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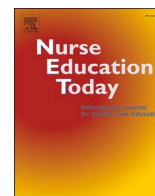
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## Research article

# Understanding the risk factors for student attrition across pre-registration nursing and midwifery programmes in a United Kingdom university: A sequential explanatory mixed methods study

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## ABSTRACT

**Background:** The World Health Organization estimates a global shortage of 4.5 million nurses and 0.31 million midwives by 2030, which presents a significant problem for workforce planning. Despite aspirational United Kingdom (UK) government policy targets and ongoing efforts, the number of nursing and midwifery vacancies continues to increase. One contributing factor is student nurse and midwife attrition.

**Aim:** To identify risk factors that contribute to nursing and midwifery students interrupting or withdrawing from pre-registration programmes.

**Design:** Sequential explanatory mixed-methods design.

**Setting:** A University School of Nursing and Midwifery in the Southwest of England.

**Participants:** 534 pre-registration nursing and midwifery student survey respondents and 8 focus group participants.

**Methods:** Students' perspectives of attrition risk factors were evaluated using a Likert scale with free text questions used to capture additional factors affecting interruption or withdrawal. Students were also invited to take part in focus group discussions. Survey data were coded and analysed utilising SPSS (Version 25) software. Survey free text narrative and focus group data were analysed using reflexive thematic analysis.

**Results:** Survey results revealed 55 students had interrupted and returned and 281 students had considered leaving or interrupting their programme. Survey descriptive statistics data were grouped into top attrition risk factors. Free text narratives and focus group data identified four themes: multiple and overlapping challenges; the threats and opportunities of clinical placements; the availability of the right support at the right time; and, investing for a better future for myself and others.

**Conclusion:** Nursing and Midwifery students reported challenges across their pre-registration programmes resulting in risk factors that might lead to students interrupting or withdrawing. Optimal cooperation between higher education institutions (HEI) and clinical stakeholders is of paramount importance to address these challenges as is government and Nursing and Midwifery Council (NMC) acknowledgement and consideration of the identified risks linked to attrition; specifically relating to national funding arrangements and the clinical practice hours required for registration within the UK. This may also resonate with professional programmes internationally, faced with similar staffing shortages.

## 1. Background

Student attrition in pre-registration nursing and midwifery education programmes is a worldwide problem (Hamshire et al., 2019). Every student lost exacerbates the shortage of registered nurses and midwives around the world. The World Health Organization (WHO) has estimated

a global shortage of 4.5 million nurses and 0.31 million midwives by 2030 (Boniol et al., 2022). In the United Kingdom (UK), the shortage of nurses and midwives is a significant problem for workforce planning and affects the sustainability and quality of healthcare (Health Education England, (HEE) 2018)). In response, the UK government committed in its 2019 manifesto to increase the number of registered nurses in the

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National Health Service (NHS) in England by 50,000 by the end of the parliamentary term (Department of Health and Social Care, 2022). Despite aspirational policy targets and ongoing efforts, the number of registered nursing vacancies remains at 9.9 %, equating to 40,096 nurse vacancies (NHS Digital, 2023) and 2500 midwives (Royal College of Midwives (RCM), 2023). One factor contributing to these vacancies is the attrition of students in pre-registration programmes, with student nurse attrition estimated to be 25 % in the UK (HEE, 2018) and midwifery attrition 13.8 % (RCM, 2023). The difficulty in understanding the true impact of attrition rates is there is no single agreed definition, with both attrition and dropout being used interchangeably in the literature (Canzan et al., 2022). The onus remains on higher education institutions (HEI) to be accountable for understanding and addressing attrition (Beech et al., 2019). For the purposes of this research, we have used HEE (2018) definition of pure attrition as “the number of students who did not complete on time using the standard pathway for that programme” (HEE, 2018 pg 5).

The factors that put students at risk of leaving their pre-registration nursing and midwifery education have been described as multifaceted and complex (Hamshire et al., 2019). A wealth of literature has explored the factors that impact on a student’s decision to drop out and leave their pre-registration programme (Canzan et al., 2022; Chan et al., 2019; Hamshire et al., 2019; McKeever et al., 2018; McNeill and Kitson-Reynolds, 2024; Merkley, 2016; Moran et al., 2024; ten Hoeve et al., 2017) with many studies describing how demographic and external factors to the programme contribute to this (Jeffreys, 2015; Williamson et al., 2013). The complexity of what contributes to attrition is described by Hamshire and colleagues as a ‘wicked problem’; a concept capturing how attrition is a problem involving the overlapping and interactions of multiple factors and where there are few clear solutions (Hamshire et al., 2019 p.2).

Research has shown that students’ experience within HEIs and the support they receive in academic and practice components of their programmes can contribute to reasons for leaving (Chan et al., 2019; Eick et al., 2012; McKeever et al., 2018; Smith-Wacholz et al., 2019). Within the literature there is emerging understanding of how a student’s personality, self-efficacy, behaviour, and motivation can also contribute to decisions to stay (Edge and Gladstone, 2022; Mitchell et al., 2020). A further concept recognised is the psychological construct of grit, which is closely entwined with motivation. Terry and Peck’s (2020) study found that as a student’s level of grit increased so did their perceived level of academic and clinical performance. Most recently Soerensen et al. (2023) study, described how reasons for entering nursing and an intrinsic desire to help others, were a driver for remaining and continuing their nurse education.

Other key concepts such as self-efficacy, sense of belonging (Levett-Jones et al., 2007) and perception of curriculum that contribute to students staying (Tinto, 2017) have been studied over a number of years. Despite this, addressing attrition and factors that contribute to a student’s decision to leave their programme of study continues to be a priority. Student nurse and midwife retention, success and persistence are desired outcomes globally (McNeill and Kitson-Reynolds, 2024; Mooring, 2016; Mitchell et al., 2020; RCM, 2023). It is therefore important to better understand reasons for drop out and to establish what mechanisms might help to retain students (Collard et al., 2020). Supporting students to persist in their programme of study requires interventions that address the needs of diverse student populations and work collaboratively with students to understand these (Edge and Gladstone, 2022), along with whole-programme strategies that are initiated at pre-programme stage and support students through their pre-registration education journey (Mitchell et al., 2020).

## 2. Aims

The aim of this study was to identify risk factors that contribute to nursing and midwifery students interrupting or withdrawing from pre-

registration programmes.

## 3. Methods

### 3.1. Design

The study employed a sequential explanatory mixed-methods design (Creswell et al., 2003) with quantitative data collected from a nursing and midwifery student survey used to inform student focus group questions. Mixed method research designs require at least one quantitative and one qualitative component, with the presence of data integration (O’Hanlon, 2018). The study took a pragmatic approach to understanding the real-world challenges that nursing and midwifery students face whilst recognising that these realities will be multiple and complex (Creswell and Plano Clark, 2018). Methodological pragmatism respects quantitative and qualitative research methods and knowledge equally (Allemang et al., 2022). Rather than ‘picking a side’ methodological pragmatism embraces inter and intra-disciplinary collaborations between researchers across differing paradigms (Foster, 2023).

### 3.2. Setting & participants

The study took place in a mid-size South-West England HEI. The HEI provides a variety of nursing associate, nursing, and midwifery pre-registration programmes. The survey was distributed to a convenience sample of all nursing and midwifery students enrolled on a pre-registration programme by a member of the teaching team. Nursing and midwifery student participants were invited to share their contact (email) details with the research team should they wish to take part in a follow-up focus group. The contact details shared were used by the focus group facilitator, who was a non-teaching member of staff, to invite students to a choice of online or face to face focus groups.

### 3.3. Data collection

#### 3.3.1. Survey

Students’ perspectives of attrition risk factors were evaluated using a 5-point Likert scale (Descriptors: Agree, Strongly Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree) against a bank of 20 risk factors identified following a review of the literature. These factors were collated into a set of draft survey questions by the project team, piloted with a convenience sample group of 29 mixed field second year students and amended based on their feedback to create the final survey. A series of questions also captured categorical data on a range of factors including age, ethnicity, gender, teaching site and programme of study.

Participants were asked if they had ever considered interrupting or withdrawing from their studies. This enabled an exploration of the views of students who had identified themselves as being at risk of attrition alongside those who did not. Students rated their agreement or disagreement with each risk factor statement, for example: “I am considering (or have considered) leaving or interrupting because the academic course requirements are too hard/demanding”. Data were compiled by collating descriptive statistics regarding the level of agreement with each statement.

Free text questions were used to capture any additional factors affecting interruption or withdrawal and views on factors enabling or supporting students to remain on the course. A question asking students about their awareness and use of support services was also asked (Descriptors: Aware and have used, Aware but have not used, Not aware). The study did not attempt to evaluate the services provided.

#### 3.3.2. Focus groups

Students expressing an interest in taking part in a focus group were invited to discuss their experiences and perceptions of the risk factors for attrition, any protective factors, and their awareness and use of existing support mechanisms. A semi-structured focus group topic guide was

developed building on the responses from two of the survey questions: ‘What factors, do you think, are the reasons for students leaving the nursing/midwifery programme?’; and ‘What keeps you on your programme?’. This offered some structure to the focus group discussion, but still allowed discussion to flow between the participants. The focus group facilitator was aware of and prepared for group dynamics yet remained flexible enough to allow an in-depth and detailed exploration of the topic to take place (Nyumba et al., 2018). To promote an open and honest discussion the facilitator (GH) was not a member of the teaching or clinical placement development teams. One focus group took place face to face; the other was organised online. Each focus group was planned for approximately one hour, with flexibility built in. The focus groups were facilitated over a combined period of 2 h & 50 min (FG1 = 1-h 39 mins, FG2 = 1-h 16mins). They were audio-recorded, and the recordings were professionally transcribed.

### 3.4. Data analysis

Survey data were coded and then analysed utilising the software SPSS version 25 for Windows (IBM Corp, 2017). For each questionnaire descriptive statistics were performed to summarise the data. Survey free text narrative responses (n = 822) and the focus group transcripts were analysed using Reflexive Thematic Analysis (RTA) (Braun and Clarke, 2022), following their six steps method (Braun and Clarke, 2006). This required data familiarisation, initial code generation, theme generation, reviewing themes, defining, and naming themes, and finally writing up the findings. Survey free text narrative responses and interview transcripts were independently coded by authors (SH & GH) and then later compared and combined (GH) to generate candidate themes. Braun and Clarke (2022, p.4) describe RTA as a method for “developing, analysing and interpreting patterns across a qualitative dataset”. Candidate themes were shared with all other members of the research team for the purpose of thematic review, definition, and naming discussions. This process of refining and (re)naming checks ensured that the final themes provided a coherent representation of the whole data set and a lucid narrative (Byrne, 2021).

### 3.5. Ethics

Ethical approval for this study was obtained from the University’s Health Faculty Research Ethics and Integrity Committee (FREIC) (Project ID 4064). Participants provided informed consent on completion and submission of the survey, and before participating in the focus groups. Completed survey data could not be withdrawn as responses were anonymised at source. Focus group participants were reminded that they could withdraw their consent or remove their data at any time prior to the completion of data analysis. Their anonymity was maintained by allocating participant identifiers.

## 4. Results

### 4.1. Participant characteristics survey

All 1678 students on pre-registration nursing and midwifery pre-registration programmes were invited to take part in the survey. The survey received 534 responses (31.8 % response rate). A total of 822 free text narrative responses were received across these (n = 534) responses. Most of the survey respondents were third year students 39 % (n = 208), with additional representation from first, second and fourth year students as demonstrated in Fig. 1. Nursing students made up the majority of the survey respondents 83 % (n = 443), followed by midwifery students 11 % (n = 59), and finally nursing Associate students 6 % (n = 32).

### 4.2. Participant characteristics focus groups

Sixty-five students provided contact details to express an interest in

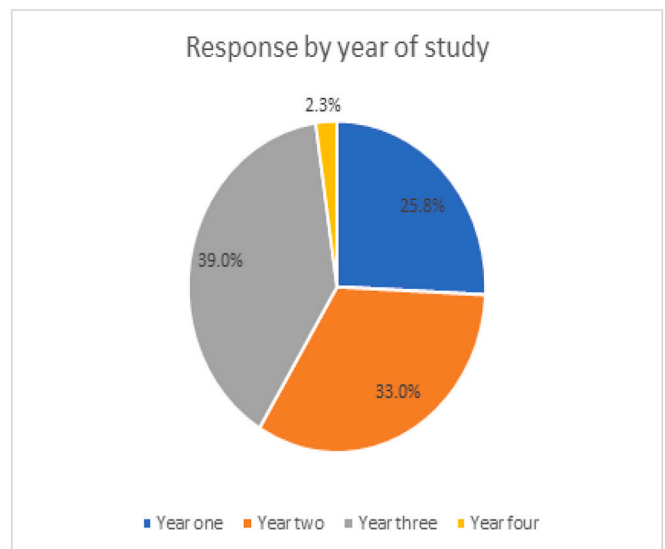


Fig. 1. Survey respondents by programme year.

attending a focus group. Of these, only eight responded to contact and consented to take part (12 % response rate). This low response rate was partly due to final year students completing their nursing and midwifery pre-registration programmes between the survey and focus group, and therefore attending clinical practice. Adult and mental health nursing fields, and midwifery, were represented by focus group participants. Participants ranged from 2nd year BSc (Hons) to 4th year MNurs (Hons) students (Table 1). No year one students, nursing associate students, or child field students participated in the focus groups.

### 4.3. Survey findings

Of the whole student sample (n = 534), 10.3 % (n = 55) reported that they had previously interrupted and returned to study. A total of 52.6 % (n = 281) reported that they had considered leaving or interrupting study on their programme. Of this ‘at-risk of attrition’ study group (n = 281) 20.9 % (n = 59) were somewhat likely or very likely to interrupt, and 14.6 % (n = 41) were somewhat or very likely to withdraw entirely. This figure most likely included people who had considered both leaving and interrupting. Of the whole student sample (n = 534) 11 % (n = 59) indicated they were somewhat or very likely to interrupt, whilst 7.7 % (n = 41) indicated they were somewhat or very likely to withdraw. Caution needed to be exercised in analysis and interpretation of these data as students may have responded positively to both questions.

Survey findings were categorised into three areas: academic and university factors, clinical practice placement factors and personal/

Table 1  
Focus group participants.

Focus Group 1 (Face to face)		
Participant Number	Field of Nursing or Midwifery	Year of programme
P1 (Student 1)	Adult Nursing	Year 3 (BSc, Hons)
P2 (Student 2)	Mental Health	Year 2 (BSc, Hons)
P3 (Student 3)	Adult Nursing	Year 3 (BSc, Hons)
P4 (Student 4)	Adult / Mental Health	Year 4 (MNurs, Hons*)
P5 (Student 5)	Mental Health	Year 2 (BSc, Hons)
P6 (Student 6)	Adult / Mental Health	Year 4 (MNurs, Hons*)
Focus Group 2 (Virtual)		
P7 (Student 7)	Adult Nursing	Year 3 (BSc, Hons)
P8 (Student 8)	Midwifery	Year 3 (BSc, Hons)

\* An integrated dual field master’s pre-registration programme.

health factors. A summary of identified risk factors can be seen in Table 2. Of particular interest is the group who identified as having considered leaving the programme ('at-risk of attrition'). This group was asked questions about their personal reasons for considering leaving or interrupting. Students who did not identify as being at risk of leaving the programme were asked about the same factors, but the questions sought their views as to why others may want to leave; their responses are therefore likely to express perceptions on the attrition risk for others.

There was a general trend in the data (11 out of 12 risk factors) for students who did not identify as being at risk of attrition to rate placement and personal factors as a higher risk. There was more balance in academic risk factors between the groups with two of the key areas identified more frequently by the 'at-risk of attrition' group: the course being too hard/demanding and not meeting expectations.

4.4. Focus group findings

The combined analysis of the survey free text narrative responses and the focus group data generated four themes. These themes reflected the risk factors that contribute to nursing and midwifery students interrupting or withdrawing from pre-registration programmes, alongside self-reported protective factors. The four themes (*multiple and overlapping challenges, the threats and opportunities of clinical placements, the availability of the right support at the right times, investing for a better future for myself and others*) were synthesised alongside survey descriptive statistics from the at-risk of attrition group. This meant the qualitative narrative findings and the quantitative numerical results could offer context to one another (Draucker et al., 2020).

**Table 2**  
Survey finding descriptive statistics grouped by theme.

Question content	Students at risk of attrition	Students not at risk of attrition
To what degree is the following a key factor in attrition risk	% (and number) of participants who agree or strongly agree	
<b>Academic and University factors</b>		
Academic part of course is too hard/demanding	45.3 % (127)	39.9 % (101)
Academic part of course not meeting expectations	39.7 % (111)	31.6 % (80)
Lack of focus on field of practice	36.4 % (102)	35.2 % (89)
Not feeling part of a university community	31.8 % (89)	37.9 % (96)
Insufficient support from personal tutor	27.6 % (77)	35.2 % (89)
Insufficient support for learning needs (e.g., dyslexia)	18.2 % (51)	15.9 % (40)
Discrimination on campus in THEORY	6.5 % (18)	5.5 % (14)
Bullying and harassment on campus in THEORY	5 % (14)	6.3 % (16)
<b>Clinical practice placement factors</b>		
Negative experience in PLACEMENT	58.3 % (162)	62.1 % (157)
Travel is to placement is too long/excessive	49.9 % (139)	60.5 % (153)
Insufficient support from practice teams	35.8 (100)	34.3 % (86)
Bulling and harassment in PLACEMENT	31.8 % (89)	37.2 % (94)
Discrimination in PLACEMENT	21.5 % (60)	23.5 % (59)
<b>Personal and health factors</b>		
Financial difficulties	64 % (180)	79.1 % (200)
Struggling with mental health difficulties	47.5 % (133)	71.9 % (182)
Social isolation	33.2 % (93)	48.6 % (123)
Caring responsibilities are a key factor	32.1 % (90)	56.1 % (132)
Struggling with physical health difficulties	23 % (64)	41.1 % (104)
Lack of peer support	22.9 % (64)	29.6 % (75)
Disillusionment with profession	18.4 % (51)	30.8 % (77)

4.5. Multiple and overlapping challenges

Although multiple challenges were described by the students that might lead to them interrupting or withdrawing from their pre-registration programme, financial pressures was the most prominent challenge reported across all nursing and midwifery student groups, as presented in Table 2.

Financial pressures arose for a variety of reasons, one of which was having to find significant upfront costs to attend clinical placements before travel claims could be processed:

*"Mine was over two grand, my GP placement...over two grand in travel, accommodation. And the accommodation I found out five days before I started placement. And that was because another student had moved out"* (FG1 P4).

*"Not only is it 3 hours each way most days (clinical placement), once you account for delays and walking to and from buses/trains... I cannot always afford to pay out for a hotel in advance, cover my travel and make sure they (children) have everything they need at home"* (Survey narrative response).

As briefly referred to in the survey response below, the time and organisational investment needed to travel for teaching and seminars was also a factor, particularly for those living at distance from the main University site, as this student shared:

*"There's no way I can commute to (University) four days a week. Because of my family and because of the cost of fuel and travel and time and, you know, everything"* (FG2 P8).

Students cited recent cost of living pressures as additional strains on their finances. Many stated these unexpected inflationary cost-pressures were not represented within their learning support funding – with some not even being eligible for this due to their international status - as these students' report:

*"I'm an international student. I get no funding... I mean...I've not been shopping – I just go to food banks and... I also know spots where you can just pick up stuff"* (FG1 P1).

*"So, I've got a nine-year old at home and they, they say, 'Oh don't work,' whilst you're on the course. But the funding does not cover you not working"* (FG1 P3).

However, one of the most common responses to questions around finances was the frustration student nurses and midwives felt at working long hours within the NHS with no remuneration:

*"We are expected to essentially pay to work, work for nothing, and pay for the travel to get there to work for nothing"* (Survey narrative response).

*"Why am I putting myself through this shit when I can get a job tomorrow and not have to worry about where rent's coming from?"* (FG1 P3).

Significant hardship was not the only challenge reported. The demands of balancing academic, clinical, financial pressures, and family commitments impacted negatively on their overall wellbeing:

*"stress/fatigue due to overworking and burn out - Due to financial strains, currently working 60+ hours a week due to having to complete placement hours as well as paid work, plus having assignments to do"* (Survey narrative response):

*"It's not the degree that's always so difficult, it's the other stuff. It's all the other things that come with having a family... I think I've come to realise there is no such thing as balance. There isn't – in my life"* (FG2 P8).

Survey findings also support these multiple challenge narratives with 45.3 % (n = 127) of the at-risk respondents (n = 281) reporting academic components of the course being too hard or demanding as an attrition risk factor. In addition, 32.1 % (n = 90) of the at-risk respondents highlighted caring responsibilities as a risk factor.

4.6. The threats and opportunities of clinical placements

Negative experiences in clinical placement were identified as an attrition risk factor by 58.3 % (n = 162) of at-risk respondents. In addition to the significant financial and travel commitments made during clinical placements, data indicated that 31.8 % (n = 89) of the at-risk students felt that bullying and harassment in practice were a risk

factor for leaving the course. This rose to 40 % for child health and dual field nursing students. However, of note this was lower for midwifery students at 25 % and was not identified as a risk factor by nursing associate students.

Clinical placement experiences such as toxic work cultures and placement bullying (staff and students) were, therefore, most troubling to students:

*"I had a toxic, toxic team on placement...I was like, I'm done. Like, this isn't even I want to step off and take time off. I am done"* (FG 1 P6).

*"I think the whole ward, the culture there was not ideal. But I think specifically my supervisor assessor person, she bullied me quite badly, and I've heard that from other students"* (FG2 P7).

Students also reported that they were not receiving the clinical education and support they were expecting, with 35.8 % ( $n = 100$ ) of at-risk respondents reporting insufficient support from clinical practice teams in placement was a risk factor:

*"I wasn't supernumerary during that placement, whatsoever. I was used as numbers and it was very obvious that I was used for numbers because any time I asked to do any training like you, it was, Oh, we can't. We don't have enough staff"* (FG1 P3).

*"I can remember thinking to myself...I don't want to go back into that environment again because it was just – it just was horrible. I never cry and I cried, and I just thought, why? why am I doing this? Why am I putting myself through this to be treated like that?"* (FG2 P8).

Unsurprisingly, difficulties with mental health were found to be a risk factor for attrition across all programmes, with 47.5 % ( $n = 133$ ) of at-risk respondents reporting their mental health as an attrition factor.

However, in contrast positive clinical placement experiences and supervision were protective factors, as these students described:

*"Support from academic tutors and placement has been phenomenal to keep me in the programme"* (survey narrative response).

*"Positive placement experiences motivating me to keep going and know it will be worth it"* (survey narrative response).

#### 4.7. The availability of the right support at the right times

Survey findings indicated that 33.2 % ( $n = 93$ ) of the at-risk respondents felt social isolation was a key attrition risk factor. Similarly, 31.8 % ( $n = 89$ ) identified that not feeling part of a university community was significant, as these students shared:

*"My first placement was horrible...I was just turned 19. New situation, during Covid. I didn't know what to do. I don't know how to stand up for myself"* (FG1 P4).

*"The social isolation has been immensely challenging, and due to this, I have had to reach out to university counselling for support"* (survey narrative response).

When academic, clinical, and personal challenges were faced by students this stressed the need for having the right support at the right time. Students often initially sought support and signposting from their academic personal tutors. Many felt they received this support in a timely manner, as shown in these quotes:

*"When I have needed them, I have been very fortunate I've had some really good personal tutors who have been there for me and who have come back to me if I've had an issue"* (FG2 P8).

*"Support from personal tutor and opportunities to make up hours have enabled me to stay"* (survey narrative response).

However, some reported inconsistencies in the responses received from academic personal tutors, and others indicated a marked lack of support, with 27.6 % ( $n = 77$ ) of at-risk respondents identifying this as a key risk factor.

*"Horrendous experience, lack of support, no one cares, constant change of goal posts, no communication with tutor, no one interested; just a number..."* (survey narrative response).

*"I am also not sure what our personal tutors are there for. I have asked my tutor for help and have been told to consult the student handbook... I really don't feel supported. A lot of the time you are treated as a nuisance"* (survey

narrative response).

Although staff and organisational support was highlighted as important, students also shared the value of peer support, including the Peer Assisted Learning Scheme (PALS) organised by academics, as these quotes suggested:

*"Making key friendships with course mates was essential to being able to share experiences and kept me on the course"* (survey narrative response).

*"So, if you felt isolated you had your PALS group. 'cause not everyone makes friends at university...I think PALS plays a massive role..."* (FG1 P5).

Finally, when considering gaps in support across the pre-registration nursing and midwifery programmes it was noted that although 36.4 % ( $n = 102$ ) of total at-risk respondents felt there was a lack of focus on their field of practice (much of the theoretical content of the programme being shared), this was the highest attrition risk factor for mental health (78 %) and child health nursing students (71.4 %).

*"99% of theory is based on adult health only. Most adult health lecturers have little or no understanding of child or mental health. This makes it extremely difficult during lectures to be engaged and interested"* (survey narrative response).

#### 4.8. Investing for a better future for myself and others

Students were asked why they first applied for the nursing or midwifery pre-registration programme, and what kept them on the programme. The reasons they had applied and registered for a programme varied significantly but were generally personal or altruistic.

Some students stated they drew on these reasons as a way of retaining their enthusiasm and interest when they faced difficult times. Some reported that they had wanted to improve their financial situation and employment opportunities:

*"The nursing degree will be a good qualification that I can use to travel with/find better conditions to work in"* (survey narrative response).

However, perhaps more evident in the findings were altruistic reasons, such as helping others, particularly patient groups as shown in these student quotes:

*"if you think about why a lot of us come into nursing it is to make a difference, as cheesy as it sounds"* (FG1 P6);

*"I can't even put into words how much it means – to be allowed to be in that environment and have people, you know, look to you for help"* (FG2 P7).

Some also wanted to inspire others who might feel that a nursing or midwifery profession was beyond them somehow, as this quote captured:

*"I think for me, potentially later on down the line being able to reassure people like myself who wouldn't have had the confidence to do this, you can do it. You can be anything you want to be, you just need to – you need to work hard. And I feel like that's what keeps me going, thinking I can inspire others"* (FG2 P8).

Whatever the rationale for applying for the nursing or midwifery pre-registration programme, the reason for remaining was a self-determination to get a return on what they had invested:

*"I've invested so much time and money into this that I actually do want to have something. To walk away with something"* (FG1 P1).

*"I am determined to finish the course and it's already cost me so much and feel it would be a waste! That's the only reason to carry on sometimes"* (survey narrative).

## 5. Discussion

This study sought to identify risk factors that contribute to pre-registration nursing and midwifery students interrupting or withdrawing from pre-registration programmes. The findings suggest that the causes behind nursing and midwifery students interrupting or leaving undergraduate programmes are multiple and complex, and there is an interface between many of the challenges and attrition risks reported by students. Examples of this interface are shown in theme one: *multiple and overlapping challenges*. The most frequently cited attrition

risk was the financial challenges students faced. This was found to overlap with excessive travel and upfront accommodation costs for a significant number of students (Lloyd, 2024), due to restrictions on capacity in local clinical placements and geographic constraints. It is worth noting that clinical placement hours are markedly variable, depending on the country and registration requirements, with the UK Nursing and Midwifery Council (NMC) stipulating the highest figure of 2,300 hours for nursing and midwifery in comparison with Australia at 800 hours (McKenna et al., 2019). These financial challenges are exacerbated by a cost-of-living crisis which is significantly impacting on many students (Lewis, 2023; William et al., 2024). This has led to many healthcare students having to undertake additional paid work alongside their fulltime clinical placements. These long hours, and the additional academic challenges the programmes were reported to present impacts on the time students have to spend either socially, personally or with their family. It also impacts on their capacity to rest and look after their own wellbeing. Dall'Orta et al. (2022) p.1787 highlighted how financial challenges, long work hours, and personal network imbalances impact on student nurses and midwives' capacity to achieve a 'personal equilibrium'. It is therefore not surprising that the highest cited personal and health factor attrition risk factor reported was 'struggling with mental health difficulties'. However, it does need to be acknowledged that a 2022 survey completed by Student Minds (2023) found that 57 % ( $n = 760$ ) of UK university students surveyed reported having a current mental health issue. Evidently, this is not just an issue for student nurses and midwives but a wider issue for all students.

One of the wellbeing stressors and attrition risk factors specific to student nurses and midwives were the challenges presented by clinical placements. These findings were evident in the *threats and opportunities of clinical placements* theme. It was found that many students experienced negative and at times toxic cultures of learning across a variety of clinical placements. In contrast, our study identified that positive experiences in clinical placements were found to be inspiring and in some cases were the one thing that kept students on the programme, especially when they found the academic elements challenging. The culture of clinical placements environments was found to be pivotal in how students decided to pursue their career choices; this included decisions on whether to continue the programme and whether to remain in the profession (Zhang et al., 2022). Similar findings were also presented by a nursing education qualitative study in Denmark (Soerensen et al., 2023).

When students faced financial, personal, clinical, academic, or indeed a combination of challenges a key intervention that kept them on the programme was receiving timely and informed support and guidance. Many students praised their academic personal tutors and the wider teaching and clinical practice support teams, highlighting that without them they would have left their nursing or midwifery programmes. However, others cited a lack of continuity in information, or delays in responses to requests for support. One area where support was particularly difficult to access was during clinical placements, mainly as the links between the HEI and the clinical placements were sporadic and tenuous. Students would often not know whether to discuss issues that arose with their academic personal tutor, assessors, or practice development leads. Zabihi et al. (2020) also found that a lack of co-ordination and working relationships between the HEI academic teams and clinical placement teams left students feeling unsupported and confused about what was expected from them.

It was noted that many students reported altruistic reasons for choosing to apply for nursing and midwifery programmes of education, supporting findings from other studies (Crick et al., 2014; Lundell Rudberg et al., 2022). Students wanted to make a difference, not only for themselves but also for their families and wider society. This was often the driver to them wanting to complete their nursing and midwifery programmes, especially when challenges presented. This study, much like those before it highlights student nurses and midwives' determination and resilience to remain on their programmes, sometimes against the odds (Lopez et al., 2018; Soerensen et al., 2023; Van Hoek et al.,

2019). However, this resilience and tenacity needs to be balanced against their potential vulnerability (Soerensen et al., 2023). This vulnerability exists against a background where nearly half of those reporting to be at risk of leaving the programme also reported to be struggling with mental health difficulties. Therefore, it is essential to provide the right support at the right time through effective support strategies and interventions (Edge and Gladstone, 2022; McNeill and Kitson-Reynolds, 2024).

## 6. Strengths and limitations

A strength of our study was that it captured a wide variety of student perspectives and experiences across a range of nursing fields, midwifery and nursing associate programmes and stages. It used both quantitative and qualitative methods that not only provided evidence of the numbers of students at risk of interrupting or withdrawing from pre-registration programmes in this area, but also explored the nuances of why that might be. Our study took place in one mid-size South-West England university which may limit the transferability of our findings to other HEI settings. We acknowledge that our focus group attendee numbers were low. The focus group data were, however, combined with free text narrative comments in the survey to generate the themes. A further limitation was only descriptive statistical analysis was conducted, thereby potentially reducing the capacity to capture the full complexity of the data. Nevertheless, as student attrition is a national and international challenge, we believe our findings will be helpful to other HEI settings.

## 7. Conclusions

Nursing, nursing associate and midwifery students reported a series of multiple and overlapping challenges across their professional programmes, including academic elements, practice placements and personal barriers. These risk factors contributed to decisions to interrupt or withdraw from their course. Many of the challenges impacted on students both financially and emotionally, highlighting the need for robust and responsive support mechanisms to be in place. It is worth noting that students reported the positive impact on attrition risks of getting the right support at the right times.

High attrition rates of pre-registration student nurses and midwives is a global challenge which directly impacts on the worldwide shortage of registered nurses and midwives. Further research should consider how these complex and interrelated challenges can be addressed, not just individually, but across all attrition risk areas. Formal national and international collaborations that share evidence-based good practice across Higher Education Institutes and practice placement partnerships could enhance the student experience and improve retention of the future nursing and midwifery workforce.

## CRedit authorship contribution statement

**Francis Thompson:** Writing – review & editing, Writing – original draft, Visualization, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Gary Hodge:** Writing – review & editing, Writing – original draft, Visualization, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation. **Danielle Edge:** Writing – review & editing, Writing – original draft, Formal analysis. **Sarah Howes:** Writing – review & editing, Methodology, Formal analysis, Data curation. **Caroline Jamison:** Writing – review & editing, Funding acquisition, Formal analysis, Conceptualization. **Margaret Fisher:** Writing – review & editing, Project administration, Funding acquisition, Conceptualization. **Aled Jones:** Writing – review & editing, Supervision, Project administration, Funding acquisition, Conceptualization.

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## Declaration of competing interest

There are no conflicts of interest.

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