Supportive counselling programme for nursing students experiencing academic failure: randomized controlled trial

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Abstract
Title. Supportive counselling programme for nursing students experiencing academic failure: randomized controlled trial.

Aim. This paper is a report of a study examining the effects of a supportive counselling programme on the academic performance of Iranian nursing students experiencing academic failure.

Background. In order to using limited educational resources effectively, nursing students experiencing academic failure should be immediately identified in order that appropriate intervention can take place.

Method. Data were collected over a 12-month period in 2006–2007, with 42 Bachelor of Science nursing students who displayed poor academic performance. They were randomly allocated to receive either supportive or ordinary counselling. The mean grades in basic theoretical courses, special courses, and also the combination of both basic and special courses was compared between the two groups.

Findings. Over the study period, there were improvements in the mean grades of special courses and also in both basic and special courses of male students in the experimental group, compared with those of male students in the control group (0.27 against −1.43, \( P = 0.014 \); and 1.87 against −0.40, \( P = 0.009 \); respectively).

Conclusion. A supportive counselling programme can improve the academic performance of male nursing students. Replication of the current study with larger samples and longer duration is recommended.

Keywords: academic performance, counselling, nurse education, nursing students, randomized controlled trial

Introduction
In most countries, including Iran, the number of applicants to study on Bachelor of Science nursing education programmes is limited because of an insufficient number of teachers, inadequacies in equipment, materials and settings, and lack of opportunities to gain practical experience while taking the programme (Sadler 2003). One of the most important challenges to teachers and educational counsellors alike is how to encourage students to continue along the interesting, but long road of study. This challenge becomes all the more important when one takes into account the fact that poor academic performance...
performance and academic failure are the most common causes of attrition (Richardson 1996, White et al. 1999).

The consequences of academic failure do not only involve students, peers, and educational experts, but also include negative economic effects. Following academic failure and attrition, students may experience feelings of anger, frustration and distress (Turkett 1987, Castledine 1995). The cost that the failed student pays may be an overall feeling of defeat, decreased self-esteem, and the destruction of dreams (McSherry & Marland 1999) that, in turn, may influence all aspects of an individual’s life.

Many researchers have investigated the causes of academic failure with similar findings. In addition, numerous researchers have tried to demonstrate a relationship between poor academic performance and various factors, such as low self-esteem (Huckabay & Arndt 1976), lack of commitment to the professional role (Warnecke 1973), and lack of social support (Sarason 1981, Hilbert & Allen 1985). In the nursing literature, many cognitive and non-cognitive factors have been identified as predictors of nursing students’ academic performance (McEvoy 1995, Andrew 1998, Jeffreys 1998, White et al. 1999). Various models, such as Tinto’s (1993) model and Shelton’s (2003) model, have been introduced to explain the relationship between academic failure and the afore-mentioned factors.

Academic improvement may be attributed to a student’s superior cognitive ability, low life distress, high motivation, positive feelings towards self-efficacy, ability to study, ability to concentrate, and being prepared for attending classes. Although each factor in itself is related to academic performance, it may be a combination of these factors that differentiates effective from less effective learners (Chacko & Huba 1991).

The efficacy of the educational system would be maximal if all of the places are taken up by students and the system supports students until the end of the programme (Sadler 2003). Approaching this ideal requires some actions on behalf of the experts. A nursing student experiencing any problem in theoretical/practical courses should be immediately identified in order that appropriate intervention may be implemented (McSherry & Marland 1999).

In the nursing literature, counselling programmes have been reported as interventions to decrease student attrition and improve academic performance (Campbell & Davis 1990, Courage & Godbey 1992, Sherrod & Harrison 1994, Saucier 1995, Parks & Kirkpatrick 1996). Educators should not wait for students to seek help, but should make contact with them and suggest help to them. This reflects a caring attitude and demonstrates an interest in students’ progress (Shelton 2003).

It is necessary for nurse educators to adopt a holistic approach to caring and fostering the next generation of nurses who are currently studying nursing (Shelton 2003). Treating a nursing student as an individual is in agreement with the idea of a ‘caring profession’ (McSherry & Marland 1999).

Background

The Iranian context

In Iran before the 2004 there was no organized and well-documented programme of academic counselling in the medical sciences universities, and the only service available to students was guiding them in the selection of credits for semesters. In early 2004, the High Council for Medical Education affiliated to the Ministry of Health and Medical Education requested that all medical sciences universities provide academic counselling for students of all educational levels studying at these institutions. Based on this, an academic counsellor is a faculty member appointed by the faculty dean, at the suggestion of the deputy of education, and bears responsibility for providing students with counselling for educational, research-related, and personal issues. Although this kind of ordinary counselling has been deployed within the universities, the number of students experiencing academic failure is the same as previously, suggesting the need for changes in the counselling programme.

Theoretical considerations

According to attributional theory (Weiner 1985), people seek some reason to explain events and outcomes. For example, students explore reasons for their success or failure, and these reasons shape their view of their own academic competency. Attributional retraining is a method used to replace unhelpful attributions affecting motivation, with the ultimate goal of reconstructing a student’s justification for his/her academic performance.

Bandura introduced the concept of ‘self-efficacy’, according to which any intentional change in behaviour results from a person’s perception of his/her ability to achieve/display that behaviour. While some people perceive themselves as responsible for events taking place, others see themselves as victims of conditions (Lebedina-Manzoni 2004).

Tinto’s theory of student retention emphasizes the concepts of academic integration and social integration. Academic integration means getting involved in doing the course and is actualized through appropriate self-organization, being active in group work, and seeking help when
necessary. Social integration can be defined as having an active social life with friends from courses, participating in university associations, or talking with peers. Successful integrations are a combination of both academic and social integration (Beder 1997). According to Tinto’s model, inadequate personal interaction or different abilities, goals, and values decrease integration.

According to the Shelton (2003) model, internal psychological processes affect the way a student seeks and uses environmental supports. Students at risk of academic attrition may persevere and achieve good grades if they have internal resources for retention and success and use all available external supports. External support variables are environmental factors helping a student to be successful academically (Bean & Metzner 1985). Shelton defines two types of support: Psychological and functional support.

Psychological support includes encouragement of feelings of self-valuing and competence. Functional support encompasses achieving behaviours which help students to complete assignments in order to reach their goals. Sources of support may come from within (educators, learning support, counselling, and peers), as well as from outside (family and peers) an academic institution (Bean & Metzner 1985, Tinto 1993).

Many reports have concerned programmes for the retention of students as effective interventions in reducing attrition and improving academic performance. Lockie and Burke (1999) studied a cohort of at-risk baccalaureate nursing students (N = 210) over a three-year period at a private, urban university in Midwestern United States of America (USA). The results showed that the programme PLUS (Partnership in Learning for Utmost Success) increased at-risk students’ retention, cumulative grade point average (GPA) and graduation rates, indicating the vital role that establishing a connection and supporting early on students’ academic careers plays in their success.

Another support programme was reported by the US Department of Education, Department of Higher Education (2001). This programme (TRIO), funded under Title IV of the Higher Education Act, was designed to help students overcome socioeconomic and cultural barriers to higher education. It was shown that those enrolled in TRIO programmes were more likely than other students to persist to graduation.

Brown (1987) showed that a supportive group could reduce student attrition due to academic failure. After implementing the programme, a statistically significant reduction was seen in academic failure and attrition in the experimental group compared with the control group.

Investigations on the effects of some new conceptual-based interventions on academic failure have shown that there is room for maximizing the quality of nursing education. In the study reported in this paper, some concepts of Bandura’s theory of self-efficacy, Weiner’s attributional theory, Tinto’s theory of student retention, and the Shelton model of student retention to improve the academic performance of nursing students experiencing poor academic performance, constituted the foundation of the ‘supportive counselling programme’ implemented and evaluated.

The study

Aim

The aim of this paper is to report on a study examining the effects of a supportive counselling programme on the academic performance of Iranian nursing students experiencing academic failure.

Three hypotheses were tested:

- After intervention, the mean grade for the basic theoretical courses in the experimental group will be better than that of the control group;
- After the intervention, the mean grade for the special theoretical courses in the experimental group will be better than that of the control group;
- After the intervention, the mean grade for both basic and special theoretical courses in the experimental group will be better than that of the control group.

Design

A randomized experimental design was used, with two groups and two measurement times (pre- and postintervention). Participants were randomly allocated to the experimental or control group by the coin toss method (22 and 21 students, respectively).

Participants

The study was conducted at a university school of nursing and midwifery in Iran from September 2006 to September 2007. The study population consisted of all nursing students studying in the second to sixth semesters who showed poor academic performance, characterized by a mean grade of less than 14 out of 20 in basic theoretical and special courses. After gaining the permission from the dean of the school, nursing students’ grades from different courses were accessed to identify those who had a mean grade of less than 14 out of 20 in the basic theoretical and special courses in the previous semester. Out of the 320 nursing students, 62 with poor academic performance were identified. After being informed...
of the study’s aim, along with other relevant details, 43 students agreed to participate in the study. One student in the experimental group did not continue to the end of the intervention and was thus excluded from the study.

**Intervention**

The intervention consisted of a supportive counselling programme implemented with counselling sessions either on an individual level or on a group level (with 2–3 students) depending on students’ choice, during the semester. The intervention worked through tertiary prevention, whose focus is recovery and rehabilitation (McKeown & Weinrich 2000). Each session had two main components of psychological and functional support as the backbone of the programme (Shelton 2003). Development of self-efficacy was based on attributional theory, Bendura’s theory and Tinto’s theory of student retention, which is mainly accomplished through attributional retraining. In this study, developing a supportive atmosphere was achieved through psychological supportive behaviours, identified by students in previous studies, including caring and understanding, being approachable, encouraging students, demonstrating interest in them, having realistic expectations, listening, conveying confidence in and respect for students, being non-judgmental, being honest and direct, being open to different points of view, and wanting students to succeed (Bergman & Gaitskill 1990, Nehring 1990, Hughes 1992, Myton et al. 1992, Schaefer & Schaefer 1993, Sieh & Bell 1994, Hanson & Smith 1996).

Another component of the supportive counselling programme, functional support, consisted of behaviours identified by students in previous studies as supportive, including being available to students, helping in new situations without taking over, communicating clear and reasonable expectations, presenting information clearly, providing helpful feedback, using fair evaluation methods, helping problem identification and resolution, serving as role models, and helping in planning for the future (Thurber et al. 1989, Bergman & Gaitskill 1990, Nehring 1990, Hughes 1992, Myton et al. 1992, Schaefer & Schaefer 1993, Sieh & Bell 1994, Hanson & Smith 1996).

Ethical considerations

The university ethics committee approved the study. We researchers also gained the approval of those responsible for access to students’ information/records and for implementing the intervention. All student volunteers were informed of the aim of the study and intervention in detail and were assured of confidentiality. All participants gave written informed consent, which documented that they had the right to withdraw from the study if and when they wished.

**Data analysis**

SPSS version 14.0 for Windows (SPSS Inc., Chicago, IL, USA) was used for statistical analysis. Group comparability (in terms of gender, marital status, residence place, and the year of study) was evaluated using the chi square test. Means and means differences (before/after) in the two groups were compared using t-test. To compare male and female students’ grades between the two groups, the Mann Whitney test was used.

**Results**

Forty-two students (21 students in the experimental group and 21 in the control group) participated in the study. The means and standard deviations for age in the experimental and control groups was 22.14 ± 1.85 and 21.24 ± 0.99 respectively, and no statistically significant difference was obvious between the two groups regarding age (t = 1.972, and P = 0.056). Table 1 shows the characteristics of the students in the two groups, and the result of the chi-square test for evaluating group comparability.

To address the first hypothesis (after intervention, the mean grade of the basic theoretical courses in the experimental group will be better than that of the control group), the mean difference in the grades of the two groups for basic theoretical courses (difference between the mean grade before and after intervention for each group) was compared. In spite of more improvement in the mean grade for the basic theoretical courses in the experimental group, compared with those of the control group (1.5 against 1.28), there was no statistically significant difference between the two groups (t = 0.243 and P = 0.81). Thus, the first hypothesis was not accepted.

Regarding the second hypothesis (after the intervention, the mean grade for the special theoretical courses in the experimental group will be better than that of the control group), the t-test showed that there was no statistically significant difference between the two groups (−0.42 against
Table 1 Population characteristics and comparison of the two groups

<table>
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<th>Control group</th>
<th>Experimental group</th>
<th>Frequency</th>
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<th>Frequency</th>
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<th>χ²</th>
<th>P value</th>
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<tr>
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<tr>
<td>Female</td>
<td>13</td>
<td>61.9</td>
<td>14</td>
<td>66.7</td>
<td>0.104</td>
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<td>Male</td>
<td>8</td>
<td>38.1</td>
<td>7</td>
<td>33.3</td>
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<td>Marital status</td>
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<tr>
<td>Single</td>
<td>21</td>
<td>100</td>
<td>20</td>
<td>95.2</td>
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<td>Married</td>
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<td>4.8</td>
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<td>Residence</td>
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<tr>
<td>Dormitory</td>
<td>15</td>
<td>71.4</td>
<td>19</td>
<td>90.5</td>
<td>2.471</td>
<td>0.12</td>
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<tr>
<td>Home</td>
<td>6</td>
<td>28.6</td>
<td>2</td>
<td>9.5</td>
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<td>Year of study</td>
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<tr>
<td>First year</td>
<td>6</td>
<td>28.6</td>
<td>6</td>
<td>28.6</td>
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<td>Second year</td>
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<td>Third year</td>
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<td>5</td>
<td>23.8</td>
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With regard to the third hypothesis (after the intervention, the mean grade for both basic and special theoretical courses in the experimental group will be better than that of the control group), there was more improvement in mean grade of the experimental group compared to the control group (0.85 against 0.13), but this was not statistically significant (t = 1.606 and P = 0.12) (See Table 2).

Although the findings of this study did not support any of the three hypotheses, when we compared these variables separately for female and male students in the two groups, it became obvious that over the study period, there were improvements in the mean grades for special courses and also for both basic and special courses of male students in the experimental group, compared with those of male students in the control group (0.27 against −1.43, P = 0.014; and 1.87 against −0.40, P = 0.009; respectively).

This means that the supportive counselling programme was effective in improving the academic performance of male students. Table 3 shows the mean differences for female and male students separately.

**Discussion**

One of the limitations of the study was that the psychological states of the students during counselling sessions that was not controllable. Another limitation detected during the study was students’ disinterestedness in participating in the study, which led to a small sample size. In addition, time restriction limited students’ participation in the counselling sessions to...
What is already known about this topic

- Academic failure is a challenging issue with considerable negative emotional consequences for students and wasted resources.
- Various counselling programmes have been attempted by educators to improve academic performance.
- Limited information is available on the efficacy of these programmes.

What this paper adds

- The supportive counselling programme improved male nursing students’ grades in both special and basic theoretical courses.
- Researchers should continue testing counselling programmes that may positively affect the academic performance of nursing students.

Implications for practice and/or policy

- The interest of nursing students in special courses can be used as a powerful motivating factor in improving their academic improvement.
- Replication of the study with larger samples and longer duration is recommended.

The extent that they wished, due to their involvement in attending classes and clinical placements.

In spite of the fact that students in the experimental group showed more improvement compared to the control group, statistical significance was not reached. Power analysis showed that mean differences would be needed in the basic, special, and combination of basic and special course grades of 0.08, 0.31, and 0.48, respectively, indicating the low probability of seeing statistically significant differences with our sample size. Given this low power due to the small sample size, we considered reporting the results in terms of effect sizes. The effect sizes for mean differences in basic, special, and combination of basic and special course grades were 0.07, 0.36, and 0.51, respectively, indicating a moderate effect for the mean differences in the special and combination of basic and special course grades in spite of seeing no statistical significant differences.

When the analysis was carried out for female and male students of the two groups separately, a statistically significant difference was seen between the mean difference in grades for special theoretical courses ($P = 0.014$) and for both special and basic theoretical courses ($P = 0.009$) for male students in the two groups. It seems that male students may be affected more by the supportive counselling programme. Brown (1987) examined the effect of a supportive group on the academic failure and attrition of nursing students, and showed that this intervention had some effects; however, Brown did not compare male and females separately. In the study by Chacko and Huba (1991), it was found that factors such as self-efficacy and reading ability have a direct effect on academic success. This finding might justify the different effect that the supportive counselling programme had for female and male nursing students, and further study is needed to compare self-efficacy and reading ability between female and male nursing students.

In general, research assessing the effect of supportive programmes on improving the student retention and reducing academic failure has addressed the effectiveness of such programmes. The current study is somewhat different from previous studies in that we considered the mean grade for courses rather than graduation as a measure of academic performance. The results of the research by Blanc et al. (1983) partly confirm our results. They concluded that a complementary educational programme improves students’ grades among those identified as at high-risk for non-completion.

Irrespective of dividing students into experimental and control groups, our findings showed that the mean grade for special theoretical courses, both before ($14.77 \pm 1.22$) and after the intervention ($14.10 \pm 1.61$), were better in comparison to their mean grades for basic theoretical courses before ($11.28 \pm 1.98$) and after the intervention ($12.77 \pm 1.52$). The paired t-test showed a strongly statistical significant difference between these two means both before ($P < 0.001$) and after intervention ($P < 0.001$). These findings may reflect nursing students’ greater interest towards special theoretical courses in comparison with basic theoretical courses, and also the importance they place on special theoretical courses.

Conclusion

We suggest extending the study by implementing the intervention for several semesters to assess its possible longer-term effects. In addition, research is needed into students’ motives for selecting their major course of study, the relationship of their motivation to academic performance, and the factors influencing their primary motivation during study in order to help researchers to understand students’ academic performance better. If nurse teachers wish to have a key role in fostering well-qualified nurses, they should consider various ways, including counselling
programmes, to improve their students’ academic performance. It seems that counselling programmes continue to pose the main challenge for nurses’ teachers to achieve this goal.

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Conflict of interest
No conflict of interest has been declared by the authors.

Author contributions
HP was responsible for the study conception and design. HP & SP performed the data collection. HP & HH performed the data analysis. HP & SP were responsible for the drafting of the manuscript. HP, SP & HH made critical revisions to the paper for important intellectual content. HH & HP provided statistical expertise. HP obtained funding. HP provided administrative, technical or material support. HP supervised the study.

References

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