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Midwifery

Research Article

Midwives' occupational wellbeing and its determinants. A cross-sectional study among newly qualified and experienced Dutch midwives

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ABSTRACT

Objective: Internationally, about 40 percent of midwives report symptoms of burnout, with young and inexperienced midwives being most vulnerable. There is a lack of recent research on burnout among Dutch midwives. The aim of this study was to examine the occupational wellbeing and its determinants of newly qualified and inexperienced midwives in the Netherlands. The majority of practicing Dutch midwives are aged under 40, which could lead to premature turnover.

Design: A cross-sectional study was conducted using an online questionnaire that consisted of validated scales measuring job demands, job and personal resources, burnout symptoms and work engagement. The Job Demands-Resources model was used as a theoretical model.

Setting and participants: We recruited Dutch midwives who were actually working in midwifery practice. A total of N=896 midwives participated in this study, representing 28 percent of practicing Dutch midwives.

Measurements and Findings: Data were analysed using regression analysis. Seven percent of Dutch midwives reported burnout symptoms and 19 percent scored high on exhaustion. Determinants of burnout were all measured job demands, except for experience level. Almost 40 percent of midwives showed high work engagement; newly qualified midwives had the highest odds of high work engagement. Master's or PhD-level qualifications and employment status were associated with high work engagement. All measured resources were associated with high work engagement.

Key conclusions: A relatively small percentage of Dutch midwives reported burnout symptoms, the work engagement of Dutch midwives was very high. However, a relatively large number reported symptoms of exhaustion, which is concerning because of the risk of increasing cynicism levels leading to burnout. In contrast to previous international research findings, being young and having less working experience was not related to burnout symptoms of Dutch newly qualified midwives.

Implications for practice: The recognition of job and personal resources for midwives' occupational wellbeing must be considered for a sustainable midwifery workforce. Midwifery Academies need to develop personal resources of their students that will help them in future practice.

Introduction

The organization of care is changing, from a strict division between community and hospital care, there is a growing trend towards integrated care focusing on interprofessional collaboration. Women's preferences have also changed, with more women giving birth in hospital and expressing a greater need for pain relief (De Vries et al., 2013; Gottfreðsdóttir and Nieuwenhuijze, 2018). These challenges may

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threaten the historically independent position of midwives in the Netherlands as guardians of physiological birth (at home) (De Vries et al., 2013; Gottfreðsdóttir and Nieuwenhuijze, 2018), and may also lead to unnecessary medical interventions in low-risk pregnant women (Offerhaus et al., 2013). In addition, on a global level, rising health care costs, increasing use of technology and interventions, and decreasing numbers of normal births are challenges for midwives (Gottfreðsdóttir and Nieuwenhuijze, 2018).

Midwives are at risk of burnout symptoms and occupational stress, which has implications for the quality of care for pregnant women (Suleiman-Martos et al., 2020). Burnout is a process whereby professionals deplete their energy resources and their dedication, leading to reduced involvement with clients (Bakker et al., 2014) Work-related burnout among midwives internationally ranges between 20 and 60 percent (Hunter et al., 2019; Suleiman-Martos et al., 2020). Midwives are at risk for burnout when they feel unsupported, undervalued or not been able to work according to the midwifery philosophy (Jefford et al., 2019). Previous research on intentions to leave midwifery ranged from 21 to 43% (Jarosova et al., 2016; Harvie et al., 2019; Stoll and Gallagher, 2019). Hunter et al. found that burnout, stress and anxiety levels were higher among midwives with ITL than among those without (Hunter et al., 2019). Important reasons for intentions to leave were dissatisfaction with the organization of midwifery and/or my role as a midwife (Jarosova et al., 2016), concerns about their mental and physical health, and the negative impact of an on-call schedule on personal life (Stoll and Gallagher, 2019).

Occupational wellbeing includes two constructs: burnout and work engagement (Schaufeli et al., 2014). High work engagement in healthcare professionals is associated with better mental and physical health, better workability and is beneficial for work performance and workplace safety (Hakanen et al., 2019). Previous studies on midwives' wellbeing measured burnout, stress and anxiety and did not include work engagement (Suleiman-Martos et al., 2020). It is known that healthcare professionals show high levels of work engagement due to job content: working with clients is meaningful and resourceful (Hakanen et al., 2019). Including work engagement in studies on midwives can provide a comprehensive view on midwives' wellbeing (Schaufeli, 2014).

In the JD-R model (Fig. 1) (Bakker and Demerouti, 2007), burnout and work engagement are interrelated constructs and can serve as distinct concepts covering the same underlying dimensions, namely work demands and work resources. For example, an individual's energy level can be a source of both vigor and exhaustion (Taris et al., 2017).

This heuristic model was developed to understand work-related wellbeing (both burnout and work engagement) by studying the influence of specific job characteristics (job demands, resources) and personal characteristics (personal resources) on wellbeing, and ultimately on performance outcomes (Bakker and Demerouti, 2007; Bakker et al.,

2014). The JD-R model is based on the assumption that job characteristics differ for various occupations (Schaufeli and Taris, 2014). Job demands (JD) are aspects of the job requiring effort and are associated with mental or physical costs (Bakker and Demerouti, 2007). Job resources (JR) help professionals to achieve job goals or to reduce job demands. Personal resources are defined as the psychological characteristics or aspects of the self that are generally associated with resiliency and that refer to the ability to control and impact one's environment (Schaufeli and Taris, 2014). Personal resources contribute positively to wellbeing. They can also initiate an upward spiral of resources that reinforce each other, resulting in higher work engagement (Xanthopoulou et al., 2009).

Factors known to be associated with midwives' burnout symptoms are a low maturity level, young age, little work experience and being single (Suleiman-Martos et al., 2020). Midwives are also at risk for burnout when they feel unsupported, undervalued or not been able to work according to the midwifery philosophy (Jefford et al., 2019). According to Wright et al., stress is related to increased exhaustion and may be higher among midwives in the community as compared to midwives in hospital settings (Wright et al., 2017). Protective factors against burnout are: enjoying working with pregnant women, having supportive relationships with colleagues and working with like-minded midwives (Stoll and Gallagher, 2019). Preventing factors for burnout, are building resilience, positive coping strategies (Kumar, 2016), meditation, mindfulness, communication skills training and self-care efforts (West et al., 2018), and a positive work environment and flexible working hours (Kumar, 2016).

In other occupational groups, autonomy and social support are associated with high work engagement (Bakker et al., 2014). In different occupations, personal resources such as self-esteem, self-efficacy, optimism and proactive behavior are associated with high work engagement and relate negatively to burnout (Mastenbroek et al., 2014; Mestdagh et al., 2018; Schaufeli and Taris, 2014).

The association of age and work experience with burnout symptoms highlights the need to study newly qualified midwives (NQMs) more intensively. Previous research on NQMs shows that the transition to practice causes stress and insecurity (Gray et al., 2016). NQMs must adapt themselves to a new role with new responsibilities (Bullock et al., 2013). Furthermore, NQMs themselves felt competent but not confident in their first year in practice (Avis et al., 2013; Skirton et al., 2012). Our previous qualitative studies among Dutch NQMs (Kool et al., 2019, 2020) have also identified differences in job demands and resources between community-based and hospital-based midwives. Locum NQMs work long hours for different community practices, which they perceive as demanding. Working with clients in the community, autonomous working and the variety of work were perceived as job resources. Personal resources such as openness, flexibility and assertiveness helped them in their work, while perfectionism was perceived as hindering their work (Kool et al., 2019, 2020).

Due to the specific context of midwifery care in the Netherlands (see box), previously identified determinants of burnout symptoms among midwives elsewhere are not applicable in the Dutch working context. As far as we know, no recent research has been conducted into the occupational wellbeing of Dutch midwives.

There is a lack of knowledge about the levels of burnout symptoms and work engagement among Dutch midwives. We also do not know what job and personal demands and resources relate to midwives' occupational wellbeing (Kool et al., 2019, 2020), nor whether work experience (Gray et al., 2016; Suleiman-Martos et al., 2020) or working context (Gray et al., 2016) are of any significance for midwives' occupational wellbeing.

The aim of this study is therefore to examine the occurrence of burnout symptoms and work engagement among Dutch midwives with different amounts of working experience and to assess the contributions of relevant job demands, job resources and personal resources to both burnout symptoms and work engagement.
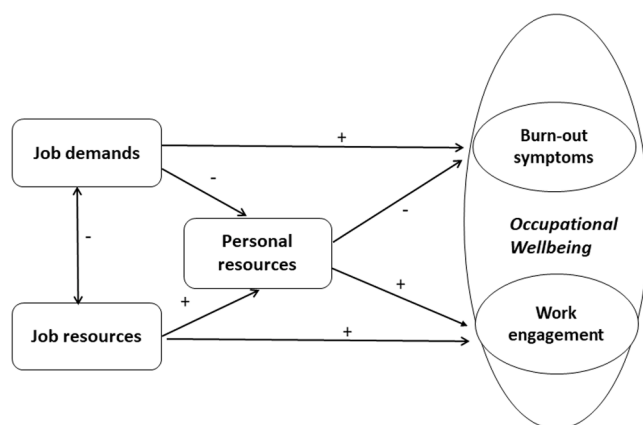

Fig. 1. The job demands-resources model (JD-R model) (Xanthopoulou et al., 2007).

Research questions:

(1) What is the percentage of burnout symptoms and high work engagement among Dutch midwives and do these differ between newly qualified midwives (NQMs) and experienced midwives (EMs)?
(2) What are the determinants of burnout symptoms and high work engagement in Dutch midwives and do these differ between newly qualified and experienced midwives?

With the outcomes of this study, we aim to contribute to the knowledge about the occupational wellbeing of midwives. Based on an understanding of the determinants of midwives' wellbeing, we make tailored recommendations for optimizing that wellbeing, thereby contributing to the quality of midwifery care.

Participants, ethics and methods

In December 2018- March 019, a cross-sectional study was conducted among newly qualified and experienced practicing midwives in the Netherlands using a questionnaire with validated scales. Dependent variables were burnout symptoms and work engagement. Independent variables were socio-demographic characteristics, job demands, job resources and personal resources (Perdok et al., 2017).

Participants

A random sample of practicing midwives in the Netherlands was obtained from the Dutch midwives register of NIVEL (Netherlands Institute for Health Services Research), supplemented by all NQMs ($<$ 3 years after graduation) in their database ($N = 1301$). A total of 60 letters were returned to sender, resulting in a NIVEL register sample of $N = 1241$. Six respondents refused to give informed consent and were excluded. The net response rate was 54.5 percent ($n = 676$) (Fig. 2).

Announcements of this study in newsletters, on the website of the Royal Dutch organization of Midwives (KNOV) and in Facebook groups (midwifery academies, inspiration network of midwives) yielded another 461 respondents (Fig. 2).

Questionnaires that were less than 100 percent completed were excluded from the analyses ($n = 241$), producing a total of 896 eligible respondents. Our sample represents 28 percent of the total population of practicing Dutch midwives (Kenens et al., 2017).

Ethics

Ethical approval for this study is not formally required in the Netherlands. The Medical Ethical Assessment Committee of the University Medical Centre of Groningen confirmed that the research does not fall within the scope of the Medical Research Involving Human Subjects Act (WMO) (reference number 2018/628).

Participant consent was obtained at the start of the questionnaire; participants could decide to stop filling in the questionnaire without explanation. Participant anonymity was assured as no name or other identifying data were collected.

Data collection

In December 2018, a letter was sent to the midwives in the NIVEL sample providing a brief introduction to the study, the aim of the study and a personal link to the questionnaire platform Qualtrics®. Reminders were sent four and eight weeks later.

After two months, additional recruitment started with a call-up in newsletters and private Facebook groups for Dutch midwives. Respondents could obtain a link for the questionnaire by responding to the call-up. They could not participate twice, due to a built-in check in Qualtrics.

The online questionnaire could be completed on a smartphone, tablet or computer/laptop. Participants could contact the researcher with questions by email. They were able to pause during the questionnaire and continue later. After every 50 completed questionnaires, a gift certificate (worth 50 euros) was awarded. Data collection closed at the end of April 2019.
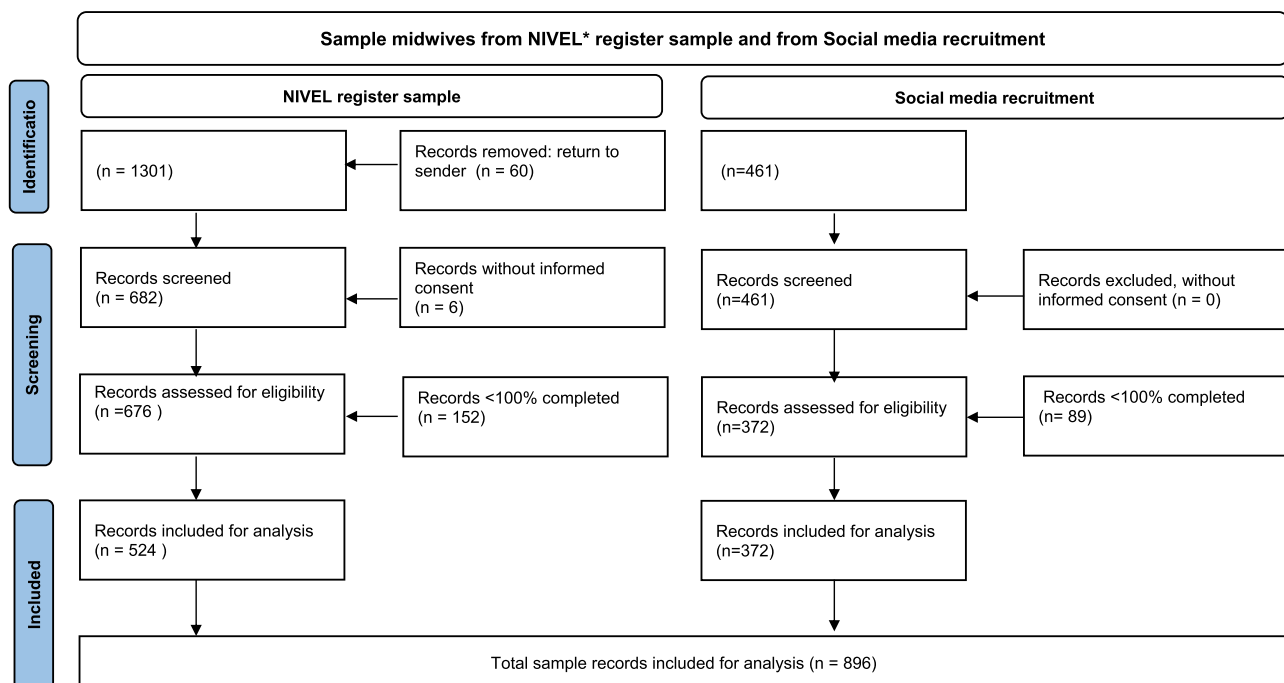
Fig. 2. Flowchart of the study population Dutch midwives ($N = 896$).

Measures

All measured variables are presented in Fig. 3.

To measure burnout symptoms, we used the Dutch version of the Maslach Burnout Inventory (Schaufeli and Van Dierendonck, 2000), the UBOS-C (Utrecht Burnout Scale-clients) for professionals working with clients in social occupations or healthcare. Burnout is defined as a syndrome of exhaustion, cynicism and lack of professional efficacy (Bakker and Demerouti, 2007). We used the UBOS-C subscales on exhaustion and cynicism. Both subscales are consistent and stable over time, and correlations with other burnout-scales are high, which confirms their content validity (Schaufeli and Van Dierendonck, 2000). The answers were given using a 7-point Likert scale (0=never; 6=always). The outcome was represented by mean scores that ranged from 0 to 6. The manual for the UBOS-C for healthcare professionals defines high exhaustion if scores are ≥ 2.5 and high cynicism if scores are ≥ 1.6 (Schaufeli and Van Dierendonck, 2000). We considered burnout symptoms as high when both exhaustion and cynicism scored high (Schaufeli and Van Dierendonck, 2000).

To measure work engagement, we used the short version of the Dutch translation of the UWES (Utrecht Work Engagement Scale) (Schaufeli and Bakker, 2003). Work engagement is defined as a unique positive, fulfilling, work-related state of mind that is characterised by vigor, dedication and absorption (Schaufeli and Bakker, 2003). The UWES showed a high reliability and validity (Schaufeli and Bakker, 2003) The short version of the UWES consists of nine items. The answers were given using a 7-point Likert scale (0=never; 6=always). A total median score was calculated. Using the norm scores of the UWES, we considered a score of 4.67 or higher as high work engagement (Schaufeli and Bakker, 2003).

Job demands and job resources were measured using the Dutch version of the QEEW 2.0 (Questionnaire on the Experience and Evaluation of Work). The QEEW 2.0 has a high internal consistency. Job demand variables included subscales as mentioned in Fig. 3. Question items were scored on a 4-point Likert-scale (always, often, sometimes, never) (Veldhoven et al., 2002), except for items in the subscales job security, financial rewards, learning resources and organization of work, which were scored on a 5-point Likert scale (totally agree, agree, neutral, disagree, totally disagree)(Veldhoven et al., 2002). A score per subscale was obtained by adding the score of the items and dividing this by the maximum achievable score and then multiplying it by 100. This resulted in continuous scores per subscale that ranged from 0 to 100. A higher score is the result of the most negative answer to each question on the scale. In the case of only the most positive answers, the scale score will result in 0.

Personal resources were measured using the Dutch translation of the Psychological Capital Questionnaire (PCQ) (Luthans et al., 2007). We used the constructs of psychological capital (Luthans et al., 2007) because they are relatively malleable and open to development.

For this study, optimism, hope and resilience were included in the questionnaire. The PCQ has a 6-point Likert scale (1=strongly disagree, 6=strongly agree). Each of the PCQ scale scores is calculated by taking the mean of all items in the scale. This resulted in a score that ranged from 1 to 6 (Luthans et al., 2007) To measure self-efficacy, we used the Dutch General Self-Efficacy Scale (GSE) (Teeuw et al., 1994). The answers on the GSE consist of a four-point Likert scale (1=completely false, 4=completely true) (Teeuw et al., 1994). The score was obtained by calculating the sum of the scores of all 10 items (range from 10 to 40); a higher score means a higher degree of self-efficacy (Teeuw et al., 1994).

Questions about socio-demographic characteristics were inspired by the WHELM studies (Creedy et al., 2017). We adopted questions about age distribution, marital status, educational level, working context and employment status and adapted them to the Dutch language and context.

Pilot testing of questionnaire

The preliminary online questionnaire was pilot tested online by a panel of 10 midwives, 5 fourth-year students and 5 midwives (lecturers). Based on their feedback, we added information about the time needed to complete the questionnaire to the introduction text. We also decided to exclude the relationship with superior and participation subscales
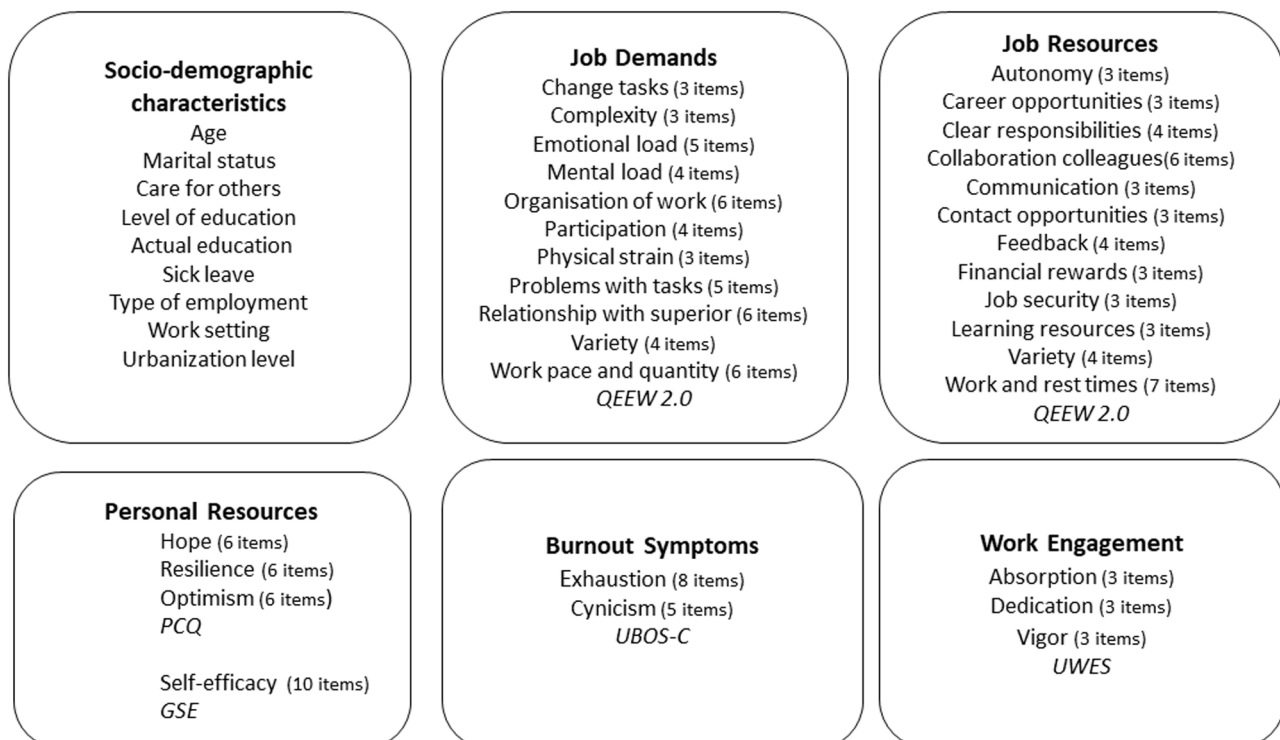

Fig. 3. Socio-demographic characteristics, variables, scales and measurement instruments.

because community-based midwives did not recognize these items in their work due do their self-employed status.

Analysis

The descriptive statistics relating to socio-demographic characteristics, work engagement and burnout symptoms are presented with reference to work experience. Missing data (missing items per subscale) were examined for all variables. Work engagement and burnout symptoms and the socio-demographic variables showed no missing data. For job demands, job resources and personal resources, the amount of missing data was less than one percent and completely random. We carried out a simple imputation of the missing data with the average score for each specific item.

We used descriptive statistics to answer the first research question about the occurrence of burnout symptoms and high work engagement, and the differences between experience levels. To identify the determinants of burnout symptoms and high work engagement, we first performed univariable regression analysis to assess associations between dichotomised dependent variables (burnout symptoms and work engagement). We then conducted a multivariable regression analysis between the dichotomised dependent variables (burnout and work engagement) and experience levels (NQMs and EMs). We also corrected these associations for possible interacting variables such as workplace (community or hospital), marital status (single/with partner), autonomy, variety of work and support from colleagues. The selection of these interacting variables was derived from previous research (Bakker et al., 2014; Kool et al., 2019, 2020; Suleiman-Martos et al., 2020).

To answer the second research question about the determinants of burnout symptoms and work engagement, we used a univariable logistic regression analysis with dichotomised dependent variables (burnout symptoms and work engagement) in order to assess associations with the socio-demographic characteristics; job demands, job resources and personal resources.

The associations were presented as odds ratios (OR) with 95 percent confidence intervals (CI). A two-tailed p-value of 0.05 or less was considered statistically significant. Due to the limited number of NQM respondents, we were unable to perform a multiple logistic regression analysis of determinants of burnout symptoms and work engagement by experience level.

For the analyses, we used SPSS 25 (IBM SPSS Statistics for Windows, Version 25.0.).

Results

Table 1 shows the socio-demographic characteristics of NQMs, EMs and the total sample.

Our sample showed similar percentages to the population of Dutch midwives on the variables of age distribution, sex and country of initial education. Different proportions of our sample compared to Dutch midwives as a whole have been shown for the number of community midwives, self-employed and locum midwives (Kenens et al., 2017).

In the total sample, more than half of the respondents were aged under 40 (58%), 80 percent were living with a partner, 58 percent lived with children, and 81 percent worked in community practice. About 10 percent were also caregivers for a family member or close relative. Almost half of our respondents had a Master's degree (56%) and six percent were on sick leave (fulltime or part-time) at the time of completing the questionnaire.

Table 2 shows the frequencies and median scores on exhaustion, cynicism, burnout symptoms and work engagement.

In total, 19 percent of midwives scored high on exhaustion and 10 percent scored high on cynicism, with about 7 percent of midwives having burnout symptoms.

The results of the associations between midwives' experience levels and both burnout symptoms and work engagement were shown in

Table 1

Frequencies (percentages) of **socio-demographic characteristics** of study population: split in Newly Qualified Midwives, Experienced Midwives, Total sample, Dutch midwives

Characteristic	NQM (n=182)	EM (n=714)	Total sample (N=896)	Dutch Midwives* (N=3221)
Age				
<30	*154(84.6)*	*73(10.2)*	*227(25.3)*	*878(27.3)*
30-39	*21(11.6)*	*279 (39.1)*	*300(33.5)*	*1175(36.5)*
40-49	*7(3.8)*	*182 (25.5)*	*189(21.1)*	*645(20)*
>50	*-*	*180 (25.2)*	*180(20.1)*	*523(16.2)*
Sex				
Woman	*182(100)*	*706 (98.9)*	*888(99.1)*	*3157 (98)*
Man	*-*	*8(1.1)*	*8(.9)*	*64 (2)*
Marital status				
Single	*32(17.5)*	*86(12)*	*118(13.2)*	
Partner	*114(62.6)*	*610 (85.4)*	*724(80.8)*	
Other / non spec.	*36(19.8)*	*18(2.6)*	*54(6)*	
Living with kids				
Yes	*26(14.3)*	*494 (69.2)*	*520(58)*	
No	*156(85.7)*	*220 (30.8)*	*376(42)*	
Caregiving others				
Yes	*2(1.1)*	*92(12.9)*	*94(10.5)*	
No	*180(98.9)*	*621 (87.1)*	*802(89.5)*	
Country Initial education				
NL	*168(90.3)*	*581 (81.4)*	*749(83.6)*	
Belgium	*13(9.1)*	*112 (15.7)*	*125(14)*	
Other	*1(.7)*	*21(2.9)*	*22(2.4)*	
Other qualifications				
None	*133(73.1)*	*251 (35.2)*	*384(42.9)*	*2538(79.7)*
Master Applied Science	*38(20.9)*	*409 (57.3)*	*447(49.9)*	*-*
Master of Science	*11(6)*	*48(6.7)*	*59(6.6)*	*646(20.3)*
PhD	*-*	*6(.8)*	*6(.7)*	*-*
Actual education				
None	*137(75.3)*	*648 (90.8)*	*785(87.6)*	
Master Applied Science	*37(20.3)*	*28(3.9)*	*65(7.3)*	
Master of Science	*7(3.8)*	*37(5.2)*	*44(4.9)*	
PhD	*1(.5)*	*1(.1)*	*2(.2)*	
Sick leave				
Yes	*2(1.1)*	*54(7.6)*	*56(6.3)*	
No	*180(98.9)*	*658 (92.2)*	*838(93.5)*	
Not answered	*-*	*2(.3)*	*2(.2)*	
Working context				
Community practice	*168(92.3)*	*556 (77.9)*	*724(80.8)*	*2315(71.9)*
Hospital	*9(4.9)*	*149 (20.9)*	*158(17.6)*	*906(28.1)*
Combination of both	*5(2.7)*	*9(1.3)*	*14(1.6)*	*-*
Urbanization level				
Urban	*84(46.2)*	*278 (38.9)*	*362(40.4)*	*-*
Rural	*51(28)*	*149 (20.9)*	*200(22.3)*	*-*
Urban and rural	*47(25.8)*	*287 (40.2)*	*334(37.3)*	*-*

Table 1 (*continued*)

Characteristic	NQM (n=182)	EM (n=714)	Total sample (N=896)	Dutch Midwives* (N=3221)
Employment status				
Employed	*19(10.4)*	*138 (19.3)*	*157(17,5)*	1195(37,1)
Self-employed	*14(7.7)*	*496 (69.5)*	*510(56.9)*	1465(45.5)
Locum	*149(81.9)*	*80(11.2)*	*229(25.6)*	561(17.4)

NQM= Newly Qualified midwives (<3years), EM=experienced midwives, * Dutch midwives according to the Dutch registrations (Kenens et al. 2017)

Table 3.

Experience level was not associated with burnout symptoms: NQMs did not have significantly higher odds of burnout symptoms than EMs (OR=1.31, 95% CI: 0.73–2.34). NQMs demonstrated significantly higher odds (OR=1.76; 95% CI: 1.27–2.44) on high work engagement than EMs. Adjusted for possible interaction variables (workplace, marital status, autonomy, variety, collaboration with colleagues), the odds of high work engagement for NQMs increased (OR=2.09; 95% CI:1.31–3.31).

Determinants of burnout symptoms

Table 4a shows the results of the univariable logistic regression analyses assessing the determinants of burnout symptoms.

None of the socio-demographic characteristics were significantly associated with burnout symptoms. All measured job demands were positively associated with burnout symptoms, except for mental load in NQMs. All four personal resources (hope, optimism, resilience, self-efficacy) showed a negative association with burnout symptoms, with general self-efficacy showing the strongest association (OR=0.84, 95% CI:.80–0.89).

Determinants of work engagement

Table 4b shows the results of the univariable logistic regression analyses assessing the determinants of work engagement.

Socio-demographic determinants associated with work engagement are age, level of education, employment status and urbanization level. Midwives aged between 30 and 39 showed significantly lower odds of high work engagement than those aged under 30. Midwives with Master's or PhD-level qualifications demonstrated higher odds of high work engagement than those with Bachelor's level qualifications. Midwives

who were self-employed and working as locums demonstrated higher odds of high work engagement than midwives working at a hospital. For all midwives, working in a rural environment demonstrated higher odds of high work engagement than working in an urban area.

All measured job resources were associated with work engagement, with the exception of job security. Collaboration with colleagues and little influence on work and rest times demonstrated significantly lower odds of high work engagement. All four personal resources were also determinants of work engagement, with hope having the strongest positive association with work engagement in NQMs (OR=8.27, 95% CI 3.32–20.5).

Discussion

In this study, we assessed the occupational wellbeing of Dutch midwives as reflected in burnout symptoms and work engagement. Burnout symptoms were shown by seven percent of the respondents. The individual indicators showed even higher percentages among the respondents: 19 percent had high scores on exhaustion and 10 percent had high scores on cynicism. There were no differences in the frequency of burnout symptoms between NQMs and EMs. All measured job demands were significantly and positively associated with burnout symptoms.

Almost 40 percent of Dutch midwives reported high work engagement; NQMs showed the highest percentage (49%), compared with 35 percent for EMs. A lower level of experience was significantly associated with high work engagement. Determinants of high work engagement were age below 40, education at Master's and PhD level, self-employment and working in a rural environment. Job resources associated with high work engagement were career opportunities, the availability of learning resources and feedback, a high degree of autonomy and variety in work activities. All personal resources – hope, resilience, optimism and self-efficacy – were associated with high work

Table 3

Associations between midwives' experience levels (NQM, EM) and Work Engagement / Burnout symptoms.

Variables	OR[a] (95% CI)	p-value	Corrected OR[b] (95% CI)	p-value
Work Engagement	*1.76(1.27, 2.44)*	*<0.001*	*2.09(1.31, 3.31)*	*<0.001*
Burnout symptoms	1.31(0.73, 2.34)	0.38	1.31(0.68, 2.51)	0.42

OR=odds ratio, CI=confidence interval
[a] EM = reference group
[b] corrected for workplace, marital status, autonomy, variety, collaboration with colleagues.

Table 2

Frequencies (percentages) and Median (25th – 75th percentile) of Exhaustion, Cynicism, Burn-out symptoms and Work Engagement on, Newly Qualified Midwives (NQM), Experienced Midwives, and total midwives (EM).

Variables	NQM (n = 182)		EM(n = 714)		Total: NQM+EM N= 896	
	n(%)	Median (25th·75th)	*n(%)*	Median (25th, 75th)	*n(%)*	Median (25th, 75th)
Exhaustion		1.44(0.88, 2.00)		1.50(1.00, 2.00.)		1.50(1.00, 2.13)
Low	153(84.1)		573(80.3)		726(81)	
High	29(15.9)		141(19.7)		170(19)	
Cynicism		0.60(0.20, 1.00)		0.60(0.20, 1.00)		0.60(0.20, 1.00)
Low	163(89.6)		641(89.8)		804(89.7)	
High	19(10.4)		73(10.2)		92(10.3)	
Burnout symptoms						
Low	166(91.2)		665(93.1)		831(92.7)	
High	16(8.8)		49(6.9)		65(7.3)	
Work Engagement		4.67(4.00, 5.11)		4.33(3.56, 4.89)		4.33(3.56, 5.00)
Low	94(51.6)		466(65.3)		560(62.5)	
High	88(48.8)		248(34.7)		336(37.5)	

Exhaustion: a high score on exhaustion based on UBOS-C scores for healthcare professionals (scores ≥ 2.5) and Cynicism (scores ≥ 1.6) points, Burn-out symptoms (high scores on exhaustion and high scores on cynicism). (Schaufeli and van Dierendonck, 2000) Work Engagement: a high score on Work Engagement based on the norm scores (UWES scores ≥ 4.67), (Schaufeli and Bakker, 2003).

Table 4a

Associations of various characteristics with Burnout-symptoms based on experience years (NQMs < 3 years, EM >3 years: odds ratios (OR) and 95% confidence intervals (CI).

Burnout symptoms			
Variables	NQM n = 182 OR(95% CI)	EM n = 714 OR(95% CI)	Midwives N = 896 OR(95% CI)
BACKGROUND VARIABLES			
Age			
*<30**	1.00	1.00	1.00
30–39	1.56(0.73, 2.93)	1.06(0.66, 1.71)	1.24(0.76, 2.03)
>39	1.06(0.66, 1.71)	1.46(0.73, 2.93)	1.10(0.69, 1.75)
Marital status			
Single *	1.00	1.00	1.00
Partner	0.56(0.09, 3.58)	0.54(0.11, 3.00)	0.53(0.15, 1.80)
Living with kids	0.92(0.39, 2.23)	0.87(0.51, 1.48)	0.89(0.57, 1.39)
Care for others	0	1.21(0.60, 2.43)	1.24(0.62, 2.46)
Level of education			
BSc*	1.00	1.00	1.00
MSc applied	–	0.98(0.11, 8.58)	0.91(0.10, 7.91)
MSc	–	0.60(0.07, 5.28)	0.62(0.07, 5.38)
PhD	–	0.46(0.04, 4.90)	0.36(0.03, 3.91)
Sick leave	0	0.79(0.37, 1.70)	0.63(0.31, 1.27)
Type Employment			
Employed*	1.00	1.00	1.00
Self-employed	0.32(0.04, 2.53)	0.79(0.33, 1.87)	0.65(0.34, 1.25)
Locum	0	1.07(0.53, 2.19)	0.92(0.58,1.44)
Workplace			
Primary care*	1.00	1.00	**1.00**
Hospital	0	1.33(0.16, 10.74)	2.13(0.28, 16.47)
Combination	0	0.58(0.07, 5.07)	0.89(0.10, 7.41)
Urbanization			
Urban*	1.00	1.00	1.00
Rural	1.79(0.54, 5.91)	1.22(0.74, 2.01)	1.29(0.82, 2.03)
Combination	1.71(0.47, 6.27)	1.13(0.62, 2.06)	1.20(0.70, 2.05)
JOB DEMANDS			
Change tasks	**1.08(1.04, 1.12)**	**1.06(1.04, 1.08)**	**1.06(1.04, 1.07)**
Complexity	**1.12(1.07, 1.18)**	**1.05(1.03, 1.06)**	**1.0–6.6(1.04, 1.07)**
Emotional load	**1.09(1.05, 1.13)**	**1.07(1.05, 1.09)**	**1.08(1.06, 1.09)**
mental load	1.00(0.97, 1.03)	**1.02(1.00, 1.04)**	**1.02(1.00, 1.03)**
organization of work	**1.08(1.04, 1.11)**	**1.06(1.04, 1.07)**	**1.06(1.05, 1.08)**
Physical strain	**1.03(1.01, 1.06)**	**1.02(1.00, 1.03)**	**1.02(1.01, 1.03)**
Problems with task	**1.14(1.09, 1.20)**	**1.08(1.06, 1.11)**	**1.09(1.07, 1.11)**
Variety	**1.05(1.02, 1.08)**	**1.02(1.00, 1.03)**	**1.02(1.01, 1.04)**
Work pace and quantity	**1.07(1.04, 1.11)**	**1.06(1.05, 1.08)**	**1.06(1.05, 1.08)**
PERSONAL RESOURCES			
Hope	**0.02 (0.01,0.10)**	**0.24(0.17, 0.33)**	**0.19(0.14, 0.26)**
Optimism	**0.05(0.02, 0.17)**	**0.17(0.11, 0.27)**	**0.14(0.10, 0.22)**

Table 4a (*continued*)

Burnout symptoms			
Variables	NQM n = 182 OR(95% CI)	EM n = 714 OR(95% CI)	Midwives N = 896 OR(95% CI)
Resilience	**0.07(0.03, 0.21)**	**0.26(0.18, 0.38)**	**0.21(0.15, 0.30)**
Self-efficacy	**0.70(0.59, 0.82)**	**0.87(0.82, 0.93)**	**0.84(0.80, 0.89)**

CI=confidence interval, OR=odds ratio, Significant: *P*<.05, *= reference group.

engagement and lowering the odds of burnout symptoms.

The results for burnout symptoms among Dutch midwives differed from international outcomes. About seven percent of our respondents reported burnout symptoms: a combination of high exhaustion and high cynicism. Internationally, 20–60 percent of midwives display burnout symptoms (Suleiman-Martos et al., 2020). There are three possible explanations for these differences. Firstly, the choice the UBOS-C versus that of the CBI (Copenhagen Burnout Inventory) in the WHELM studies (Suleiman-Martos et al., 2020). The CBI measures three different subscales of burnout: work, personal and client burnout (Suleiman-Martos et al., 2020). Among Swedish midwives, for example, 40 percent scored high in the personal burnout subscale, while work burnout and client burnout were around 15 percent (Hildingsson et al., 2013). Our study only measured work-related burnout symptoms. The differences In personal burnout symptoms might explain our relatively low burnout figures. Secondly, our sample may differ from the norm group for the UBOS-C. The norm score group of the UBOS-C is based on 10 percent primary care professionals, while 81 percent of our sample were primary care midwives (Schaufeli and Van Dierendonck, 2000). Working in the community with continuity of care protects against burnout symptoms (Suleiman-Martos et al., 2020). The cut-off point for burnout symptoms might therefore be too strict for our sample.

The occurrence of exhaustion among Dutch midwives is a reason for concern, despite the low levels of burnout symptoms: about one in five Dutch midwives suffered from exhaustion. The burnout percentages are relatively low due to the low percentages of cynicism within this group. High scores on exhaustion combined with high scores on work engagement indicate that this group remains energetic because of their motivation for their work and the buffers against burnout symptoms (Bakker et al., 2014). However, there is a risk that cynicism will increase if scores on job resources decline. This could cause this group to become less committed to their work and less involved with their clients, resulting in lost working days due to sick leave, with a risk of them leaving the profession (Bakker et al., 2014).

The vulnerability of NQMs to burnout symptoms, based on previous research by Suleiman et al., could not be confirmed in our population (Suleiman-Martos et al., 2020). A possible explanation might be the difference in the working context of Dutch midwives, whereby most NQMs work in a community setting (Kenens et al., 2017), which provides them with more job resources than hospital-based midwives.

This study is the first to measure work engagement using a large sample of midwives who are working in different contexts. Other international studies on midwives' wellbeing do not report work engagement, (Suleiman-Martos et al., 2020), or studied a small sample of hospital midwives (Freeney and Fellenz, 2013), making a comparison within the occupational group of midwives impossible. However, similar results regarding work engagement were found among Dutch doctors in postgraduate training (residents) (43% highly engaged doctors vs 38% highly engaged midwives) (Prins et al., 2010). This could be explained by the meaningful and resourceful work that healthcare provides (Hakanen et al., 2019).

Our study shows the relevance of reporting work engagement in studies on midwives' wellbeing. Although burnout and work engagement are intertwined constructs, previous research on the determinants

Table 4b

Associations of various characteristics with Work Engagement, based on experience years (NQMs < 3 years, EM >3 years): odds ratios (OR) and 95% confidence intervals (CI).

Work Engagement			
(Sub)group	NQM (n = 182) OR(95% CI)	EM (n = 714) OR(95% CI)	Midwives (N = 896) OR(95% CI)
Variables	**BACKGROUND VARIABLES**		
Age			
<30*	1.00	1.00	**1.00**
30–39	0	1.46(0.73, 2.93)	**0.49(0.33, 0.73)**
>39	0	1.06(0.66, 1.71)	1.30(0,85, 1.99)
Marital status			
Single *	1.00	1.00	1.00
Partner	1.17(0.20, 6.94)	0.82(0.20, 3.31)	0.90(0.30, 2.70)
Living with kids	1.66(0.87, 3.14)	0.99(0.62, 1.57)	0.72 (0.51, 1.03)
Care for others	0.00	1.10(0.62, 1.96)	0.86(0.49, 1.51)
Level of education			
BSc*	1.00	**1.00**	1.00
MSc applied	1.54(0.43, 5.58)	**9.95(1.77, 56.11)**	**7.85(1.41, 43,62)**
MSc	0.88 (0.22, 3.52)	**10.78(1.93, 60.10)**	**9.32(1.68, 51.75)**
PhD	0	**14.00(2.09, 93.67)**	**9.80(1.57, 61.00)**
Sick leave	0	0.94(0.44,1.98)	0.75(0.36, 1.55)
Employment status			
Employed*	1.00	1.00	**1.00**
Self-employed	1.17(0.40, 3.46)	1.57(0.75, 3.25)	**1.97(1.16, 3.33)**
Locum	0.56(0.18, 1.71)	1.28(0.71, 2.33)	**1.73(1.19, 2.51)**
Workplace			
Primary care*	1.00	1.00	1.00
Hospital	1.62(0.26, 9.99)	2.73(0.67, 11.14)	2.42(0.80, 7.35)
combination	0.83(0.09, 7.68)	2.26(0.53, 9.61)	2.28(0.71, 7.27)
urbanization			
Urban	**1.00**	**1.00**	**1.00**
Rural	**2.23(1.01, 4.96)**	**2.14(1.33, 3.44)**	**1.97(1.32, 2.94)**
Combination	0.81(0.36, 1.83)	1.17(0.71, 1.94)	0.93(0.62, 1.41)
JOB RESOURCES			
Autonomy	**1.05(1.02, 1.07)**	**1.03(1.02, 1.04)**	**1.04(1.02, 1.05)**
Career opportunities	**1.03(1.01, 1.05)**	**1.02(1.01, 1.03)**	**1.03(1.02, 1.04)**
Clear responsibilities	**1.05(1.02, 1.08)**	1.03(1.02, 1.04)	**1.03(1.02, 1.04)**
Collaboration colleagues	0.98(0.95, 1.00)	**0.98(0.96, 0.99)**	**0.97(0.96, 0.99)**
Communication	1.02(1.00, 1.03)	**1.01(1.00, 1.02)**	**1.01(1.00, 1.02)**
Contact opportunities	1.00(0.99, 1.02)	**1.02(1.01, 1.02)**	**1.01(1.01, 1.02)**
Feedback	**1.03(1.01, 1.04)**	**1.01(1.00, 1.02)**	**1.01(1.01, 1.02)**
Financial rewards	1.02 (1.00, 1.03)	1.01(1.00, 1.02)	**1.01(1.00, 1.02)**
Job security	1.01(0.99, 1.02)	1.01(1.00, 1.02)	1.00(1.00, 1.01)
Learning resources	**1.05(1.03, 1.08)**	**1.05(1.03, 1.06)**	**1.05(1.03, 1.06)**
Variety	**1.04(1.02, 1.07)**	**1.05(1.03, 1.06)**	**1.04(1.03, 1.06)**
Work and rest times	**0.97(0.94, 0.99)**	0.99(0.98, 1.00)	**0.99(0.97, 1.00)**
PERSONAL RESOURCES			

Table 4b (*continued*)

Work Engagement			
(Sub)group	NQM (n = 182) OR(95% CI)	EM (n = 714) OR(95% CI)	Midwives (N = 896) OR(95% CI)
Hope	**8.27(3.34, 20.5)**	**4.03(2.73, 5.96)**	**4.46(3.14, 6.33)**
Optimism	**2.17(1.14, 4.14)**	**2.40(1.65, 3.50)**	**2.14(1.56, 2.93)**
Resilience	**4.84(2.46, 9.52)**	**2.24(1.61, 3.11)**	**2.45(1.84, 3.26)**
Self-efficacy	**1.13(1.04, 1.24)**	**1.19(1.12, 1.26)**	**1.16(1.10, 1.21)**

CI=confidence interval, OR=odds ratio, Significant: *P*<.05, *= reference group.

of midwives' occupational wellbeing has only identified associations between job demands and burnout symptoms, and not between job resources and work engagement (Taris et al., 2017; Suleiman et al. 2020). Adding work engagement and job resources to research on midwives may provide a more comprehensive view on their wellbeing.

The determinants of high work engagement – higher educational levels and self-employment – are consistent with previous research (Hakanen et al., 2019).· In this study, however, a young age and little working experience were determinants of high work engagement, in contrast with the outcomes of (Hakanen et al., 2019). A possible explanation for these differences could be that Dutch NQMs are able to begin practice with a competence level that is already high (NQA, 2019). The novice level in other occupations might explain lower levels of work engagement (Hakanen et al., 2019). Another explanation could be a lack of job or personal resources, according to the JD-R model;(Bakker and Demerouti, 2007) in our findings, a lack of support from colleagues and an imbalance in work and rest times were associated with lower odds of high work engagement.

The results of our study reveal that personal resources – hope, resilience, optimism and self-efficacy – were positively associated with high work engagement and negatively associated with burnout symptoms. These findings are consistent with previous findings on wellbeing in other occupations (Hobfoll et al., 2003). Although personal characteristics were measured in studies on midwives' occupational wellbeing, personal resources are a relatively new addition to these studies (Bakker and Demerouti, 2007). The importance of conserving and optimizing personal resources as part of midwives' wellbeing were supported by this study.

Our findings added specific knowledge about the importance of personal resources for NQMs. In our previous qualitative studies, Dutch NQMs mentioned openness, flexibility and setting boundaries as important personal resources in their work in midwifery practice (Kool et al., 2019, 2020). Dutch NQMs mentioned different personal demands as hampering their work. In line with these outcomes, our study suggests that all four personal resources are strong determinants of high work engagement.

Strengths & limitations

A first strength of this study is that, to our knowledge, this study is unique in that it explores both burnout symptoms and work engagement among midwives and uses the JD-R model as its theoretical framework. The JD-R model, which incorporates both positive and negative wellbeing, provides us with a comprehensive view of occupational wellbeing (Schaufeli and Taris, 2014). Midwives seem similar to other healthcare professionals: highly engaged in their work and therefore willing to deal with job demands because of their involvement with clients. If burnout symptoms alone are investigated, it is not possible to show a process of declining engagement.

A second strength of this study is the use of validated scales in the questionnaire to increase reliability.

A third strength is the generalisability to the population of community-based midwives. In this study, we had a larger number of community-based midwives (81%) than in the Dutch population of midwives as a whole (72%). Our study population included a quarter of the population of Dutch midwives who were currently practicing, with comparable percentages on background variables, except for work setting. Our findings are less generalisable for hospital-based midwives, however, because of the small number of hospital-based working midwives who responded.

This study also has some limitations. We do not know how the non-response influenced the levels of exhaustion and burnout symptoms. Employees with high scores on burnout symptoms seem less likely to fill in the questionnaire (Taris and Schreurs, 2009). We may therefore have underestimated the prevalence of burnout symptoms. Another limitation is that we were unable to conduct a multiple regression analysis of work engagement and burnout symptoms with predicting variables for both NQMs and EMs. For a prediction model, 10–15 cases per variable are needed for midwives with high levels of the dependent variable (Twisk, 2014). We cannot therefore arrive at any conclusions concerning predictors of burnout and work engagement. Another limitation of this study is its cross-sectional design, which does not allow us to report causal relationships between different variables and midwives' wellbeing. In addition, this study was performed in 2019, which is also a limitation.

Recommendations for research and practice

International research is recommended on work engagement among midwives to enable comparisons with midwives in other countries. However, the levels of work engagement among Dutch midwives cannot be extrapolated to midwives in other countries, although we did identify experience level as a determinant of work engagement. Further research is recommended to explore explanations for these differences in levels of work engagement between NQMs and EMs.

In this study, we applied a heuristic model for occupational wellbeing (the JD-R model) in the midwifery profession. Further quantitative research with a higher number of respondents is necessary to identify determinants of work engagement and burnout symptoms for both NQMs and EMs. With a multivariable model, it is possible to identify independent determinants of occupational wellbeing, which could support the wellbeing of different groups of midwives. Furthermore, prospective longitudinal research involving multiple assessments is needed in order to gain an understanding of patterns of work engagement and burnout symptoms over the course of many years.

Using the JD-R model (Bakker and Demerouti, 2007), we were able to present a comprehensive view of midwives' occupational wellbeing. By using this model, we added figures on work engagement among midwives, and we provided midwives with determinants which contribute to wellbeing. Therefore we propose that, in addition to a focus on lowering job demands, interventions that focus on an increase of job resources, such as career opportunities, the availability of learning resources and feedback, a high degree of autonomy and variety in work activities as well as interventions which focus on the development of PR (such as hope, optimism, resilience and self-efficacy) might contribute to an increased wellbeing of midwives.

Based on our findings, we recommend building awareness among professional organisations and the profession itself about the importance of job and personal resources for midwives' occupational wellbeing. For example, it is important for midwives to retain certain job resources, such as a degree of autonomy and variety in their work. The recognition of these resources for midwives' occupational wellbeing must be considered for future developments in the organization of midwifery care. Also, professional organisations must be aware of the impact of demands such as working hours and rest times on midwife's mental wellbeing.

Training programmes with a focus on conserving and optimizing job

and personal resources for midwives could enhance midwives' occupational wellbeing, reducing levels of exhaustion and strengthening work engagement. Based on our findings, the need for the midwifery curriculum to prepare students for working in practice is also about building awareness of the job demands and resources that midwives will face after graduation. Furthermore, strengthening and optimizing students' individual personal resources before graduation could contribute to the building of a sustainable workforce.

Conclusion

Based on the findings of this study, the occupational wellbeing of Dutch midwives seems to be better than that of midwives abroad: a smaller percentage of midwives showing burnout symptoms and a larger number having high work engagement. The percentage of midwives with burnout symptoms is relatively low due to the low scores on cynicism. However, the percentage of midwives with high scores on exhaustion is concerning. Dutch NQMs had the highest odds of high work engagement compared to experienced colleagues. Being a young midwife with less working experience did not harm their work engagement and did not lead to burnout symptoms This study added the important role of job and personal resources as determinants of high work engagement among midwives. optimizing job and personal resources for midwives could help to retain midwives in the profession, enhance their occupational wellbeing and improve the quality of the care that they provide.

Ethical standards

Written informed consent was obtained from all respondents.

CRediT authorship contribution statement

Liesbeth Kool: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Visualization, Writing – original draft. **Esther I. Feijen-de Jong:** Conceptualization, Formal analysis, Investigation, Methodology, Supervision, Validation, Writing – review & editing. **Nicole J.J.M. Mastenbroek:** Conceptualization, Data curation, Formal analysis, Validation, Writing – review & editing. **François G. Schellevis:** Conceptualization, Methodology, Supervision, Validation, Writing – review & editing. **Debbie A.D.C. Jaarsma:** Conceptualization, Methodology, Supervision, Validation, Writing – review & editing.

Declaration of Competing Interest

None.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.midw.2023.103776.

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