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Title: Go with the 'FLO': A mobile texting service to enhance student nurse retention

Keywords: Student nurse attrition, Automated mobile phone texts

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Abstract: Background

The review undertaken revealed that there is an abundance of literature concerning retention and the high levels of attrition among undergraduate students and of relevance here, nurse education The study undertaken evaluated the use of mobile phone automated texts designed to provide information, support and reassurance to help alleviate the stress and anxieties that some undergraduate nursing students experience during the early phase of their studies and which can lead to some students leaving their programme.

Objective

The objective of the study was to evaluate how use of automated mobile phone texts, using a system known as FLO, could usefully supplement pastoral support, as an intervention to reduce attrition among undergraduate nursing students.

Design

A qualitative and quantitative evaluation was conducted using a questionnaire designed specifically for the study.

Participants

The sample were two cohorts of undergraduate first year student nurses (n=178). Of these 123 (69%) signed up to FLO and 77 (63%) completed the evaluation form.

Methods

The evaluation form that was administered in a classroom situation one week after use of FLO had ceased. Data were analysed through use of a descriptive statistics and thematic analysis approaches.

Results

A range of key themes emerged from the analysis including that text messages were helpful and supportive, increased a sense of belonging to the University and encouraged retention. There were some unresolved issues concerning the costs incurred by participants when sending reply text messages.

Conclusions

It is concluded that FLO or use of similar mobile phone protocols can be a useful addition to approaches to improve undergraduate nursing student retention rates.

**Title Page (including article title, word count, full author details and all acknowledgements)**

DON’T GO WITH THE ‘FLO’ –

A STUDENT MOBILE TEXTING SERVICE TO ENHANCE NURSING STUDENT RETENTION

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**Conflict of Interest:** Phil O’Connell and Lisa Taylor both work for 'Simple Shared Healthcare' and Phil O’Connell is the Chairman 'Simple Shared Healthcare' and creator of FLO. The remaining academic authors have no conflict of interest.

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ABSTRACT

Background

The review undertaken revealed that there is an abundance of literature concerning retention and the high levels of attrition among undergraduate students and of relevance here, nurse education The study undertaken evaluated the use of mobile phone automated texts designed to provide information, support and reassurance to help alleviate the stress and anxieties that some undergraduate nursing students experience during the early phase of their studies and which can lead to some students leaving their programme.

Objective

The objective of the study was to evaluate how use of automated mobile phone texts, using a system known as FLO, could usefully supplement pastoral support, as an intervention to reduce attrition among undergraduate nursing students.

Design

A qualitative and quantitative evaluation was conducted using an open-ended questionnaire designed specifically for the study.

Participants

The sample were two cohorts of undergraduate first year student nurses (n=178). Of these 123 (69%) signed up to FLO and 77 (63%) completed the evaluation form.

Methods

The evaluation form that was administered in a classroom situation one week after use of FLO had ceased. Data were analysed through use of a descriptive statistics and thematic analysis approaches.

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Conclusions

It is concluded that FLO or use of similar mobile phone protocols can be a useful addition to approaches to improve undergraduate nursing student retention rates.

KEY WORDS Attrition, Automated mobile phone texts

# INTRODUCTION

The focus of this paper is an evaluation of the use of FLO to improve undergraduate student nurse retention. FLO is a Short Messaging Service (SMS) originally designed as an NHS Telehealth service to send patients automated texts which give guidance and information about their medical condition (Cottrell et al 2012). Within the NHS, FLO has been used to help patients manage their own (Cottrell et al., 2012a, Cottrell et al., 2014; 2015a; Cottrell 2015b) and to be acceptable to patients (Cottrell et al., 2012b).

This study explored the use of FLO for the first time in an educational non-medical setting aimed at enhancing retention in a cohort of first year of Level 4 Nursing students. FLO was adapted to send mobile phone automated texts to participating students providing information, support and reassurance to help alleviate the stress and anxieties that students often experience in the early stages of their studies. Such stressors can sometimes lead to students leaving their course prematurely, or lead to increases in student attrition rates.

# LITERATURE REVIEW

The Higher Education Academy (2015) refers to retention as being when students remain in one Higher Education Institute and successfully complete their programme of study within a specific time period, whereas attrition refers to students who leave early without successfully completing their educational programme. General university attrition rates reported by the Higher Education Statistical Agency (2015) amongst first year undergraduate students studying at English Universities was 5.7% in 2012/13. However, in comparison to other Higher Education undergraduate programmes nurse education attrition rates are relatively poor. For example, Buchan and Seccombe (2011) in a labour force review conducted for the Royal College of Nursing describe how across England, Scotland and Wales attrition in nurse education is high and rising. From 21,338 students who began courses in 2005, 5,885 left before completion, an attrition rate of 27.6 per cent compared with 26.3 per cent in 2008 and 24.8 per cent in 2006. Later estimates have improved a little, for example, in the Shape of Caring review (Willis 2015) it is reported that the average attrition rate for student nurses in England is 20%. Nevertheless, the Willis review still recommends that an urgent evaluation is needed as to why student nurses leave their programmes prematurely, in order to stop NHS education funding being wasted. However, as Jinks et al (2014) relates, it is salutary to remember that attrition is not just costly for economic reasons as it also represents a substantial loss of investment in time and money for the students concerned and their families.

A note of caution is needed however, as accurate calculation of Higher Education attrition rates is reported by a number of authors to be notoriously difficult. For example, Deary et al (2003) describes how the lack of an agreed definition of attrition is problematic. Cook (2010) also recounts, that the absence of a common method for calculating attrition across programmes of study and degrees makes it difficult to analyse attrition throughout Higher Education sector. Similarly Glossop (2001) highlights the complex methodological issues involved in measuring nursing student attrition rate include use of a comparable format. For example, such things as databases not tracking individuals who change courses, or students who had deferred their studies or change from a full-time to a part-time mode of study are some of the difficulties identified. Another major methodological limitation when studying student attrition are difficulties in ascertaining the reasons why students prematurely leave their programmes (Dodge et al 2009). For example, contacting those who have discontinued may be difficult and surveys sent to students often suffer from low response rates (Glossop, 2001). Furthermore, many of the post-leaving inventories used to collect data are often limited with imprecise definitions of reasons for leaving used. Thus data obtained as a result is not reliable enough to draw meaningful conclusions (Deary et al 2003).

Nevertheless, some authors do give possible reasons why some undergraduate students leave their programmes early. For example, Thomas (2002) gives financial reasons such as hardship and accumulating debt for Higher Education students generally. However, in nursing there are additional stressors related to the nature of the occupation and student exposure to the realities of professional practice when undertaking clinical placements. For example, nurse education as stressful and anxiety provoking is reported by authors such as Thomas et al (2012) who undertook a systematic review of the subject area. Thomas et al outline the difficulties that many nursing students have coping with clinical practice and the impact this has on attrition rates. Thomas et al undertook a systematic review of ten relevant qualitative studies and identified five cross-cutting themes of which stress and coping was related to all the synthesised themes. Disillusionment and disappointment was also reported when many of the students studied were first exposed to the reality of the clinical environment. Hamshire et al (2012) also describes how dissatisfaction and difficulties around clinical placements acting as a tipping point that precipitated the departure of many students.

There are a number of studies that focus on the efficacy of different approaches to reduce attrition and improve retention. Some studies concentrate on recruitment strategies and better selection procedures and their effects on improving attrition rates. For example, Gillen (2012) looks at introducing tighter selection processes in student nurse recruitment. A number of studies also examine student support mechanisms. Whitehead (2002) identifies that nursing loses a large numbers of its students due to student failure to attain the academic standards required. In a study of the academic writing experiences of student nurses Whitehead singled out the need for a greater emphasis on academic support throughout the whole period of a student nurses’ education programme.

Others have examined the pastoral support for student nurses and its effects on improving student nurse retention. For example Banks et al (2012) conducted a survey in three Scottish Universities concerning student nurse retention, concluding good pastoral support had a positive impact on retention. In addition some students that participated in Banks et al’s study reported that they would have left had they not received ‘good’ pastoral support. Similarly Pellatt (2006) identifies that clinical practice mentors play a vital role in supporting student nurses in practice and Levett-Jones and Lathlean (2008 that fostering a sense of belonging is a prerequisite for successful learning in clinical practice.

It can be concluded from this albeit brief review of the literature that there is plentiful literature concerning retention and attrition in undergraduate nurse education. Attrition rates in nursing in Willis’s view are unacceptably high. Any failure to complete an educational programme has economic consequences for funding bodies and universities. Unsuccessful completion also comes with a personal cost; trauma, embarrassment and self-esteem. The background literature gave the impetus for the research conducted and its aim to examine how use of automated mobile phone texts using a system known as FLO could provide a useful supplement to the pastoral support currently offered to undergraduate nursing at the University where the study was undertaken.

# METHODS

Aim

The aim of the study was to evaluate how use of automated mobile phone texts, using a system known as FLO, could usefully supplement pastoral support, as an intervention to reduce attrition among undergraduate nursing students.

Context

The study was undertaken in 2014 in a post-1992 university located in central England. In line with the literature review findings, highest levels of attrition among undergraduate nursing students at this University are those in the early phases of their studies. A Short Message System (SMS) protocol was therefore developed covering the first 12 weeks of the students’ programme. The text messages consisted of a mix of: interactive text messages, where a response was required from the student and information only texts, where no response was required from the student. The messages were designed to be sent from week 2 to week 12 of the students’ programme, on different days of the week, including weekends, and at various times during the day and early evening between 10.30 – 19.00hrs. One or two text messages were sent each week covering matters such as; guidance to where students could access support; reminders to the participants to see their personal tutors, and; information about university activities. Examples of the text messages sent are given in table one. The system was programmed to provide an alert when a student responded with a concern such as anxiety about an aspect of their programme.

Recruitment and sampling

The prospective participants were a self–selected sample from two cohorts of nursing students, all of whom were informed about the project during an interactive question and answer session with a member of the FLO Team. The information given was supplemented through use of a written study information sheet. It was made clear that the FLO project was not part of core curriculum, that students could choose whether to participate in the project or not, and if they decided not to take part they would suffer no penalties or be treated differently to their peers. They were also told that FLO would be free and they would not be charged for the messages that were sent. Those willing to participate completed a written consent form, were asked to provide their personal details along with their mobile phone number. The sample was therefore a self-selected cohort of those willing to participate and who completed a FLO consent form, provided their mobile phone number and ‘signed up’ for FLO.

Participants

There were a total of 178 first year nursing students available to take part in the study. Of those, 123 (69%) agreed to participate and signed up to receive text messages from FLO and 77 (63%) of those who registered with FLO completed the evaluation questionnaire.

Ethical Approval

A FLO licence was purchased and company permission obtained for the development of the service to support student nurses during the early phases of their studies. Ethical Approval was also obtained from the University Research Ethics Committee prior to commencement of the study. All the usual ethical procedures were adhered to including use of study information sheets and written consent forms. Students were also told they could withdraw from the study at any time by texting ‘STOP’ to the FLO team. Assurances of confidentiality and anonymity in data analysis and data reporting stages of the study were given and adhered to. Finally care was also taken with the security of data access, storage.

Methods

At the end of the 12 weeks, the students were asked to complete a questionnaire that contained a series of close and open questions. Participants were also told they could expand on their answers in any way they wished to. A 15 Item questionnaire was designed specifically for the evaluation and to assess students’ views of FLO. The questionnaire explored factors related to retention and whether or not students found FLO texts helpful, supportive and relevant; if FLO texts encouraged them to stay on, seek support and made them feel linked to the University. The reason for stopping FLO and the timing and frequency of text messages were also explored. Open response boxes were used to allow students the opportunity to identify further uses of FLO and any other addition comments.

Example of the questions posed were such things as ‘Did the FLO text messages motivate you to continue with your course? If yes, in what ways?’, ‘Did FLO encourage you to keep attending the University?’ and ‘Did FLO make you feel more linked in with the University? If yes, in what ways?’

Data analysis

Quantitative data was entered into excel and analysed using descriptive statistics. Qualitative data was analysed using thematic framework analysis such as that described by Miles and Huberman by (1994) to identify emergent patterns and themes. All responses were read independently by two members of the FLO research team, who devised an index of key concepts and themes drawing on *a priori* issues linked to the study objectives as well as issues raised by the participants. The researchers agreed on a final framework and subsequently data from the transcripts were applied systematically to the framework followed by mapping and interpretation.

# RESULTS

One hundred and twenty three undergraduate student nurses registered with FLO and 77 (63%) completed the evaluation questionnaire. Quantitative results are shown on Table 2. Of those who completed the evaluation form, one was male and the rest were female. Of the 58 (75%) respondents who provided their age, the majority (n=34) were aged up to 25 years and only 10 were over 35 years.

The open questions generated qualitative from which five data themes were identified. Some, but not all, of the themes were similar to the questions posed in the questionnaire. An overview of the themes is given in Table 2 and described in more detail in the following sections of this paper.

Theme one: FLO as helpful and supportive for new students.

Good pastoral support (Banks et al, 2012) has been shown to have a key role in student retention. Overall, 53 (69%) of nursing students rated FLO as ‘Good’ or ‘Excellent’.Seventy two (94%) reported that the content of the FLO texts was ‘*Excellent’ or ‘good’* and quotes such as the following were common:

*There were times, when, for example, I was sitting typing an assignment and I received a message from FLO to remind me that it is not all about work and there is time to enjoy yourself as well as being a student and not to let things get too stressful (Student Nurse 1)*

*[It was helpful] that FLO pointing you to the resources in the university, for example, the library and generally to see how you were getting along, how you were doing and that there were people to talk to (Student Nurse 9)*

Theme two: Retention: Fostering a sense of belonging and encouraging continuation on the course

In line with previous research that demonstrates that fostering a sense of belonging encourages student retention (Levett-Jones and Lathlean, 2008), 54 (70%) of respondents felt that FLO had given them a sense of belonging and had made them feel linked to the University.

FLO also had a direct impact on student retention and six (8%) reported that FLO helped them to stay on the course and been influential students’’ decisions not to leave the course nursing. For example, For example, comments such as the following were typical:

*FLO motivated me to continue (Student Nurse 13)*

*[The FLO text messages] encouraged me to stay on (Student Nurse 4)*

*(The FLO texts made me) feel part of something special. That I have made a good start and I should keep going (Student Nurse 16)*

*Felt part of the University (Student Nurse 21)*

*Knowing there was support available (Student 25)*

One nursing student, however, wrote they were already motivated to continue with the course regardless of FLO and commented:

*(I was) already determined to succeed, so I didn’t really need FLO to remind me. (Student Nurse11)*

Seven of the participants also said that FLO had encouraged them to attend University writing for example,

*I felt I knew who or where to go for support if I needed it…They [FLO texts] welcomed me to the University and reminded me on what steps to take when I need help. (Student Nurse 4)*

*The FLO system made us feel a part of the University, not so alone at times (Student Nurse 9)*

*[FLO was] Supporting friendly atmosphere (Student 27)*

*Felt part of the community (Student 23)*

Theme three: Frequency of FLO text messages and reminders

Forty six (60%) nursing students reported that the frequency of text messaging was ‘*about right’* or ‘*perfect’ f*or them. Twelve (16%) felt that they were ‘*too frequent’*, whereas seven (9%) felt they were not frequent enough. Quotes such as the following were typical:

*No, they [the FLO texts] were not intrusive; sometimes to get them at the weekend was good. Just to remind you that you are a student and to keep you informed. (Student Nurse 1)*

Some students, however, highlighted the need for a longer period between the text message and the reminder ‘nag’ message:

*It annoyed me that if you hadn’t replied within ten minutes or so, it would send another text. (Student Nurse 18)*

*It wasn’t very personal. If I didn’t reply within 5 mins, they would send another text (Student Nurse 17)*

Theme four: Reasons for Texting STOP to FLO

Ten (8%) students stopped FLO. One student stopped FLO as she felt she did not need it anymore:

*I felt confident and settled as a student (Student Nurse 20)*

However, in line with other research (Boath et al., submitted) the other nine reported that although FLO is a free text service, students reported that they had received texts from their mobile phone provider saying that they would be charged and two stated that they had been charged. Comments made included:

*FLO could have been a free service like we were told, as I and a few others got charged! (Student Nurse11)*

*FLO was not compatible with my phone, could not reply to text messages, because of this had repeated messages (Student Nurse 35)*

Theme five: Future uses of FLO

Taylor et al (2015) highlighted the importance of a partnership approach in facilitating the adoption of telehealth. FLO was initiated over the summer period and students were not involved in devising placement messages. The need for staff-student co-production, or even student led messages was reflected in student comments and all students were keen to be involved in designing a text message system that worked for them in future. Brett (2008) observed that students valued a mobile technology text-based administrative system, used to text information such as changes of venue/teaching room, reporting of cancelled lecturers and so on. Comments such as those below were typical and suggested that students would also appreciate reminders for assignments and deadlines, but would in addition, appreciate a more interactive question and answer text message service:

*Text reminder for deadlines, exams etc. (Student 15)*

*Regarding resources, they could have been more specific? Not just to the library but to other areas of the university (Student 1)*

*Text us relevant dates of support groups. What’s happening at the University…text us, inform us of any changes e.g. lessons been swapped round or timetable change (Student 34)*

*A text Q&A service so students can text questions & receive a text with the answer (Nurse 14)*

*I think FLO should be all year round to let us know about changes to the Uni (Student Nurse 39)*

*It could be a support system that you could text with questions specific to you with personalised answers (Student Nurse 37)*

# DISCUSSION

Over the last decade there has been a significant increase in the use of technologies in higher education (Waldman & Rafferty, 2008), reflecting technological advances, the preferences of contemporary students (Haythornthwaite & Andrews, 2011) and the reality that most graduates will work in organisations that use technology (Zeman & Swanke, 2008). This study focuses on a unique way of using mobile phone technology to improve undergraduate student nurse retention rates. Mobile phones are among the most rapidly growing technologies in the world (Rebello, 2010). Indeed, there are more mobile phones in the UK than people (Chambers, 2014). We are moving towards a culture where many people use mobile phones to organise every aspect of their lives (Chambers, 2014). Technology enabled education has now become part of our everyday academic life (Castells et al., 2007) and this has spawned an array of research into the widespread educational use of mobile phones in university teaching and nurse education (Saade & Kira, 2009; Lauricella and Kay 2013). There are few descriptions of mobile phone technology used to improve student retention (Akuamoah-Boateng and Boadu 2013 and Van Neste-Kenny et al 2009).

FLO has now also been successfully used with sports science and social welfare law students and shown to facilitate their retention in the first year (Boath et al., 2016).This evaluation largely supports the use mobile phone use to improve nursing student retention. In line with other research, the findings are predominated by positive evaluations (Boath et al.,2016; Boath et al, submitted). One of the most positive aspects was how the text messages appeared to increase students’ sense of belonging or being ‘cared for’ and ‘cared about’. This is not surprising as many students irrespective of their programme of study are reported to suffer from home-sickness and adjustment problems in the early phases of their university studies. For example, Cooke (2006) identifies that historically many first year university students face a wide range of stressors and challenging whilst embracing a new direction of their lives that entering university represents. A number of studies also suggest that higher rates of psychological morbidity are recorded amongst first year undergraduate students (Price et al 2006). As described earlier for nursing students this may be compounded by feeling of not being wanted or a feeling of rejection that some students report when first entering clinical placements (Thomas et al 2012). For some this may result in premature withdrawal from their programme. For example, and as also related earlier, Hamshire et al (2012) describes how dissatisfaction and difficulties around clinical placements may act as a tipping point that can result in some nursing students deciding to leave their programme prematurely.

Linsey et al. (2010) found that students were reluctant to make use of the technology unless it had a clear, perceived benefit to them, particularly with text-based messaging services. The fact that 32 of the 48 (77%) students who received advice from FLO took that advice suggests that FLO is acceptable to students and as six students (8%) reported that FLO facilitated thenm staying on the course, FLO may be a cost-effective option that is worth investigating further.

FLO is a free service in the UK. However, an unexpected feature of the evaluation was that although mobile phone companies are paid to provide a free service by the FLO designers, some mobile phones companies informed students that they required payment for the use of FLO and some students believed they would be charged to reply to messages. This prompted some students to STOP FLO, or not reply to text messages. This anomaly has been reported to the FLO designers and is being investigated with the mobile phone companies involved. Bates and Poole (2003; cited in Traxler and Kukulska-Hulme 2005) argue that consideration of whether the right technology has been selected is an important aspect of a comprehensive evaluation of mobile learning. Thus the pros and cons, limitations and advantages of other text messaging systems should be reviewed prior to any final decision regarding the future of FLO.

Placements are also a critical experience in a student nurses’ education, and while some students may excel in a practice setting, others may feel overwhelmed and unprepared for the reality of practice, or isolated and disconnected from University life (Watts 2011). As Hamshire et al (2012) describe, dissatisfaction and difficulties around clinical placements are often a trigger point for considering withdrawal from University (Mulholland et al 2008). Moriarty et al (2009), in researching barriers to progression and retention, found that additional support to students during placements might reduce withdrawal from programmes. FLO has now been evaluated with social work students on their first clinical placement (Boath et al., submitted) and positive outcomes have been obtained. Extending FLO into student nurses first clinical placement is currently being explored.

Overall, the students participating in this study liked the concept of FLO and the opportunity it afforded for them to feel linked to, valued and supported by the University. Experience of FLO in the NHS (Cottrell et al., 2012a,b) revealed that patients started to view FLO as a real person, the nursing students did not. FLO is however named after Florence Nightingale and many nursing students were already aware of telehealth and this may have enhanced the appeal of FLO for them.

Although the questionnaire was designed by someone who was not a course tutor, the students were aware of the role that their tutors played in devising FLO protocols and administering the questionnaire. Thus there may have been a positive response bias. Similarly, Hawthorne effects may have come into play as this was the first research that students were asked to participate in.

The lack of randomisation, or a naturaisticl control group is a further limitation of this study. The sample size was also small and given the developmental nature of this study, no sample size calculation was carried out. Indeed, continuing to gather more data to explore retention rates more fully in future will provide the opportunity for comparative analysis.

Taylor et al (2015) highlighted, appropriate staff training, a partnership approach to implementation and early success are all critical to acceptance and increased adoption. Although staff attitudes to FLO were not assessed within this pilot evaluation, staff anecdotally, nursing staff attitudes were positive and staff were happy with the training provided, they did however raise some concerns regarding the need for dedicated time to set up FLO and write protocols.

Although an economic analysis was not carried out. Despite the fact that only six students reported that FLO had been influential in making them ‘stay the course’. Retaining these students from the start may indeed be cost-effective, as they will continue to generate an income for a further two years, not only in terms of course fees, but also potentially University Accommodation and spending within catering outlets and the Student Union. Future evaluations of FLO should consider an economic evaluation.

# CONCLUSIONS

There are a number of limitations to the study conducted. However, the positive features of the evaluation indicate that future use of FLO may be helpful in reassuring and reducing stress amongst undergraduate nursing students. Early indications are that FLO can help foster a sense of belonging when students first enter the sometimes disconcerting culture of university life and nurse education. Liaison with the providers would be essential to resolve practical problems, such as students being charged for texting back to FLO. Students suggested that more bespoke, personalised texts and an interactive system would be welcome. Revision of the text messages and involvement of students in their design may result in students feeling texts sent are ‘more real’ to them. Resources would be required to fund not only the continuation of FLO, but also the staff time involved in devising protocols, monitoring responses and taking action where required. It is therefore, acknowledged that more evaluative work is needed before recommendations for the use of similar systems can be given. The challenge, and opportunity for educators, is to arrange the ‘FLO’ of messages in the most efficient and cost-effective manner, that is acceptable to staff and students alike.

**Conflict of Interest**: Two of the authors, Phil O’Connell and Lisa Taylor have an income from FLO. The remaining academic authors have no conflict of interest.

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**Table(s)**

**Table 1: Examples of text messages included in the protocol**

|  |  |
| --- | --- |
| Focus | Example of text messages |
| Providing reassurance | The first welcoming text message sent at Day Two 13.00 hours read:  “Hi, it’s FLO. Welcome. We are delighted that you have chosen to study with us.  An informative, no response required, text message sent at 18.00hrs read:  “Hi, don’t worry if you can’t remember all of the information from Welcome Week, it’s all on the  University website & Blackboard”    Day 14 at 19.00 hours.  Hello, you have been at the uni for a few of weeks, how have you settled in? Let us know by texting #1 for Good, #2 for Okay, #3 Not good. FLO  Day 15 at 10.30 If no reply – Hi, you don’t appear to have replied to my last text regarding how you have settled into University? Reply #1 for Good, #2 for Okay, #3 Not good. Thanks FLO (156) If they text - Good  FLO replies   * Fantastic – that’s a really good start. Take care FLO.   If they text - Okay  FLO replies   * Uni life does take some getting used to; once it becomes more familiar it should get even better. Remember to socialise as this can help you to settle in. FLO (158)   If they text - Not good  FLO replies   * I’m sorry to hear this, try talking to members of your group along with your PT as they can offer you great support during your transition into Uni life. FLO |
| Improving awareness of support available | Day 11 at 12.35pm An interactive, response required, text message read:    “Hi, your personal tutor will play an important role during your time at the university. Have you met your personal tutor yet? Reply #1 if YES or #2 if NO” sent at 12:35. This was followed with the following messages dependent upon the students’ response  If no reply by 19.00hrs – “Hi it’s FLO, I’ve notice you haven’t replied regarding whether you have met your personal tutor? Reply #1 if YES or #2 if NO”  If the student replies via text - “Yes”  FLO replies immediately -  “Fantastic, remember your personal tutor is a great source of information and support throughout your time at the university”  If the student replies via text - “No” FLO replies immediately  “Sorry to hear this, try to arrange to meet your personal tutor as soon as you can as they can be a great source of info and support during your time at the university” |

Table 2: *Summary of FLO evaluation questionnaire results*

|  |  |  |  |
| --- | --- | --- | --- |
| **Nursing Students (n=77)** | **Yes** | **No** | **Not applicable / not answered** |
| Did receiving text messages from FLO help you continue with your course? | 6 (8%) | 67 (87%) | 6 (8%) |
| Did FLO make you feel involved with and linked to the University? | 54(70%) | 23 (30%) | 0 |
| Did FLO encourage you to attend University | 7 (9%) | 66 (86%) | 4 (5%) |
| Did FLO suggest advice for you? | 48 (63%) | 25 (32%) | 4 (5%) |
| Did you follow FLO’s advice? | 32 (42%) | 20 (26%) | 24 (32%) |
| Did you STOP FLO text messages? | 10 (13%) | 67 (87%) | 0 |

**Table 3: Qualitative data themes**

|  |
| --- |
| FLO as helpful and supportive for new students |
| Fostering a sense of belonging and encouraging course attendance |
| Frequency of FLO text messages and reminders |
| Reasons for texting STOP to FLO |
| Response to interactive text alerts |

1

**\*Research Highlights**

Highlights

Automated text messages using FLO are:

* helpful and supportive to nursing students
* Increase a sense of belonging to the University
* Encourage student retention and improve attrition rates