Eaves, J. L, & Payne, N. (2019). Resilience, stress and burnout in student midwives. Nurse Education Today, 79, 188-193.

ABSTRACT

Background: There is a lack of research on resilience in midwifery, yet this may be a factor that can help prevent burnout and intention to leave the profession.

Objectives: To explore the relationship between perceived stress, resilience and burnout and the intention to leave midwifery within Midwifery students.

Design: A Quantitative study with a cross-sectional survey design

Setting: A London University in the UK.

Participants: 150 BSc student midwives, aged between 18 and 44, studying at University participated in this study. This included 72 students in year one, 26 in year two and 52 in year three.

Methods: Participants completed the Perceived Stress Scale, the Oldenburg Burnout Inventory and the Resilience Scale-14 to examine their self-reported stress levels, burnout (emotional exhaustion and disengagement) and level of resilience. Intentions to quit the profession were also measured.

Results: All variables were significantly correlated but in multiple regression analyses only stress predicted disengagement, and stress and year of study predicted emotional exhaustion. High stress and reduced resilience predicted intentions to quit midwifery. Resilience did not act as a moderator. Thus the findings suggest that resilience did not protect students from high levels of stress leading to burnout or wanting to quit, although resilience did help to reduce intentions to quit.

Conclusion: Student stress levels are not moderated by resilience and resilience played no role in reducing burnout. However, resilience may help students to persevere in the profession rather than leaving their studies. In order to minimise burnout and stress we need to consider alternative ways of enhancing the current workforce to reduce the decline in midwives entering the profession.

Keywords: Midwives, Resilience, Stress, Burnout, Students

INTRODUCTION

Poor environments and complex situations have had a profound impact on practicing midwives and nurses alike, as evident from the declining workforce and high attrition rates within UK Universities (Pezaro et al., 2016; Power, 2016).

A Royal College of Nursing (RCN; 2016) staff survey revealed that intention to leave the profession was influenced by a constant shortage of staff and poor working conditions. Nearly half of the participants reported high levels of work related stress, with 32% also reporting harassment or bullying at work. High stress levels are not only seen within the practicing midwife but also within those currently undertaking educational programmes (McCarthy et al., 2018).

Academic pressures entwined with clinical placements can create exceptionally stressful periods for the students (Reeve, et al., 2013; Heaphy et al., 2015; Wolf et al., 2015). Studies in Ireland (Heaphy et al., 2015) and Turkey (Cilingir et al., 2011) found clinical placements caused midwifery students anxiety which in turn affected their ability to carry on. Recent studies have reported how continued stress endured by student midwives not only affects their self-esteem (Edwards et al., 2010) but also their academic performance (LeBlanc, 2009) and general health (Maroco & Tecedeiro, 2009). Thus, identifying the impact of stress may aid the development of interventions to help students deal with stress and potentially reduce attrition.

BACKGROUND

Stress is a common aspect of life and has been studied across multiple disciplines to establish its deleterious effects. Cilingir et al. (2011) found that midwifery students reported more stressful experiences than their counterpart nurses, with the fear of making a mistake high on the list. Some stress can be good and act as a motivator. For example, LePine, et al., (2004) found positive links between academic stress and learning performance. Nevertheless, extensive literature identifies the negative impact of prolonged periods of stress on cognition, behaviour and mental health (McVicar, 2003; McEwen, 2008; Khajehei et al., 2011; Chernomas & Shapiro, 2013).

Lazarus' (1966) theory of stress has facilitated a richer understanding of how individuals perceive and cope with stress. The positive or negative effect of the stress rests on the nature of the stressor, the person's perception of the stressor and the level of resources the person has at their disposal to deal with the stressor. One such resource is resilience.

Multiple definitions of resilience have emerged including a positive adaptation to adversity (Luther et al., 2000) and the ability to carry on undeterred despite continuing stress (Bonanno, 2004). Furthermore, it has been described as a flexible trait (Rutter, 1987; Ugnar, 2005) that alters dependent on environmental factors.

Literature on resilience has flourished in recent years, as focus is directed towards establishing how resilience plays a role within the workplace, and how increased levels of resilience help facilitate a more productive and healthy workforce (Hunter & Warren, 2014). Hunter & Warren identified various stressors that required resilience, such as

heavy workloads, bureaucracy, a lack of support and autonomy. Additionally, they highlighted that newly qualified midwives were at particular risk and emphasised the importance of building resilience. Therefore, it has been suggested that high levels of resilience are essential in order to deal with stress, overcome adversity and carry on undeterred (McGowan & Murray, 2016; Watson et al., 2008; Beaumont et al., 2016).

Whilst some knowledge of working midwives' resilience has been gained through research (Hunter & Warren, 2014; McDonald et al., 2016), there is still little knowledge of how stress influences the novice practitioner, hoping to enter the profession, and whether or not resilience plays a key role in moderating their stress levels (McGowan & Murray, 2016). In other words, whether resilience may protect student midwives from the deleterious outcomes of stress. One such outcome is burnout.

Burnout syndrome is the result of experiencing high levels of workplace stress and is influenced by multiple factors (Toker & Melamed, 2017). The term was coined by Freudenberger (1975) and is characterised by emotional exhaustion and depersonalization along with reduced feelings of personal accomplishment (Maslach & Jackson, 1981). Burnout syndrome is multi-dimensional, and although Maslach's three-factor approach is most frequently used, a two-factor conceptualisation by Kalliath et al., (2000) pin points emotional exhaustion as the strongest contributing factor to burnout alongside depersonalization or disengagement.

Stress in midwives has been linked to increased emotional exhaustion (Banovcinova & Baskova, 2014) and high levels of emotional exhaustion have been linked to low feelings of personal accomplishments (Mollart et al., 2013). Stoll and Gallagher (2018)

also found a correlation between burnout and intentions to quit among midwives; when staff experience dimensions of burnout they may also contemplate leaving their profession (Maslach & Jackson, 1981; Jackson et al., 2007).

Improving retention and reducing burnout and intentions to quit is of high interest to the UK National Health Service at this current time as staff shortages have put much pressure on the remaining workforce (Moloney et al., 2018). This shortage in turn impacts on the support given to students, reducing their confidence and impacting on continuation (Barkley, 2011). In fact, staff shortages was the key reason midwives reported for intending to quit the profession (RCM, 2016). Additional factors such as reduced mental well-being (Perry et al., 2017) and job satisfaction (Rouleau et al., 2012) have also been linked to intention to quit. Whereas receiving support from supervisors and colleagues reduced the levels of burnout and intention to quit (Kalliath & Beck, 2001; Moore, 2002). For midwifery students, academic, practice placement, emotional and financial demands are key causes of attrition (Hughes, 2013; Hamshire et al., 2013; McCarthy et al., 2018).

Due to the lack of research on resilience in midwifery, and in particular in midwifery students, the aim of this research was to analyse the relationship between perceived stress, resilience and burnout and the intention to quit midwifery within midwifery students. This research also examined whether resilience acts as a moderator between high stress levels and burnout and intention to quit.

METHODS

Study Design

A cross-sectional survey design was used measuring year of study, stress, resilience, and their relationship with burnout (emotional exhaustion and disengagement) and intention to quit the profession. Data were collected in 2016.

Participants

All 200 undergraduate midwifery students studying at a London, UK university in the 2016/2017 academic year were eligible to participate in the study. There were no male students enrolled on the course at this time. 150 students participated (a response rate of 75%).

Data Collection

All undergraduate BSc. midwifery students studying on the three year degree at the University were asked during class time to voluntarily participate in the study. One class from year 2 opted out. Data were collected from January to March 2016. The self-administered questionnaires took no longer than 20 minutes to complete and were filled out during timetabled lessons. Those who did not wish to participate read quietly during this time. The information sheet was given out before participation and written informed consent was gained prior to completion of the questionnaires. Students were randomly grouped into one of three sub groups, each completing the measures within the questionnaires in different orders to control for possible response bias due to order effects (e.g. Bowling, 2005).

Confidentiality and anonymity were maintained by not asking for names and numbering the questionnaires, with each participant receiving the number on a debrief sheet. Any student wanting to withdraw their data, prior to the commencement of data analysis, was able to do so by contacting the researcher using this number. Debrief sheets were handed out after the questionnaires were completed and the details of who to contact if anyone experienced any distress were provided. All data were kept in a locked cupboard and on a password protected computer to ensure privacy.

Measures

The measures employed assessed three predictor variables: year of study, resilience and perceived stress, and three outcome variables: burnout (emotional exhaustion and disengagement) and intention to quit.

Demographic Form

This form was generated by the researcher and consisted of questions concerning year of study, marital status, age, sex, religion and residential status.

Resilience Scale (RS-14)

This scale was developed to assess common levels of resilience within the population (Damásio, et al., 2011). Investigations into resilience methodology have identified Wagnild and Young's scale (RS-14) to be the most reliable of its kind (Ahern et al., 2006) and it was therefore employed due to its rigor and validity (Damásio et al., 2011; Abiola et al., 2017). RS-14 includes 14 items and employs a 7 point Likert response scale ranging from 1 'strongly disagree' to 7 'strongly agree'. The items were summed

and a high score means high levels of resilience. Internal consistency was calculated using Cronbach's alpha (α=.92).

Perceived Stress Scale (PSS-10)

The PSS-10 (Cohen & Williamson, 1988) was developed to assess people's perception of stressors and how frequently they occur and it has been classified a reliable and valid self-report measure (Roberti et al., 2006). However, in the present study the scale was modified so the questions referred to stress (i.e. feelings and thoughts in the last month) associated with the midwifery programme rather than life in general. The scale includes 10 items and the response options for each items were; never occurred, almost never occurred, occurred sometimes, occurred fairly often or very often (scored from 0 to 4). PSS scores were calculated by reversing the scores on the four positive items and then summing across all 10 items. Scores are interpreted as the higher the score, the higher the perceived level of stress. Cronbach's alpha was used to test internal consistency (α=.73).

Oldenburg Burnout Inventory (OLBI)

The OLBI is used to measure burnout within any occupation. It was employed here because it focuses on key dimensions identified in burnout literature (Pines et al.,1981; Shinn, 1982): disengagement and emotional exhaustion. The scale is broken down using the two dimensions which consist of 8 emotional exhaustion items and 8 disengagement items. A 4-point Likert response scale was used with responses from (1) 'strongly agree' to (4) 'strongly disagree'. Items within each dimension were summed with high scores meaning high burnout. Cronbach's alpha was used to

assess the internal consistency of the 8 disengagement items (α=.76) and 8 emotional exhaustion items (α=.54).

Intention to quit

Intention to quit was measured to assess the current midwifery students' feelings towards their training and profession. This was not a specific measure, but instead items were adapted from Meyer et al., (1993). Three questions were included. The first was negatively worded ("How often do you feel like quitting your midwifery training?") and had response options ranging from (1) 'Almost never' to (7) 'Almost every day'. For the final two questions response options ranged from (1) 'Very Unlikely' to (7) 'Very likely'. One was negatively worded: "How likely is it that you will leave in the next year?" and one was positively worded and subsequently was reverse scored: "How likely is it that you will work as a midwife after your training?". The scale was discussed with midwifery lecturers. Scores on the positive items were reversed. The three items were summed, with high scores denoting greater intention to quit, and internal consistency of the items was measured using Cronbach's alpha (α=.58).

Statistical Analysis

All analysis was carried out using SPSS 16.0 program. There were no missing data. Reliability statistics were calculated using Cronbach's alpha. Descriptive statistics were calculated for each variable (mean and SD) and the relationships between continuous variables were determined using Pearson's *r* correlations. ANOVA was used to explore differences between the three year groups on the continuous variables. As the ANOVA was significant, Post hoc Tukey's HSD tests were used to identify where the significant differences lay. Three multiple linear regressions were used to

predict emotional exhaustion, disengagement and intentions to quit from year of study, stress and resilience. Statistical significance for all analyses was set at $p < .05$.

Ethical Considerations

Ethical approval was obtained from the University Psychology Department ethics committee. The research was carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki).

RESULTS

150 female student midwives participated in the study. Ages were recorded in bands (18-24, 25-30, 31-37, 38-44 and 45+) with 51% of the total sample aged 18-24. This included 72 students in year one, 26 in year two and 52 in year three. Descriptive statistics and correlations were calculated between stress, resilience, emotional exhaustion, disengagement and intention to quit, as seen in Table 1**.**

Table 1 shows intention to quit was positively correlated ($p < .01$) with emotional exhaustion ($r = .24$), perceived stress ($r = .41$), and disengagement (.40). Resilience showed a small negative correlation with emotional exhaustion ($r = -.16$, $p < .05$), whereas disengagement ($r = -.25$, $p < .01$) and intention to quit ($r = -.30$, $p < .01$) had stronger negative correlations with resilience. Perceived stress was positively correlated with emotional exhaustion ($r = .40$, $p < .01$) and disengagement ($r = .48$, $p < .01$) but there was a strong negative correlation found between perceived stress and resilience ($r = -.31$, $p < .01$). Therefore, higher levels of stress (and to a lesser extent lower levels of resilience) are associated with emotional exhaustion, disengagement and intention to quit.

A one-way analysis of variance (ANOVA) was conducted to examine whether there were differences between years of study in stress, resilience, emotional exhaustion, disengagement and intention to quit. This showed significant differences between the three years of study on emotional exhaustion ($F(2, 147) = 11.73$; $p<.001$) but not on disengagement, intention to quit, stress and resilience. Post hoc Tukey's HSD tests then further identified differences in emotional exhaustion scores. Emotional exhaustion levels for year 3 ($M=2.76$, $SD= .39$) and year 2 ($M=2.82$, $SD= .33$) were significantly higher than year 1 ($M=2.50$, $SD= .35$) but there was no difference between years 2 and 3.

Finally, three multiple regressions were used to predict emotional exhaustion, disengagement and intentions to quit respectively from year of study, stress and resilience. Results are shown in Table 2. As year of study is a categorical variable, it was dummy coded before entry into the regressions with year 1 as the reference category, which was not entered. Stress and resilience were not only included as direct predictors but the moderating effect of resilience was also examined to see whether resilience may buffer the relationship between stress and burnout or intention to quit. To test the moderator effect, the predictor (stress) and the moderator (resilience) were mean-centred and a product term was created which was entered into the regression as an additional variable.

Results of the first regression indicate the five predictors (year 2, year 3, moderator, resilience and perceived stress) significantly explained 26% of the variance in emotional exhaustion ($p < .001$). Stress makes the strongest significant contribution to

emotional exhaustion (β =.32, p < .001), followed by year 3 (β =.28, p < .001) and year 2 of study (β =.26, p < .001) (Table 2). Therefore, high stress and being in years 2 or 3 of study, compared to year 1, increased emotional exhaustion.

The same predictors significantly explained 28% of the variance in disengagement (p <.001). Stress makes the only significant contribution to disengagement (β =.47, p <.001), so high stress increases disengagement. The five predictors also significantly explained 22% of the variance in intention to quit (p <.001). Stress again made the largest contribution (β =.37, p <.001) but resilience was also found to be significant (β =-.20, p <.01). Therefore, low resilience and high stress increase intention to quit.

In summary, results indicate Year 2 and 3 students experience significantly higher levels of emotional exhaustion than those in year 1. Furthermore, they signify that being in years 2 or 3 and high stress levels predict higher emotional exhaustion scores and that high stress levels predict higher disengagement scores. Moreover, high stress and low resilience predict intention to quit.

DISCUSSION

The purpose of this study was to examine relationships between stress, resilience, burnout and intentions to quit midwifery in students and also to establish if resilience acted as a moderator between stress and burnout or stress and intentions to quit.

Results showed all variables to be significantly correlated, including strong correlations between emotional exhaustion, disengagement and intention to quit.

In the multivariate analyses stress was the key predictor of emotional exhaustion and disengagement, supporting previous research (e.g. Banovcinova & Baskova, 2014). Hunter and Warren (2014) found that newly qualified midwives were at a critical point in their careers and this left them more susceptible to workplace adversity. Results of this study show that Year 2 and 3 students reported higher levels of emotional exhaustion than students in year 1. Thus, particular attention needs be to paid to supporting students in these later years of training, as well as in the early years after qualification (Hunter and Warren, 2014).

Wagnild and Young (1993), Taku (2014) and Epstein (2015) all maintain resilience has the ability to act as a moderator or protective factor between stress and negative outcomes such as burnout. This was not evident from the results of this study, although there was a negative correlation between stress and resilience, suggesting that the two are inversely linked. Nevertheless, high stress levels and reduced resilience were both predictors of intentions to quit, so both reducing stress and building resilience are important for ensuring midwifery students transition into the profession. Increased resilience may also help them remain in the profession (Hunter & Warren, 2014)).

Limitations

This study featured several limitations which must be taken into account when interpreting results. The sample of midwifery students was relatively small, did not include any men and was drawn from a single Higher Education institution (HEi) in the UK, so the findings of this study may not generalise to all midwifery students. The number of participants from the second year was small, as one class opted not to participate, so the experience of second year students was not so well represented.

However, the overall response rate, at 75%, was good. Furthermore, the use of self-report measures means that response bias may be a limitation, as students may have responded in a socially desirable manner. Finally, this was a cross-sectional survey and so relationships between variables do not indicate causality.

Implications for practice

Although resilience did not predict burnout and it did not moderate the impact of student stress in this study, the findings suggest that increased stress is a problem for burnout and intentions to quit. This suggests that more could be done to help reduce stress in practice.

HEis have a duty of care to ensure they teach the knowledge and skills each student needs to cope with the array of situations they may face whilst working as a midwife. It has been reported that clinical placements often cause stress in the novice practitioner (Cilingir et al., 2011). Therefore recommendations include reducing the placement hours and incorporating more simulations and critical thinking sessions into the training (Watson et al., 2012; Lendahls and Oscarsson, 2017). Furthermore, the inclusion of actors, according to Croft et al., (2008), can enhance students' communication, conflict resolution and interpersonal skills in applied settings. According to Lathrop et al., (2007) this kind of constructivist learning style helps promote understanding of skills, develops self-confidence and enables easier retention of information. Adult learning theories such as Knowles' (1980) four principles of analogical learning and Schön's (1983) reflection on action, could be fully incorporated here to promote experiential learning inside and outside the classroom. This may better prepare students for the environments they will eventually face and

perchance, reduce the dissonance between practice and reality (Thomas & Asselin, 2018). When students are on placement, this could include more focus on demanding, fast paced stressful situations, which may help deflect some of the stress midwives feel, as practice makes them more confident in their competencies (Howarth et al., 2017). Recommendations include HEis working alongside the Nursing and Midwifery Council (NMC) to develop modules aimed at enhancing and promoting personal and work based resilience, which may also aid retention of students.

Indeed, a review of resilience based training courses identified a positive relationship with increased resilience and reduced stress levels (Robertson et al., 2015). Smith et al., (2018) found the more resilience training someone received, the more resilient and less stressed they became. Furthermore, incorporating interventions, such as mindfulness (Galante et al., 2018; Khoury et al., 2018), which are effective in reducing stress, may also help relieve psychological strain which can build up over time and contribute to burnout. Additional factors which may reduce stress include yoga (Hartfiel et al., 2011), having a strong social milieu (Earvolino-Ramirez, 2007), and getting plenty of physical activity (Edwards et al., 2010). The availability of such stress reduction strategies is possible within all HEis and the provision of support is also crucial (Kalliath & Beck, 2001; Moore, 2002).

Conclusions

The findings of this study suggest that the stress of midwifery training is linked to burnout and that both stress and reduced resilience are linked to intention to quit. However, future research needs to be conducted beyond a single HEi and could follow students over a longer period of time, possibly from induction at University to post

registration, thus producing more generalizable results that can be used to predict retention, commitment and burnout post registration. In this current economic climate and time of uncertainty in the sector, educators must do all they can to help facilitate the best learning environments and provide students with the tools and skills they require to succeed. This includes making wellbeing within this profession a priority and not just a luxury.

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Table 1. Descriptive statistics and correlations between the variables

	Mean (SD)	1 PSS	2 Res	3 EE	4 Dis	5 Quit
1 PSS	1.78 (.59)	1				
2 Res	5.39 (.99)	-.31*	1			
3 EE	2.64 (.39)	.40**	-.16*	1		
4 Dis	2.09 (.52)	.48**	-.25**	.25**	1	
5 Quit	2.02 (1.10)	.41**	-.30**	.24**	.40**	1

** p< 0.01; * p < 0.05

PSS – Perceived Stress Scale, Res – Resilience, EE – Emotional Exhaustion, Dis-Disengagement, Quit – Intention to Quit

Table 2. Multiple regressions predicting burnout and intention to quit

	Emotional Exhaustion					Disengagement					Intention to quit				
	R^2	F	β	B	CI	R^2	F	β	B	CI	R^2	F	β	B	CI
Year 2	.26	9.98***	.26***	.26	.11-.42	.28	11.26***	-.07	-.09	-.30-.11	.22	8.06***	.02	.07	-.38-.52
Year 3			.28***	.23	.11-.35			.10	.11	-.05-.27			.08	.17	-.19-.53
Stress			.32***	.21	.11-.31			.47***	.42	.29-.56			.37***	.69	.39-.98
Resilience			-.06	-.02	-.08-.04			-.12	-.07	-.14-.01			-.20**	-.22	-.39-.-05
Moderator			.04	.03	-.07-.12			-.14	-.12	-.25-.01			-.10	-.19	-.47-.08

** p< 0.01; *** p < 0.001