MIDWIFERY STUDENTS' PERSPECTIVES OF PHYSICAL AND VIRTUAL MOBILITY ACTIVITIES INCLUDING PREFERENCES FOR E-LEARNING: A CROSS-SECTIONAL SURVEY

ABSTRACT

Background. Contemporary higher education requires that all midwifery students have insight and understanding of global health practice and demonstrate intercultural sensitivity. However, the mobility models currently offered do not often fit the lives of large numbers of midwifery students.

Objectives. To investigate midwifery students' international physical mobility activities and factors that affect mobility; to determine midwifery students' learning needs and preferences for related e-learning packages.

Design. Multi-centre, descriptive quantitative survey.

Settings. Four European Higher Education Institutions based in the United Kingdom, Estonia, Italy and the Netherlands offering an undergraduate midwifery programme.

Participants. The sample included 205 midwifery students from Italy (n=93), the Netherlands (n=51); United Kingdom (n=35) and Estonia (n=26).

Methods. Data were collected in June-July 2020 through an online cross-sectional, bespoke questionnaire and analysed using summary statistical analysis.

Results. There is a high level of interest across a range of mobility opportunities, especially those of shorter duration. Barriers to mobility comprised finance, caring responsibilities, concerns about fitting mobility activities into the midwifery programme, negative impact on studies and language barriers. The most frequently identified facilitators of mobility included professional perspectives such as interest in other cultures and midwifery in other settings and an endorsement that mobility would add value to their development as a midwife. When engaging in virtual learning, the most preferred resources mentioned by the students were videos, video calls with peers, choice quiz and discussion forum.

Conclusions. The barriers identified require new approaches to enable all midwifery students to benefit from transnational learning. The survey findings provide insights into midwifery students' perspectives from which a new mobility model can be developed.

KEY WORDS: midwifery; intercultural sensitivity; student mobility; virtual mobility; physical mobility; e-learning; survey, Erasmus.

1. INTRODUCTION

The European Union has always been supportive of student mobility through a variety of programmes. The Erasmus+ programme (the European Union's programme to support education, training, youth and sport in Europe) funds opportunities for some European students to study abroad as part of their degree programmes. Erasmus+ aims to support higher education students to experience and develop an improved awareness of different cultures and to see themselves as a global citizen (European Commission, 2014). In the past few years, there has been a steady increase in student mobility within the European Union (Vossensteyn et al., 2010) and recognition that Erasmus+ placements help students on some programmes to develop intercultural competence (Hofstede, 2011), defined as 'the ability to communicate effectively and appropriately in intercultural situations based on one's own intercultural knowledge skills and attitudes' (Deardorff, 2006: 247). The benefits for individuals who engage in study mobility experiences include improvement in soft skills, such as knowledge of other countries, their ability to interact and work with individuals from different cultures, adaptability, foreign language proficiency and communication skills. Interestingly, 99% of the Higher Education institutions surveyed noted a substantial improvement in returning Erasmus students' confidence and adaptability (European Commission, 2014: 17).

2. BACKGROUND

Contemporary higher education requires that all midwifery students have insight and understanding of global health practice and intercultural sensitivity (ICM, 2019). The need for a globally aware midwifery workforce that is flexible in meeting local, regional, national and international service users' needs in an equitable and compassionate way is acknowledged. However, the current Erasmus+ mobility model does not fit the lives of large numbers of midwifery students. The ability to offer clinical practice Erasmus+ placements is also limited by pressures with placement capacity. Additionally, as the midwifery profession and student body are predominantly female and more likely to hold caring responsibilities, some individuals may be particularly challenged in achieving transnational or mobility experiences. Such factors may potentiate inequalities in accessing physical mobility opportunities and may be why students often express an interest in Erasmus+ but ultimately do not participate because of pre-existing financial and personal barriers (European Commission, 2014; Forder and Fowlie, 2017; Rostovskaya et al., 2020). The main barriers to European physical mobility appear to be family separation, poor integration between domestic and partner programs and concerns over language differences (Kehm, 2005). Sixty-one per cent of non-mobile students cited financial aspects as a barrier compared with 41% of mobile students, 47% of non-mobile

students cited separation from family or partner as a barrier compared with 23% of mobile students (Isserstedt and Schnitzer, 2002). However, there is no information related specifically to midwifery students. Although some e-learning resources are available on the Erasmus+ Virtual Mobility website (https://europa.eu/youth/erasmusvirtual) enabling youth to engage in meaningful intercultural experiences online, there are currently no e-learning resources dedicated specifically to midwifery. Finding and evaluating new ways to widen opportunities in transnational learning and the development of intercultural sensitivity is an urgent priority.

The contemporary digital era has 'enhanced the accomplishment of new and complementary competencies eliminating borders between people and knowledge through the proliferation of e-learning worldwide' (Pamfilie et al., 2013: 1). Finch et al. (2012) support the value of e-learning technologies with emphasis on the potential for these platforms to support and develop problem-solving communities amongst higher education settings, especially in the context of public health debates.

The goal of the TOTEMM (Transforming transnational intercultural sensitivity for midwifery students through an inclusive mobility model) Erasmus+ project is to promote equity, social inclusion and participation of non-mobile midwifery students studying in the United Kingdom, Italy, Estonia and the Netherlands. This will involve the creation and implementation of a new inclusive mobility model that combines physical and virtual components, through e-learning packages taken with students from different settings. Further information about the TOTEMM project can be found here: https://www.nottingham.ac.uk/totemm/.

The aim of this survey was to determine background information and factors that influence midwifery students' physical and virtual mobility. The objectives were: a) to investigate midwifery students' international physical mobility activities and factors that affect mobility and b) to determine midwifery students' learning needs and preferences for e-learning packages.

3. METHODS

3.1 Study design

This was a multi-centre, descriptive quantitative study conducted in Italy, Estonia, the Netherlands and the United Kingdom, with data collected using a cross-sectional bespoke online questionnaire survey comprising closed response and open-ended questions.

3.2 Research sites

The research sites were four European Higher Education Institutions (HEIs) based in the United Kingdom, Estonia, Italy and the Netherlands offering either a three or four year

midwifery programme, leading to a first degree in midwifery and professional registration as a midwife.

3.3 Sample

All midwifery students (n=795) from the four HEIs were invited to take part in the study to achieve a comprehensive understanding of the phenomenon under exploration. The inclusion criteria were ability to give informed consent and being a student midwife at one of the four HEIs selected as study sites. The exclusion criteria were qualified midwives; student midwives discontinued from their undergraduate midwifery programme and student midwives on study interruption. All the recruited students were able to understand English, hence the survey was administered in English and not translated to other languages; this was agreed by all participating HEI partners. A glossary of terms was provided to all students for a small number of particular technical terms.

3.4 Ethical considerations

The research proposal received approval from the Faculty of Medicine and Health Sciences Ethics Committee at the University of Nottingham and the relevant authorities in the partner HEIs. All HEI partners were asked for ethics requirements in their country and these were followed when submitting the Research Ethics Committee (REC) application in the UK. In two institutions, confirmation of UK ethics review was accepted by the local REC. In one institution, REC review was not required. Online informed consent was obtained prior to participation in the survey, following circulation of the Participant Information Sheet. All student materials and the survey were in English as it was confirmed that the students from all sites would have a good understanding of the English language. It was explained to potential participants that entry into the study was voluntary and academic progression would not be affected by their decision. The completion of the online survey was anonymous and personal identifiers were not collected. Participants were free to omit any question and withdraw at any point during the questionnaire without giving any reason by closing the browser. In case of withdrawal, they were made aware that their submitted responses could not be removed from the data set and would be included in analysis. All data were held in confidence under password-protected systems.

3.5 Recruitment

A recruitment email was forwarded to all potential participants, including a Participant Information Sheet ensuring that students had sufficient time to consider participation. The research team was available to answer any queries and discuss potential participation.

Students who wanted to participate in the study were invited to complete the online survey via a web link.

3.6 Data collection

A cross-sectional, bespoke survey investigated the following areas: a) demographic and programme information; b) mapping of midwifery students' interest in and experience of mobility activities; c) barriers and facilitators to engagement in mobility activities; d) preference for digital resources and experiences of online interactive group work. Items related to barriers and facilitators to engagement in mobility activities were developed and agreed by all members of the research team from literature evidence and student midwives' feedback. The survey was administered online using the JISC Online Surveys (JOS) platform and the anticipated completion time was 30 minutes. Data collection took place from the 22nd of June to the 27th of July 2020, during the Covid-19 pandemic. Due to the global pandemic and atypical situation at the time of data collection, students were asked to complete the survey by answering all questions as if in a pre Covid-19 situation (November/December 2019). Although the Covid-19 pandemic is likely to have medium/long-term impact on students' experiences of international mobility, this will allow the findings to be transferable to other populations of students in a 'normal' situation. The survey was piloted with eight student midwives from the four participating sites (two from each country), who were asked for feedback on the content, English language and recruitment strategies to reduce burden and to maximise chances of completion.

3.7 Data analysis

A descriptive summary statistical analysis was undertaken using the Jisc Online Surveys (JOS) platform. Due to small numbers in particular groups, subgroup analysis was not carried out. Free-text responses were insufficient for further analysis, therefore only the closed response data are reported. Only 20 out of 205 students briefly answered the open question 'Is there anything else you would like to say in regard to study abroad, either through physical mobility or virtual mobility?'. Only 2 out of 205 students briefly answered the open question 'Is there anything else you would like to say related to the topics explored by the survey?'. Very few students added free-text responses to detail their answer when replying 'other' for some of the closed questions. It is difficult to hypothesize why students did not complete this. Reasons may include pressure of time, and the stage and impact of the pandemic.

4. RESULTS

Responses were received from 205/795 midwifery students from each year of the midwifery programme (response rate 25.8%). The participants were distributed as follows in the four countries: 93 students from Italy, 51 students from the Netherlands, 35 students from the United Kingdom and 26 students from Estonia.

4.1 Demographic and programme information

The participants' demographic information, number of language(s) spoken, usual pattern of travel outside their home country, stage of programme and country of study are presented in Table 1.

The majority of students (N=180; 88.3%) were under 30 years of age, approximately half (N=107; 52.9%) were not employed alongside their student status, over a quarter (N=54; 27%) had caring responsibilities and approximately 80% (N=165) could converse at a conversational level in at least one language in addition to their mother tongue. Similar numbers of students reported either not travelling (N=16; 7.8%) or travel more than three times per year (N=16; 7.8%); over half of the respondents (N=110; 53.7%) travelled either occasionally or once per year.

One of the four institutions collaborating in the initiative provides a four-year midwifery programme; two are of three years' duration and in one centre the programme is 4.5 years' duration, integrated with a general nursing programme. In the latter centre, students in the fifth year were not available for participation due to course completion prior to data collection. Responses by year of programme reflect this with 1st (N=76; 37.1%), 2nd (N=61; 29.8%) and 3rd (N=58; 28.3%) year students contributing higher proportions of responses. Ten students (4.9%) completed the survey during the 4th year of their programme.

4.2 Mapping of midwifery students' interest in and experience of mobility activities

Midwifery students indicated high levels of interest across several of the opportunities for study abroad with the highest proportion indicating interest in shorter opportunities including 1/2-week experiences (N=145; 71.8%), conferences (N=157; 78.5%) and study tours (N=129; 64.5%). Some students had already experienced such opportunities and where that was the case, there were more interested in further opportunities than not interested. Small proportions had plans in place across all types of activity. The two experiences where higher proportions of students were not interested or unsure were 9-week Erasmus plus placements (N=89; 43.4%) and study tours in another country (N=54; 27%).

We also asked midwifery students to indicate their interest in study abroad considering the time beyond the current phase of the pandemic when restrictions have eased. Table 2 presents responses for the pre Covid-19 situation and the future situation termed post Covid-19. Responses of 'not interested' and 'unsure' increased for all the activities listed. However, interest in physical mobility remains and the pandemic has not eradicated that. Physical mobility options are therefore likely to continue to be important in the future. The largest difference across all response categories relates to volunteering experience with decreased interest and increased uncertainty related to this activity.

4.3 Barriers and facilitators to engagement in mobility activities

4.3.1 Barriers to engagement in mobility activities

Midwifery students were asked about possible barriers to considering study abroad. Respondents were asked to relate questions to the Pre Covid-19 situation with four possible options: that the factor was not at all a barrier; to some extent; to a great extent or a very great extent a barrier. All responses are included in Table 3 below.

Combining responses 'to a great extent' and 'to a very great extent', factors identified as a barrier by over 20% of respondents were as follows:

- Financial constraints (N=68; 33.3%)
- Fitting it in within the midwifery programme (N=50; 24.5%)
- Language barriers (N=48; 23.6%)
- Caring responsibilities (N=45; 22.3%)
- Negative impact on their studies (N=42; 20.7%)

Information was sought to determine which levels of expense may preclude participation in study abroad (Table 4). Five levels of expense were presented to students in Euros and Pounds sterling. Over 80% percent of respondents reported ability to travel to another country for study purposes if total costs to them were less than 300 Euros. Above this level of expenditure, the proportion of students able to travel reduced as cost increased.

4.3.2 Facilitators to engagement in mobility activities

Respondents indicated the extent that various factors supported study abroad; all options are presented in Table 5. Combining responses 'to a great extent' and 'to a very great extent', factors reported to facilitate study abroad by over 90% respondents were a perception that it

would add value to their development as a midwife (N=189; 93.6%), interest in other cultures (N=182; 90.1%) and interest in midwifery in other settings (N=184; 91.5%). Factors that were reported as being facilitators 'not at all' or 'to some extent' were support of friends and family (N=68; 33.7%) and feeling confident in and organizing travel to other countries (N=69; 34.4%).

4.4 Preference for digital resources and experiences of online interactive group work

Midwifery students were asked which four digital resources they would prefer to find in the online packages on public health topics that will be developed as part of the TOTEMM project. Video (N=147; 73.1%), video calls with fellow students (N=105; 52.2%), multiple choice quiz (N=89; 44.3%) and discussion forum (N=80; 39.8%) were regarded most positively. All responses are shown in Table 6.

Over three quarters of respondents had experience of online interactive group work (N=156; 77.2%). The extent to which students had enjoyed this type of work varied: 29 (15.1%) had not enjoyed it at all, 96 (50.3%) enjoyed it to some extent, 60 (31.4%) and 6 (3.1%) to a great/very great extent respectively. Over one third of respondents (N=67; 37%) had not experienced difficulties with online interactive group work. The difficulties reported most frequently were Information Technology (IT) problems (N=62; 34.3%) and difficulty in arranging a convenient time for synchronous activities (N=33; 18.2%). Less frequently reported were language barriers (N=7; 3.9%), lack of facilitation from academics (N=3; 1.7%) and different time zones (N=1; 0.6%). Factors that facilitated online interactive activities included academic facilitation (N=86; 50%), flexibility of asynchronous activities (N=45; 26.2%), external help with conflict resolution (N=19; 11%) and IT assistance (N=18; 10.5%).

5. DISCUSSION

Over 200 midwifery students from Italy, Estonia, the Netherlands and the United Kingdom provided information to inform future physical mobility planning and the development of e-learning resources. The majority of students who responded are less than 30 years of age, travel outside their home country at least occasionally and can converse in at least one language outside their mother tongue.

There is a high level of interest across a range of mobility opportunities, especially those of shorter duration. This supports the Universitas 21 (2019) Student Mobility Report 2018, which found that short-term mobility of less than 2.9 months was increasing as it provided greater flexibility to the student. Barriers to mobility included finance; expenditure over 300 Euros to

study abroad would preclude engagement for increasing numbers of students. Brandon et al. (2020) identified finances as a barrier to study abroad, despite some monetary support with Erasmus+ placements, reported by current and recent students on undergraduate and postgraduate programmes across various disciplines. Caring responsibilities, concerns about fitting mobility activities into the midwifery programme, negative impact on their studies and language barriers were reported by our participants. Previous studies amongst students from a range of University programmes reported similar barriers including financial aspects, bureaucratic procedures, poor integration between domestic and partner programs, language barriers, family separation and caring responsibilities (Isserstedt and Schnitzer, 2002; Kehm, 2005; European Commission, 2014; Bagnasco et al., 2020; Brandon et al., 2020; Heirweg et al., 2020; Rostovskaya et al., 2020; Tuncer Unver et al., 2021). These are key issues that need to be considered and addressed by future mobility programmes to encourage students' engagement in international study initiatives.

The most frequently identified facilitators of mobility included professional perspectives such as interest in other cultures and midwifery in other settings and an endorsement that mobility would add value to their development as a midwife. Marshall (2017) previously found that midwifery students valued placements in other cultures and healthcare systems as it extended their knowledge development. Student nurses studying abroad identified a number of benefits of global mobility, including developing independence and self-confidence; learning a foreign language; having greater awareness of other countries' culture, healthcare system and practice; facilitating career choices and breaking down prejudices (Tuncer Unver et al., 2021). Bagnasco et al. (2020) similarly identified personal enrichment and increased professional awareness as benefits of mobility experiences. This resonates with contemporary higher education requirements for midwifery programmes, which include insights of global health practices and opportunities to develop intercultural sensitivity (ICM, 2019).

Preferred digital media were identified to inform the TOTEMM packages' planning and development. However, responses are likely to be influenced by previous exposure and use of different digital resources may have varied between settings. It would seem appropriate for the most preferred resources (videos, video calls with peers, choice quiz and discussion forum) to be included in the TOTEMM e-learning packages but clearly TOTEMM also offers an opportunity to introduce students to digital resources that they have not used previously, for example 360-degrees virtual reality for immersive and interactive learning (Atkins et al., 2020; Schiza et al., 2020) or chatbots to enhance personalised problem-based learning (Dolianiti et al., 2020). Kobayashi (2018) found that higher education students from the United States preferred instant messaging, emails, online lecture notes and assignments on Learning Management System, videos, online collaboration tools (wiki, forum), and audio presentations

which resonate with our findings. Whilst there are debates around the most effective media as learners' perceptions of these may vary, emphasis should be given to the attention, motivation, emotion and experience of students when developing virtual learning (Bransford et al., 2000). The cognitive theory of multimedia Learning assumes that learning is an active process of filtering, selecting, organizing, and integrating information (Clark and Mayer, 2003; Mayer, 2005) and this should also be considered when selecting the preferred digital media to be implemented in online education.

The survey provides a valuable insight into midwifery students' engagement and experiences with interactive online learning and the challenges previously encountered. Our findings reflect that not all midwifery students have experience of online working and for those who have, not all have enjoyed it, resonating with evidence from Ho et al. (2021), who found that prior e-learning experiences of nursing students were not uniformly positive. Course design, learners' motivation, time management and confidence in using online technologies may affect the success of online learning experiences (Song et al., 2004). Alongside its benefits, the challenges of online learning are widely reported in the literature, including being an isolated learner (Gillett-Swan, 2017), difficulty of peer communication, absence of synchronous feedback (Kim et al., 2005), technical issues, lack of sense of community, time limits and difficulty in understanding course objectives (Song et al., 2004). Preparing students for the possible challenges and setting appropriate expectations appears an important point in planning completion of e-learning packages. As suggested by Song et al. (2004), the packages' design will focus not only on technological aspects, but also on goals, objectives and learners' expectations. The development of online resources should also take into consideration accessibility, flexibility, interactivity and collaboration, identified by Liang and Chen (2012) as key factors in overcoming expected challenges within virtual learning. An appreciative inquiry approach aims to bring learners' needs to the foreground, allowing them to inform the co-design of e-learning resources; the ASPIRE methodology (Wharrad et al., 2021) used within the TOTEMM project applies this into practice.

6. STRENGTHS AND LIMITATIONS

Although generalisability of results cannot be assumed with a response rate at this level and a higher response rate is always optimal, the participants of this study come from different socio-economic backgrounds across Europe and provide a snapshot of current mobility activities, factors that may affect mobility and e-learning preferences.

This survey was carried out at a unique and concerning time due to the Covid-19 pandemic and in the period immediately prior to the United Kingdom leaving the European Union. At the

point of planning the TOTEMM project, the pandemic was not anticipated and the extent of disruption unprecedented. By the time of the survey, students in all countries had experienced significant changes to their personal lives for the preceding several months. In addition, there was variation in the nature of restrictions in the four partner countries impacting students in different ways, but the extent was significant. By the time of survey distribution, students had been using virtual platforms for learning in each institution, with a possible surfeit of and resultant fatigue with online activity. Higher response rates may have been achieved in the absence of a pandemic and at times when learning was not almost exclusively online.

To try to obtain information relevant to the non-pandemic situation and also to determine the impact of the pandemic on mobility plans, we asked students to express their interest in mobility activities for both pre pandemic (retrospectively) and post pandemic. Our findings must be interpreted cautiously when data were collected at a time when return to a 'normal' or 'new normal' daily life was uncertain.

A further common factor for all students is that the research team included academic staff responsible for provision of the undergraduate programmes in the four sites. This may have influenced response rate, despite confirmation of anonymity of response.

CONCLUSION

Midwifery students' interest in mobility activities and the influencing factors are demonstrated from four countries. The barriers identified require new approaches to enable all midwifery students to benefit from transnational learning. The current pandemic is acting as a catalyst for change, providing an additional, unexpected impetus to developing and evaluating new approaches to mobility. The survey findings provide insights into midwifery students' perspectives from which a new mobility model can be developed.

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