

Graduate nurses' experience of feedback, support and anxiety: a pilot study

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ABSTRACT

Objective

The aims of this study were to investigate the association between feedback and anxiety, while also exploring the feedback and support experiences of graduate nurses.

Design

This study used a mixed methods approach.

Setting

Participants completed an online survey.

Subjects

The study included 107 Australian graduate nurses.

Main outcome measures

Anxiety and feedback.

Results

Using bivariate regression a negative relationship was identified between feedback and anxiety. Further analysis using one-way analysis of variance revealed that participants who received regular and quality feedback and support, reported the lowest anxiety. The second aim was assessed by reviewing participants' subjective comments regarding their experiences as graduate nurses. Results revealed high variability in feedback and support experiences. The data gathered suggests graduate nurses experience anxiety during their transition from university to professional nursing.

Conclusion

The provision of regular feedback and support was associated with reduced anxiety in graduate nurses. These preliminary findings highlight the importance of regular and appropriate feedback and support to facilitate learning, successful role transition and improved patient outcomes.

INTRODUCTION

It is well established that the transition to a new professional role can be difficult. This is particularly true for nursing graduates who have reported stress, disillusionment and anxiety related to their role transition from student to professional nurse (Duchscher 2009). After completing university and attaining registration, many first year graduate nurses (GNs) gain employment within a graduate nurse program (GNP). A GNP is intended to facilitate role transition and provide support to alleviate distress. Despite the objectives of these programs, many GNs continue to experience stress, emotional exhaustion, isolation, lack of support and concerns for their patients' safety. Support refers to the provision of assistance, guidance and responses to GNs needs by more senior nurses (Beecroft et al 2006). One component of support that has been reported to assist GNs is feedback. Feedback is defined as information provided to a student that describes their performance of a task. This information is intended to improve future performances (van de Ridder et al 2008; Ende 1983).

Literature Review

There is agreement that feedback is important, however, consensus regarding how best to deliver feedback is less clear (Nottingham and Henning 2014). Ende (1983) stated that feedback is crucial to the learning process, and with practice, is not hard to implement.

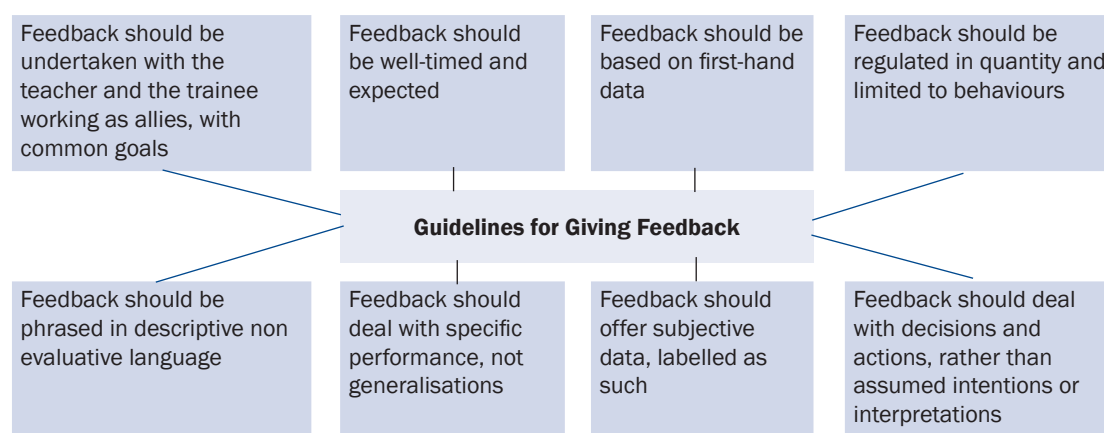


Figure 1: Ende's guidelines for giving feedback; Source: Ende, J. 1983.

These guidelines have been fundamental to research in the area of feedback and are used in a range of disciplines (Grover et al 2014; Nottingham and Henning 2014; van de Ridder et al 2008).

Consistent with Ende's guidelines, Duchscher (2009) stated that new nurses need frequent and regular feedback to help them develop professionally and reinforce their practice. Haggerty et al (2013) found that when GNs received support and appropriate feedback, not only were there improvements in GNs confidence and job satisfaction, but there were also improved patient outcomes. This is consistent with other reports of improved patient care when GNs received regular feedback and support from experienced nurses (Lewis and McGowan 2015; Pineau Stam et al 2015; Horsburgh and Ross 2013; Ferguson 2011; Martin and Wilson 2011; Johnstone et al 2008).

Ende (1983) noted that the absence of feedback can lead to errors and mistakes remaining unchanged, and good performance not being reinforced, thus hindering the transition to expert clinician. This delayed transition is often described in nursing literature, where GNs reported they lacked sufficient feedback during their GNPs (Parker et al 2014; Phillips et al 2014; Saghafi et al 2012; Duchscher 2009; Wangenstein et al 2008). Feedback may also have the potential to reduce disillusionment and anxiety associated with the transition to a new role (Duchscher 2009). Feelings of inadequacy and lacking confidence in one's nursing

performance can increase stress and anxiety, which in turn can lead to emotional exhaustion and ultimately resignation from the profession (Scott et al 2008).

Not only is feedback important for the individual GN, it may also be essential to promoting patient safety. The early months after graduation are associated with the highest rates of clinical errors for GNs (Martin and Wilson 2011; Saintsing et al 2011). Lack of feedback and unaddressed errors, can be harmful to patients and costly for hospitals (Cantillon and Sargeant 2008; Grover et al 2014). Feedback appears fundamental to supporting GNs. The provision of regular feedback also appears important to professional development, reduction of anxiety, and promotion of patient safety. While qualitative studies have noted incidental findings that feedback is important for GNs, there is a dearth of literature focused on GN's feedback experiences.

The aims of this pilot study were:

1. To explore the relationship between feedback and anxiety.
2. To investigate GNs experiences of feedback and support during their GNP.

METHOD

Participants were required to be a GN currently employed in a GNP in Australia, or have completed a GNP in Australia within the last two years.

Participants were recruited using a passive snowballing method via the social media site, Facebook. Participation was voluntary and anonymous with ethical approval from Deakin University HEAG. Recruitment was also aided by sending emails at two intervals, to a list of Alumni Bachelor of Nursing graduates, from the university where the study took place.

Participants were 107 registered nurses (female, n=101; males, n=6). Participants in this study were either currently undertaking a GNP (2015, n=37), or had completed one up to two years prior to participating in the study (2013, n=25; 2014, n=45); Participants ages were varied with 52% between 20-24 years. The majority of participants, (87%) completed a GNP within the public system. And (54%) of the sample had completed their GNP fulltime (40 hours per week).

The survey consisted of three sections, and included a total of 107 self-report questions.

Section A

This included ten questions addressing demographics and information regarding participants' GNP.

Section B

As no previous inventory to measure the variables of feedback and support in a quantitative way existed, the Experiences of Feedback and Support Instrument (EFSI) was developed. Questions were based on existing literature and were piloted for their face validity. The final EFSI had 57 questions. As this was a pilot of the instrument, a comments section was included to gain qualitative data from participants. Full details of the instrument development methodology is yet to be published. The authors are available to be contacted regarding further information about the instrument.

Section C

This section required participants to complete the State Trait Anxiety Inventory (STAI), (Spielberger et al 1983). The STAI consists of two sections, each containing 20 questions. These two sections measure participants' feelings at the time of the survey (state anxiety), while also measuring how participants generally feel (trait anxiety). Strong reliability (0.65 - 0.75) and construct validity have been shown for the STAI (Spielberger et al 1983). Participants were required to self-report using a 4-point Likert scale (1=Not at all; 2=Somewhat;

3=Moderately so; 4=Very much so) with the higher the score denoting higher levels of anxiety (Spielberger et al 1983).

Participants completed an anonymous online survey consisting of the three sections (repetitive). After collecting data, statistical analyses were conducted using SPSS Version 22. Additional data from the comments were (data is plural) hand sorted for predominant themes. Individual scores for the separate variables were added to create total scores for EFSI, state anxiety and trait anxiety.

FINDINGS

Relationship Between Anxiety and Feedback

A bivariate regression was used to test the hypothesis of the relationship between feedback and anxiety. The results are presented in table 1. Separate analyses were run for state and trait anxiety, as they measure different constructs. Although the total amount of variance explained by EFSI score was not large, it did show a significant medium negative relationship between anxiety and EFSI scores, as determined by $r > .30$ (Field 2014). This suggests that as the positive feedback experiences increase, anxiety decreases.

Table 1: Regression Analysis between Anxiety and EFSI Scores

Anxiety	β	R square	F value	p value
STATE	-.32	.10	11.88	<.001
TRAIT	-.34	.12	3.72	<.0001

To further explore this relationship, separate one-way ANOVAs were completed to determine if and where differences existed. For this analysis, cut offs were applied to EFSI scores to create three categories for this variable. Low feedback was defined as scores <128 (n=31) and included participants responses that disagreed or strongly disagreed with all questions and those who agreed with less than a quarter. Moderate feedback was defined as scores between 129 up to 155 (n=43); this included participant's responses that agreed with more than a quarter to 75% of questions. Finally, high feedback was defined as scores >156 (n=33). This would have been the score achieved if the participant agreed with more than 75% of the 57 items where each item was on a 4 point Likert scale. Mean anxiety scores from the ANOVA analysis are presented in table 2.

Table 2: Mean Anxiety Scores From ANOVA

Level of feedback	STATE		TRAIT	
	M	SD	M	SD
LOW	38.77	13.67	39.54	10.64
MODERATE	39.13	9.92	41.20	8.29
HIGH	32.32	10.18	33.63	9.63

State anxiety

A one-way ANOVA revealed there was a significant effect of feedback on state anxiety, $F(2, 104) = 4.04$, $p = .02$, $\eta^2 = .07$. Using Cohen's criteria we can see that this is a small effect size (.01-.09). A Tukey post hoc test revealed that state anxiety score was statistically significantly higher in participants receiving moderate feedback compared to those who received high amounts of feedback ($p = .03$). There were no statistically significant differences found between the low and moderate feedback groups ($p = .99$) or low and high feedback groups ($p = .06$).

Trait Anxiety

A one-way ANOVA indicated there was also a significant effect of feedback on trait anxiety, $F(2, 104) = 6.33$, $p = .003$, $\eta^2 = .11$. Using Cohen's criteria we can see this is a moderate effect size (.09-.25). A Tukey post hoc test revealed that trait anxiety score was statistically significantly higher in the moderate feedback group compared to the high feedback group ($p = .002$). Anxiety scores were also statistically significantly higher in the low feedback group compared to the high feedback group ($p = .04$). No statistically significant difference was found between the low feedback and the moderate feedback groups ($p = .74$).

Graduate Nurse Experiences of Feedback and Support

Specific questions from the EFSI that tapped directly into Ende's (1983) elements of feedback revealed trends that provided an indication of GNs experiences of feedback and support. These trends were assessed alongside the subjective comments ($n = 43$). These comments revealed insights into GNs experiences of feedback and support. Recurrent and similar comments are presented here as two themes; 1) variation in the feedback GNs received and 2) the availability of staff to provide support.

Variation in feedback

It was evident there was high variability in feedback experiences, with many participants reporting vastly different experiences in the amount of feedback and support in different locations. One participant expressed this variation as:

In my first rotation I felt very much a part of the team... On my second rotation it was completely the opposite. All of the grads (8 of us) felt isolated and belittled...(Participant 52).

Encouragingly, some GNs reported an abundance of support and feedback that helped them understand their role and improve their practice. GNs commented on how feedback helped them recognise gaps in their knowledge that led to improved performance and increased confidence. One participant stated:

...feedback was great, almost every day we had our educators floating around, reading our assessments, telling us how we can improve and how to better assess our patient...(Participant 44).

The importance of feedback was highlighted by participants' responses to EFSI item 46 which asked whether: "Receiving feedback made me feel supported", to which 87% of participants agreed. Having goals is an important part of the feedback process, and 57% of participants reported their goals were regularly reviewed with their supervisor. Results indicated 52% of participants reported receiving regular feedback regarding their progress and performance. Some GNs reported receiving harmful feedback. This appeared to occur when feedback was given in a rude manner or in inappropriate locations, such as in public:

I had feedback by a senior staff member inappropriately in front of a patient which caused huge embarrassment... (Participant 71).

I was once yelled at in front of a lot of staff in the nurses station... (Participant 2).

While these incidents were not the majority, (as 72% of participants reported receiving feedback in appropriate locations, it is concerning for the GNs to whom this did occur.

Responses from participants indicated that receiving judgmental feedback related to a participant's personality rather than their nursing performance was very damaging. GNs commented on the lasting negative feelings this provoked and the devastating impacts on their confidence:

Some negative feedback made me feel inadequate as a nurse (Participant 71).

The feedback I received was not constructive, more of criticisms and comparisons to my peers (Participant 2).

Conversely, many participants commented that respectful and constructive feedback made them feel supported by the nursing staff. This is reflected in 66% of participants reported that the feedback they received was descriptive of their performance. It was encouraging to find that 84% of participants reported receiving feedback in a respectful and supportive way.

...Feedback was given on specific tasks immediately after completion and the feedback was very focused...(Participant 78).

Availability of support

There were several comments relating to GNs being unable to find someone to help them. Numerous participants reported that other nurses were "too busy" to help them and further felt unable to ask for assistance or support when needed. This was stated as:

I asked for help on many occasions with tasks I was unfamiliar with, and most times ward staff would not help me because they were too busy (Participant 2).

Grads were left to their own devices to either sink or swim (Participant 80).

This was supported by 54% of participants who reported they lacked support during their GNP. This theme in particular, highlighted GNs need for clarification and assistance in managing complex and acutely unwell patients. This theme emphasised the potential risk to patients and how this can be a stressor for GNs who do not receive the appropriate support to care for them. This can lead to mistakes and errors in patient care:

I was not orientated, I was basically left on my own to manage patients of a surgical specialty even though I constantly asked and told staff I needed help and wasn't confident...(Participant 65).

The only time I received feedback was when I made a serious mistake, and I feel like it could have been prevented if I had more support (Participant 28).

Timing of feedback can influence its effectiveness; results here were mixed with 50% of participants reporting that the feedback they received was immediately after performing a task. Multiple GNs commented on the absence of supervision, and having to rely on their own assessments of their performance, as they did not

receive any feedback. There appeared to be an unsaid rule, that is, no feedback means you are doing well. One GN describes how this eventuated:

I was also told by other nurses that the fact I was often put in rooms at the end of the ward where I couldn't be observed, meant that I was doing a good job... (Participant 59).

Another concerning finding was the overall culture and environments GNs worked in. Participants reported negative environments including feeling excluded and described some nurses as being “clicky” or “bitchy”. It was worrying to note that some GNs reported bullying and experienced depression due to lack of support. Just over half (51%) of the participants acknowledged experiencing stress as a result of insufficient support. Overall ward culture also impacted on GNs experiences:

The feedback I received reflected the lack of support and bitchy nature of the ward (Participant 88).

A great deal of the staff, throughout the hospital, appeared to be disgruntled and I heard several on my ward complain about their job and not wanting to be there... after a short while I tended to feel the same (Participant 80).

DISCUSSION

This study aimed to explore GNs experiences of feedback and support. In particular this study aimed to investigate if there was a relationship between anxiety and the feedback and support GNs received. Results indicated that high levels of feedback and support were needed, (as opposed to low and moderate levels), in order to be effective.

These results were supported by the comments from the survey that provided subjective information on GNs feedback and support experiences. While participants reported the supportive benefits of feedback, almost half reported not receiving feedback frequently enough. These findings resonate with previous research that found GNs reported receiving minimal amounts of feedback during their GNP (Parker et al 2014; Phillips et al 2014; Saghafi et al 2012; Duchscher 2009; Wangensteen et al 2008). These results are also supported by findings that GNs experience heightened anxiety in the absence of feedback (Marks-Maran et al 2013; Ostini and Bonner 2012; Wangensteen et al 2008). These principal findings revealed that GNs were reporting higher anxiety compared to the general Australian population (Crawford et al 2011). However, it was found that when GNs received positive feedback and support experiences, their reported anxiety was lower than the general population's anxiety levels. For feedback to be effective at reducing anxiety, large amounts of feedback are needed, as moderate amounts of feedback were still associated with high anxiety. This is consistent with previous research where GNs were requesting frequent and regular feedback to assist them in feeling supported and improving their ability to care for patients (Parker et al 2014; Saghafi et al 2012; Duchscher 2009). This could be linked to existing literature which reports that despite supervisors reporting they gave feedback, this same feedback was often not recognised by novices as feedback, and so was not effective in improving practice (Watling and Lingard 2012; Cantillon and Sargeant 2008; Clynes and Raftery 2008; van de Ridder et al 2008). It is possible that GNs are not recognising feedback, or potentially, feedback is provided in an unclear manner. There is literature suggesting feedback needs to be clearly labelled as feedback before it is provided in order for the student to understand the intended message (van de Ridder et al 2008). Such initiatives are recommended and supported by these results.

Participants reported how receiving feedback in inappropriate locations or in a way they perceived to be disrespectful caused significant distress. Previous research has emphasised the importance of timing, location and approach to provision of feedback in determining the effectiveness (Nottingham and Henning 2014a). If feedback is delivered abruptly or unexpectedly, it can be detrimental to a GNs confidence (Haggerty et al 2013; Wangensteen et al 2008). Comments also revealed GNs problematic experiences of trying to find support or help, with some participants reporting a lack of supervision and minimal opportunities to be observed. These findings are consistent with previous studies which found GNs reported problems in finding senior nurses to supervise and support them, with many GNs perceiving other nurses as unavailable or disinterested (Parker et al 2014; Saghafi et al 2012; Johnstone et al 2008; Beecroft et al 2006). This is concerning as accurate feedback is dependent on the observation of a behaviour or action (Grover et al 2014; van de Ridder et al 2008; Ende 1983).

The present findings add to existing literature investigating the variation of feedback and support experiences on different wards. These results add to the discussion on the benefits and disadvantages of rotations during GNPs. Some participants reported wards being complete opposites in terms of available support. This is similar to previous research that found GNs reported feeling like they were 'starting again' each rotation which was anxiety provoking (Johnstone et al 2008). The findings from the comments exploring feedback and support experiences appeared dependent on the ward environment. Experiences were highly variable; with some GNs forming strong relationships with other nurses while other participants experienced isolation and were bullied. One key element in the feedback process is the importance of the relationship between a novice and the supervisor (Watling and Lingard 2012; Cantillon and Sargeant 2008; Clynes and Raftery 2008).

LIMITATIONS

The greatest confound of this study was the lack of an existing inventory to measure feedback and support. The option to participate and leave comments was voluntary. This can lead to a disproportionate amount of participants selecting themselves to participate based on personal experiences of significant stress or anxiety. This could potentially be unrepresentative of the general nursing population. It may be useful for future ESFI to include the option to answer each question separately for different rotations as vast differences were reported. This tool requires further use in larger samples which will allow for more rigorous psychometric testing of validity.

CONCLUSION

This study found that frequent and positive feedback and support experiences are associated with lower anxiety levels in GNs. There are no current standards, guidelines or requirements for the amount of support or feedback GNs should receive; it is left to the discretion of each ward. Although GNs may remain in the same hospital throughout their GNP, wards vary significantly in the culture and degree to which the environment is supportive. Further research is needed to investigate how much feedback is optimal which may then lead to more effective ways to support GNs. Additional research may allow recommendations and policies to be created that guide education and orientation programs. GNs who feel supported and receive regular feedback report lower anxiety levels. An improved culture of support, which includes high levels of regular feedback for our novice professionals, is needed in our hospitals in order to improve GNs transitions. The benefits of this include reductions in anxiety and intentions to leave the nursing profession while, importantly, leading to safer patient care.

RECOMMENDATIONS

GNs may benefit from ward staff and educators being reminded of the importance of feedback and additional training in providing it. Positive feedback experiences might play out as presented in the following example. A GN receives information from a supervisor, (a senior nurse), in an appropriate location, (not in front of patients or other people). The information is respectful and descriptive of a specific performance, such as a patient assessment. It should occur immediately after the performance, and occur on a regular basis that allows the GN's goals to be reviewed and achieved.

REFERENCES

- Allen, E. and Seaman, C.A. 2007. Likert Scales and Data Analyses. Retrieved from <http://asq.org/quality-progress/2007/07/statistics/likert-scales-and-data-analyses.html/> (accessed 01.10.15).
- Beecroft, P.C., Santner, S., Lacy, M.L., Kunzman, L. and Dorey, F. 2006. New Graduate Nurses' Perceptions of Mentoring: six-year programme evaluation. *Journal of Advanced Nursing* 55(6):736-747.
- Cantillon, P. and Sargeant, J. 2008. Giving feedback in clinical settings. *British Medical Journal (Clinical Research Ed.)*, 337:a1961-a1961.
- Clynes, M. P. and Raftery, S.E.C. 2008. Feedback: an essential element of student learning in clinical practice. *Nurse Education in Practice*, 8(6):405-411.
- Crawford, J., Cayley, C., Lovibond, P.F., Wilson, P.H. and Hartley, C. 2011. Percentile Norms and Accompanying Interval Estimates from an Australian General Adult Population Sample for Self-Report Mood Scales (BAI, BDI, CRSD, CES-D, DASS, DASS-21, STAI-X, STAI-Y, SRDS, and SRAS). *Australian Psychologist*, 46(1):3-14.
- Duchscher, J.E.B. 2009. Transition shock: the initial stage of role adaptation for newly graduated Registered Nurses. *Journal of Advanced Nursing*, 65(5):1103-1113.
- Ende, J. 1983. Feedback in clinical medical education. *Journal of the American Medical Association*, 250(6):777-781.
- Ferguson, L.M. 2011. From the perspective of new nurses: what do effective mentors look like in practice? *Nurse Education in Practice*, 11(2):119-123.
- Field, A. 2014. *Discovering statistics using SPSS*. Sage: London.
- Grover, B., Hayes, B.D. and Watson, K. 2014. Feedback in clinical pharmacy education. *American Journal of Health-System Pharmacy*, 71(18):1592-1596.
- Haggerty, C. Holloway, K. and Wilson, D. 2013. How to grow our own: An evaluation of preceptorship in New Zealand graduate nurse programmes. *Contemporary Nurse*, 43(2):162-171.
- Horsburgh, D. and Ross, J. 2013. Care and compassion: the experiences of newly qualified staff nurses. *Journal of Clinical Nursing*, 22(7/8):1124-1132.
- Johnstone, M. Kanitsaki, O. and Currie, T. 2008. The nature and implications of support in graduate nurse transition programs: an Australian study. *Journal of Professional Nursing*, 24(1):46-53.
- Lewis, S. and McGowan, B. 2015. Newly qualified nurses' experiences of a preceptorship. *British Journal of Nursing*, 24(1):40-43.
- Marks-Maran, D., Ooms, A., Tapping, J., Muir, J., Phillips, S. and Burke, L. 2013. A preceptorship programme for newly qualified nurses: A study of preceptees' perceptions. *Nurse Education Today*, 33(11):1428-1434.
- Martin, K. and Wilson, C.B. 2011. Newly Registered Nurses' Experience in the First Year of Practice: A Phenomenological Study. *International Journal for Human Caring*, 15(2):21-27.
- Nottingham, S. and Henning, J. 2014. Feedback in Clinical Education, Part I: Characteristics of Feedback Provided by Approved Clinical Instructors. *Journal of Athletic Training (Allen Press)*, 49(1):49-57.
- Nottingham, S. and Henning, J. 2014. Feedback in Clinical Education, Part II: Approved Clinical Instructor and Student Perceptions of and Influences on Feedback. *Journal of Athletic Training (Allen Press)*, 49(1):58-67.
- Ostini, F. and Bonner, A. 2012. Australian new graduate experiences during their transition program in a rural/regional acute care setting. *Contemporary Nurse: A Journal for the Australian Nursing Profession*, 41(2):242-252.
- Parker, V., Giles, M., Lantry, G. and McMillan, M. 2014. New graduate nurses' experiences in their first year of practice. *Nurse Education Today*, 34(1):150-156.
- Pineau Stam, L.M., Spence Laschinger, H.K., Regan, S. and Wong, C.A. 2015. The influence of personal and workplace resources on new graduate nurses' job satisfaction. *Journal of Nursing Management*, 23(2):190-199.
- Phillips, C., Kenny, A., Esterman, A. and Smith, C. 2014. A secondary data analysis examining the needs of graduate nurses in their transition to a new role. *Nurse Education in Practice*, 14(2):107-111.

- Saghafi, F., Hardy, J. and Hillege, S. 2012. New graduate nurses' experiences of interactions in the critical care unit. *Contemporary Nurse: A Journal for the Australian Nursing Profession*, 42(1):20-27.
- Saintsing, D., Gibson, L.M. and Pennington, A.W. 2011. The novice nurse and clinical decision-making: how to avoid errors. *Journal of Nursing Management*, 19(3):354-359.
- Scott, E.S., Engelke, M.K. and Swanson, M. 2008. New graduate nurse transitioning: necessary or nice? *Applied Nursing Research*, 21(2):75-83.
- Spielberger, C., Gorsuch, M.L., Lushene, R., Vagg, P.R. and Jacobs, G.A. 1983. Manual for the State-Trait Anxiety Inventory for Adults: Sampler set. *Mind Garden Consulting Psychologist Press, Inc.*
- van de Ridder, J.M.M., Stokking, K.M., McGaghie, W.C. and ten Cate, O.T.J. 2008. What is feedback in clinical education? *Medical Education* 42(2):189-197.
- Wangenstein, S., Johansson, I.S. and Nordström, G. 2008. The first year as a graduate nurse - An experience of growth and development. *Journal of Clinical Nursing*, 17(14):1877-1885.
- Watling, C.J. and Lingard, L. 2012. Toward meaningful evaluation of medical trainees: the influence of participants' perceptions of the process. *Advances In Health Sciences Education: Theory And Practice*, 17(2):183-194.