



## LJMU Research Online

Vermeulen, J, Buyl, R, Luyben, A, Fleming, V and Fobelets, M

**Defining midwifery autonomy in Belgium: Consensus of a modified Delphi study**

<http://researchonline.ljmu.ac.uk/id/eprint/16616/>

### Article

**Citation** (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

**Vermeulen, J, Buyl, R, Luyben, A, Fleming, V and Fobelets, M (2022)  
Defining midwifery autonomy in Belgium: Consensus of a modified Delphi study. Journal of Advanced Nursing. ISSN 0309-2402**

LJMU has developed **LJMU Research Online** for users to access the research output of the University more effectively. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LJMU Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain.

The version presented here may differ from the published version or from the version of the record. Please see the repository URL above for details on accessing the published version and note that access may require a subscription.

For more information please contact [researchonline@ljmu.ac.uk](mailto:researchonline@ljmu.ac.uk)

<http://researchonline.ljmu.ac.uk/>

## **Defining midwifery autonomy in Belgium: consensus of a modified Delphi study.**

### **ABSTRACT**

**Aims:** Although there is substantial literature on autonomy of midwifery, the concept remains vague, and what it exactly constitutes is little clear. Attempts to define this have been carried out, but did not result in a communal understanding. The aim of this study therefore is to define a consistent definition of midwifery autonomy in Belgium.

**Design:** A modified Delphi survey with content experts.

**Methods:** Critical components of the available definitions on midwifery autonomy were retrieved from the literature, and translated into Dutch and French. An online Delphi panel of content expert assessed components of autonomy in midwifery on clarity and relevance between June and October 2021. From the validated components, a preliminary consolidated definition was generated, which was validated in a final Delphi round.

**Results:** After round one, experts (n=27) evaluated ten out of 17 components to be clear and relevant. Two components were judged inappropriate and therefore removed. After further adaptation four additional components were identified appropriate after the second round, and one component after a third Delphi round. Experts' suggestions for improving the clarity and relevance were taken into account. Finally, experts assessed the preliminary definition. After minor modifications the definition of midwifery autonomy in Belgium was confirmed valid.

**Conclusion:** We established a communal definition of midwifery autonomy in Belgium, the creation of such a definition results in a joint understanding of the concept of midwifery autonomy.

**Impact:** If midwives internationally want to successfully achieve autonomy, a clear understanding of the concept of midwifery autonomy is needed. The consensus definition of midwifery autonomy in Belgium comprises 15 components related to midwives' work content, professionalism and relationship with others. Our definition of midwifery autonomy has the potential to encourage an international dialogue, grounded in a common understanding of autonomy, enabling stakeholders in maternity care to strengthen professional midwifery autonomy.

**Key words:** midwives, midwifery, midwifery autonomy, autonomy, professionalisation, consensus, definition, Delphi study, nursing, content experts.

## **1. INTRODUCTION**

An essential aspect of midwives' drive for professionalisation is the need for increased involvement in national policy development, in which the midwifery profession is recognised as an important partner in decision-making. Internationally however, considerable differences in midwives' status and roles, autonomy and responsibilities have been identified. A recent study on professionalisation of midwifery in Europe (Vermeulen et al. 2019) showed that whereas progress in initial midwifery education had taken place, midwives' status and roles in practice as well as their influence on the health care systems, culture and politics in various countries are matters of concern. In particular, midwives' autonomy is limited, because they face restrictions to fulfilling a comprehensive role as defined by the International Confederation of Midwives and the EU Directives (Van kelst et al. 2013a). Therefore, a more in-depth study of relevant influencing factors, such as professional autonomy in individual countries, has been recommended (Vermeulen et al. 2019).

## **2. BACKGROUND**

Defining professional autonomy of midwifery is difficult (Pollard 2003), as while there is a substantial body of literature on autonomy, the definition and its description remains unclear. A recent literature review revealed that autonomy is a central element in midwifery. It is usually linked to informed choices, decision-making and power to control over a situation (Zolkefli et al. 2020). However, the central element that is most frequently documented in the literature is the capacity for decision-making (Perdok et al. 2017, Zolkefli et al. 2020, Pollard 2003) in which the midwife is responsible and accountable for her decisions (Pollard 2003). Hence, a midwife should have the expertise (Clemons et al. 2021), knowledge and skills required for making decisions (Zolkefli et al. 2020). A recent study strongly links midwifery

autonomy with the provision of expertise, individualised maternity care for women and families (Clemons et al. 2021). Competency therefore is considered a prerequisite for autonomy.

In a number of articles, autonomy is used interchangeably with the term 'independence' (Zolkefli et al. 2020, Perdok et al. 2017). Job autonomy thus has been defined as the degree of control a worker has over his or her own immediate scheduling and tasks (Perdok et al. 2017, Clemons et al. 2021, Pollard 2003). Perdok et al. (2017) used the Leiden Quality of Work Life Questionnaire for Nurses (van der Doef and Maes 1999), to measure job autonomy experienced among maternity care professionals in the Netherlands (Perdok et al. 2017). The job autonomy experienced was highest for primary care midwives, followed by obstetricians, clinical midwives and obstetric nurses. Thompson highlights that midwifery in the Netherlands is considered an autonomous profession, as midwives are not supervised by doctors or any other health professionals (HPs) (Thompson 2020). Autonomy may thus include, a state of being independent and self-directing from the control or power of another (Legault 2016). When midwifery decisions are challenged by other HPs, these challenges might obstruct professional debate, e.g. in situations where midwives experience difficulties to question a decision for fear of repercussions, job autonomy is hindered (Clemons et al. 2021). In addition, it is Clemons et al.'s (2020) opinion that an autonomous midwifery profession must be self-governing and self-regulating (Clemons et al. 2021).

While high levels of job autonomy are found to be beneficial for midwives (Yoshida and Sandall 2013, Perdok et al. 2017) and for the relationship with their patients (Perdok et al. 2017), autonomy has been identified as being at odds with the hierarchical and routine-based culture of hospitals (Clemons et al. 2021, Thompson 2020). Internationally, it is suggested that

medicalisation of birth limits midwifery autonomy (Ghérissi and Brown 2014). Therefore, infrastructure and culture at work impacts on autonomy in midwifery practice (Zolkefli et al. 2020), while collegial relationships could support or hinder midwives' autonomy (Clemons et al. 2021).

In the early 2000s, midwifery students in the United Kingdom believed that working towards midwifery autonomy had not been explicit enough in their educational programme (Baird 2007). Many midwifery students considered that they had only witnessed professional autonomy in midwifery led birthing units and that it was almost invisible in obstetric led units. Consequently, newly-graduated midwives did not feel prepared for professional autonomy (Baird 2007, Pollard 2003). Australian midwifery students' experiences within a student led clinic confirmed that this learning experience promoted a sense of autonomy and prepared them to practice autonomously (Hamilton et al. 2020). Conversely in Flanders and the Netherlands, midwifery education has identified professional autonomy as an essential part of additional advanced professional skills (Mestdagh et al. 2019). As maternity care HPs are poorly aware of each other's competencies, (Mivšek et al. 2021) recommend interprofessional education to promote interdisciplinary collaboration in maternity care while retaining autonomy within each profession.

In Belgium, midwives' degrees of autonomy strongly vary; in hospitals most midwives work under the authority of an obstetrician. Midwives in hospitals have limited control over the organisation of their work such as one to one care, continuity of care, or working hours, most of which is determined by hospital management (Vermeulen et al. 2020b). As in other countries, Belgian primary care midwives, however, tend to have more autonomy in the organisation of their work than midwives in a hospital for example taking decisions

independently (Vermeulen et al. 2020b, Vermeulen et al. 2019, Clemons et al. 2021, Yoshida and Sandall 2013).

In the current Belgian maternity care context, midwives experience some difficulties in practising the full scope of midwifery practice according to the International Confederation of Midwives' definition (Van kelst et al. 2013a). The historical value that society gives to specialist medical services has an impact on midwives' autonomy, for example, most obstetricians conduct births in Belgium. Consequently, Belgian midwives' autonomy is limited. This situation is in contrast with the country's legal framework, the growing body of evidence about the positive outcomes and cost effectiveness of midwife led care (Sandall et al. 2016) as well as the increasing international calls for strengthening the contribution of midwifery in the public health field (Vermeulen et al. 2019).

Lack of discussion on midwifery autonomy has come about because, according to the World Health Organization, midwives are, by definition, autonomous practitioners (WHO 2016). The study of Perdok et al. demonstrated that especially primary care midwives scored highest in expecting to lose their job autonomy in an interprofessional care system in the Netherlands (Perdok et al. 2017). As many midwives continue to practise in a setting that is often dominated by the medical and nursing profession (Vermeulen et al 2021), it is time to open the issue of midwifery autonomy for debate. However, it remains unclear if midwives in Belgium themselves want to be autonomous practitioners. Pollard's study suggests that this is open for debate (Pollard 2003). She identified mixed views among midwives about whether they practise autonomously, the central issue appearing to be if midwives actually want to be autonomous practitioners and take on more responsibility. Midwives' attitudes to their

working environment and their basic understanding of the concept of autonomy in midwifery may help researchers in identifying this uncertainty.

Although there is substantial literature on autonomy, it remains a vague concept and lacks a pragmatic understanding of how professional autonomy is translated into daily midwifery practice (Clemons et al. 2021). In literature, attempts to define autonomy have been made, but definitions vary and no consolidated definition has been made. If Belgian midwives want to obtain an autonomous position in health care, they must have clear understanding of its meaning. Thus, a valid and consistent definition of the professional autonomy of midwives in Belgium is needed.

### **3. THE STUDY**

#### **3.1. Aims**

The aim of this study is to develop a consolidated definition of midwifery autonomy in Belgium.

#### **3.2. Design**

A modified Delphi survey with content experts in Belgium.

#### **3.3. Data collection**

For the creation of the consensus definition we included content experts (Zamanzadeh et al. 2014). Content experts were defined as professionals with research or work experience in the field of interest (Rubio et al. 2003), Belgian midwives with work or research experience from all identified domains: obstetrics, reproductive medicine, gynaecology and neonatology were invited. Additionally we included midwives practising in primary care, research and education. In order to include representation of professional associations, board members of the Flemish Organisation of Midwives, Professional Union of Belgian Midwives and the French speaking



Association of Catholic Midwives, were invited to participate. We aimed for a participation of at least 20 experts representing all Belgian regions, namely the Flanders (Dutch-speaking), Walloon (French-speaking) and Brussels-Capital (bilingual) regions.

To incorporate the content experts in this study, a modified Delphi method was chosen. The Delphi method is a structured process that gathers information in a series of rounds which are continued until agreement is reached. The Delphi methodology is an important method for achieving consensus on issues where none previously existed (Rubio et al. 2003). A classical Delphi is defined as the process wherein panel experts initiate the alternatives in response to the researcher's questions. A modified Delphi indicates the process whereby the initial alternatives in response to the researcher's questions are carefully selected before being provided to the panel (Avella 2016).

Content experts were invited in June 2021 by e-mail to participate in this online survey. Initial participants were identified through personal contacts of one researcher (JV) and thereafter by snowball sampling. The invitation included information about the study, an informed consent form and a link to the survey site (Qualtrics<sup>XM</sup>). Only respondents who received a personal link by e-mail could access the survey, additional settings were set to prevent multiple submissions. A reminder was sent two weeks after the first invitation.

#### **3.4. Ethical considerations**

All data were stored in a secured and locked server of the Vrije Universiteit Brussel (VUB), only accessible to the researchers. No data were shared or discussed with other colleagues, to maintain anonymity all identifying information was removed by a researcher (JV). Participants were informed by an information letter. After reading the informed consent form, participants informed consent was asked by indicating 'yes' before starting the survey. Ethical approval

was obtained from the University Hospital Brussels/Vrije Universiteit Brussel (VUB), Belgium in May 2021 (registration number: B.U.N. 143/202/100/0490).

### **3.5. Validity and reliability/rigour**

Critical components of the available definitions located in the literature were translated and adapted for assessment by content experts to create a consolidated definition (Schaap et al. 2019). After identification, the critical components of midwifery autonomy were translated into Dutch (JV) and French (MG). The Dutch version was reviewed by another researcher (MF), likewise the French version was checked (JV).

Every critical component's clarity was assessed (Feo et al. 2018). Additionally, every critical component's relevance was evaluated on its relevance to a definition of midwifery autonomy in Belgium. As suggested by the literature, a 4 point Likert type scale was used with responses ranging from: 1=not clear/relevant, 2=somewhat clear/relevant, 3=quite clear/relevant, 4=very clear/relevant (Zamanzadeh et al. 2014). By using open questions, the experts were also invited to suggest additional items and make comments. The content validity was quantitatively measured by establishing the proportion of experts agreeing on the clarity and relevance of the selected critical component. The selected methodology was adapted from Zamanzadeh et al. (Zamanzadeh et al. 2014) and has also been used in earlier validation studies (Vermeulen et al. 2018, Vermeulen et al. 2020a).

### **3.6. Data analysis**

The content validity index (CVI) of individual critical components was calculated as suggested in literature (Zamanzadeh et al. 2015). To determine the CVI for each critical component's clarity and relevance (I-CVI), the number of experts assessing it as relevant or clear (rating 3 or 4) was divided by the total numbers of experts. The I-CVI expresses thus the degree of

consensus between experts, with a value between 0 and 1.00. These values were interpreted as recommended (Zamanzadeh et al. 2014): if the I-CVI is higher than 0.79, the critical component was considered appropriate, and if the I-CVI is between 0.70 and 0.79 needed revision. In the latter case the critical component was adapted based on the content experts' advice and subsequently included in a next Delphi round. Components with an I-CVI is below 0.70 were removed.

In the final stage, an initial consolidated definition of midwifery autonomy in Belgium was created by the research team based on the critical components that reached content validity.

As suggested in literature (Feo et al. 2018) we asked if the definition:

1. captures the main components of autonomy;
2. is complete or missing a crucial component;
3. is understandable by midwives from all identified domains and;
4. if it should be changed in any way.

Participants were asked to provide a yes/no response to each question and space was given to add free-text comments. The free text responses were analysed independently by two researchers (JV, MF) focusing on frequently recurring themes in experts' feedback. The definition was refined following a discussion with the research team.

## **4. FINDINGS**

### **4.1. Delphi round one**

#### **4.1.1. Characteristics of participants**

From the 37 invited content experts, 27 (n=73%) agreed to participate in the validation process. Participants, all female but one, from the age group 41-50 years were the most represented (n=11), the age groups 20-30 years (n=2) and 61-65 years (n=1) were the least

represented. Maximum variation sampling was exerted as defined in the professional and competency profile of Belgian midwives, meaning the inclusion of experts from clinical midwifery (n=8), primary care (n=7), both clinical midwifery and primary care (n=5), education (n=9) and research (n=6). Most participants had many years of relevant work experience, between 21-30 years (n=9) and between 11-20 years (n=5). Seven midwives working in Flanders, seven midwives working in the Walloon and 13 from the Brussels-Capital Region participated.

**Table 1: Area of expertise of the content experts to include here**

**4.1.2. Item Content Validity Index I-CVI (Relevance and clarity)**

The first Delphi round resulted in the content validity (I-CVI  $\geq$  0.80) of 10 components out of the 17 components for both clarity and relevance. The component regarding having political influence as midwives did not reach the cut off value of 0.70 for clarity (0.67). The component addressing that women respect the competencies of the midwife did not reach the cut off value of 0.70 for both clarity (0.67) or relevance (0.63), both inappropriate components were removed. Three components scored I-CVI between 0.70-0.79 on both clarity and relevance, while respectively one component was inappropriate for clarity (0.78) only and another one for relevance (0.78) only.

**Table 2: Item-Content Validity Index I-CVI after round one to include here**

The five components with an I-CVI between 0.70-0.79 were revised by two researchers (JV, MF) based on experts' comments and suggestions received. Several content experts explicitly suggested changing the scope of the definition of midwifery autonomy in Belgium to the practice domains where the midwife is legally entitled to work autonomously, namely uncomplicated pregnancy, childbirth and postpartum (Vermeulen et al. 2020b, Van kelst et al.

2013b). As most experts' additional comments were related to unclear or confusing wording, in four components a clarification of terms was added. More specifically, the following words were explained: 'work method', 'competent', 'recognised by society' and 'authority'. One component needed a minor linguistic adjustment as advised by the experts. Five components required a second validation round.

#### **4.2. Delphi round two**

In the second round (July-August 2021), we received responses from 15 (56%) of the 27 content experts who participated in the first round (table 1).

From the five components revised by the Delphi panel in the second round, four components reached content validity for both clarity (0.93-1.00) and relevance (0.80-1.00). The component 'the professional group of midwives can regulate their own profession' (Regulate: subject to rules), reached an acceptable item content validity for relevance (0.87), but remained inappropriate for clarity (0.73) in this second validation round.

#### **Table 3: Item-Content Validity Index I-CVI after round two to include here**

Based on the suggestion of the experts, the word 'regulation' was substituted as considered confusing and not well known by Belgian midwives. Therefore, this component was rephrased and it was specified that in fact a professional association of midwives, in consultation with the competent authorities', defines the rules governing the exercise of their profession and send for a third Delphi round.

#### **4.3. Delphi round three**

From the 15 content experts who participated in the two previous rounds, 11 experts (73%) assessed the component regarding a legitimately established professional association of midwives defining the rules governing the exercise of their profession, in a third round. Those

experts still represented each of the identified midwifery domains, namely four clinical midwives, three primary care midwives, three midwives from education and two midwives involved in research. Four midwives were professionally active in Flanders, two in Walloon and five in the Brussels-Capital Region.

The component reached validity both for clarity (0.91) and relevance (0.91), and was thus included in the preliminary consolidated definition of midwifery autonomy.

#### **4.4. Delphi round four**

From the 15 validated components, the research team generated a preliminary consensus definition of midwifery autonomy in Belgium.

#### **Table 4: The validated components of midwifery autonomy to include here**

The preliminary consolidated definition was sent for a fourth Delphi round, with only the 11 experts who participated in all three Delphi rounds included. Ten experts (91%) participated in this round, two adjustments were brought forward. Firstly, it was suggested clarifying that the definition of midwifery autonomy is independent of the place of employment of the midwife. The second suggestion was to modify a sentence that a midwife 'gets more responsibility in the course of her duties' instead of the midwife 'getting more responsibility when performing her tasks'. Consequently, after these modifications the definition of midwifery autonomy in Belgium was confirmed valid and consolidated by the research team.

#### **Table 5: Consolidated definition of midwifery autonomy to include here**

### **5. DISCUSSION**

In this paper we established a communal definition of midwifery autonomy in Belgium, the creation of such a definition results in a joint understanding of the concept of midwifery

autonomy. The definition comprises 15 critical components related to midwifery autonomy in Belgium, together they encompass the essentials of midwifery autonomy as indicated by content experts. These 15 components are related to the work content, professionalism of the midwife and relationship with others. In our definition we identified work related content as one in which the midwife is responsible, can independently take decisions and control her work. Likewise, identified components related to the professionalism of the midwife such as expertise, authority and competency were included in our consensus definition. In regard to the relationship with others, our definition comprises components concerning respect for the independence of midwives, their recognition and respect by other health professionals in maternity care. While throughout the literature, accountability, responsibility and autonomy are used interchangeably (Zolkefli et al. 2020), some aspects of our definition are in line with a suggested definition of midwifery autonomy in New Zealand (Clemons et al. 2021). More specifically the right and responsibility to practice within the midwifery scope of practice in accordance within a professional framework is closely related to our consented definition.

From the 17 identified critical components in literature, related to midwifery autonomy, two components were inappropriate, namely the component regarding having political influence as midwives and the component addressing women's respect for the competencies of the midwife. It may be that the component 'political influence' is not considered as relevant for midwives and their autonomy in Belgium. The suggestion that midwives should have more political influence was not clear to all participants, and thus interpreted differently. Some experts interpreted this component as midwives being actively engaged in politics rather than having policy making influence. Nevertheless, while professional midwifery associations are important key stakeholders and can play an important role in policy discussions related to education, regulation and professionalisation of midwifery, there is a scarcity of data that

describe the involvement of midwives in national policy development currently (Lopes et al. 2015). The component, related to the professional association of midwives being able to regulate their own profession only reached validity after a third round. The component was rephrased and as suggested. We defined 'regulation' as the defining of the rules governing the exercise of the midwifery profession.

That women respect midwives' competence was considered as obvious by most experts who therefore advised against linking this component to midwifery autonomy. Conversely, several experts highlighted that midwives' competencies are not well known by public. Indeed, this point was also raised in another Belgian study which concluded that the knowledge of Brussels women about midwives' legal competences during pregnancy, labour and childbirth is poor, especially in women between 15-20 years and women who have never given birth (Vermeulen et al. 2016). As midwives' competencies are not well known by the public, content experts questioned the relevance of the component relating women's respect for midwives with midwifery autonomy.

This is the first study to elicit a valid consolidated definition of midwifery autonomy in Belgium, nevertheless attention should be drawn to the limits of our study. Despite the fact that a Delphi survey with content experts is widely accepted in validation studies in health research (Keeney et al. 2006), our study may be considered vulnerable to potential bias due to the selection of the content experts and thus their input prejudiced. From the 27 participants who participated in the first Delphi round, 15 experts participated in the second round. The reasons for this drop out was not further explored. Due to the anonymity, the researchers could not personally approach nonrespondents, which made it difficult to maintain connection and involve them in the consecutive rounds. Experts dropping out of a Delphi study may however



affect the final results of the study, as the resultant consensus may not be representative of all the experts in the domain of interest (Greatorox and Dexter 2000). However, despite the drop an acceptable variation sampling was achieved with participation from experts within all identified domains

Critical components related to midwifery were selected from the identified literature. The basis of our search was a recent systematic literature review aiming to explore midwifery autonomy and its impact on midwifery practice (Zolkefli et al. 2020). The available information was supplemented by an additional literature search. It may be that we have overlooked other components. As a Delphi survey does not necessarily identify components that might have been overlooked, content experts were able to suggest other items and adjustments to minimise this limitation (Rubio et al. 2003). We also recognise the limitations of a Delphi survey, as a group consensus represents expert opinion rather than indisputable fact (Trevelyan and Robinson 2015). Nonetheless, we rigorously applied our chosen methodology throughout our research to make sure that the entire process was robust and we estimate that our findings to be accurate. Additionally, the researchers followed the Consensus-Based Checklist for Reporting of Survey Studies (CROSS) while designing and conducting the Delphi survey to ensure our study was sufficiently reliable, reproducible and transparent (Sharma et al. 2021).

The potential impact of the agreed definition of autonomy on the culture of midwifery practice is unclear. Literature is inconclusive about the question as to whether midwives want to be more autonomous. The WHO report 'Midwives' Voices - Midwives' Realities' (WHO 2016) showed that midwives worldwide are asking for more autonomy and recognition, especially from obstetricians. Although, as midwifery autonomy is associated with increased job

satisfaction (Papoutsis et al. 2014) and proactive behaviour (Mestdagh et al. 2019) the fear of being held responsible for professional choices is an important reason for some midwives' reluctance for increased autonomy (Weltens et al. 2019). Likewise in Ireland, the perception amongst both midwives and obstetricians is that many midwives do not want more autonomy, because they are fearful of being accountable for decisions (Healy et al. 2016). Nevertheless, midwives in Flanders and the Netherlands recently indicated the need for shifting towards shared responsibility, autonomy and healthy interprofessional cooperation (Mestdagh et al. 2019). A study to explore Belgian midwives' desired professional autonomy using present consented definition of midwifery autonomy is planned for the near future.

An area for future research includes the exploration of stakeholders in maternity care views and their own understanding of midwifery autonomy. As suggested in literature (Feo et al. 2018), the comprehensiveness of a definition of midwives' autonomy may be subject of debate with other health professionals providing maternity care, researchers, women, students and policymakers. In order to explore midwives' wishes regarding their own autonomy, further research in the different midwifery settings is recommended. Our consolidated definition of midwifery autonomy in Belgium has the potential to guide this type of research, not only in Belgium but also throughout Europe where initial education programmes all have to meet the same standard. There is also the potential to apply it internationally as its contents are based on the literature in this field.

## **6. CONCLUSION**

The definition of midwifery autonomy in Belgium presented in this article has the potential to encourage an international dialogue, grounded in a common understanding of autonomy, enabling stakeholders in maternity care to strengthen professional midwifery autonomy. It is

also important that worldwide other health professionals in maternity care comprehend fully what midwifery autonomy entails, both for maternity care and the midwifery profession. A challenge lies in finding the balance between maintaining a high level of professional autonomy amongst health professionals and good collaboration between them (Perdok et al. 2017). A clear and consolidated definition of midwifery autonomy contributes to understanding how autonomy exactly translates to maternity care, daily midwifery practice and has the potential to pave the way to a stronger professionalisation of midwifery.

### Conflict of interest

No conflict of interest has been declared by the authors.

### REFERENCES

- Avella, J.R. (2016) Delphi panels: Research design, procedures, advantages, and challenges. *International Journal of Doctoral Studies*, **11**(1), 305-321.
- Baird, K. (2007) Exploring autonomy in education: preparing student midwives. *British journal of Midwifery*, **15**(7), 400-405.
- Clemons, J.H., Gilkison, A., Mharapara, T.L., Dixon, L. & McAra-Couper, J. (2021) Midwifery Job Autonomy in New Zealand: I do it all the time. *Women Birth*, **34**(1), 30-37. <https://doi.org/10.1016/j.wombi.2020.09.004>.
- Feo, R., Conroy, T., Jangland, E., Muntlin Athlin, Å., Brovall, M., Parr, J., Blomberg, K. & Kitson, A. (2018) Towards a standardised definition for fundamental care: A modified Delphi study. *J Clin Nurs*, **27**(11-12), 2285-2299. <https://doi.org/10.1111/jocn.14247>.
- Ghérissi, A. & Brown, J.M. (2014) A Situational Analysis of the Status of Midwifery in North Africa and the Middle East. *Int J Childbirth*, (2), 69-76. <https://doi.org/10.1891/2156-5287.4.2.69>.
- Greatorex, J. & Dexter, T. (2000) An accessible analytical approach for investigating what happens between the rounds of a Delphi study. *J Adv Nurs*, **32**(4), 1016-24.
- Hamilton, V., Baird, K. & Fenwick, J. (2020) Nurturing autonomy in student midwives within a student led antenatal clinic. *Women and Birth*, **33**(5), 448-454. <https://doi.org/https://doi.org/10.1016/j.wombi.2019.12.001>.
- Healy, S., Humphreys, E. & Kennedy, C. (2016) Midwives' and obstetricians' perceptions of risk and its impact on clinical practice and decision-making in labour: An integrative review. *Women and Birth*, **29**(2), 107-116. <https://doi.org/https://doi.org/10.1016/j.wombi.2015.08.010>.
- Keeney, S., Hasson, F. & McKenna, H. (2006) Consulting the oracle: ten lessons from using the Delphi technique in nursing research. *Journal of Advanced Nursing*, **53**(2), 205-212 8p. <https://doi.org/10.1111/j.1365-2648.2006.03716.x>.
- Legault, L. (2016) The Need for Autonomy. *Encyclopedia of Personality and Individual Differences*. [https://doi.org/10.1007/978-3-319-28099-8\\_1120-1](https://doi.org/10.1007/978-3-319-28099-8_1120-1).
- Lopes, S.C., Titulaer, P., Bokosi, M., Homer, C.S.E. & ten Hoope-Bender, P. (2015) The involvement of midwives associations in policy and planning about the midwifery workforce: A global survey. *Midwifery*, **31**(11), 1096-1103. <https://doi.org/10.1016/j.midw.2015.07.010>.

- Mestdagh, E., Timmermans, O., Fontein-Kuipers, Y. & Van Rompaey, B. (2019) Proactive behaviour in midwifery practice: A qualitative overview based on midwives' perspectives. *Sex Reprod Healthc*, **20**, 87-92. <https://doi.org/10.1016/j.srhc.2019.04.002>.
- Mivšek, P.A., Hundley, V., van Teijlingen, E., Pahor, M. & Hlebec, V. (2021) Slovenian midwifery professionalization: Perception of midwives and related health professions. *Eur J Midwifery*, **5**, 30. <https://doi.org/10.18332/ejm/137664>.
- Papoutsis, D., Labiris, G. & Niakas, D. (2014) Midwives' job satisfaction and its main determinants: A survey of midwifery practice in Greece. *British Journal of Midwifery*, **22**(7), 480-486.
- Perdok, H., Cronie, D., van der Speld, C., van Dillen, J., de Jonge, A., Rijnders, M., de Graaf, I., Schellevis, F.G. & Verhoeven, C.J. (2017) Experienced job autonomy among maternity care professionals in The Netherlands. *Midwifery*, **54**, 67-72. <https://doi.org/10.1016/j.midw.2017.07.015>.
- Pollard, K. (2003) Searching for autonomy. *Midwifery*, **19**(2), 113-24. [https://doi.org/10.1016/s0266-6138\(02\)00103-1](https://doi.org/10.1016/s0266-6138(02)00103-1).
- Rubio, D.M., Berg-Weger, M., Tebb, S.S., Lee, E.S. & Rauch, S. (2003) Objectifying content validity: Conducting a content validity study in social work research. *Social work research*, **27**(2), 94-104. <https://doi.org/10.1093/swr/27.2.94>.
- Sandall, J., Soltani, H., Gates, S., Shennan, A. & Devane, D. (2016) Midwife-led continuity models versus other models of care for childbearing women. *The Cochrane Database Of Systematic Reviews*, CD004667. <https://doi.org/10.1002/14651858.CD004667.pub5>.
- Schaap, T., Bloemenkamp, K., Deneux-Tharoux, C., Knight, M., Langhoff-Roos, J., Sullivan, E. & van den Akker, T. (2019) Defining definitions: a Delphi study to develop a core outcome set for conditions of severe maternal morbidity. *Bjog*, **126**(3), 394-401. <https://doi.org/10.1111/1471-0528.14833>.
- Sharma, A., Minh Duc, N.T., Luu Lam Thang, T., Nam, N.H., Ng, S.J., Abbas, K.S., Huy, N.T., Marušić, A., Paul, C.L., Kwok, J., Karbwang, J., de Waure, C., Drummond, F.J., Kizawa, Y., Taal, E., Vermeulen, J., Lee, G.H.M., Gyedu, A., To, K.G., Verra, M.L., Jacqz-Aigrain É, M., Leclercq, W.K.G., Salminen, S.T., Sherbourne, C.D., Mintzes, B., Lozano, S., Tran, U.S., Matsui, M. & Karamouzian, M. (2021) A Consensus-Based Checklist for Reporting of Survey Studies (CROSS). *J Gen Intern Med*. <https://doi.org/10.1007/s11606-021-06737-1>.
- Thompson, S. (2020) *Increasing self-efficacy in student midwives for physiological childbirth: The design and development of a midwifery education initiative - the ESSENTIAL programme*, Maastricht University, Maastricht, the Netherlands.
- Trevelyan, E.G. & Robinson, N. (2015) Delphi methodology in health research: how to do it? *European Journal of Integrative Medicine*, **7**(4), 423-428. <https://doi.org/10.1016/j.eujim.2015.07.002>.
- van der Doef, M. & Maes, S. (1999) The Leiden Quality of Work Questionnaire: its construction, factor structure, and psychometric qualities. *Psychological reports*, **85**(3), 954-962. <https://doi.org/10.2466/pr0.1999.85.3.954>.
- Van kelst, L., Spitz, B., Sermeus, W. & Thomson, A. (2013a) A hermeneutic phenomenological study of Belgian midwives' views on ideal and actual maternity care. *Midwifery*, **29**, e9-e17. <https://doi.org/10.1016/j.midw.2011.10.002>.
- Van kelst, L., Spitz, B., Sermeus, W. & Thomson, A. (2013b) Student midwives' views on maternity care just before their graduation. *Journal of Advanced Nursing*, **69**(3), 600-609. <https://doi.org/10.1111/j.1365-2648.2012.06042.x>.
- Vermeulen, J., Buyl, R., D'Haenens, F., Demedts, D., Tricas-Sauras, S., Haddani, I. & Fobelets, M. (2020a) The Development of the DDads Questionnaire: Awareness, Knowledge and Attitudes of the General Population Towards Paternal Depression. *Front Psychiatry*, **11**, 561954. <https://doi.org/10.3389/fpsy.2020.561954>.
- Vermeulen, J., Luyben, A., Buyl, R., Debonnet, S., Castiaux, G., Niset, A., Muyltermans, J., Fleming, V. & Fobelets, M. (2020b) The state of professionalisation of midwifery in Belgium: A discussion paper. *Women and Birth*. <https://doi.org/10.1016/j.wombi.2020.09.012>.

- Vermeulen, J., Luyben, A., O'Connell, R., Gillen, P., Escuriet, R. & Fleming, V. (2019) Failure or progress?: The current state of the professionalisation of midwifery in Europe. *European Journal of Midwifery*, **3**. <https://doi.org/10.18332/ejm/115038>.
- Vermeulen, J., Peersman, W., Quadvlieg, L., Fobelets, M., De Clercq, G., Swinnen, E. & Beeckman, K. (2018) Development and validation of the Midwife Profiling Questionnaire assessing women's preferred perinatal care professional and knowledge of midwives' legal competences. *Sexual & Reproductive Healthcare*, **16**, 23-32. <https://doi.org/10.1016/j.srhc.2018.01.003>.
- Vermeulen, J., Swinnen, E., D'haenens, F., Buyl, R. & Beeckman, K. (2016) Women's preferences and knowledge about the legal competences of midwives in Brussels, Belgium. A descriptive observational study. *Midwifery*, **40**, 177-186. <https://doi.org/10.1016/j.midw.2016.07.002>.
- Weltens, M., de Nooijer, J. & Nieuwenhuijze, M.J. (2019) Influencing factors in midwives' decision-making during childbirth: A qualitative study in the Netherlands. *Women and Birth*, **32**(2), e197-e203. <https://doi.org/https://doi.org/10.1016/j.wombi.2018.06.009>.
- WHO (2016) World Health, Organization. Midwives voices, midwives realities. Findings from a global consultation on providing quality midwifery care. World Health Organization, Geneva.
- Yoshida, Y. & Sandall, J. (2013) Occupational burnout and work factors in community and hospital midwives: a survey analysis. *Midwifery*, **29**(8), 921-6. <https://doi.org/10.1016/j.midw.2012.11.002>.
- Zamanzadeh, V., Ghahramanian, A., Rassouli, M., Abbaszadeh, A., Alavi-Majd, H. & Nikanfar, A. (2015) Design and Implementation Content Validity Study: Development of an instrument for measuring Patient-Centered Communication. *Journal of Caring Sciences* **4**(2), 165-178 <https://doi.org/10.15171/jcs.2015.017>.
- Zamanzadeh, V., Rassouli, M., Abbaszadeh, A., Alavi-Majd, H., Nikanfar, A. & Ghahramanian, A. (2014) Details of content validity index and objectifying it in instrument development. *Nursing Practice Today*, **1**(3), 163-171.
- Zolkefli, Z.H.H., Mumin, K.H.A. & Idris, D.R. (2020) Autonomy and its impact on midwifery practice. *British Journal of Midwifery*, **28**(2), 120-129. <https://doi.org/10.12968/bjom.2020.28.2.120>.

## TABLES AND FIGURES (ATTACHED)

Table 1: Area of expertise of the content experts

Table 2: Item-Content Validity Index I-CVI after Delphi round one

Table 3: Item-Content Validity Index I-CVI after Delphi round two

Table 4: The 15 validated components of midwifery autonomy

Table 5: Preliminary consensus definition of midwifery autonomy