaviour and other health-related responses: A narrative review. *Social and Personality Psychology Compass*, *3*(6), 962-978.
- Harris, P. R., & Napper, L. (2005). Self-affirmation and the biased processing of threatening health-risk information. *Personality and Social Psychology Bulletin*, *31*(9), 1250-1263.
- Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science*, *6*(1), 1-12.
- Norman, P. and Bennett, P. (1995). Health locus of control and health behaviours, in M. Conner and P. Norman (eds). *Predicting Health Behaviour: Research and Practice with Social Cognition Models*. Buckingham: Open University Press.
- Public Health England. (2019). *Achieving behaviour change. A guide for local government and partners*. PHE publications. Retrieved from https://www.ucl.ac.uk/behaviour-change/sites/behaviour-change/files/phebi_achieving_behaviour_change_local_government.pdf
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In *Advances in experimental social psychology* (Vol. 21, pp. 261-302). Academic Press.
- Weinstein, N. D. (1983). Reducing unrealistic optimism about illness susceptibility. *Health psychology*, *2*(1), 11.

Session 3 follow-up



Helena Morris
To [Redacted]

Reply | Reply All | Forward

Hi everyone,

Thank you for joining today's training session on health literacy. Below are some references and links that were shared today, as well as some further reading materials should you be interested in learning more. Please get in touch if you have any follow up questions.

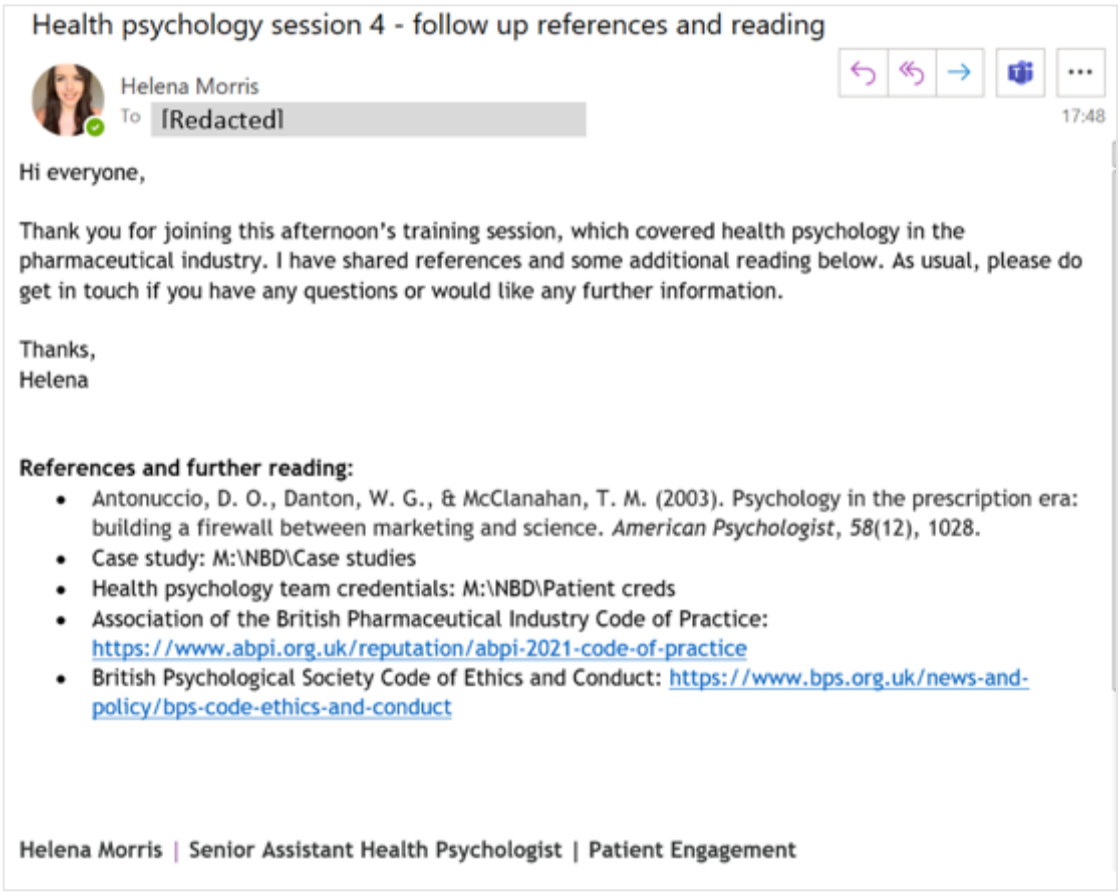
Thanks,
Helena

References and further reading:

- Public Health England. (2015). Local action on health inequalities: Improving health literacy to reduce health inequalities. (PHE publications gateway number: 2015329). Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/460710/4b_Health_Literacy-Briefing.pdf
- Raynor, D. T. (2012). Health literacy: Is it time to shift our focus from patient to provider?. *BMJ: British Medical Journal*, *344*(7852), 7-7.
- Rowlands, G., Protheroe, J., Winkley, J., Richardson, M., Seed, P. T., & Rudd, R. (2015). A mismatch between population health literacy and the complexity of health information: an observational study. *British Journal of General Practice*, *65*(635), e379-e386.
- Rudd, R. E., Anderson, J. E., Oppenheimer, S., & Nath, C. (2007). Health literacy: An update of medical and public health literature, chapter 6. *Review of adult learning and literacy*, *7*, 175-204.
- World Health Organization Regional Office for Europe. (2013). Health literacy: the solid facts. Retrieved from: https://apps.who.int/iris/handle/10665/326432
- http://www.healthliteracy.org.uk
- http://www.healthliteracyplace.org.uk
- https://www.hee.nhs.uk/ourwork/population-health/training-educationalresources
- https://www.readabilityformulas.com/smog-readability-formula.php

Helena Morris | Senior Assistant Health Psychologist | Patient Engagement

Session 4 follow-up



Health psychology session 4 - follow up references and reading

Helena Morris
To [Redacted]

17:48

Hi everyone,

Thank you for joining this afternoon's training session, which covered health psychology in the pharmaceutical industry. I have shared references and some additional reading below. As usual, please do get in touch if you have any questions or would like any further information.

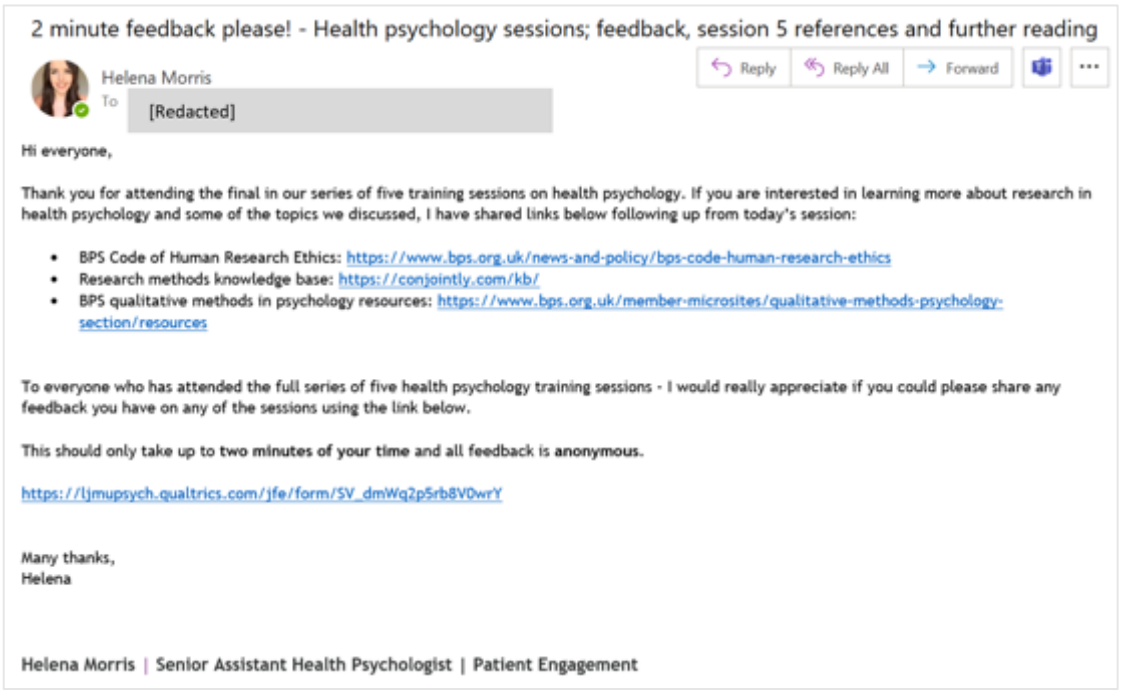
Thanks,
Helena

References and further reading:

- Antonuccio, D. O., Danton, W. G., & McClanahan, T. M. (2003). Psychology in the prescription era: building a firewall between marketing and science. *American Psychologist*, *58*(12), 1028.
- Case study: M:\NBD\Case studies
- Health psychology team credentials: M:\NBD\Patient creds
- Association of the British Pharmaceutical Industry Code of Practice: https://www.abpi.org.uk/reputation/abpi-2021-code-of-practice
- British Psychological Society Code of Ethics and Conduct: https://www.bps.org.uk/news-and-policy/bps-code-ethics-and-conduct

Helena Morris | Senior Assistant Health Psychologist | Patient Engagement

Session 5 follow-up



2 minute feedback please! - Health psychology sessions; feedback, session 5 references and further reading

Reply | Reply All | Forward

Helena Morris
To [Redacted]

Hi everyone,

Thank you for attending the final in our series of five training sessions on health psychology. If you are interested in learning more about research in health psychology and some of the topics we discussed, I have shared links below following up from today's session:

- BPS Code of Human Research Ethics: https://www.bps.org.uk/news-and-policy/bps-code-human-research-ethics
- Research methods knowledge base: https://conjointly.com/kb/
- BPS qualitative methods in psychology resources: https://www.bps.org.uk/member-microsites/qualitative-methods-psychology-section/resources

To everyone who has attended the full series of five health psychology training sessions - I would really appreciate if you could please share any feedback you have on any of the sessions using the link below.

This should only take up to **two minutes of your time** and all feedback is **anonymous**.

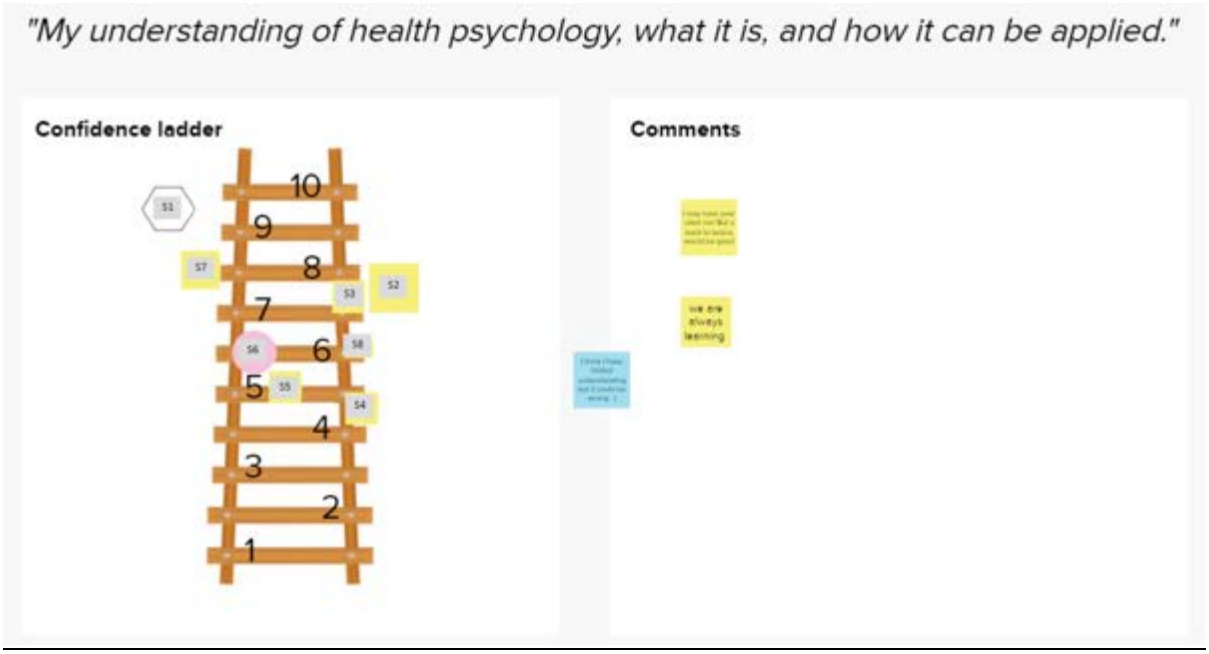
https://ljmupsych.qualtrics.com/jfe/form/SV_dmWq2p5rb8VDwrY

Many thanks,
Helena

Helena Morris | Senior Assistant Health Psychologist | Patient Engagement

Appendix 4. Student confidence ladder scores

Training session 1 scores



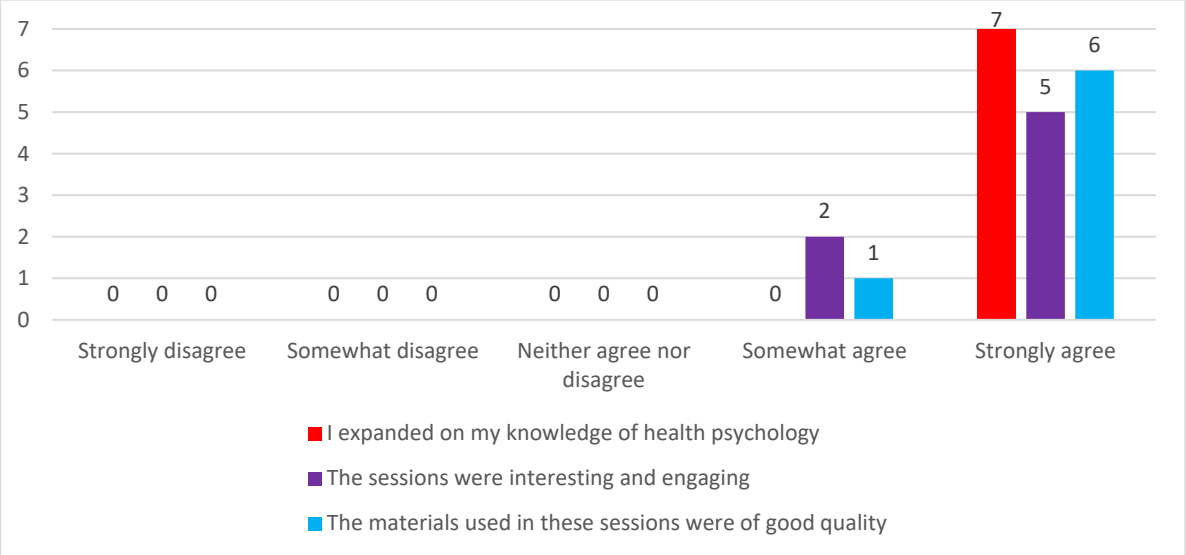
Training session 2 scores

Student identities have been anonymised for privacy.

Appendix 5. Student feedback

Q1. Please rate the following qualitites of the training provider's delivery:

Q2. To what extent do you agree with the following three statements?:



Q3. Please share any additional comments you may have:

- *"Interesting and insightful, very well presented."*
- *"Helena delivered an excellent presentation that really engages the audience. Her real-world examples made it easy to not only understand the concepts that she was presenting, but also how to apply those concepts in the future. In today's session, I really appreciated the quiz questions at the end to recall important concepts and learning about a new concept for me, snowball sampling. Very interesting."*
- *"Very well presented with verbal clarity and thoughts organised in a easy to digest way. Thank you."*
- *"Fantastic sessions. Helena has a very calm, professional and friendly presentational style and is always well prepared, knowledgeable and engaging."*

Appendix 6. Professional observer feedback

OPEN HEALTH

Helena Morris - Teaching and Training Feedback

Provided by: Dr Sumira Riaz, Head of Health Psychology and Research, OPEN Health

Helena prepared and facilitated a series of training sessions focusing on health psychology models and principles. After observing Helena's teaching and training across the course she hosted for OPEN Health, I am pleased to share feedback on her performance in this capacity.

Helena delivered five training sessions to serve as an introduction to the basics of health psychology for the Patient Engagement team. The content of the course was interesting, targeted and appropriate for the group it was delivered to. The group were relatively naïve to the principles of health psychology; therefore it was important that the sessions were relevant and specific. The presentations that were shared were engaging, and perhaps could only be improved by reducing the amount of text on the slides. It is a difficult balance to provide enough insights and not overwhelm the listeners.

Helena incorporated activities to engage the group and encouraged active participation. The group was sometimes quiet, however, Helena could perhaps have done more to encourage verbal participation by using longer purposeful silences and requesting individuals to share their thoughts where appropriate. It is important to remember that these sessions were presented in a virtual format, therefore balancing interaction and participant can be challenging virtually.

In terms of delivery, Helena was articulate and presented at a good, steady pace. She had good knowledge of the materials and was well prepared to answer any questions.

Helena asked the group to reflect on the knowledge they had gained at the end of the course, and all attendees shared that they had learnt something new and felt more confident in their understanding of health psychology, which was a testament to the success of this training programme.

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Teaching and Training Diary

Proficiency in teaching and training is a key competency for a Health Psychologist, as it allows for current research and best practice to be accurately and responsibly disseminated, facilitating learning within the field and beyond. In order to continuously learn and develop this skillset, regular and purposeful documentation and reflection is vital. This reflective diary describes a series of teaching and training experiences that I participated in throughout my time undertaking the Professional Doctorate, including reflections on planning, delivering and evaluating teaching and training programmes with a variety of student groups and audiences.

My teaching and training experiences throughout my time studying the Professional Doctorate are underpinned by the lectures we received on teaching and training during the first year of the programme. These lectures and the discussions that followed deepened my understanding of the broad landscape of learning and teaching theory, and the importance of continued skill development. It opened my eyes to the many ways that a teacher can deliver learning materials through adapting their methodology to suit the student group and surrounding context, and set me up well for my future experiences of delivering teaching and training. I was able to reflect on pre-conceived notions around how limited teachers are by the engagement of students themselves, and expanded my insight into how teachers can maximise learning through a variety of means.

Delivering a personal presentation in the workplace

17/02/2020

The first opportunity to develop teaching and training skills came along during the second month of the Doctorate. As part of a wider training day on presentation skills hosted at my workplace, I was asked to deliver an informational presentation about myself lasting up to 10 minutes. The purpose of this was to share information about myself that the group may not know, and to receive feedback on my delivery. When planning the content of this presentation, I felt initially apprehensive about having such a vague brief, so I focused mainly on making sure the information was as interesting as possible, and easy to understand. I presented my short talk to a group of around twelve colleagues from my workplace, as well as a professional training provider. I felt confident when delivering the presentation and reflected that this was linked to feeling very comfortable with the subject matter itself. I received positive peer feedback as well as professional feedback from the external training provider.

The session was also video recorded, and I was given the opportunity to reflect on my delivery. The prospect of watching my presentation back was daunting, but the group discussion and feedback gave me a valuable insight into the visual aspect of speaking to a group, and how body language can engage the audience. I endeavoured to make more eye contact with individuals in the audience or student group next time, as non-verbal communication such as eye-contact and open body language are key communication tools, and have been show to enhance engagement in the teaching setting (Bambaeeroo & Shokrpour, 2017). The professional trainer fed back that I came across as confident and calm, which was very reassuring as I had previously never had professional feedback on my presentation style. At the close of the session, an anonymous peer vote was cast on the best presentation of the day, and I was pleased to have been voted second place, which boosted my confidence in my presentation skills. This presentation opportunity provided me with beneficial experience at the start of the first year of the Professional Doctorate, and made me feel confident moving forward.

British Healthcare Business Intelligence Association BHBIA industry training webinar: 'Creating truly patient-centric materials'.

02/07/2020

My workplace was invited to host an industry training webinar with a focus on patient centricity for the British Healthcare Business Intelligence Association (BHBIA), and myself and a colleague were put forward by a senior member of staff to lead this. The BHBIA is a professional association for organisations involved in UK healthcare business intelligence and market research, with a focus on legal and ethical compliance, information dissemination and education on best practice within the professional community. The audience was a combination of approximately 70 delegates from both pharmaceutical companies and healthcare communications businesses.

After meeting with my colleague to discuss potential topics, we decided to split the webinar into two sections, and each host a section of the training session for 25 minutes. The objective of the training session was to provide peer education to the industry on best practice in creating patient-facing materials. When preparing the training materials, I focused on providing information on health literacy, and how an understanding of health literacy is important in order to make useful and accessible materials for patients. My colleague and I prepared some slides to accompany the session (Appendix 1). We considered the needs of a broad audience comprising people of varying backgrounds and professions, and so opted to cover some of the fundamentals of the topic to ensure the audience left with a strong foundational knowledge. It is highly beneficial to communicate

specific objectives to the learner at the start of the session, in order to increase engagement and set the direction for the training (Swargiary & Roy, 2023). Therefore, we began by defining the purpose of the webinar, and sharing some key learning outcomes.

As this was almost four months since I began remote working due to the Covid-19 pandemic, I had some experience of presenting information and talking to small audiences over a video call, but I had not yet provided any teaching or training in this virtual setting. In order to ensure my methods were appropriate for the setting, I spent some time reviewing literature into effective training in this setting. In recommendations following a literature review, Sun and Chen emphasise the importance of encouraging students to relate the discussion to their own experiences, and for educators to facilitate an environment where students are able to learn from one another (Sun & Chen, 2016). Therefore, I opted to include interactive elements into the session, to allow the attendees to reflect on how accessible the patient materials they develop are, and created space for peer discussion.

On the day of the session I felt quite apprehensive and nervous about making a mistake or stumbling my words, as I was aware that the session was being recorded and distributed as a webinar to the BHBIA network. Thankfully, the session went smoothly and I was able to deliver my talk as planned. At the end of the session, there was a live Q&A with the audience. This was initially intimidating, but it allowed me to think on my feet and I felt confident with the answers I provided. Following the webinar, attendees were asked to provide formalised feedback to the BHBIA. We received a mean value score of 8.1, which is considered 'excellent', and attendees commented that the session was useful, relevant and insightful. Full feedback can be found in Appendix 2. One piece of feedback noted that the slides could have been more visual, which is something I noted to take into account during future training. Other attendees reported that they appreciated the specific, real-world examples, and this is also something I have endeavoured to consider in every future training opportunity.

Introduction to Health Psychology: a series of five training sessions

Hosted between 10/05/2021 – 20/07/2021

I hosted a series of five training sessions for a team of 8-10 colleagues in my workplace, with the objective to provide an introduction to health psychology and its applications. Each session was up to 40 minutes long, and was delivered via video call due to the Covid-19 pandemic. Learning objectives for the series of five training sessions can be found in Teaching and Training Case Study Appendix 1, and presentation slides can be found in Teaching and Training Case Study Appendix 2. This series of

sessions has been documented as a case study within my portfolio. Therefore, further documentation, reflections and feedback on this experience is included in more detail in the case study.

Session 1: Introduction to Health Psychology

The audience for this series of training sessions was a mix of copywriters, commercial consultants, researchers and project managers, along with psychologists and assistant psychologists. I understood there to be a broad range of understanding of psychology, and began with a 'back to basics' approach, to ensure a solid baseline of knowledge. Self-assessment is considered beneficial in actively engaging the student in the learning process (Yan & Brown, 2017). Therefore, I opted to include an informal self-report measure of the attendees' understanding of health psychology during this session, in order to revisit this at the end of the series.

The group responded well to the training session and participated in the confidence self-report scoring activity. It was interesting to hear that they were engaged in learning and were keen to reflect back on their confidence scores at the end of the series of training sessions to see if their scores had changed. In terms of delivery, I was surprised to find that I felt more nervous training colleagues and peers that I was acquainted with than I would strangers, and this provided me with an interesting point of reflection.

Session 2: Health Beliefs and Changing Behaviour

The objective of session two was to provide an understanding of health beliefs and some behaviour change theory. I was conscious that some of these concepts would be completely new to the group and wanted to ensure maximum engagement and learning.

After planning the first session, I found it much easier to plan session two as I had a structure and research process to follow. Mukhtar, Javed, Arooj and Sethi note that some of the limitations of online learning include a lack of student feedback on whether the materials are being understood (Mukhtar, Javed, Arooj, & Sethi, 2020). I felt that this was particularly important during this session, given the novel nature of the material to the group. During the session I incorporated moments to confirm the group were understanding the material and opened for questions at regular intervals. The delivery of the session went well, however it finished earlier than I expected as I found the group was quieter than I anticipated. I reflected that this may be due to the online environment and considered ways to enhance interactivity and engage the group further in the next session.

Session 3: Health Literacy

I developed the third training session with a focus on health literacy. This allowed me to spend time immersing myself in research into health literacy, and I learnt of some new measures to understand the health literacy score of written materials.

During this session, I was able to utilise learnings from delivering the previous two sessions in order to enhance my teaching style. I had reflected on the importance of leaving purposeful silences and space for others to un-mute and join in a conversation, and I deduced that it was necessary to leave longer than I would normally do in a face-to-face setting, as body language cannot be used as a cue from either the teacher or the student, and therefore, more overt cues such as deliberate pauses are needed to infer that there is a clear space for someone else to speak. This felt awkward at first but worked well and some new members of the group offered answers to interactive activities for the first time. When the session ended, I was pleased with the delivery and engagement.

Session 4: Applied Health Psychology in Pharma

The fourth training session of this series focused on applied health psychology in the pharmaceutical industry. Going into this session I felt a lot more relaxed and confident, with the experiences of the other training sessions behind me. Ahead of delivering this session, I felt that I had developed an effective process of preparation, through developing and reviewing the materials, visualising any areas that I felt could be difficult, and preparing my physical space.

The group appear to have relaxed into the environment and the group setting during this session and were more interactive. According to Giorgdze and Dgebuadze, an interactive teaching approach means students not only interacting with the teacher, but interacting with other students. They emphasise that the use of interactive teaching methods ensures full participation of students, and helps students to retain information for longer periods of time than passive learning would offer (Giorgdze & Dgebuadze, 2017). I gained some positive feedback on my delivery of this session from two of the attendees, who shared that the interactive discussions prompted them to think further on the topic. This was very beneficial as a piece of feedback to reflect on, as it encouraged me to implement more discussion moments in future training sessions.

Session 5: Health Psychology Research

The fifth training session was on the topic of health psychology research. Ahead of this session I felt it was important to gather feedback and insights in the students' experiences; both on their learnings and their experiences of the teaching itself. Gewin recommends asking students precise questions to demonstrate their learning and how each concept builds on their existing knowledge base (Gewin, 2020). I utilised this learning to build in direct questions in the form of a quiz during my final training session with the group, to ensure that students were able to recall and link the concepts they have learnt throughout the training programme. During the delivery of the session, I gained some valuable experience in active time management as I had prepared more content than time allowed for, and needed to manage this during the session to ensure all important topics were covered. I also developed an anonymous feedback form to gather insights into the series of sessions from the student group at the end. Students provided positive feedback stating that they now felt more confident in their knowledge and understanding of health psychology, and I received useful feedback from my workplace supervisor.

Midlands Health Psychology Network Careers Webinar

05/12/2021

Through a peer in my professional network, I was invited as a guest speaker to host a 15-minute talk at the Midlands Health Psychology Network careers webinar. The objective was to provide information on Stage 2 health psychology training, and to share my personal experiences of the Professional Doctorate as well as my own career path to date. I was hesitant before accepting this invitation as I had never delivered a talk of this style before, but I knew it would be a great development opportunity for my teaching and training skills. I approached this as an educational session for the group, so as to ensure the content was well thought-out, and as accessible as possible.

When developing an online education session, Gewin advises that keeping things succinct is even more important than it is in a face-to-face session. They recommend reducing your goals, identifying a few specific things you want the students to learn, and providing a more direct focus in the online space (Gewin, 2020). I considered this approach to be suitable for this session, as it allowed me to focus my session plan on five specific points of information: education, employment, choosing a training route, my experiences on the Professional Doctorate, and my learnings and reflections (Appendix 3).

The constructivist theory of learning posits that learners construct knowledge and meaning from their experiences and reflecting on those experiences, and that effective learning is grounded in a real-world context (Shah Ph & Kumar, 2019). Additionally, through a constructivist approach, the teacher inquires about students' understandings of learning material before sharing new information (Bada & Olusegun, 2015). This approach aligned well with the objectives of my session, and I opted to ask open questions to the group around their initial understanding and experiences within health psychology before I began sharing information and experiences of my own. When developing the materials for the session, I considered the use of slides and a presentation to accompany my talk. Burke and James advise that visual novelty is not pivotal to engagement, and it is dependent on the nuance of the content and whether novelty is added (Burke & James, 2008). Therefore, based on the nature of the content of this session, I opted not to develop any visual stimuli, and to present just verbally.

The audience included around 20 MSc psychology students, Trainee Psychologists and Registered Psychologists. I felt confident while delivering this talk on the day and felt that not using slides allowed for a more informal and conversational session. The session was well received by the group and I gained feedback from peers and the hosts at the end of the session, who found the talk to be informative. The attendees shared that the information I provided was truly beneficial for their understanding of health psychology training. When reflecting on this experience, it felt like a critical turning point for me in terms of confidence and self-efficacy, as delivering this without any supporting materials or slides meant I was fully reliant on my own verbal delivery. I reflected that my confidence in teaching and presenting information to groups had developed significantly over the past year. The success of this session also encouraged me to consider the extent to which supporting materials are needed in future training sessions, to ensure that conscious decisions are made to include content that adds value to the session, rather than including slides as a default.

Neurofibromatosis Community Research Dissemination Conference

09/10/2022

I was invited to partner with a pharmaceutical client to share qualitative research findings on the patient experience of neurofibromatosis through a 45-minute educational session at a patient and caregiver-centric conference hosted in a regional conference centre. The audience was a combination of paediatric patients, their families, patient advocacy group leaders and healthcare professionals specialising in neurofibromatosis.

Bada and Olusegun recommend that utilising the constructivist approach of encouraging teacher and learner to share authority, and embedding learning in social experience through discussions and interaction can maximise learning (Bada & Olusegun, 2015). In order to engage the attendees in this active learning approach, we opted to alternate between sharing segments of research findings and taking live questions from the audience in an ABAB format. A session plan can be found in Appendix 4.

When it came to the day of the session, I felt intimidated by the initial thought of being on a stage and using a microphone in this context. I reflected on how best to maintain a calm and personable style of speaking in this setting, so as to maximise communication despite feeling nervous. I used breathing techniques and eye contact to remain focused and engaged with the audience, and after the first interactive panel session, began to relax. During this session, I was able to utilise skills and learnings taken from the series of five training sessions I hosted previously with the team of workplace colleagues. I practiced allowing more space for responses when asking questions, which facilitated a better discussion. The educational session ran slightly over time, but was successful in delivery and garnered a lot of interaction from the audience. We received good feedback from some attendees immediately after the session ended, and my client provided me with very positive verbal feedback and thanks. Reflecting on this gave me a great sense of achievement, as I had overcome certain perceived personal barriers that had made me feel nervous and it allowed me to feel more confident when speaking to larger groups in the future.

Consultancy partnership: Dental anxiety lecture for Trainee Dentists

09/11/2022

As part of a consultancy opportunity with the University of Central Lancashire (UCLan) School of Dentistry, I delivered a 60-minute lecture to a group of trainee dentists. The objective was to provide education on the management of dental anxiety in patients in the clinical setting, from a behavioural perspective. My client requested the format to be a virtual lecture via *Microsoft Teams*, to maximise accessibility and attendance from multiple student year groups.

I developed the session outline with the aim to provide a combination of theoretical knowledge on anxiety with practical and applicable behaviour change techniques and low-intensity interventions that dental professionals could use to support patients experiencing dental anxiety (Consultancy Case Study Appendix 4). When designing the accompanying PowerPoint slides (Consultancy Case

Study Appendix 5), I referred to published research in teaching to ensure my presentation was as effective as possible. Brock and Joglekar concluded in their research that lower textual density in slides and added non-textual elements stimulated positive student feedback (Brock & Joglekar, 2011), while Strauss, Corrigan and Hofacker advise that slides containing relevant visual elements, when accompanied by instructor narration, use both the visual and verbal channels of a student's working memory, thus improving the chances of increasing knowledge (Strauss, Corrigan, & Hofacker, 2011). After considering the subject matter of the lecture, I concluded that utilising slides with a small amount of text, and visual elements to accompany my teaching would be the most effective solution. I noted the importance of applying the learnings to realistic and relevant contexts in order to maximise the potential for learning (Martin & Bolliger, 2018; Strauss et al., 2011). I endeavoured to relate all learnings back to real-world scenarios and to provide clear examples of specific interventions so that students could directly and immediately apply their learnings to their practice.

When it came to the delivery, a technical problem meant that I was unable to use the 'Polls' feature of *Microsoft Teams* as I had planned to. I was able to think on my feet and adapt my plan accordingly, to use a different feature, but ensure the learning objectives were still met. Following the lecture, my client provided positive feedback and shared that they would like to invite me to deliver this lecture again in the future to more student groups. I also requested feedback from the students after the lecture and received positive responses on the content and delivery of the lecture (Consultancy Case Study Appendix 7). This was a valuable experience in developing training materials for trainee healthcare professionals in a university setting, and I was able to utilise this opportunity as a consultancy case study for the Professional Doctorate.

Final reflections on teaching and training

Reflecting back on my teaching and training experiences throughout my time on the Professional Doctorate, I am grateful to have had a variety of opportunities to develop my knowledge, skills and confidence with various student groups in multiple settings. Considering my initial teaching and training experiences at the beginning of the Professional Doctorate in comparison with more recent sessions, I now feel more comfortable and competent in my abilities. I have also had the opportunity to reflect on and put into practice various educational theories across this time. I have learned the value of immersing myself in approaches such as constructivism, which I find is a helpful perspective to ground my teaching practice in. This has allowed me to develop a collaborative style of teaching, which takes into account the student's previous experiences and encourages autonomy and

initiative. Through reviewing literature and reflecting on feedback received from students and audiences across each teaching experience, I have also developed my knowledge and proficiency in specific techniques such as utilising effective supportive materials such as slides, and encouraging group discussions to facilitate learning.

The impact of the Covid-19 pandemic meant that many of my teaching and training experiences in 2020 and 2021 were in an online setting. This provided me with useful experience in navigating the online and virtual environment when it comes to teaching, and gave me insight into how to adapt to challenges such as the use of new technology, engaging students through distance learning, and adapting teaching techniques to suit this setting. When the restrictions of the pandemic lifted, I was pleased to be able to return to face-to-face delivery of training and education sessions in order to maximise my experiences and learnings in this area. In my current workplace, many meetings and workshops are currently held in a hybrid setting with some attendees in person, and others dialled in virtually. I'm grateful to have had a breadth of experiences to allow me to continue to adapt to an ever-changing world post-pandemic.

Through the process of logging my experiences in teaching and training, I have also identified some areas for further development. Although I have gained some valuable experience in teaching trainee healthcare professionals, I would benefit from further experience with different professions in different settings in order to advance my capabilities. I would also like to increase my confidence, through continuing to accept opportunities to provide teaching and training. I endeavour to keep abreast of research and theory relating to teaching, as this process has taught me how vital it is to base your practice in theory.

References

Bada, S. O., & Olusegun, S. (2015). Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education, 5*(6), 66-70.

Bambaeeroo, F., & Shokrpour, N. (2017). The impact of the teachers' non-verbal communication on success in teaching. *Journal of advances in medical education & professionalism, 5*(2), 51.

Brock, S. E., & Joglekar, Y. (2011). Empowering PowerPoint: Slides and teaching effectiveness. *Interdisciplinary Journal of Information, Knowledge, and Management, 6*, 85.

Burke, L. A., & James, K. E. (2008). PowerPoint-based lectures in business education: An empirical investigation of student-perceived novelty and effectiveness. *Business Communication Quarterly, 71*(3), 277-296.

Gewin, V. (2020). Five tips for moving teaching online as COVID-19 takes hold. *Nature, 580*(7802), 295-296.

Giorgdze, M., & Dgebuadze, M. (2017). Interactive teaching methods: challenges and perspectives. *International E-Journal of Advances in Education, 3*(9), 544-548.

Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. *Online Learning, 22*(1), 205-222.

Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pakistan journal of medical sciences, 36*(COVID19-S4), S27.

Shah Ph, D., & Kumar, R. (2019). Effective constructivist teaching learning in the classroom. *Shah, RK (2019). Effective Constructivist Teaching Learning in the Classroom. Shanlax International Journal of Education, 7*(4), 1-13.

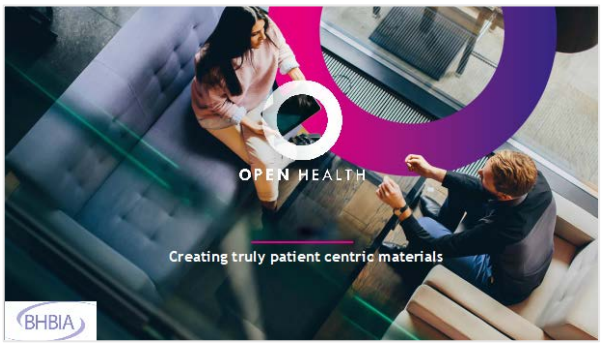
Strauss, J., Corrigan, H., & Hofacker, C. F. (2011). Optimizing student learning: Examining the use of presentation slides. *Marketing Education Review, 21*(2), 151-162.

Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education, 15*.

Swargiary, K., & Roy, K. (2023). *Crafting Effective Lesson Plans: A Comprehensive Guide for Educators*: LAP.

Yan, Z., & Brown, G. T. (2017). A cyclical self-assessment process: Towards a model of how students engage in self-assessment. *Assessment & Evaluation in Higher Education, 42*(8), 1247-1262.

Appendix 1. BHBIA training session webinar slides – creating patient centric materials



Session introduction

What makes materials patient-centric? Is Pharma any good at developing patient-centric materials? This session will challenge you to think about the assets that patients see.

BHBIA

What is the purpose of this webinar?

Pharma is increasingly focussing on patient centricity. BUT...

How 'patient friendly' are communications from the pharmaceutical industry?

Do they consider the health literacy of the target population?

BHBIA

What will you take away from this session?

- We will ask you to think about how you and your colleagues approach patient/caregiver communications and research.
- You will be reviewing both good and bad communications to explore this yourself.
- You will leave with guiding principles to focus your minds on patient comms in the future.
- You will be able to ensure patient and caregiver comms and research are clear, well understood, genuinely valuable and useable.

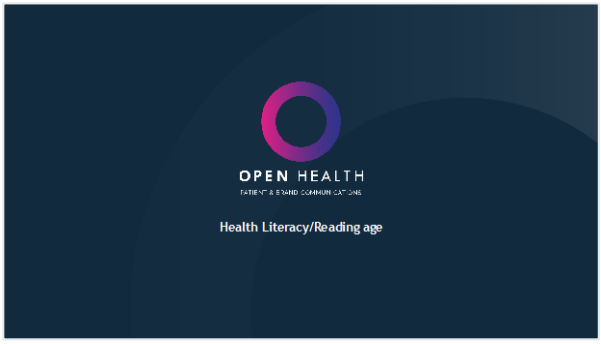
BHBIA

Things to consider when developing patient information:

- Language...
- Content...
- Accuracy...
- Design...
- Format...

These elements also apply when looking at stimulus for patients/caregivers, how we ask questions and how we provide outputs to be shown more widely to patient populations.

BHBIA



Which newspaper do the following excerpts come from?

What reading age are they aimed at?

BHBIA

"Mr Cameron was said to be 'pretty hacked off' yesterday, after his bike was stolen outside his local branch of Tesco in West London. The Conservative leader left his bicycle padlocked to a short bollard at the supermarket in Portobello Road at about 6.30pm on Wednesday as he was 'picking up a few bits of salad'. But when he emerged it had disappeared after thieves had apparently lifted it clear. "

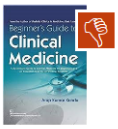
BHBIA

"This is the moment David Cameron saw his £1.000 mountain bike had been half-inched as he shopped in Tesco. He stood sadly as locals jokingly pointed the finger of suspicion at London Mayor Boris Johnson, who had his own cycle nicked recently.
Mr Cameron, in blue T-shirt, white shorts and trainers, had nipped into a Metro store to get salad. He left his silver and black Scott bike chained to a 3ft tall post - but yobs simply lifted it off."

BHBIA

What does this mean?

- The average reading age in the UK is about 9 years old.
- The Sun aims at a reading age of 9.
- The Guardian aims at a reading age of 14.
- 1.7 million adults in England have literacy levels below those expected of an 11-year-old.



Remember, writing to the average reading age of the UK is not about intelligence - it's about comprehension....being **inclusive** and **writing to how people read.**

BHBIA www.literacytrust.org.uk

What is health literacy?

- Health literacy is the ability to read, understand and act on health information.
- It is important to understand that health literacy requires a range of skills and resources associated with how we process health-related information
- There is a difference between health literacy, general literacy and intellectual ability
- The capacity to obtain, interpret and understand basic health information and then to use such information and services to enhance health.

BHBIA

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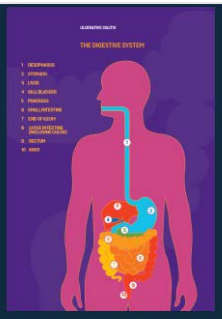
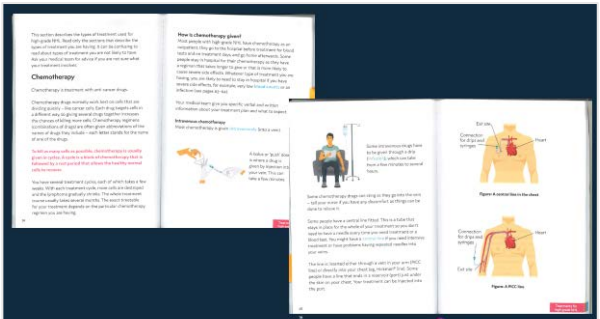
Reviewing materials

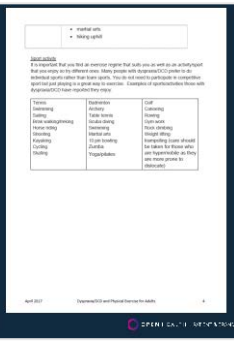
Reviewing patient materials:

- For this exercise I'm going to show you on some screen a variety of patient materials that I would like you to review.
- Think about:
  - Language...
  - Content...
  - Accuracy...
  - Design...
  - Format...
- Feel free to use the chat function to feedback on your thoughts

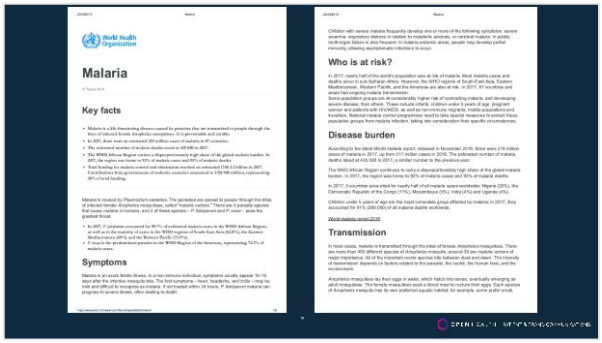
BHBIA

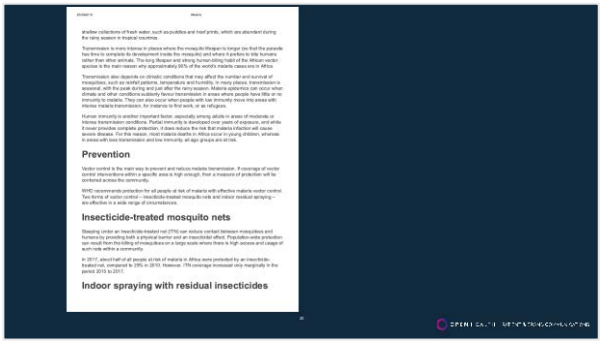






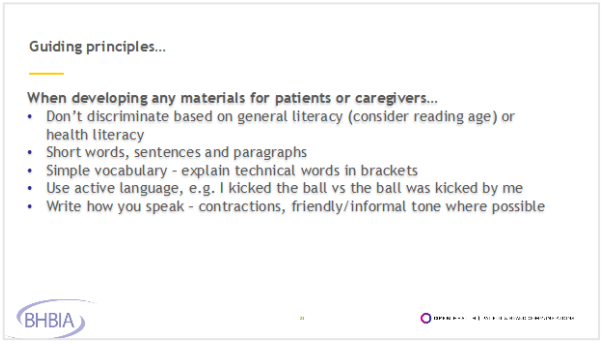
Teaching and Training Diary 161

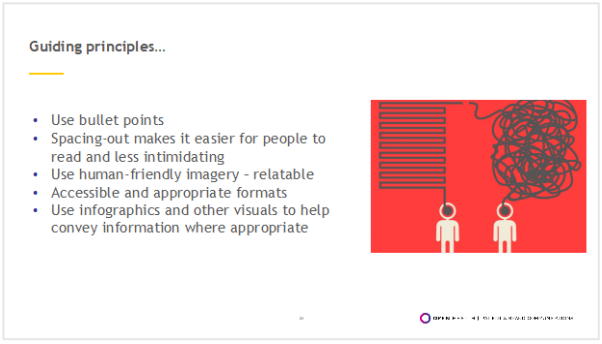

Malaria
Key facts
Symptoms
Who is at risk?
Disease burden
Transmission

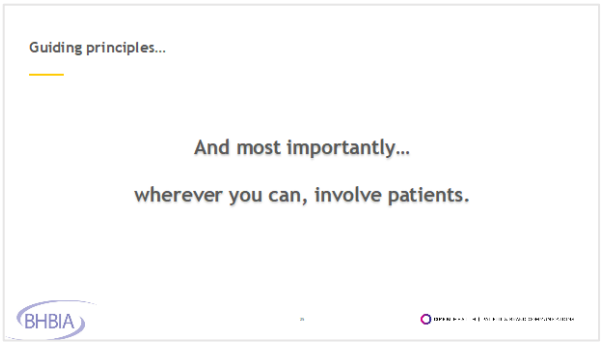

Prevention
Insecticide-treated mosquito nets
Indoor spraying with residual insecticides


What did you think?
BHBIA


OPEN HEALTH
PATIENT & BRAND COMMUNICATIONS
Guiding Principles


Guiding principles...
When developing any materials for patients or caregivers...
Don't discriminate based on general literacy (consider reading age) or health literacy
Short words, sentences and paragraphs
Simple vocabulary - explain technical words in brackets
Use active language, e.g. I kicked the ball vs the ball was kicked by me
Write how you speak - contractions, friendly/informal tone where possible
BHBIA


Guiding principles...
Use bullet points
Spacing-out makes it easier for people to read and less intimidating
Use human-friendly imagery - relatable
Accessible and appropriate formats
Use infographics and other visuals to help convey information where appropriate


Guiding principles...
And most importantly...
wherever you can, involve patients.
BHBIA


OPEN HEALTH
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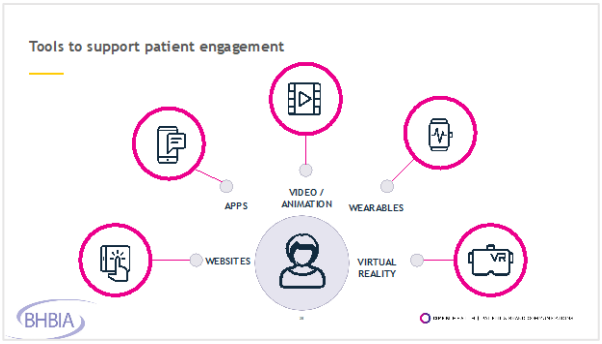
Channels for Communication & Support


COVID-19 is accelerating the rise of digital health...
THE NEW ENGLAND JOURNAL of MEDICINE
Telehealth to Experience Massive Growth with COVID-19 Pandemic, Says Frost & Sullivan
McKinsey & Company
Telehealth: A quarter-trillion-dollar post-COVID-19 reality?
48% of respondents (in a Health Union survey of 2,214 people living with chronic health concerns) said they either had or plan to have a telehealth appointment since the start of the coronavirus pandemic. This survey, which was fielded April 14-17...
More than double - from the 23% of respondents from Health Union's first COVID-19 survey fielded in March
BHBIA


Tools to support patient engagement
APPS
VIDEO / ANIMATION
WEARABLES
WEBSITES
VIRTUAL REALITY
VR
BHBIA

Personalising support

Digital tools enable a more personalised experience … creating User Personas aids designing with the user in mind

BHBIA

In summary

When creating truly patient centric materials…

Audience Pain Point Content Channel

BHBIA

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THANK YOU!

Appendix 2. BHBIA webinar feedback

Email feedback from BHBIA webinar hosts and collated delegate feedback

From: Personal identifiable details redacted
Sent: 13 July 2020 10:39
To: Personal identifiable details redacted
Cc: Personal identifiable details redacted; 'BHBIA' <Personal identifiable details redacted>
Subject: Webinar delegate feedback

Hi Personal and Helena,

We've now got the results of the delegate feedback – please see attached plus my comments below.

We will send the slides out this week (pdf format). Personal id – don't worry about sending a different slide set but please could you just remind me of the names of those tools that you mentioned and what they were for – and I can add that into the email, for those who are interested.

Feedback

As a percentage of the attendees, the response rate is very good and the feedback itself is really positive. The mean 'value' score of 8.1 is really excellent – right at the top of the range we get for our webinars (the feedback is always quite variable as it's impossible to please everyone and often the averages are much lower than this) – you did a great job at pitching it at a level that was valuable for the majority.

It could be interesting to consider whether there are other topics like this that take a slightly deeper dive into an aspect of patient research, for potential future webinars. And certainly we'll keep in mind when encouraging people to tune into past webinar recordings that this is one of the particularly useful ones.

We also had some nice comments in chat/Q&A at the end:

- Great session, thanks all!
- Great presentation - thanks everyone
- Thanks all - very insightful
- Thank you to Personal id and Helena it was a great presentation, really interesting for me. Thank you for covering my question so well!

Many thanks again for sharing your time and expertise with our members.

Personal identifiable details redacted

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Delegate feedback (N=12)

Prompt	Responses
Was the webinar pitched at the right level?	'Yes, it was about right' (n=9) 'No it was too elementary' (n=3)
What, if anything, did you find most useful about this webinar?	• *"Learning how to use patient-friendly wording as we can often slip into more HCP-friendly wording in patient materials!"* • *"It was very useful to spread consciousness about the reading level of patients and how to address this correctly."* • *"liked the specific examples"* • *"It was a good reminder of the main principles when designing patient-related materials. Good to hear an update on COVID-19 impact and thoughts in channel of communication going forwards* • *"Practical sessions giving us the chance to look at materials rather than all being theoretical"*
What, if anything, was not useful/would you have liked to change?	• *"I would have liked to have seen the presentation focus on a more advanced aspect of patient communications. The slides they showed could have been condensed into one intro slide as the basics of patient research before moving onto key issues."* • *"would have been great to see a before and after"* • *"I don't feel anything was not useful, I do feel that they could have covered more on this topic. Like some more about patients in other countries besides the UK and if there are more things we could do to create more patient centric materials. I think they could have covered more ground."* • *"I think the slides could have been more visual; i also felt it could have been more strategic, felt was on a very tactical level"* • *"Nothing"* • *"Nothing"* • *"I did not feel the need to change anything."* • *"I guess ideally more time to review and comment on things - was a little whistle stop!"*
Please let us have any other feedback/ comments/ questions	• *"I felt it was pitched at the right level, paced well and insightful. Clearly knowledgeable speakers"* • *"Excellent webinar. The platform worked well, the presenters were excellent, questioning was straightforward using "chat" and all questions were really well handled by both presenters and BHBIA team."* • *"Really interesting and practical webinar, with some great tips to take into the workplace"*
Please rate the overall value of attending this webinar out of 10	Mean score = 8.1

Appendix 3. Midlands Health Psychology Network (MHPN) Careers Webinar Session Plan

Date: 05/12/2021
Timing: 15 minutes
Mode of delivery: remote (Zoom)
Attendees: Primarily MSc Health Psychology students and Trainee Psychologists

Objectives:

1. To provide information on my education and career path so far, and what led me to enrolling on the Professional Doctorate
2. To deliver an overview of my experiences of the Professional Doctorate so far, and how I aim to meet the competencies
3. To host a Q&A with the group and answer questions on my experiences, to allow for a deeper understanding of the Stage 2 taught route in health psychology

Information provided to attendees:
Helena Morris is a Trainee Health Psychologist currently completing Stage 2 training via the DHealthPsych Professional Doctorate at Liverpool John Moores University (LJMU). Based in London, Helena works as a Senior Assistant Health Psychologist within the Patient Engagement team at OPEN Health, a healthcare communications and market access company. In this talk, Helena will share her experience of the Professional Doctorate, reflecting on her journey so far – including how she is meeting the Stage 2 competencies and adapting to remote training.

Key discussion points:

- Education and training
    - Undergraduate and Stage 1 training experiences
- Employment experiences in health psychology
    - Previous experiences
    - My current placement of employment during the Professional Doctorate
- Choosing a route that works for you
    - Why I chose the Professional Doctorate route
    - Researching and applying for Stage 2 training
- The Professional Doctorate at LJMU
    - The application process and starting the programme
    - The structure of the programme at LJMU
    - How I am meeting the competencies
        - Teaching and training
        - Consultancy
        - Behaviour change interventions
        - Research
        - Professional skills
- Learnings and reflections
    - The biggest challenges for me
    - My learnings and reflections so far
- Q&A

Appendix 4. Neurofibromatosis research dissemination session plan

OBJECTIVES

1. To provide an overview of qualitative research into the patient clinical and psychological experience of neurofibromatosis from pre-diagnosis, to treatment and ongoing maintenance and monitoring
2. To provide the patient and caregiver community with an opportunity to reflect and comment on the patient journey research
3. To collate further insights into the emotional experiences of people living with neurofibromatosis

AGENDA

Activity	**Outline**
Introduction and objectives	Introduce the outline and objectives of the session including the content to be covered, and format of interactive discussions throughout
Insights sharing: Pre-diagnosis and diagnosis experiences	Share key highlights from the research into the patient experiences pre-diagnosis, and the diagnostic experience
Q&A discussion with attendees 1	Open to questions from attendees, to discuss the pre-diagnosis and diagnosis research findings
Insights sharing: Treatment, testing and ongoing monitoring	Share research findings relating to treatment options for neurofibromatosis, how patients engage with these, and how the condition is monitored on an ongoing basis
Q&A discussion with attendees 2	Open to questions from attendees, to discuss the treatment, testing and ongoing monitoring research findings
Insights sharing: The practical and psychosocial impact of neurofibromatosis	Share key insights from the research relating to the psychosocial and practical impact of life with neurofibromatosis
Q&A discussion with attendees 3	Open to questions from attendees, to discuss the practical and psychosocial impact of neurofibromatosis research findings
Insights sharing: The caregiver perspective	Share key highlights from the research on the caregiver perspective, in the paediatric setting
Q&A discussion with attendees 4	Open to questions from attendees, to discuss the caregiver perspective research findings
Summary and close	Summarise learnings from the session and close.

Client-identifiable information has been redacted for the purposes of confidentiality.

Research

This section contains three separate pieces of research. The first is a systematic review exploring positive psychology interventions in prostate cancer. The second is a qualitative exploration of the domains associated with patient empowerment in healthcare. The third outlines the development, pilot testing and psychometric evaluation of a novel measure of patient empowerment. Additional to this is a Research Commentary, which covers a reflective analysis of my research experiences and learnings throughout my time on the Professional Doctorate.

Research Commentary

Reflecting on my research experience during the Professional Doctorate, I am grateful for the numerous opportunities I have had to hone my skills and knowledge, and to note a significant increase in confidence in my abilities. I'm thankful to have the opportunity to work with a team of psychologists, many of whom have strong academic research backgrounds, and to have been able to learn from their experience. Research was an area of the Professional Doctorate that intimidated me initially, and some of my earliest reflections on this journey focused on how I might gain confidence in my research abilities. Looking back, I am pleased to identify numerous areas of growth. A common thread of this commentary pulls on the journey through which I have pushed myself out of my comfort zone, allowing me to gain confidence, obtain experience and develop valuable research skills. Within this commentary I will focus on my development as a researcher across the three pivotal research activities during the Professional Doctorate alongside my professional experience in my workplace placement.

Systematic literature reviews

When developing my Plan of Training at the beginning of the Professional Doctorate, I made the choice to select my systematic review project as the first piece of work to focus on. I was slightly daunted by the prospect of carrying out this research and was aware that a number of my peers on the Professional Doctorate had experience conducting a systematic review through their Health Psychology MSc programme, while it wasn't a requirement during the time I completed the MSc, and I had yet to complete one through my workplace. Because of this, I felt that I was unprepared or lacked potential important knowledge, and so decided to complete this research first before any other Professional Doctorate assignment. Upon reflection, my anxiety associated with the prospect of the systematic review meant that my mindset was one of fear of failure, rather than curiosity associated with my research topic and learning a new skill. For these reasons, alongside the turbulence of the early COVID-19 pandemic, I delayed starting my review for many months. I'm proud to reflect that I have since learned to recognise this mindset that I can initially take when facing the start of a significant project, and while these feelings can still arise, I know how to best manage and channel them through labelling and challenging the thoughts in turn. This was a helpful learning that has allowed me to step back and reflect on my initial feelings when challenged with a new project, ensuring I am allowing myself to start the work in a more positive mindset.

The prospect of carrying out such a *systematic* piece of research felt huge to me as I began my initial exploration into how to complete one. Reading guidance papers, course materials and textbooks such as 'Doing a Systematic Review' (Boland, Dickson, & Cherry, 2017) on the steps required intimidated me, as I felt I could make one mistake without realising and compromise my entire research. In hindsight, I now believe the beauty of a systematic review is that its systematic nature guides you through the journey, encouraging a rigorous standard of research.

Completing and submitting my PROSPERO registration felt like a milestone, as this was an unfamiliar process, and I was keen to begin conducting my searches straight away. I was grateful to receive the advice of a librarian at LJMU with queries relating to my searches. This was an invaluable resource, and they helped me to refine my database searches, and source articles from overseas that I had difficulty accessing. I also benefited from contacting one of the key researchers in my targeted field, to request access to data I could not source. The process of reviewing and synthesising the data was rewarding, and by this stage I was pleased to note that I couldn't relate to the extreme apprehension I felt at the beginning of the process.

I gained a lot of valuable feedback from my university supervisors when I submitted my drafts of the systematic review. My supervisors encouraged me to include a quality assessment of the papers I had included in the review, which enhanced the rigor of the review, and taught me the importance of this assessment as well as the methodology of conducting this type of assessment. I was relieved to submit and pass this piece of work, and it left me with a lot of learnings to reflect on as a researcher. Through regular reflection on my abilities and confidence in this area and putting emphasis on active experimentation (Kolb, 1984) when conducting reviews, I can see development in concrete skills evidenced by more efficient work and better feedback from supervisors in my workplace. I have since worked on numerous literature reviews and two systematic reviews in my workplace, and the experience that I gained when working on this first review has been extremely beneficial. I now feel confident in the process, and in my judgments as a researcher, while understanding where to seek the input of others as appropriate.

Designing and conducting qualitative research

Designing and conducting qualitative research is an area that I felt much more comfortable with than systematic reviews at the start of the Professional Doctorate. Through my workplace placement, I have had the opportunity to regularly conduct a wide variety of research activities, ranging from commercial market research to academic research written for scientific publication. I have gained

experience in designing and conducting primary qualitative research through qualitative interviews, focus groups and advisory boards, and these have offered me many individual opportunities that have helped me to grow as a researcher. In July 2022 I was tasked with leading the development of primary research materials including an interview discussion guide for people aged 7-16 living with neurofibromatosis across Europe. Although I had assisted with research in paediatric populations, this was the first time I had led a project with a paediatric sample. When developing the discussion guide, I spent time researching best practice guidance and published examples of other work in this population and sought advice from colleagues with experience in this area. While I had this wealth of guidance, this was also a lesson in trusting my own judgment and instincts professionally. Due to the age range, I opted to tailor the interview guide to segment questions appropriately for three different age brackets and was required to justify this decision to my client's medical review board. I also learnt to translate and apply client-facing, complex research questions to appropriate research materials suitable for the population. Individual novel experiences such as this have been invaluable throughout my workplace placement, enriching my experience on the Professional Doctorate.

For my two pieces of empirical research to submit as part of the Professional Doctorate, I had two separate qualitative research projects outlined in my Plan of Training. However, an opportunity arose in my workplace to carry out an independent research project with the aim to develop a novel scale to measure healthcare service user empowerment. This could be conducted in two stages; first a qualitative exploration of the subject area to determine appropriate domains to be included in the scale (empirical paper 1) and second, the initial development and piloting of the new scale (empirical paper 2). Despite my qualitative research experience within the workplace, the idea of designing and carrying out this research without the structure of my workplace felt vulnerable at first. While this was also a work project, no other employees were allocated to it as it was not revenue-generating. Upon reflection, this caused me to feel as though I had less scope to discuss ideas with others, but I utilised meetings with my university supervisor to ensure I had appropriate support.

I noted a feeling of confidence when developing my interview discussion guide, which I can attribute to the learnings and experience I have gained through my workplace projects. Developing the application to submit my research to the University Research Ethics Committee (UREC) for proportionate review allowed me to interrogate my proposed research design, and I made changes including shifting from utilising focus groups to individual interviews for data collection, to allow for more in-depth insights. My initial ethics application was rejected, and I was encouraged to revisit my screener questions to ensure I was not asking for unnecessary data beyond the purpose of screening.

I was disappointed by the rejection but learnt a valuable lesson relating to the design of research screeners. After my revised application was approved, I began advertising for, screening and recruiting participants, and subsequently arranging remote interviews with participants across the UK. Recruiting participants was frustrating, as I received a number of applications from outside of the UK due to the nature of URLs being shared across the internet. If I were to repeat this based on my experience, I would use a more stepwise recruitment approach, widening my reach more gradually to try and avoid this situation.

I enjoyed the data collection process and noted how rewarding it felt to be carrying out primary research based on an area of my interest, having been able to conduct extensive background research and review all relevant literature. I was able to fully connect with the research question and felt that this translated into effective interviews with my participants. I found that because I was reflecting after each interview, I gained learnings on how to approach certain topics or questions, and how to elicit the most in-depth responses from my participants, which I could then carry forward into the next interview. For example, I found it helpful to place a stronger emphasis on setting up the tone of the interview, spending slightly longer outlining the desire for participants to be completely honest and positioning them as the 'experts' on this topic, which I reflected elicited more open responses.

When analysing the data, I opted to use NVivo for the first time, which streamlined the process and supported the identification of themes. I was grateful for Braun and Clarke's release of their book *'Thematic Analysis: A Practical Guide'* (Clarke & Braun, 2021), which allowed me critically assess my understanding of thematic analysis, and to ensure I was aligned with their method. I felt confident in writing up this research after analysing the data extensively and prepared my paper for submission to *Health Promotion International*. The use of NVivo for analysis was a helpful tool, and it is now a software that I will use each time I carry out qualitative analysis based on this experience.

Quantitative methods and developing a novel measurement scale

For my second empirical paper as part of the Professional Doctorate, I embarked on a project to develop, pilot test and carry out psychometric inspection of a novel empowerment scale, building upon the qualitative research conducted as part of empirical paper 1. This research project was one of the most personally rewarding, and I gained a wealth of confidence and research skills through the process. I was excited to develop the scale, and to be given this level of responsibility from my workplace to create an innovative tool that could be utilised to measure healthcare empowerment.

This opportunity also allowed me to include some quantitative research methodology into my Professional Doctorate portfolio, which wasn't initially planned as part of my research competency in my Plan of Training.

Through workplace projects I have had experience in developing surveys tailored to specific research questions and felt comfortable in the process of developing and assessing questions for interpretability, ambiguity, face validity and content validity. However, the process of developing a scale using a combination of existing and novel items, grounded in evidence was a new challenge for me. I also felt challenged by the prospect of factor analysis, as this is something I hadn't carried out since my undergraduate psychology degree. I felt somewhat comfortable with using SPSS to carry out the analysis, as I have had experience through my workplace in carrying out survey data analysis alongside previous academic projects. I reflected upon this and noted that I felt motivated and excited by these challenges, which was far removed from the fear I felt upon starting my systematic review. I spent quite a lot of time researching and re-learning various methods of factor analysis through textbooks and desk research before I had researched and developed the draft scale items, to ensure I felt confident in the whole process from the start.

I worked with a team of psychologists within my workplace to review and validate decisions as part of the scale development process. Each reviewer was asked to share the rationale behind their recommendations to either add, remove or adapt scale items from the initial draft list. This gave me a great insight into the decision processes of others and their interpretation of the scale items, allowing me to evaluate an accumulation of evidence and apply this to my final research decisions with regards to the scale.

The pilot testing process was another new challenge. As I was aiming to reach a sample of at least 300 people with a limited budget, I opted to learn how to use Amazon Mechanical Turk (MTurk) to recruit participants. This was daunting at first, as I didn't find the platform to be particularly user-friendly to the lay-person or researcher, but it proved successful in reaching a wide variety of people in combination with social media recruitment and snowballing. Reflecting on this process, I would consider using this method again for research with broad sample inclusion criteria.

After developing, pilot testing and analysing the data from this scale, I felt a shift in my self-efficacy relating to this type of research. Approaching this unfamiliar methodology with an inquisitive attitude meant I could designate time to thoroughly understanding the 'why' behind each step. This

in turn meant that I was confident in the rationale behind each methodological decision, beyond just learning that something is 'the right thing to do' in a given context. This gave me a great sense of accomplishment, and the confidence to approach new forms of data analysis with this mindset in the future. As I write this commentary, my immediate next plans are to begin to submit my systematic review, empirical paper 1 and empirical paper 2 to the journals they were developed for.

Professional practice and ethics in research

Working on research projects as part of a multidisciplinary team within my workplace has allowed me to develop my professional skills related to research, including tailoring messages to different audiences, playing to the team's strengths and implementing reflexivity on behalf of our team and our clients when designing a protocol.

There have been times when I have needed to challenge a client's request in order to prioritise the ethical standards of the research and protect the wellbeing of potential participants, either through enhanced screening, reduced burden on the participant or a complete adaptation of research methods. As outlined in the HCPC Standards of Proficiency (Health & Care Professions Council, 2023) and the BPS Code of Ethics and Conduct (BPS, 2018), Health Psychologists must practise within the legal and ethical boundaries of their profession and act in accordance with the four key principles; respect, competence, responsibility and integrity. In these situations I have had to navigate some tricky conversations with clients, and this has allowed me to grow as a professional. I have left each conversation feeling more confident and authentic in the way I am communicating these messages. Feeling increased confidence in this remit benefited me through the ethical review process for both pieces of empirical research for the Professional Doctorate, as I felt I had practice in critically assessing my decisions and testing to see if there is justification for every decision that will impact the participant.

My work at OPEN Health is consultancy-oriented, meaning that I am required to act as an expert advisor to our clients. Through various workplace experiences throughout my time on the Professional Doctorate, I have learnt to balance the input and requirements of pharmaceutical clients, healthcare professionals, patient advocacy groups and internal stakeholders while making it my primary concern to ensure that the safety and wellbeing of any research participants is not compromised. I have learned that it is helpful to gain buy-in from important stakeholders at the beginning of a research project by outlining important ethical considerations upfront such as

informed consent, legal and ethical boundaries, and safeguarding, as aligned to the HCPC Standards of Proficiency (Health & Care Professions Council, 2023).

Broadening my research experience within my workplace

The nature of my work means that I have the opportunity to work with different populations as part of research projects, including mental health, oncology and rare disease, and to conduct research with patients, caregivers and healthcare professionals in various countries globally. This breadth of experience has allowed me to learn how to tailor research design, for example, considering the context of culture and social norms relating to health and the discussion of health-related topics, and to seek expert input relating to the disease area, country or culture in question, including engaging patient advocacy groups and developing research in partnership with those groups.

Through working with various internal and external teams as part of my work placement, I have also been exposed to new research methodologies such as ethnography and social listening, and new software to support qualitative analysis, and have worked with various approval boards including the NHS Research Ethics Committee in partnership with pharmaceutical clients.

As my career has progressed throughout my workplace placement, I have experienced working on research projects in both the roles of Assistant Psychologist and Behavioural Psychologist. Transitioning from a junior to a mid-level role in this setting gave me the opportunity to become a lead researcher on projects. This pushed me to gain confidence in my decision making, and to also learn to take on a reviewer role in research design and analysis. Through paying close attention to the HCPC Standards of Proficiency (Health & Care Professions Council, 2023) and the BPS Code of Ethics and Conduct (BPS, 2018), I have ensured that my decisions are aligned to the guidance set out by these professional bodies, and have also ensured that I am seeking regular supervision.

Competence in research understanding, development and delivery is paramount as a Health Psychologist. The weight of the importance of this competency has intimidated me at times, but consequently, the focus I have put onto gaining experience and developing a positive mindset with regards to continuous learning as a researcher will hopefully stand me in good stead throughout the rest of my career.

References

Boland, A., Dickson, R., & Cherry, G. (2017). Doing a systematic review: A student's guide. *Doing a Systematic Review*, 1-304.

BPS. (2018). *Code of ethics and conduct*. Leicester: British Psychological Society.

Clarke, V., & Braun, V. (2021). Thematic analysis: a practical guide. *Thematic Analysis*, 1-100.

Health & Care Professions Council, H. (2023). Standards of Proficiency: Practitioner Psychologists. Retrieved from https://www.hcpc-uk.org/standards/standards-of-proficiency/practitioner-psychologists/

Kolb, D. (1984). Experiential Learning: Experience As the Source of Learning and Development, vol. 6, no. 2. *Englewood Cliffs*, 289-296.

Professional Practice

This section contains a Reflective Practice Commentary, detailing my reflections on my learning, progress and growth over the span of Professional Doctorate training period. Accompanying this is a comprehensive Practice Log, detailing the work undertaken during this period on a weekly basis. The Practice Log can be found in a separate accompanying document.

Reflective Practice Commentary

It feels like a significant milestone to be reflecting on my time working towards the Professional Doctorate. My journey has been filled with turning points, from everyday occurrences that made a new concept 'click' for me, to sometimes daunting experiences that have taught me immeasurable amounts, altering the way I see things both as an individual and as a future Health Psychologist.

I believe that one of the most important tools in a psychologist's toolkit is reflective practice, and I reflect on the abundance of learnings, challenges and moments of growth over my time on the Professional Doctorate with immense gratitude. The concept of reflective practice was first introduced to me during my master's degree, when I was encouraged to complete a reflective diary, and I still consider it to be one of the best tools I have been given as a trainee psychologist. I began my reflective diary during the first week of the doctorate, using Gibbs' Reflective Cycle (Gibbs, 1988) to provide a framework and prompts for my reflective practice. This commentary draws upon my reflective diary and practice log to illustrate my reflections on six distinct experiences that have shaped my learning and development.

Building professional, communication and therapeutic skills through research activities

While I have reflected in depth on my research experience and growth in my Research Commentary, there have also been some pivotal research experiences and learnings that have had more of a widespread impact on my professional skills and development.

In October 2020 I assisted my workplace supervisor in the facilitation of a virtual advisory board with haematologists and people living with immune thrombotic thrombocytopenic purpura (iTTP). The purpose was to collect data to explore the unmet holistic and psychological support needs of this population. Assisting with the facilitation helped me to understand the 'in-the-moment' decisions my supervisor was making. I reflected:

> *"This made me more aware of the challenges she faced: adhering to an approved discussion guide, receiving prompts from our client for questions to ask, monitoring the online chat function, being aware of timings, writing on the online whiteboard and above all this being present and compassionate while listening to speakers but moving the conversation in the right direction based on the research questions."* – reflective diary, 09/10/20

I recall feeling in awe of the skill level it takes to make this look seamless and natural, and not being able to imagine myself facilitating an advisory board or focus group so smoothly.

A year later in October 2021, I had led some workshops, advisory boards and focus groups of my own, and felt much more competent in this area. I was tasked with assisting a similar focus group

behind the scenes, but a few moments before it began, the co-facilitator dropped out and I instead had to lead half of the focus group:

> *"I was meant to be in a support role rather than a facilitator role. 10 mins before the advisory board started, [my manager] told me the client didn't want to co-host and I would have to do it, alongside [my manager]. I didn't feel nervous, I felt ready and confident to give it a go and do a fairly good job, although I hadn't prepared for this. It's interesting to think that this time last year I would not have had the confidence in my ability to do this."*
> – reflective diary, 01/10/21

In December 2023, after a lot more experience, I co-facilitated another very similar advisory board with a colleague, and it prompted me to reflect in the moment on my growth. I noted that I prepared appropriately by immersing myself in the objectives and discussion points but didn't 'over prepare' out of anxiety or nerves. The focus group went well, I was able to think on my feet and felt confident and relaxed communicating with the group:

> *"The advisory board was really enjoyable because I was confident, felt comfortable with the scope of the research and was able to direct the conversation, which made me feel relaxed and I think make me do a better job as a consequence."* – reflective diary, 01/12/23

This thread of learning and development has been crucial to my understanding of and self-efficacy relating to skill building as a trainee Health Psychologist. While this example is specific to the facilitation of focus groups and related research activities, I now have a different perspective on my own ability to learn and develop new skills more broadly, and feel more confident that I am able to put my mind to learning new skills, despite how daunting the prospect may seem at the start of the journey.

Conducting individual research interviews has also had a significant impact on my communication skills in a broader sense. During the first two months of the doctorate, I spent a day conducting semi-structured research interviews with my workplace supervisor and another Health Psychologist in my team. This became a day of training, where I was able to listen in on interviews my supervisor conducted, and seek feedback on my interviews while she listened in. We were interviewing people living with polycythaemia vera and their caregivers to understand their lived experience of the condition and their unmet needs.

> *"At the end of one patient interview, [researcher] asked if they had any questions, and the patient asked whether their interview sounded normal, and wanted to check they'd answered OK. They said they were nervous all day before the interview. This made me think more about the power imbalance discussion from yesterday [during a Prof Doc lecture], and how the*

patient likely perceived a power imbalance. The patient commented that [researcher] made them feel relaxed. Shows how the power imbalance feelings can be eased, e.g., she started off the conversation by having a chat about favourite TV programmes."

– reflective diary, 14/02/20

The above reflection describes a short conversation that gave me a window into someone's perception of the power dynamic in this situation, and it is a learning that stayed with me. I find myself reminded of the vulnerability of this exchange, and it has shaped how I open up any conversation with a patient or research participant as it reminds me to centre a down-to-earth, human connection upfront, to be mindful of the power imbalance, and to aim to foster a comfortable environment for what can sometimes be a vulnerable conversation for them. On the same day, I also gained valuable insights from conducting interviews myself:

"Carer was really reassured and pleased to hear that her interview was going to help other people. Carer said I had been very kind and thanked me. I reflected on what I did that would have seemed kind. I think it was that I made her feel heard and understood. When she got upset, I acknowledged that what she was sharing must have been very difficult and gave her space."

– reflective diary, 14/02/20

Although this was just one day of training, I reflect back on it now as a turning point for my confidence in this area. It provided a gateway to reframing these conversations in a way that allows for more of an authentic connection to be established with the other person in a professional way, that can be conducive to better outcomes and a more comfortable experience for them. This was an important learning that aligns well to HCPC Standard of Proficiency 7; communicate effectively (Health & Care Professions Council, 2023). This experience and subsequent learnings have had a broad impact on my professional skills and can be applied to clinical practice, therapeutic skills and building a therapeutic alliance.

Research interviews have also prompted wider learnings related to my communication and clinical skills. In April 2021 I was part of a research programme in conjunction with a pharmaceutical client and some NHS Trusts across the UK testing the acceptability of a supportive app for patients with treatment resistant depression. The research screening calls required me to probe suicidal ideation and to screen participants based on specific risk criteria.

"This was the first time I had screened patients who were at a noted risk of suicide and it gave me an understanding of how to discuss suicidality sensitively, and the risk assessment

and escalation processes involved in working with a high-risk group of research participants."
– practice log, 26/04/21

I reflected:

"At first, I felt uncomfortable asking patients that I had never interacted with before whether they had suicidal thoughts in the past two years as part of the screener. I needed to spend time reflecting on the patient perspective and discussing with my supervisor. I learnt not to be afraid of using the word 'suicide' and to be comfortable in discussing it."
– reflective diary, 27/04/21

Although I had prepared by discussing the escalation processes with the research team and related psychiatrists, and following the protocol for screening, I didn't feel a complete sense of ownership or ease related to this activity. I felt uncomfortable with my lack of experience and knowledge in this area, which prompted me to attend a Suicide Prevention Summit hosted by the BPS, in order to expand my professional development. The summit provided various perspectives on best practice for psychologists and those in the mental health field when speaking about suicide, and this was a very beneficial educational experience. It provided me with a good understanding of the impact of language relating to suicide, risk assessment, mitigating risk, and the relevant research in this space.

After this training, I felt better equipped and more confident in this area. Some of the discussions directly addressed the uncomfortable feeling that can arise when discussing suicidality, and it allowed me to acknowledge this feeling and prevent it from becoming a barrier to addressing this topic. As I reflect back on the apprehension I felt during those first screening calls, I know that I would feel much more comfortable in a similar situation now. Beyond this, I feel that this experience taught me the importance of continuously assessing your skills, seeking appropriate training and professional development opportunities, and ensuring that you are practising safely and effectively within your scope of practice as per HCPC Standard of Proficiency 1 (Health & Care Professions Council, 2023).

Implementing behaviour change interventions

When starting the doctorate, I had limited experience in delivering 1:1 behaviour change interventions, and I felt uncomfortable having this gap in knowledge and experience. After the very first day of the course, I reflected:

"I was quiet during the afternoon session. I would like to have made more contributions to the group discussion, but I'm feeling inadequate compared to the others as I don't work 1:1 with clients in a therapeutic setting." – reflective diary, 16/01/20

A discussion during the afternoon session centred on therapeutic modalities and techniques, and I recall thinking that I had little value to add to the conversation.

A few months later, it was reassuring to discuss my lack of confidence in my 1:1 skills and experience with members of my cohort, as others shared that they also felt the same. We decided to set up some video calls where we could role play therapeutic scenarios and discuss shared learnings, and I learnt a lot from my peers during that time. During the first year of the course, I was grateful to receive training on a number of modalities such as acceptance and commitment therapy, motivational interviewing and solution-focused brief therapy, and I sought additional training on cognitive behavioural therapy key skills.

During a lecture towards the end of that year, I took part in a formal role play scenario in front of the rest of my cohort and university supervisors:

> *"Today's session focused on clinical skills and we had a series of role plays on scenarios given us, taking turns to be the practitioner and the client and giving group feedback. I prepared a rough structure of some questions beforehand, and my turn as therapist was first, which gave me no time to be nervous. I received positive feedback from the group on my 30-minute session and built confidence."* – practice log, 10/12/20

Receiving feedback from my supervisors and peers during this session gave me a confidence boost and prompted me to reflect on my learnings over that year, the skills that I had developed, and how I can put them into practice in this setting.

Over the next two years, I had the opportunity to design a number of population-level behaviour change interventions through my workplace, and I became more confident in formulation and intervention design. When it came to developing and delivering the 1:1 intervention used as a case study as part of the doctorate, I considered my learnings and preparedness in this area. Ahead of the assessment session I reflected:

> *"I feel quite nervous about starting this series of sessions because it's not something I normally do as part of my job. I do feel confident that I can navigate it and that I'm as prepared as I can be for now, but it's definitely out of my comfort zone."* – reflective diary, 23/03/23

Although I was nervous and felt out of my comfort zone, I can now see the marked growth in my confidence compared to how I felt going into role play scenarios of 1:1 BCIs two years prior. Reflecting on my growth since the first day of the Prof Doc, I am now able to see a more nuanced

picture of the skills I have and the areas in which I'd like to grow and gain more experience in the future.

Over the past few years, I have had many formal and informal learning opportunities relating to intervention formulation, design and delivery, and specific therapeutic modalities. My confidence has increased, and I also feel more able to see the bigger picture of how my learnings and experiences from my workplace can be utilised in the 1:1 setting. Delivering individual interventions is a skill that I will continue to seek further opportunities to develop. I would like to gain more experience in this area after completing the doctorate in order to become a more well-rounded professional in this space.

Midlands Health Psychology Network careers talk

In November 2021, I was invited to be a speaker at an online careers webinar for the Midlands Health Psychology Network. Upon being asked to speak, I noted:

> *"I felt apprehensive about this because it would put me out of my comfort zone, but I also knew I was able to do it. I immediately knew I should say 'yes' to this, so I did. In the past I think I would have turned this down, but someone saw me do a recent talk and thought I would be suitable, so it made me think 'if they think I can do it and I think I can do it then what is there to lose?' I'm hoping to build my confidence more in public speaking, so I should accept this opportunity."* – reflective diary, 19/11/21

As highlighted in the above reflective diary entry at the time, being asked to speak at this event prompted reflection and meta-reflection; I recognised my growth in confidence and self-efficacy across the previous two years and felt proud that this had spurred me to immediately accept this opportunity. I recall feeling surprised that I genuinely felt excited about the prospect of it. The task itself was to speak about my experience on the doctorate so far as well as my career and journey into health psychology, and to answer questions from other trainees, undergraduates, and MSc students. The preparation for the talk required me to take stock of my journey so far, and this was a pivotal moment at the half-way point of my doctorate experience where I first realised and reflected on what I had learnt and how I had progressed up until that point. Upon further reflection, I understand now that verbalising my experiences as part of the talk and answering the questions of others cemented my learnings and allowed me to feel more confident in my progress and ability as a trainee Health Psychologist.

Unprecedented times and prioritising wellbeing

I can't reflect on what influenced me during my time on the Professional Doctorate without mentioning Covid-19. Enrolling in January 2020, my experiences on the doctorate were significantly

shaped by the pandemic, with plans changing in ways I couldn't have imagined when applying for the course. My cohort experienced only a handful of in-person sessions before the first lockdown began and face-to-face discussions shifted to video calls and online lectures. Adjusting to working remotely on the doctorate and in my workplace was a significant challenge. I reflected on how difficult I found the shift to work in isolation, communicating only through emails and video calls, and to retain focus and motivation while a global health crisis was unfolding.

> *"Working remotely is not for me. I enjoy picking up energy from other people. You can get that slightly on the phone but it's not the same. You can't connect with people in the same way. I struggle a lot with motivation remotely."* – reflective diary, 27/04/20

In my previous reflections I can recognise how challenging I found these circumstances. My progress until mid-2021 was slower than I had planned, and I found it increasingly more difficult to 'catch up' with my initial Plan of Training (PoT), leading to a cycle of guilt, anxiety and avoidance. This way of working wasn't sustainable; I began to experience feelings of burnout and I knew I needed to make some changes.

In order to practice safely and effectively it's important for practitioner psychologists to maintain their own mental and physical health, and this is specifically acknowledged in HCPC Standard of Proficiency 3 (Health & Care Professions Council, 2023). Since identifying a need for change, I made an effort to adjust my own health behaviours and to address my progress through supervision. Mid-way through 2021, I discussed my situation with my university supervisor and we "re-set". I reconsidered my Plan of Training, adjusting my goals in line with the present, and I reduced my placement working hours from five to four days per week. Upon reflection, this was a turning point that pushed me to consider what it means to truly prioritise your mental and physical health in order to maintain a high standard of professional effectiveness. Alongside reducing my working hours and seeking support, I found new strategies that helped me to more effectively manage my workload in these new circumstances and to maintain a healthy work-life balance.

This personal experience, and more broadly the experience of working through the height of the pandemic taught me a number of lessons. Notably, I gained a better understanding of the importance of using supervision to discuss all aspects of professional practice beyond discrete problems and challenges relating to practical work. I also learnt to reflect on which aspects of my work I find most rewarding and gained a better understanding of the extent to which I value face-to-face interactions with the people I work with. Overall, this was a significant catalyst for self-reflection, and I am grateful for all the learnings during this time.

Management in the workplace

During my time completing the doctorate, I began line managing interns and Assistant Psychologists. Though I had previous management experience in other roles, this was my first time managing in a psychology role and it took me a while to feel confident in this position, though I knew I needed to instil confidence in my team in order to perform well in this role. When I began managing the first intern, I made the following reflection:

> *"I am still feeling an imposter when it comes to managing, meaning I'm speaking with less confidence. I feel as though I've been arbitrarily picked out of me and [line report] to manage them (i.e., the roles could have been reversed) which isn't true. I need to reflect on this more."* – reflective diary, 22/04/21

Almost three years on from this original reflection, I have had the experience of managing five members of the psychology team. I now have a completely different perspective and the above way of thinking feels quite alien to me. Through reflections and experience in this position, I am now able to better recognise how I can offer support and guidance to the Assistant Psychologists that I currently manage, and it feels much more natural. Although my workplace provides general management training, I feel this is an area of professional skill in which it can be difficult to gauge your own abilities, as it can be challenging to obtain objective or concrete feedback. In order to feel more confident in this position, during the first year I spent time reflecting on the qualities of line managers I'd had over the past ten years that I found to be most beneficial. I concluded that it is very important to me to be my most authentic self, while maintaining professional boundaries as appropriate to a supervisory position. I also found it a helpful practice to spend time understanding the personalities, preferences and working styles of my line reports, so I can tailor my communication style in a way that best suits them. My later reflections demonstrate that I can now more effectively put these skills into practice, and feel more confident in this role:

> *"I need to speak to [line report] tomorrow about the feedback the project team received on [client project detail redacted]. I have spent some time thinking about how to best talk about the comments, how [line report] might feel and what she can do moving forward in situations like this. I feel a bit nervous about the conversation, but I think it will be productive and helpful once we have talked it through."* - reflective diary, 11/12/23

Although this conversation centred around me discussing some negative feedback that my line report and their project team had received, I was able to frame the conversation constructively, and I felt that I was supporting them in a way that would help them to learn and grow from this experience. As my career moves forward, I will ensure that I regularly reflect on how I can better support my team and seek feedback where appropriate to implement positive changes.

Expanding professional skills

A common theme in my reflective diary was confidence, which has consequently been a common thread throughout this reflective commentary. Specifically, I have worked towards and been put in positions that have supported me to build confidence in applying health psychology in practice and trusting my professional decisions. When I began the doctorate, as I know is common for many other trainees, I felt a sense of imposter syndrome. I reflected:

> *"I feel like I have less health psychology experience than the others, though I know this isn't true in practice. Need to remember I have a lot of valuable skills and they [programme leaders] chose me knowing my experience."* – reflective diary, 16/01/20

Though I can still feel imposter syndrome at certain times, the frequency of this feeling has significantly reduced, and I now feel a lot more confident in who I am as a future Health Psychologist, and my capabilities. Looking back on my reflections in this area, I can see a pattern of change. After gaining confidence through practising clinical role plays, almost 12 months after the above reflective diary entry I reflected:

> *"I felt a shift in thinking, about how I only need to be comfortable in practicing with the tools I have, and I am still learning new tools."* – reflective diary, 10/12/20

This shift in thinking allowed me to shake off some level of imposter syndrome and to be able to critically review my own abilities through a more positive lens.

In January 2023 I was promoted in my workplace to the role of Behavioural Psychologist. I moved into a mid-level position within our team and began to take on more responsibilities and leadership across health psychology projects. This new position made me consider the weight of responsibility I had to uphold the values and standards of the HCPC (Health & Care Professions Council, 2023) and BPS (BPS, 2018), and to advise non-psychologists across the wider multi-disciplinary team on best practice when working on our projects, considering ethical issues and the wellbeing of the patients and research participants that we work with. As my work is consultancy-based, I am frequently required to advise our research sponsors and clients on health psychology solutions. Practising this in my role has meant I have learnt to think on my feet, to come up with novel solutions and to answer questions on the spot, and I believe this has increased my confidence in my decision-making abilities. I now feel able to make appropriate judgments while knowing when to seek further advice or supervision if a challenge moves out of my current scope of practice.

The consultancy-based nature of my work has also meant that I've had the opportunity to work with a broad spectrum of people of different ages, across different countries and cultures, with many different health conditions. And by consulting on and managing patient and public involvement in

clinical research design, conducting market research activities, and developing patient, caregiver and healthcare professional interventions, I have been able to gain a good understanding of the role of health psychology in a number of settings. I'm grateful to have had the opportunity to learn about countless health conditions including rare diseases and long-term conditions, and to have gained an understanding of how health psychology can support those living with these conditions through many different cross-sections of the healthcare experience from an individual to a systemic level. As health psychology can be applied to so many settings, I believe it is a key skill for a Health Psychologist to be able to effectively adapt and tailor evidence-based solutions to novel challenges, and I am committed to continuing to develop this skill.

Conclusions

I feel privileged to have been given the opportunity to complete the Professional Doctorate in Health Psychology. During the first day of the doctorate, the head of the course asserted that as trainees, we had already learnt a lot of the theory, skills and tools that are needed in order to become an effective Health Psychologist. They impressed upon us that Stage 2 was about putting these skills into practice and building confidence, and that upon completing the doctorate each member of the cohort would qualify as their own unique, authentic version of a Health Psychologist. Hearing this perspective gave me the freedom to explore what practising as a Health Psychologist means to me, through ongoing reflection, learning, and meta-reflection. I now hope that with these skills, and with continuous reflective practice, I can embody my own authentic version of a Health Psychologist.

References

BPS. (2018). *Code of ethics and conduct*. Leicester: British Psychological Society.

Gibbs, G. (1988). Learning by doing: A guide to teaching and learning methods. *Further Education Unit*.

Health & Care Professions Council, H. (2023). Standards of Proficiency: Practitioner Psychologists. Retrieved from https://www.hcpc-uk.org/standards/standards-of-proficiency/practitioner-psychologists/