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Development and evaluation of an online, interactive information and advice tool for pre-registration nursing students

Abstract

Attrition rates for student nurses on academic programmes is a challenge for UK Higher Education Institutions. Reasons for leaving a programme of study include personal, financial issues or practice placement experiences. Research has shown systematic and integrated support mechanisms may improve attrition rates and student experience.

This project explored the sources of, and support needs of nursing and allied health students, develop and evaluate an interactive online tool: 'SignpOST'. Enabling students to access *'the right support, at the right time, from the right place'*.

Focus groups were carried out with 14, 3rd year students and 8 academic staff including personal tutors, programme/module leaders. Thematic analysis of transcribed data under four key themes for support and advice: 1. Financial 2. Programme 3. Personal 4. Study/academic, found poor student knowledge and little clarity of responsibilities of academic staff and services leads to students sourcing support from the wrong place at the wrong time. Students valued the speed and accessibility of information from informal, programme specific Facebook groups. Conversely, there were also concerns about the accuracy of these. Further research into the use of informal Facebook groups may be useful along with additional evaluation of the SOS tool.

Keywords: student support; pre-registration nursing; online support; information needs; academic staff roles & responsibilities; attrition

1.0 Introduction

This project sought to develop a tool to provide advice and practical information to pre-registration nursing students throughout their programme. Easy and prompt access to advice and information may help to alleviate some of the stresses and practical problems experienced by student nurses and therefore can potentially contribute to improved attrition.

1.1 The relevance of attrition

Student nurse attrition is of great importance for United Kingdom (UK) and international Higher Education Institutions (HEI). RCN (2008) and Thomas (2012) estimate 42-44% of student nurses have considered leaving their programme of study, the reasons for which are often difficult to measure. Attrition rates are estimated to be as high as 30% in some parts of the UK (Jelfs, 2013) meaning that in some areas, 30% of students leave their course prior to completion. There are implications, not only to the taxpayer but also to HEIs and to healthcare provision; relating to the overall number of practicing nurses.

The estimated cost to the UK taxpayer is £11, 479 per student per year, and equates to approximately £57-99 million per year in total (Waters, 2006; Waters, 2008). This is not only of concern in the UK, a 5 year America study suggested that students who drop out of academic programmes may cost up to \$3 billion annually (Schneider & Lin, 2011).

The cost to HEIs is also apparent. Not only are there concerns relating to waste of academic resources, there are also potential financial penalties if HEIs do not have a minimum number of successful students at the end of their programme (Deary et al, 2003; Price, 2002; Prymachuk, Easton & Littlewood, 2009).

Furthermore, retaining students in nursing programmes is essential in order to maintain sufficient levels of staffing in the health and social care environment, and high dropout rates ultimately reduce the number of qualifying professionals; potentially contributing to staff shortages (Deary et al, 2003).

1.2 Factors affecting attrition and the role of information and advice

Student nurses do not reflect a 'traditional' HEI demographic. The average age of nursing students is 29 years with a high percentage of students over the age of 21. Also, pre-registration nursing programmes typically have a 89% female majority (RCN, 2008). This suggests that many nursing students enter their programme with diverse backgrounds, experience and personal circumstances. Many have children and family commitments and also work alongside their course (RCN, 2008; Bridges & Porter, 2008; Wray et al, 2010; Ascend Learning, 2012; Hamshire et al, 2012; Hamshire et al, 2013). Crombie et al (2013) further highlights that the amount of time spent outside the university in a practice environment means the pre-registration nursing programme poses unique challenges to this student population. This may make it more difficult to access academic staff, practical information and support.

A wide range of literature has reported on factors affecting pre-registration attrition rates. Glossop (2001) & Pitt et al (2012) conducted a review of literature that reflected this (box.1).

Box 1. Reasons for Leaving

- Academic failure
- Personal or family reasons
- Wrong career choice
- Financial problems
- Travel
- Poor programme management
- Ill health
- Negative staff attitudes
- Programme pressures
- Inadequate pre-programme information
- Lack of support
- Theory-practice imbalance
- placements

More recent literature reports similar factors. Merkley (2015) conducted an evidence review that emphasised retention as a performance indicator on an international level. Furthermore, Merkley

(2015) identified the impact of policy, university staff and clinical placements on retention; suggesting that there should be systematic and strategic approaches to improve support.

RCN (2008) highlighted 62% of those who had considered leaving their programme was as a result of financial difficulties e.g. having to work part time in addition to their full time programme, student bursaries and/or student loans. Many are not aware of the support that can be provided by the university with issues such as childcare or basic financial advice through student support services.

Merkey (2015), Hamshire et al (2012; 2013) and Orton (2011) further indicated that lack of support on placements were often a 'tipping point' in deciding to leave their programme. Williamson et al (2013) also found that students who do not [for whatever reason] engage with support services offered by the university are more likely to withdraw. As a result of these multiple factors there are a range of interventions and methods that may support and prevent students from leaving their programmes. However, it is known that structured, accessible and responsive support mechanisms can help (Ascend Learning, 2012; Williamson et al, 2013; O'Donnell, 2011; Urwin, 2010; Hamshire et al, 2012; 2013; Merkey, 2015).

Students often have a 'build up' of a multitude of factors which cause stress, possibly resulting in withdrawal from a programme. Whilst on placement students also find it difficult to access university support systems, and may not know of the resources and systems available to help them. Cross sectional studies by Bowden (2008) & Shelton (2003) and qualitative interviews by Glogowska et al (2007) & Rudel (2006) found that access to support and advice was a key factor for programme retention. Brodie et al (2004) also suggest that a perceived lack of support whilst on placement also contributed. Therefore, there is evidence to suggest that support and advice during the programme may have an impact on retention.

Conversely, finding interventions which aim to support multiple factors are likely to be more effective in supporting the complex issues faced by nursing students (Ascend Learning, 2012;

Hamshire et al, 2013; Hamshire et al, 2012; RCN, 2006; Wray et al, 2010; Jelfs, 2013; Urwin et al, 2010; Merkey, 2015; Harris et al, 2014), and often easily accessible support and information about what to do and how to do it is all that is needed.

In response, this project aimed to explore how our most experienced student nurses have sought information throughout their programme and identify any barriers or challenges associated with this. As a result an interactive, online support and advice tool was developed and evaluated.

1.3 Aims & objectives

1. ***'the right information, at the right time, in the right place'*** Explore and identify how third year student nurses have experienced support and advice systems during their programme
2. **Analyse** qualitative data to identify overarching themes and sub-topics
3. **Develop and implement** an online, interactive support tool (SignpOSt) to improve access to university, educator, study and personal support systems available
4. **Evaluate** the impact of the a pilot support tool

2.0 Method

A four phase mixed methods approach was used to gather qualitative information from focus groups of students and staff along with quantitative evaluation feedback on the developed online, interactive tool. The four phases intended to address the main objectives of the project: explore, analyse, develop and evaluate.

2.1 Sample and sampling frame

A convenience sample was used to recruit participants to focus groups. The University offers a range of health and social care programmes and three were focused upon for this project: pre-registration

nursing (adult & mental health), occupational therapy and diagnostic radiography. Third year students were of particular interest as the explore phase of the project sought to identify:

- The types of information and advice that had been required throughout the three years of their programme
- Their experience and ease in accessing such information
- Any barriers or problems associated with obtaining this information/advice

2.2 Recruitment and selection

Students were recruited through project promotion in the classroom setting by their programme and module leaders. At this point they were told the proposed date, time and location of the focus groups and were able to express an interest in attending by adding their name to a written list. Focus group times were specifically chosen to enable students to participate on a day when they were in the University for taught sessions. An invitation to participate was also sent through the University student email system and students were able to respond to the team via email.

2.3 Explore and identify

The aim of this phase was to explore typical problems and queries experienced by students. Therefore, final year nursing and health studies students were invited to participate. This meant that the team could explore information seeking behaviour across the three programme years and obtain examples of particular situations and how long it took for these to be resolved. The focus on third year nursing students was specifically to identify the current information and advice provision. It also hoped to identify specific examples of information seeking behaviours along with the outcome. There were approximately 300 students who were eligible to participate.

This project phase also wanted to ensure that a developed tool would also be usable and purposeful for staff to refer students to if required. In light of this, staff members were recruited into a focus group from the following roles:

- Personal tutor – this role is allocated to individuals for the whole of their programme and involves providing support to students with personal issues e.g. long term sickness, on-going achievement
- Module leader – these individuals are responsible for delivering and managing small sections or ‘modules’ within the programme. They would support students with particular assignment related queries and deliver teaching
- Stage/year leader – this role is focused on each year of study and covers the whole cohort. They help with progression issues on a yearly basis and also authorise progression from one year to the next
- Programme leader – this person is responsible for the overall delivery of the programme. Much of the role is administrative management rather than student focused, although these individuals may also have personal students as a personal tutor, they may also be a module leader. The programme leader would deal with issues such as academic appeals, authorising deferrals, break in study and withdrawals.
- Placement leads – these individuals help provide a link between theory and practice. They are often outside of the university.

Staff from all roles and across the three programmes were sent an email or asked face to face if they would participate in a focus group. Box.2 illustrates the inclusion criteria for the focus groups.

Box 2 Inclusion criteria for focus groups

Inclusion criteria:

- Third year student on one of the following programmes: BSc (Hons) diagnostic radiography, BSc (Hons) Occupational Therapy, Advanced Diploma Nursing Studies (ADNS)
- OR
- A member of staff from one or more of the following groups: programme leader, module leader, personal tutor, stage/year lead

AND

- Willing to provide informed consent for participation & focus groups to be digitally recorded

2.3.1 Data collection – focus groups

Focus groups were facilitated by two members of the research team with three members in total. All were employed within the School of Nursing as academic staff. One was a third year academic lead that acted as note taker only. One other member of staff was the first year academic lead on the nursing programme and the final member had not met the students previously; these members of staff facilitated the focus groups. By engaging a member of staff who had not previously worked with the students but also having a known and trusted member of staff present aimed to provide students with reassurance that their feedback would be taken seriously and would remain anonymous. Participants were provided with a confidentiality statement to reassure their anonymity and encourage honesty in sharing their experiences. This statement also included discussion from the facilitator regarding the need to improve support services. That the team had a genuine intent to improve these and honesty was important. Conversely, part of the rationale for selecting third year students meant that they were very close to the end of their programme and arguably more confident in challenging practices and sharing their experiences.

The focus groups aimed to allow participants to share individual perceptions and experiences of information and support needs but also enable different experiences and perceptions to be compared through discussion (Bryman, 2008). Prepared focus group prompts were used by the facilitator to explore the information seeking behaviours of students based on the factors presented in box.1. Prompts included:

- What information have you needed throughout your programme?

- Where do you go for information, advice and support?
- How long does it take to resolve an issue/concern? Do you get a resolution/answer?
- What experiences have you had?

The note taker made notes on responses or ideas for further exploration in future focus groups. This also aimed to enhance dependability of data when in the analysis phase (Bryman, 2008).

Focus groups were undertaken on the university premises in a bespoke room designed specifically for video and digital recording. The focus groups were audio recorded and transcribed into hard copy format and transferred to digital compact disc (CD).

The aim was to achieve theoretical saturation with a proposed 4 focus groups at which point the researchers should be able to predict the general themes of the next group (Bryman, 2008; Calder, 1977).

2.3.2 Analyse – data analysis of focus groups

Focus groups were analysed with deductive thematic analysis to identify overarching themes from a priori of codes. Codes relating to information and support needs were generated from the key factors in box.1 but also took into account the time taken to receive responses or achieve resolution of queries and questions.

Focus group data was transcribed into hard copy format. Both researchers reviewed the transcripts prior to analysis, then coded and agreed on sub-categories and overarching themes, which aimed to ensure dependability by enabling researchers to discuss what had been perceived by participant comments and experiences (Bryman, 2008). Sub-categories were recorded carefully in preparation for mapping to university resources in the development phase of the SOS tool.

2.4 Develop and implement

Following the Explore and Analyse phases emergent themes and sub-categories were used to identify the required information and format. This informed the development of the online information tool.

2.4.1 Develop

Development of the tool was done in partnership with our Technology Enhanced Learning team who were able to build this into the current University information technology environment. The results from the 'explore' phase of the project aimed to inform particular information and advice needs to be included. Once the tool had been developed a group of third year students were initially asked to test the prototype and feedback. Following this any relevant amendments were made. Participants from the original focus groups were invited to participate through email. In addition, third year nursing students were invited to participate on a face-to-face basis in the classroom setting. The focus on third years was specifically chosen as these individuals had experienced a range of issues throughout their programme and were able to use this knowledge when providing feedback on the relevance of the tool to the programme.

2.4.2 Evaluate

A group of first year BSc (Hons) Nursing studies cohort were chosen as they were completely new to the university and this aimed to evaluate the pilot SOS tool with no previous knowledge of university support systems and services. Approximately 175 participants were eligible for inclusion in the pilot.

. A power calculation using α 0.05 β 0.90 population = 175 concluded that a minimum of 62 participants were required to complete the evaluation.

The evaluation consisted of a questionnaire that was internally peer reviewed by one member of academic staff. This had five key questions requiring a response from participants. Students were asked to use the SOS tool to locate the answers to the questions, they recorded the number of

mouse 'clicks' required to find the response and the time taken (minutes) to find the response. The final section of the questionnaire asked for open comments on 1. Where the SOS tool should be located within the university website, 2. Any improvements or general comments on the SOS tool. Final questions were scored on a five point Likert scale to evaluate perceptions on usability, accessibility and likelihood that students would use the tool.

2.4.3 Evaluation phase data analysis

Quantitative data analysis was undertaken using statistical software package for social science SPSS v21.0. Descriptive statistics were used to illustrate the effectiveness of the SOS tool. Mean time taken and mean number of mouse 'clicks' to find responses to 5 key questions was calculated. This data was assessed for normality using Q-Q plots and Shapiro-wilk. A 95% confidence level was used for all tests. Where data was normally distributed a one tailed t-test was planned, where this was not normally distributed Wilcoxon signed rank test was used to explore if students found their answers in a median 3 mouse clicks or less and median 2 minutes or less. With the hypotheses that answers would be "less than 3 clicks away" or "less than 2 minutes away".

2.5 Approvals and ethical considerations

The project was approved by Higher Education East Midlands and the University's school of health leadership team [now college of health & social care]. All participants were required to provide written informed consent prior to participation.

Focus group data were transcribed by an individual outside of the research team but employed within the university. No participants were identifiable from the recorded transcripts and each focus group was allocated a unique number. Participants had the right to withdraw up to the end of the

focus group. Any data gathered prior to this time was included and participants were informed of this prior to signing informed consent.

No identifiable student data was stored.

A confidentiality statement was read to participants before the start of each focus group. This was to reassure participants that their feedback would remain anonymous and to set ground rules for confidentiality outside of the group e.g. participants were informed that they should not discuss other participant responses outside of the focus group.

3.0 Results

This section presents the results from the focus group data obtained during the explore and identify objective. It also provides the results for the pilot evaluation of the SOS tool that was created during the development and evaluation phases of the project.

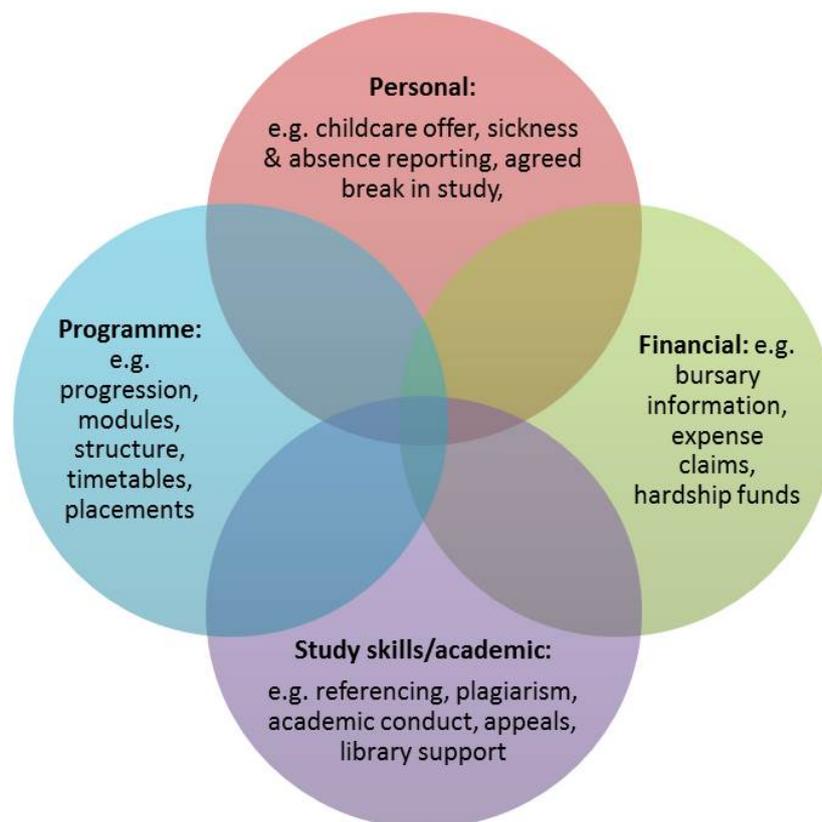
3.1 Explore & identify: focus group data

Focus group participants consisted of n=14 students and n=8 staff members. After conducting coding and identification of sub-categories, four overarching themes were allocated: personal, programme, finance, study/academic skills. It was recognised that factors often fit into more than one overarching theme and this was recorded in a table of themes versus sub-categories e.g. childcare may fit into both finance and personal issues. Table.1 provides an example of this. Figure.1 illustrates the overarching themes and overlap.

Table 1 Linking sub categories and overarching themes: an example

Theme	Factor	Childcare	Academic failure	Bursary
Personal		X		
Programme			X	
Finance				X
Study			X	

Figure 1 Themes



Two other important themes were identified as part of the focus groups:

3.1.1 Staff roles and responsibilities

Students were unclear on staff roles and responsibilities. For example, they were aware of module leaders but unclear of their remit. This resulted in students often going to the wrong person for advice. One student stated [about a placement query]: *"I just go straight to the programme*

leader...straight to the top, then you know you have the right information". This also reflected potential issues with different information being provided by different sources. However, the programme leader would not necessarily be the most appropriate person to answer queries about placement. For example the placement lead or stage leader may be more appropriate in this case. This was also reflected in the staff focus group. Staff felt unable to turn students away or redirect them with inappropriate queries and found that they were dealing with issues outside of their remit. For example, sickness being dealt with by the programme leader rather than the personal tutor and placement leads. This highlighted the need to re-confirm roles and responsibilities of staff within the SOS tool.

3.1.2 The use of informal Facebook groups

Many students reported use of informal Facebook groups to seek advice and support. This was viewed as a quick and easy way of obtaining information in any location. However, some students expressed concern about the inaccuracy of information provided in this way and the confusion that can be caused as a result of incorrect responses. For example, what should or should not be included in an assignment.

The research team wanted to acknowledge the regular use of Facebook in the development of the tool so it was decided to include the function of 'sharing' the tool and its content through Facebook. This hoped to reinforce and promote the sharing of accurate information. Conversely, it also identified a potential need for further research into the information seeking behaviours and use of informal Facebook groups, as it seemed to be the first point of call for many students.

3.2 Implement & develop

From the tabulated themes an additional column was added to the table where links to university resources, support and services were identified.

Table 2 Linking overarching themes, sub-categories and resources.

Theme	Factor	Childcare	Links to resource	Academic failure	Links to resources
Personal Programme		X	www...	X	www...
Finance				X	
Study					

This table was provided to the Technology Enhanced Learning (TEL) team to enter links into the developed SOS tool.

Tool design was developed in partnership with TEL. Figure.2 illustrates the home page where students were able to identify their professional programme. This was included as there were minor differences between the three programmes of focus e.g. practice tutors versus placement leads.



Figure 2 Homepage

Students would then be taken to a second page where staff roles and the four overarching themes were listed. Staff roles outlined the responsibilities of each staff group but also the names and contact details of these staff members (see figure.3). Clicking on their email address would open a blank email.



Figure 3 Example of role information

The four overarching themes contained links to university resources, information and support services (see figure.4). These opened in a new tab or window.



Figure 4 Theme information and links

Once complete, all sources were tested for 'broken links'.

3.3 Evaluate

A total of 62 participants were involved in the pilot evaluation. 1 response was not usable as less than half of the questionnaire was completed making n=61.

3.3.1 Time taken to find answers

The average time taken to find answers to five questions was calculated. The mean time taken=1.21 minutes (72.6 seconds) s.d. 0.75, range 3.52 minutes, CI [1.0, 1.42].

The aim was to test the hypothesis that answers to queries would be less than 2 minutes away.

Tests for normality showed that the data were not normally distributed (Shapiro-wilk 0.923, df 51, p=0.003) so a one-sample Wilcoxon signed rank test was used to determine if the median time was

less than 2 minutes; $p=0.000$ determined that the time taken to find answers to the five questions was significantly likely to be less than 2 minutes.

3.3.2 Number of clicks

The average number of mouse ‘clicks’ taken to obtain answers to five questions was recorded. The median number of clicks was 2.2, mode 2.0, range 2.00, CI [2.23, 2.46].

The aim was to test the hypothesis that answers to queries would be less than “3 clicks away”. Tests for normality showed that the data was not normally distributed (Shapiro-wilk 0.932, df 51, $p=0.06$).

A one-sample Wilcoxon signed rank test to determine if queries were less than 3 clicks away was statistically significant, $p=0.000$.

3.3.3 Feedback

Feedback from free text comments relating to look and usability can be seen in table.3.

Table 3: Themes from free text comments e look and usability.

	Frequency	Percent	Valid percent	Cumulative percent
None	21	34.4	34.4	34.4
Easy to use	18	29.5	29.5	63.9
Helpful	6	9.8	9.8	73.8
Well designed/simple	8	13.1	13.1	86.9
Quick	6	9.8	9.8	96.7
Better than UDo/do not have to	2	3.3	3.3	100.0
Total	61	100.0	100.0	

Most students made no comment. The most frequent comment was that the tool was easy to use, followed by ‘helpful’. 2 students made the comment that it was better than UDo, which is the university system. Other open comments included: “would be good as a mobile app” and that it would be best accessible through the virtual learning environment (Blackboard) homepage [which is where the tool was eventually placed along with the programme homepage].

Students were asked the following questions and scored responses on a Likert scale:

Would you recommend the SOS tool to a friend or colleague? 97% agreed or strongly agreed with this statement. One participant was unsure.

Would you use the SOS tool to get help and advice? 100% of participants agreed or strongly agreed with this statement.

Is the SOS tool easy to use? 98% of participants agreed or strongly agreed with this statement, one person was not sure.

Was it easy to find answers to questions? 100% of participants agreed or strongly agreed with this statement.

The SOS tool will enable students to find the right answers and consult the right sources for advice? 18% agreed, 78% strongly agreed and one person was unsure about this question.

I feel positive about the SOS tool. 98% of participants agreed or strongly agreed with this statement, one person was unsure.

Students will use this tool as a first option. The majority (90%) of participants agreed with this statement, 5 (9%) were unsure.

Finally, students were asked to rate the comment *“the SOS tool will improve support to students when not on campus/when on placement/when at home”* 98% of participants agreed with this statement.

4.0 Discussion

The focus group discussions found a range of information needs and support mechanisms. Students tended to use staff as a primary source of information, however some used Facebook groups. The majority of feedback suggested that the current university intranet system was not helpful. It did

not direct healthcare students to information that was specific enough for their unique programmes (compared to the generic HEI information). Information requirements reflected the multitude of factors that may affect the decision to remain on a programme of study or that might cause on-going stress. The overarching themes and associated sub-categories (linked with box.1 factors) reflected those found in the literature (Williamson et al, 2013; O'Donnell, 2011; Hamshire et al, 2012; 2013; Glossop, 2001; Ascend Learning, 2012; Urwin et al, 2010; Harris et al, 2014; Wray et al, 2010; Orton, 2011; RCN, 2008; Jeffrey, 2012; Mulholland et al, 2008; Merkey, 2015). However, additional themes around confusion about staff roles and responsibilities were highlighted. RCN (2008) and Wray et al (2010) found that staff support was linked with student withdrawal from a programme and that those who leave found this less useful or accessible. Furthermore, Hamshire et al (2013) found that support should be an on-going and consistent process throughout a programme. Reconfirming roles and responsibilities of staff and making clear how to contact them could therefore be supported by the SOS tool. Hence, supporting students to access the right person, at the right time, for the right reasons.

Williamson et al (2013) suggests that students who engage with available support mechanisms are also less likely to leave a programme of study. From the findings here students have expressed that:

- the tool was likely to be recommended/shared amongst students
- it would support students in a range of environments
- it is easy to use
- to find an answer in "less than 3 clicks" means that they are signposted to the right place, in a relatively short space of time
- the programme specific nature and ease of use will encourage engagement with the available support services.

Orton (2011), Hamshire et al (2012; 2013), RCN (2008) and Merkey (2015) found that placements can often be a major source of stress, possibly due to the lack of university support mechanisms and

contact with supportive staff. The results here show that students are able to access and contact support and information anywhere they have an internet connection [including the home, placements] at any time. Furthermore this can be done quickly (in less than 2 minutes) during a break or lunch break. Almost all students felt that this SOS tool would be useful when they were not on the university campus.

Study limitations

This study was conducted in one university in the UK and only sampled adult and mental health branch nursing students and a small number of occupational therapy and diagnostic radiography students (in the initial focus groups). The sampling frame and sample sizes were small and representative of the local student and staff demographic. Urwin et al (2010), Eaton et al (2000) and Owen & Standen (2007) suggest that nursing branch and field could potentially impact support needs and attrition factors, therefore this study may limit transferability of overarching themes found.

It is difficult to attribute this one intervention to improvement in attrition by way of measurable outcomes given the range of activities being undertaken just in this one institution e.g. values based recruitment, and a wide range of literature records that reasons for staying on or leaving a programme are rarely a result of a single factor (Hamshire et al, 2013; Hamshire et al, 2012; RCN, 2008; 2012; Wray et al, 2010; Ascend Learning, 2012; Harris et al, 2014; Merkey, 2015). However, finding ways to help students feel supported and avoid them leaving a programme should be of priority along with interventions which support a range of factors and help to reduce stress (Jelfs, 2013; Urwin et al, 2010). Student feedback from SOS suggests that the tool is helpful and welcomed by students as a means of obtaining answers to queries quickly. Helping to avoid a build-up of 'small' problems/concerns or directly explaining their options, providing reassurance or means of support explicitly. Furthermore, the principles of data collection, development, SOS template and

delivery method may be informative to other universities wishing to develop accessible support tools for their nursing and allied health students.

5.0 Conclusion

Nurse educators are encouraged to explore the support and information needs of their students. In doing so, this project highlighted a lack of knowledge of staff roles and responsibilities and information seeking behaviours through informal online social networks such as Facebook. Student support needs generally fell into one of four interdependent categories: financial, programme, personal and study. The SOS tool has enabled the team to re-confirm academic roles and allowed students to access a range of university resources and support mechanisms at any time as long as they have an internet connection. It can be concluded that an online, interactive support tool can:

- enable students to easily and quickly find support mechanisms/resources within the university which are specific to their programme and need
- find answers to minor queries without having to contact anyone
- help them to decide whether to escalate a query
- who to contact with issues and how to contact them

This project has identified the need for further evaluation of the SOS tool but also a proposed project to develop it into a mobile/smartphone application to enhance accessibility. The SOS tool will be widely disseminated to all nursing, diagnostic radiography and occupational therapy students. Embedded in the tool is a feedback questionnaire, which will continue to obtain evaluation data on wider implementation. Further research into student information seeking behaviours through online social networks is also recommended.

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