Survey of Research self-efficacy of postgraduate Nursing students in Mazandaran university of Medical Science –Northern Iran

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Abstract: Background& Aim: Research self-efficacy is one of the essential factors to provide skills and motivation for research process. This study aimed to survey the status of research self- efficacy among post graduate students of Mazandaran University of Medical Science- Northern Iran. *Methods:* In this descriptive study 234 students selected out of 690 students. The selected samples assessed by standard questionnaire to survey the status of research self-efficacy. The data analyzed by SPSS software. *Findings:* Mean and standard deviation of age of participants was 24.52±2.4. It was 182.95±12.36 for research self-efficacy. The difference of mean score of research self-efficacy of for male and females were significant. While the mean difference of research self-efficacy among participants in case of different age range and university. The difference of mean scores of research self-efficacy among married and singles was significant ($P<0.05$). It was significant in different level of education also. *Conclusion:* The results showed the status of research self-efficacy of students of Mazandaran University of Medical Science was not appropriate. It is suggested to educate the students regarding enhancement of research skills and efficacy.

Key words: Research self-efficacy, postgraduate students, Mazandaran university of Medical Science

INTRODUCTION

The first academic evolution, taking off in the late 19th century, made research a university function in addition to the traditional task of teaching. Research, learning and education is essential part of studying in postgraduate levels of education. The beliefs and attitudes toward research is related to research self-efficacy [1].

Research is the systematic process including collecting and analyzing information to increase a human understanding in order to find solutions to a problem [3].

The best educational environment and facilities cannot be suffusion for success in postgraduate stages if the students does not feel efficacy for research [1] Although skills come first but without confidence and self-efficacy the student could not proceed for research [2]. Peoples avoid from difficult situations which they will not feel efficacy [3]. In recent decades, the concept of research self-efficacy has been attracted attention of researchers [4]. Research self-efficacy refers to one's capabilities to execute particular tasks in research domain. Research self-efficacy has been found to predict students' interest in conducting In other studies also the research self-efficacy defined as judgment of student in term of ability of organization and execute of set of functions in order research [5.6.7].

Bandura (1997) noted that although misjudgment of self-efficacy is rarely studied, it is believed that misjudgment of one's self-efficacy for a specific task produces dysfunction. Miscalculation of one's self-efficacy can result in either (1) overestimating one's ability to complete a task and lead to failure or (2) underestimating one's ability and passing up opportunities that shape one's life course. Similarly, although research on mentoring typically focuses on benefits, incompatible expectations for a mentor relationship may lead to problems [8].

In the recent study conducted in Iran for evaluation of validity and reliability of research self-efficacy questionnaire 279 student examined. The results showed the students were weak in all subscales. While there was a significant relationship between research self-efficacy and success of post graduate students [1]. As the main target of post-graduation level is training the students as a good researcher. This is essential to evaluate the status of factors related to enhancement of quality and quantity of research in this level of education in Iran. Therefore considering only few studies from other parts of Iran reported inappropriate results. We aimed to evaluate the status of post graduate students of Mazandaran University of Medical Science.

METHODS

The study population of this descriptive study included all postgraduate students of Mazandaran University of Medical Science. Out of 690 students according Morgan sampling table we selected 234 students randomly. The sampling categorized according departments. The proposal of this study approved by scientific committee of Mazandaran University of Medical Science.

Tools:

(a)   Student's demographic data:

The students' demographic data included age, gender, total time spent with the research mentor in both formal and informal settings, major area of study, setting in which the student
Worked, Grade Point Average (G.P.A.), number of published papers, number of conducted research projects.

(b)   Research self-efficacy:

The research self-efficacy included 55 items. The participant response through 5 options for each item (rarely (1), sometime (2), often (3). Much (4). So much (5). The questionnaire comprised 7 factors including: analysis and statistic is 13 items (score range from 13 to 65), efficacy of conceptualization is 12 items (scored between12-60), efficacy in method and procedure 11 items (scored between 11-55).efficacy in qualities research 5 items (scored between 5-25), efficacy of report writing 6 items (scored between 6 to 30), efficacy in research skills 5 items (scored between 5 to 25), and ethical 3 items (scored between 3-12). Total score of questionnaire was 55 - 275.

This questionnaire validated in Ferdusi University by Salehi et al., The questionnaire had good validity and reliability $97\alpha=0/.$ [1]
Statistics

Spss version 20used to analysis of gathered data. Descriptive indexes including frequency, percentage, mean etc. The one way analysis of variance and T-test used to compare categorize red groups.

Findings:

Age of participants was 26.52 ± 2.4. 71 percentage of students ware female and rest were male. Only 13 % of participants were married and 87 percent were single.

The mean of analysis and statistic subscale was 32.61 ± 8.5, conceptualization was 45.4 ± 7.13, method and procedure was 35.8 ± 5.29, qualities subscale was 19.71 ± 4.22, report writing was 23.4 ± 4.87, research skills was equal to 16.28 ± 3.9 and ethical subscale was 9.6 ± 2.13. The total score of questionnaire of research self-efficacy was 182.9 ± 12.3.

Table 1- The difference of subscales of research self-efficacy between girls and boys students

The table shows there is significant difference between mean scores of male and females in term of total research self-efficacy (p-value=.002<.05). Males and females were different in all subscales of research self-efficacy except qualities item (p-value = 0.07).
The result of t-test for research self-efficacy of different departments and different age ranges were not significantly different. While comparing single and married students revealed significant difference (p-value=0.002<0.05). The mean score of married students were higher than singles.

Table -2- Comparison of research self-efficacy between different study stages

The analysis of variance showed there is significant difference between different level of education research self-efficacy. The students who were studying in Master, PhD and Mph were significantly different in research self-efficacy (P<0.05). Except skills of researches the other subscales were different between students of Master, PhD and Mph (P<0.05).

The Master students report higher scores in ethical subscale in compare to others while PhD students earned highest scores in all subscales of research self-efficacy.

DISCUSSION

This study was aimed to survey the status of post graduate students in research self-efficacy The results revealed the scores of students in total questionnaire and subscales i.e. analysis statistics, methods and procedure, research skills, ethical, report writing , qualities and conceptualization is not appropriate. The results was similar to finding of Garavand et al (2014) [9].While in another study conducted in Tehran- Iran by Roshanian and Aghazadeh (2012) the samples including Master students of psychology reported appropriate research self-efficacy in all dimensions except working with softwares and computer. This inconsistent is explainable with difference of departments and location of students. The facilities and information's related to research are more available for students who are studying in capital. Also students of psychology in compare to medicine and para medicine students are more trained for research and methodology [10].

The finding also showed there is significant difference between research self-efficacy of males and females in all suscales except qualities. This is not similar to findings of Garavand et al (2014). They found there is no significant difference between male and females in research self-efficacy. This difference can be explainable with difference of departments which surveyed in present study. Results pertaining to gender have been inconsistent; studies have not typically found that gender influenced research self-efficacy beliefs [11] although one study found that males have higher research self-efficacy beliefs than females [12] (Kahn & Scott, 1997). Turner et al (2003) and Godazgar et al., (2006) also reported difference between research self-efficacy of males and females [13,14].

There is no significant difference between different age ranges of students research self-efficacy while Rezae and Zamani(2013) found that there was a positive and statistically significant correlation between research self-efficacy and students' age. It means that as one ages, research self-efficacy increases. In other words, older students are more confident in their ability to conduct research than younger students. It is explainable with different method of analysis which employed in these studies. We have used t-test while Rezaye and Zamani used correlation[3].

There was significant difference between research self-efficacy of single and married students. The married students reported higher efficacy which can be explainable with higher responsibility of married students.
Different levels of study also showed significant difference. Ph.D. students reported higher level of research self-efficacy than M.Sc. students. This may be related to more experiences of Ph.D. students in research-related tasks than

M.Sc. students. This finding is similar to results reported by rezayie and Zamani[3]

CONCLUSION

The results showed the research self-efficacy is not high among students. Therefore, based on these findings it is recommended that research training begin early in the graduate program, exposing students to different research methodologies that provide students not only with technical skills but also interest in research by engaging the students in the research and scholarly activity processes [15]. This is suggested to proceed same researches in different places in relation to predictor factors.

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