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## Examination of Self-Directed Learning Readiness among Baccalaureate Nursing Students in Peshawar Pakistan

**Afsha Badshah Said**

Principal Investigator, RN, BSN Institute of Nursing Sciences Khyber Medical University Peshawar, Pakistan

**Nasreen Ghani**

Coordinator, Institute of Nursing Sciences, Khyber Medical University Peshawar, Pakistan

**Awal khan**

RN, MSN Institute of Nursing Sciences Khyber Medical University Peshawar, Pakistan

**Musarrat Kiramat**

RN, BSN Institute of Nursing Sciences Khyber Medical University Peshawar, Pakistan

### **Abstract:**

*Background:* Development of nursing profession demands acquisition of skills that promote continue and lifelong learning. Self-directed learning is one among those skills which is critical for nursing students, identified in the 21st Century Learning Frameworks.

*Objectives:* This study was aimed to determine undergraduate nursing students' readiness towards self-directed learning at four nursing institutions of Peshawar.

*Methods:* A questionnaire based cross sectional descriptive study involving convenient sample of undergraduate second year, 4<sup>th</sup> semester students from four degree awarding nursing institutions of Peshawar. Level of self-directed learning readiness was determined by utilizing a self-directed learning readiness scale for nursing education (SDLRSNE) comprising a five points Likert scale 1= strongly agree & 5= strongly disagree.

*Findings:* There were 91 participants in the study. The overall mean score on Fisher's 40 items self-directed learning readiness (SDLR) scale was  $153 \pm 25$ , the mean score on self-management subscale was  $48 \pm 8.4$ , and mean score of students on self-control subscale was  $58.2 \pm 11$  while mean score on desire for learning subscale was  $47 \pm 8$ . About 60 % (n=55) students scored 150 and above which is acceptable level of readiness for SDL on a scale ranging from score 40- 200.

*Conclusion:* The students showed adequate level of readiness towards SDL which will have encouraging implication on their career and in-service education, furthermore it will help in development of student centered nursing curriculum.

### **1. Introduction**

Health care system is advancing rapidly which place great challenges on health practitioners to keep and maintain the pace of attaining new knowledge for their professional growth and provision of quality patient care. (Findley & Bulik, 2011). Professional development in nursing demand acquisition of skills that promote continue and lifelong learning usually in the absence of a structured formal education program for the purpose to remain fresh and update in context of knowledge and practice (Murad, 2010; Williams, 2013). Self-directed learning is one among those skills which is critical for students, identified in 21st Century Learning Frameworks. (Francis & Flanigan, 2012). According to Malcolm Knowles (1975) self-directed learning is the mechanism by which a person identify his/her learning needs, plan, initiate and evaluate his learning by him/herself or with the help of others. Student's level of acquired capabilities to effectively engage in SDL is termed as Readiness for SDL (Gilany & Abusaad, 2012). Teacher student relationship, facilitation process, and availability learning resources are environmental while academic results, interest in the topics and fulfillment of self-expectations are motivational factors which influence readiness for self-directed learning among nursing students (Huang, 2008).

### **2. Assessment**

Self-directed learning is an inborn potential utilized by human beings at various degree during their life span while encountering a new, challenging situation. (Prabjandee & Inthachot, 2013). The concept of Self-directed learning has found in earliest times of Greek philosophers but it develop into a vast research area from the last three decades (Hiemstra, 1994). Knowels forecast in 1975 that self-directed learning is vital for humans to live in the world of innovation (Prabjandee & Inthachot, 2013). In 1991 candy identify the

significance of familiar learning circumstances for SDL and explain that if new knowledge, task or advance learning resembles to prior experience or knowledge of learner it will facilitate self-directed learning (song & Hill, 2007). Recently in higher education self-directed learning is gaining greater attention than ever as it is believed that SDL improves comprehension, remembering, critical thinking, inquisitiveness, good decision making, achievement satisfaction, enthusiasm, competency and self-reliance (Shen, Chen & Hu, 2014). In developed countries like US in response to learning challenges learning organizations focused on taking responsibility for own learning needs or simply self-directed learning to meet the goals of advancing world, at the same time research base advocacy and emphasis has been surfaced in under developed regions of the world like Asia (Francom, 2010). In medicine and nursing accreditation bodies inculcate readiness for self-directed lifelong learning as pre requisite for standard practice of future health professionals. (Guglielmino, 2011). Health care professionals who are stimulated to make independent decisions must be equipped with skills to identify their learning needs, develop their goals and design learning plan to achieve their goals. These skills are also known as self-directed learning readiness (Payne, Rundquist, Harper, Gahimer, 2013). self-directed learning readiness not only increase self confidence in nursing students but also their ability to learn in new circumstances (Gilany & Abusaad, 2012). Studies from different developed and developing countries shows various levels of self-directed learning readiness among nursing students. A study on pharmacy students at Maryland University United States showed that 74% of students showed high level of readiness for self-directed learning (Huynh, 2009). SDLR was of high level in 77% nursing students of Saudi Arabia (Gilany & Abusaad, 2012). In Karachi Pakistan only 23 % nursing students scored above average on SDL readiness scale and 18% were found below average while more than 50 % were average scorer (Gul, Cassum & Ajani, 2009).

### 3. Purpose

In Khyber Pakhtunkhwa, like any other part of the country there it is necessary to involve nursing students in SDL to keep the pace of current trends in health care and to make them competent and lifelong learners in their professional career. In Peshawar no study regarding SDL readiness on nursing students has been conducted therefore; the aim of this study is to examine self-directed learning readiness of Baccalaureate students in nursing institutions of Peshawar.

### 4. Possible implication/outcomes of the study

Hopefully findings of this study can be used as a guide for improvement of academics and teaching learning process in nursing education. Furthermore it will help in development of student centered nursing curriculum.

### 5. Methods

Quantitative, Descriptive study comprising paper based questionnaire was carry out on second year baccalaureate nursing students to examine their level of readiness for self-directed learning.

### 6. Participants

Convenient sample of (n=91) students from four nursing degree awarding institutions of Peshawar in which n=34 from Institute Nursing Sciences Khyber Medical University (INSKMU), n=34 from School of Nursing Rehman Medical Institute (SONRMI), n=14 from Post Graduate Collage of Nursing and n= 9 from Rufaidah Nursing Collage Peshawar.

### 7. Instrumentation

Self-directed learning readiness scale developed and tested by fisher et al (2001) was used to collect data. Questionnaire was divided in to two sections first section was consist demographic data (age, gender), institution of students. Second section composed of 40 items five point Likert scale of self-directed learning readiness which are further divided into subscales of self-management (15 items), desire for learning (12 items) and self-control (13 items). Five points on the scales indicates (1=strongly disagree, 2=disagree, 3=unsure, 4= agree and 5= strongly disagree). Total score on the scale range from 40-200 in which above 150 score indicates high degree of readiness for Self-directed learning while score below or equal to 150 indicates low level of self-directed learning readiness. Reliability and internal consistency of overall scale and subscale was checked by chronbach's alpha in which alpha coefficient of 40 items scale was ( $\alpha = .945$ ). Subscales alpha coefficient on self-management, desire for learning and self-control were ( $\alpha = .837$ ), ( $\alpha = .809$ ) and ( $\alpha = .890$ ) respectively.

### 8. Ethical consideration

Written informed consent was read and signed by participants before completing the questionnaire. The purpose of study and right of withdraw was clearly stated in inform consent. There was no risk to students from the study. Furthermore confidentiality of participants was protected and no identity was showed.

### 9. Data analysis

Data was entered in statistical package for social sciences (SPSS) version.19 for analyzing. Reliability of overall scale and subscales was checked by applying chronbach's alpha. Mean and standard deviation was used to describe scores on overall scale and subscales. Mean scores were compared according to age and gender of students. Four negatively phrased items on the scale (item#3, 22, 30, 40) were reversely scored. Descriptive and inferential statistics were applied. Independent sample t test was used to determine differences between two groups (age, gender). One way ANOVA test was used for comparison between more than two groups.

$P < 0.05$  was considered significant difference.

## 10. Results

	N	Percentage %
<b>Age :</b>		
18-20	54	59.3%
21-24	37	40.6%
<b>Gender :</b>		
Female	56	61.5%
Male	35	38%
<b>Institutes :</b>		
INS	34	37.4%
SONRMI	34	37.4%
PGCN	14	15%
RNC	9	9.9%
Total	91	

Table: 1 Demographics of students

As shown in table 1 total number of participants who completed questionnaire were (n=91). The age of participants ranged from 18-24 years with the mean age  $20.2 \pm 1.4$  years. (n=54) students were age 18-20 and n=37 students were age 21-24. 56% of students (n=51) were female and 44% of students (n=40) were male. 37.4% students (n=34) were from Institute of Nursing Sciences (INS), 37.4% (n=34) students were from SONRMI, 15.4 % (n=14) students from PGCN, 9.9% (n=9) students were from RNC.

	Total score	Self-management	Desire for learning	Self-control
<b>All students</b>	153±25.2	47.9±8.4	47±8.1	58.2± 10.9
<b>Gender :</b>				
Female	151.±28.5	47.2±9.2	46.1±8.9	57.7 ± 12.2
Male	156.7±19.6	49.2±7.1	48.5 ±6.5	59±8.5
t -test	t=-1.03,P= 0.305	t= -1.088, P= 0.280	t= -1.337, P= 0.185	t=-0.548, P= 0.585
<b>Age :</b>				
18-20 years	155.2±29.3	49.2±9.4	46.6±9.3	59.2±12.1
21-24 years	150.4 ±17.8	46.1±6.6	47.6±6	56.7±8.7
t -test	t=0.873,P= 0.385	t= 1.76, P= 0.082	t= -0.578, P= 0.565	t= 1.105, P= 0.272
<b>Institution:</b>				
INS KMU	141.5±28.5	43.7±9.2	44.4± 9.1	53.3±12.8
SONRMI	171±14.1	53.9 ±5	51.8± 5.3	65.3±5.7
PGCN	142.4±14.5	45.4 ±4.5	41.5 ±6.2	55.4±5
RNC	147±21.9	45.3 ±8.5	47.4±6.1	54.2±11.8
ANOVA	F=12.70, P=0.001	F= 12.47, P= 0.001	F=9.276, P= 0.001	F=10.204,P=0.001

Table 2: Mean ± SD scores of variables

Mean scores of overall scale and three subscales are given in table.2. Mean score on overall scale was  $153 \pm 25.2$  in which male students scored slightly higher ( $156.7 \pm 19.6$ ) than female students ( $151. \pm 28.5$ ). Students with age from 18-20 scored higher ( $155.2 \pm 29.3$ ) than those with age from 21- 24 as they scored  $150.4 \pm 17.8$ . Students from INS, SONRMI, PGCN and RNC scored  $141.5 \pm 28.5$ ,  $171 \pm 14.1$ ,  $142.4 \pm 14.5$  and  $147 \pm 21.9$  respectively on overall scale. Mean score on self-management subscale was  $47.9 \pm 8.4$  in which female students scored  $47.2 \pm 9.2$  while male students scored  $49.2 \pm 7.1$ . Students with age 18-20 scored slightly higher  $49.2 \pm 9.4$  than those age from 21-24 who scored  $46.1 \pm 6.6$  on self-management subscale. Students from INS, SONRMI, PGCN and RNC scored  $43.7 \pm 9.2$ ,  $53.9 \pm 5$ ,  $45.4 \pm 4.5$ , and  $45.3 \pm 8.5$  respectively on self-management subscale. Mean score on desire for learning subscale was  $47 \pm 8.1$  in which female students scored  $46.1 \pm 8.9$  while male student scored ( $48.5 \pm 6.5$ ). students with age 18-20 scored  $46.6 \pm 9.3$  while students with age 21-24 scored  $47.6 \pm 6$  on desire for learning subscale. Students from INS, SONRMI, PGCN and RNC scored  $44.4 \pm 9.1$ ,  $51.8 \pm 5.3$ ,  $41.5 \pm 6.2$ , and  $47.4 \pm 6.1$  on desire for learning subscale. Mean score on self-control subscale was  $58.2 \pm 10.9$  in which female students scored  $57.7 \pm 12.2$  while male students scored  $59 \pm 8.5$ . Students with age 18-20 scored  $59.2 \pm 12.1$  while students with age 21-24 scored  $56.7 \pm 8.7$  on self-control subscale. Students from INS, SONRMI, PGCN and RNC scored  $53.3 \pm 12.8$ ,  $65.3 \pm 5.7$ ,  $55.4 \pm 5$  and  $54.2 \pm 11.8$  on self-control subscale. 60% of students (n=55) scored above 150 which mean they have high level of self-directed learning readiness. At 95% confidence level there was no statistically significance variation between gender groups on total score (t= -1.03, P= 0.305) and also on sub scales there was no statistically significant differences between gender groups as it was (t= -1.088, P= 0.280) on self-management subscale, (t= -1.337, P= 0.185) on desire for learning subscale and (t= -0.548, P= 0.585) on self-control subscale.

There was no statistically significant difference in mean scores of age groups on over all scale ( $t= 0.873$ ,  $P= 0.385$ ) and on subscales of self-management ( $t= 1.76$ ,  $P= 0.082$ ), desire for learning subscale ( $t= - 0.578$ ,  $P= 0.565$ ) and on self-control subscale ( $t= 1.105$ ,  $P= 0.272$ ). Statistical significant was high in means score for different institutions as it was ( $F=12.70$ ,  $P=0.000$ ) on over all scale as well as on subscale of self-management ( $F= 12.47$ ,  $P= 0.000$ ), desire for learning subscale ( $F=9.276$ ,  $P= 0.000$ ) and self-control subscale ( $F= 10.204$ ,  $P=0.000$ )

S/NO	Item	Mean	SD
1	I solve problems using a plan	3.87	1.098
2	I prioritize my work	3.76	1.020
3	I do not manage my time well	2.95	1.336
4	I have good management skills	3.89	1.033
5	I set strict time frame	3.43	1.153
6	I prefer to plan my own learning	4.13	1.013
7	I am systemic in my learning	3.87	1.147
8	I am able to focus on a problem	4.07	.964
9	I need to know why	3.96	1.086
10	I critically evaluate new ideas	3.61	1.233
11	I prefer to set my own learning goals	3.93	1.146
12	I learn from my mistakes	4.12	1.079
13	I am open to new ideas	3.96	1.080
14	When presented with a problem I cannot resolve I will ask for assistance	3.67	1.317
15	I am responsible	3.98	1.299
16	I like to evaluate what I do	4.03	.988
17	I have high personal expectations	4.27	.967
18	I have high personal standards	4.10	1.066
19	I have high beliefs in my abilities	4.19	.982
20	I am aware of my own limitations	3.97	.977
21	I am confident in my ability to search out information	3.94	1.118
22	I do not enjoy studying	3.39	1.512
23	I have a need to learn	4.33	.863
24	I enjoy a challenge	4.13	1.179
25	I want to learn new information	4.33	.983
26	I enjoy learning new information	4.39	1.018
27	I set specific time for my study	3.78	1.303
28	I am self-disciplined	3.99	1.077
29	I like to gather the facts before I make a decision	4.06	1.015
30	I am disorganized	3.6222	1.32035
31	I am logical	3.66	1.077
32	I am methodical	3.74	1.230
33	I evaluate my own performance	3.78	1.166
34	I prefer to set my own criteria on which to evaluate my performance	3.59	1.135
35	I am responsible for my own decisions/actions	4.18	1.051
36	I can be trusted to pursue my own learning	3.94	1.039
37	I can find out information for my self	4.17	1.002
38	I like to make decision for my self	4.19	1.112
39	I prefer to set my own goals	4.14	1.019
40	I am not in control of my life	3.49	1.485

Table 3: Mean scores and standard deviation for items of self-directed learning readiness scale.

## 11. Discussion

The finding from this study showed positive attitude of students toward self-directed learning as majority (60%) of students scored higher than 150 and according to fisher's et al (2001) criteria they have adequate level of self-directed learning readiness. The mean score on 40 items in this study was  $153.2 \pm 25.2$  while mean scores of self-management, desire for learning and self-control were:  $47.9 \pm 8.4$ ,  $47 \pm 8.1$  and  $58.2 \pm 10.9$  respectively. In the study of fisher et al (2001) carried out on Australian under graduate nursing students over all mean score was 150.5 while mean score subscale were: 44.26, 47.31 and 58.98 for self-management, desire for learning and self-control respectively. In the research of Gilany&Abusaad (2012) conducted on Saudi undergraduate student nurses mean score on subscales were: 51.3, 48.4 and 59.9 on self-management, desire for learning and self-control respectively and mean total score was 159.6.

In this study 60% of students scored above 150 which is consistent with the findings of Indian study by Abraham et al (2011) in which 60.2% of first medical students scored above 150 on SDLRS. Mean score on Self-control subscale is higher than self-management and desire for learning similar to the results of research by Qamata-Mtshali (2012); Abraham et al (2011); Gilany&Abusaad (2012). Mean total score of male students were higher than female students and the mean scores of students age 18-20 were higher than those of age 21-24 but this differences were not statistically significant. These findings are dissimilar with findings of Williams et al's (2013) study which concluded that SDL readiness increases as the age increases. In the study of Gilany&Abusaad (2012) it was reported that majority (77%) of students possess high level of readiness for SDL and is not influenced by students demographics and learning style. Difference in mean scores of different institutions was statistically significant and indicates that SDL readiness can be influenced by instructional methods and learning environment. These findings are supported by study of Williams et al it revealed that teaching methodology can have influence on student's readiness for SDL. The study of Shahin&Tork (2013) revealed that instructions along with problem solving strategies improve student nurse's readiness for SDL and critical thinking in Egypt and Kingdom of Saudi Arabia. A Malaysian experimental study of Bagheri et al (2013) concluded that students SDL skills were better who were taught by project based learning strategy than those who taught by using conventional teaching strategy. A research carried out on Taiwanese nursing students suggested that students' readiness toward SDL is significantly influenced by their perception of learning environment and also by their achievement goals (Haug, 2008). While the study of Reviriego et al (2014) concluded on the basis of quasi experimental study that knowledge level of nurses and their level of readiness for SDL improved followed by educational course which satisfy their learning needs.

## 12. Conclusion

On the basis of findings of this study it is concluded that students in different nursing institutions of Peshawar showed satisfactory level of readiness for SDL. These results will help policy makers and curriculum developer in designing student centered curriculum.

## 13. Limitations and Recommendations

This study has limitations like lack of resources, use of self-report questionnaire, small sample size and unequal samples from each institution which could be cause of difference in results. Further research on the topic is recommended with a large sample along with exploration of factors contributed to high or low self-directed learning readiness.

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