Perceptions of Self-Directed Learning among Nursing Students at Private Nursing Institutes in Karachi, Pakistan

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Background: Nursing is a profession where theory and skills runs vice-versa but advancement and new technology increasing challenges for professionals, to update their-selves for which they required to use self-directed learning (SDL). The SDL has become a key concept in nursing education and is considered as an essential as learning of skill for nursing students and nurses to keep them motivated for lifelong learning,
Objective: The objective of this study is to assess the readiness level of nursing students regarding self-directed learning (SDL) currently studying in the BSN program in private nursing institutes.
Study Design:
Method: This study used the descriptive cross-sectional study design.

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Place and Duration of the Study: Study performed in three institutes of nursing, in Karachi, Pakistan, in duration between May to October 2019.
Methodology: 384 BS Nursing students of I- IV year were selected by stratified random sampling technique, 203 were females and 181 males participated. Mostly (200) aged between 26-30. The data was collected using a structured self-administered questionnaire focused on self-directed learning.
Result: Out of 384, 200 (52%) participants were between 26-30 years of age, 203 (52.8%) were females. The participants were belong from three different institutes and enrolled in BSN with the year I, II, III, IV. The 324 (84.3%) participants showed a high level of SDL, which indicates effective SDL abilities in students. All the sub-categories like awareness, evaluation, interpersonal skills, learning strategies, and learning activities were applied ANOVA; major difference observed in all sub-categories and participants' age and total score with age group with P-value = .05.
Conclusion: There is no difference in male and female learning abilities. SDL may enhance confidence and empowerment among students. SDL can be equally beneficial in education and clinical area. To increase SDL, various considerations are required like teacher's role, involvement in curriculum, and other professional or academic bodies that can bring learner-oriented positive teaching-learning environment; hence effective learning strategies can enhance the use of SDL.

1. INTRODUCTION

The health profession is changing time by time thus it demands nurses to advance in terms of theoretical knowledge and nursing skills [1]. Moreover, nursing is a profession where theory and skills are not permanent and changes are taking place dynamically [2]. To face the challenges of the profession, nurses are required to use self-directed learning (SDL) [1]. The SDL has become a key concept in nursing education and is considered as an essential an skill for nursing students and nurses to keep them motivated for lifelong learning, it allows them to stay flexible, open to modifying, and maintaining their professional growth [3]. Nursing education is continuously changing; therefore, learners need to update their knowledge. Furthermore, this is necessary for current millennial and generation Z students who learn through student engagement and not through traditional lectures and teacher-centered learning. Knowles describes self-directed learning as "a process in which individuals take the initiative with or without the help of others in diagnosing their learning needs, formulating goals, identifying human and material resources, and evaluating learning outcomes" [4]. Moreover; Knowles argues that individuals identify their own learning goals and way to achieve them [5].

The advantages of SDL comprise autonomy, professional self-regulation, increased opportunities and motivation and empower the students to promote nursing skills, responsibility, obligation, and determination, which will increase their significant abilities in their professional life, permitting them to adjust to the dynamic clinical setting [6].

Additionally; SDL develops the skills in the learners which are crucial to deal with modern world challenges and sort of learning is different from the conventional learning method since it builds up the abilities required for continuous professional education [7]. This SDL process includes identifying own education requirements, planning learning objectives, recognizing individual needs, developing measurable effects for learning, and assessing learning outcomes [8-10]. The nursing profession needs professionals to be self-confident, responsible, motivated, and able to work and take action independently in an altering health care environment [11-14]. Therefore, the tendency in nursing education has been changed and is moving towards a mature approach of education in which learner is obliged to be self-directed to meet the new professional challenges [2,15-17]. The rationale of the present research study was to investigate the perceptions of nursing learners related to SDL to recommend strategies effectiveness in nursing educational institutions.

2. MATERIALS AND METHODS

A quantitative descriptive cross-sectional study design was used to assess the readiness level of SDL among nursing students in private nursing institutes of Karachi Pakistan. In this research study, the undergraduate nursing students were

belonged from the three private nursing institutes of Karachi.

The target population includes more than 400 undergraduates of Generic BS Nursing (BSN) year I, II, III, and IV. To collect the quantitative data stratified random sampling technique was used [18-19] among both genders, enrolled in BSN degree program, aged between 18-30 years were included. The total sample size is n = 384, calculated by Open Epi software. From whole population, subgroups were developed and data was together [6].

The following number of BSN participants were included from year-I = 93, year II = 100, year III = 90, and year IV = 101. The lottery method was implemented for subjects' selection; each participant was given a number and made the same color and size chits for those numbers. These chits were then collected in a container as the researcher randomly picked chits for the desired sample size [20]. Followed the stratified random sampling chart which shows the number of total students in the respective institutes and calculated sample size in Table 1.

For quantitative study self-rating scale of self-directed learning, SRSSDL_ITA was used which was initially developed by SwapnaNaskar Williamson in its Italian validated version [8]. Williamson S. (2007) [21]. The Italian translation of the SRSSDL has demonstrated good inner consistency (Cronbach's alpha [α] coefficient 0.92). The SRSSDL_ITA consists of 40 items distributed included the following factors: 'Awareness', 'Learning Strategies', 'Learning Activities', 'Interpersonal Skills', and Evaluation'. The responses for each item were rated on a five-point Likert scale: 5 = always, 4 = often, 3 = sometimes, 2 = seldom, 1 = never.

The readiness is assessed as a total score ranging from 60 to 300. A high score indicates a high level of readiness; these scores are then converted into bands of readiness. 60 – 140 = Low, which means that "student needs guidance from teacher. Explicit changes needed for improvement and a possible complete re-structuring for the methods of learning". 141 – 220 = moderate, which indicates that "this is halfway to become a self-directed learner. New avenues for improvement need to be identified. Once these are evaluated, a new approach can be adopted with teacher guidance as necessary". 221 – 300 = high, which "point to effective SDL. The objective is to ensure continuous advancement by identifying strengths

and methods for the continuation of effective SDL for the students" [10].

Statistical software named SPSS (Statistical software for social sciences) V.20 was utilized for data entry and statistical analysis. Participants' characteristics i.e. age; gender, year, and institutions were presented with frequency & percentages. Significant results were gained from the assumption of normality test for factors of SDL score i.e., awareness, learning strategies, learning activities, evaluation, interpersonal skills, and total score of SDL as well. Multiple regression tests were run to determine the predictive effect of independent variables over the total SDL score by considering a p-value = .05.

The permission has been sought from institutional ERC.

Research detail briefing was given and written consents were taken from all study participants, also assured to have a right to withdraw from the research at any time.

3. RESULTS

Table1. Represents demographic characteristics of study participants, there were total of 384 students who participated in this study. Approximately half 200 (52%) of participants were 26-30 years of age, 123 (32.2%) 21-25 years, and 61 (15.8%) <20 years old. 203 (52.8%) were females and rest of them were male. Among enlisted participants, 199 (51.9%) were from institution II, 134 (34.8%) from institution I and 51 (13.3%) from an institution III. One forth participants 101(26.4%) were year-IV students, 100 (26.0%) BSN II, 93(24.2%) BSN I, and 90 (23.4%) BSN III.

Table 2-3 shows the frequency distribution of enrolled participants in levels of SDL. 324 (84.3%) participants had a high level of SDL while 60 (15.7%) had a moderate level of SDL.

It is evident from Table 3 that mean scores sub-categories like awareness, learning strategies, learning activities, evaluation, and interpersonal skills were lower among participants of age group less than 20 years as compared to age groups between 21-25 and 26-30 years. ANOVA test highlighted that there was a major difference in all sub-scale categories and participants' age and total score between participants of age group < 20 years compared to 21-25 and 26-30 years age group p = .05.

Table 4 showed the internal consistency, for each sub-scale. The comprehensive internal consistency measured with the Cronbach's alpha was 0.885.

Table 5 showed the comparison of mean score of self-rating for SDL in learning sub-scale among genders. It is evident that there was no significant difference in mean scores of sub-categories like awareness, learning strategies, learning activities and evaluation between genders. T- test showed that there was significant difference in interpersonal skills category of SDL with P-value = .05.

Table 1. Demographic characteristics of Study Participants (n=384)

Characteristics	N	%
Age		
< 20	61	15.8
21-25	123	32.2
26-30	200	52.0
Gender		
Female	203	52.8
Male	181	47.2
Institutions		
Institution-I	134	34.8
Institution-II	199	51.9
Institution-III	51	13.3
Year		
BSN-I	93	24.2
BSN-II	100	26.0
BSN-III	90	23.4
BSN-IV	101	26.4

Table 2. Frequency distribution of SRSSDL (n=384)

Self-Rating Scale for SDL	n	%
Moderate Level of SDL	60	15.7
High Level of SDL	324	84.3

Table 3. Comparison of mean score of Self-Rating Scale for SDL sub scale among age group (n=384)

Age	< 20		21-25		26-30		ANOVA	
SRSSDL subscales	Mean	SD	Mean	SD	Mean	SD	F-test	*P*-value
Awareness	46.8226	4.67475	49.5122	5.56977	49.0650	6.16203	4.793	.009
Learning Strategies	46.5161	4.43437	49.5285	5.47023	49.4900	6.17499	7.136	.001
Learning Activities	45.6774	5.31553	49.0894	6.31419	49.3850	6.54377	8.583	<0.001
Evaluation	45.9839	5.44267	49.2846	5.71096	49.2450	7.12945	6.708	.001
Interpersonal Skills	46.3871	5.30498	49.8618	5.45822	50.2900	5.96690	11.388	.000

Table 4. SRSSDL reliability: Cronbach's alpha coefficients

SRSSDL subscales	Items (n)	Cronbach's alpha coefficient
Awareness	12	0.877
Learning Strategies	12	0.861
Learning Activities	12	0.840
Evaluation	12	0.850
Interpersonal Skills	12	0.874
Total Score	60	0.885

Table 5. Comparison of mean score of Self-Rating Scale for Self-Directedness in Learning sub scale between genders. (n=384)

Gender	Female		Male		t-test	
SRSSDL subscales	Mean	SD	Mean	SD	t-value	*P*-value
Awareness	48.6502	6.03380	49.0659	5.57283	-.703	.483
Learning Strategies	48.8670	5.81455	49.1978	5.78762	-.559	.577
Learning Activities	48.2020	6.68333	49.2418	6.06656	-1.600	.110
Evaluation	48.3448	6.80705	49.1648	6.23440	-1.234	.218
Interpersonal Skills	48.9507	5.77015	50.1648	5.90489	-2.036	.042

Table 6. Logistic Regression of SRSSDL with Age, Gender, Institutes and Year of Education (n=384)

Characteristics	B	S.E.	Wald	df	P-value	OR	Lower	Upper
Age								
< 20								
21-25	1.451	.436	11.093	1	0.001	4.269	1.817	10.029
26-30	.612	.341	3.217	1	0.073	1.844	.945	3.601
Gender								
Female								
Male	.632	.291	4.701	1	0.030	1.881	1.063	3.331
College Name								
Indus								
Agha Khan	.434	.453	.918	1	0.338	1.544	.635	3.752
Zia Uddin	-.054	.410	.017	1	0.896	0.948	.424	2.118
Discipline								
BSN 4								
BSN 1	1.225	.417	8.651	1	0.003	3.405	1.505	7.705
BSN 2	1.083	.391	7.674	1	0.006	2.952	1.372	6.350
BSN 3	.697	.367	3.595	1	0.058	2.007	.977	4.123

B: Beta coefficient; S.E: Standard Error; Wald: test statistics; df: degree of Freedom; OR: Odds Ratio: C.I: Confidence Interval

Table 6 shows the univariate analysis of the association of variables age, gender, institute, year of education according to the SRSSDL. Participants who lies between age group 21-25 years were 4.26 times more likely high moderate level of SDL in learning age less than 20 years (P= .001). Male participants who were 1.88 times more likely high moderate level of SDL in learning than female (P=.03).

4. Discussion

The current study, most of the nursing students (84.3%) reported a High Level of SDL ability and 15.7% in the moderate level and there was no student in the lower level. This indicates the effectiveness of SDL. Furthermore, almost study results are parallel to study conducted in China showed 55.4% had a high level of SDL ability [22].

In the current study, most of (51.9%) studied participants' average age was between (26-30 years of age). On the other hand, in the study carried out in Nigeria, the majority of (43.9%) nursing students' average age was found below 22 years of age [23].The present study, (52.7%) large numbers of students were females. These findings are nearly equal to the study accomplished in Iran where a large number of (56.10%) studies participants were females [24].

Similarly, another study has reported the highest mean score (4.08±0.5) of all the three components of the SDLRS followed by self-control (3.9±0.9) [25]. Another study showed that the majority of students had a high level of readiness toward SDL; the mean score of self-control was higher than self-management and desire for learning [26]. A study determined that students who were taught with problem-based learning were better toward SDL rather than traditional teaching strategy. SDL is good for students along with teaching strategies [27].

Present study findings showed a positive association between age and SDL. These findings are similar to a study conducted in Spain. Furthermore, SDL is equally essential for

nursing students because it can lead to improving their attitude and skills. It encourages the students to achieve their objectives on their own. SDL is a natural process of learning which plays a vital role in personal growth and professional success [28]. In current study, concerning for SRSSDL consistency, comprehensive internal consistency measured with the Cronbach's alpha was 0.88. These results are comparable with a study performed in South Korea, the Cronbach's alpha coefficients for the SRSSDL consistency were found 0.79 [29]. In this study, awareness sub-scale, mean score of SRSSDL in Learning sub-scale among age group of nursing students were found significant in learning activities (P-value < .001), evaluation (P-value .000), interpersonal skills (P-value .001). These findings were comparable with a study conducted in which also a significant mean score of SRSSDL was found sub-scale that was (*P*-value .005) [30]. In our study there was no significant difference in mean scores of sub-categories like awareness, learning strategies, learning activities, evaluation. and interpersonal skills between different institutes' participants. But, the lowest mean score was self-management (3.7±0.5). Students are highly motivated about SDL and have self-control. However, they need help to improve their self-management skill [11].

Planning and time management are the main components, during which students need extra support for systematic learning [31]. Concerning to gender, the factors of SRSSDL have not been found significantly associated with SDL. This finding is consistent with another study that also reported no significant differences in SDLR based on demographic characteristics. On the contrary, the factors of SRSSDL have been significantly associated with SDL including (awareness *P*-value = .000), (learning strategies *P*-value = .000), (learning method *P*=.000), (interpersonal skills *P*=.000) in a study accomplished in Italy [32].

However, Lack of self-management, school environment, may be attributed to insignificant differences. Another study conducted in Lahore Pakistan revealed no significant correlation between SDLR and academic achievement. This is very likely to affect the association of SDR factors because most of the students' assessments in Pakistan are based on outdated traditional methods; pen-and-paper is especially prevalent. The key factors that influence learning and achievement are the teachers' competency,

teaching methods, and quality of learning materials [33].

Interpersonal communication and corporation with others in different affairs, such as class group debate and conversation with others, visual strategies, such a practical display including multimedia presentation and mock-up play an imperative role in their learning method [30]. Personal factors, educational culture, and social factors play role in promoting self-directed learning [34]. The degree of control the learners are prepared to take over their learning will depend on their attitude, abilities, and personality characteristics [35].

5. CONCLUSION

A high level of SDL is found; which is significantly associated with age. There is no difference in male and female learning abilities. SDL may enhance confidence and empowerment among students. SDL can be equally beneficial in education and clinical area. To increase SDL, various considerations are required like teacher's role, involvement in curriculum and other professional or academic bodies that can bring learner-oriented positive teaching-learning environment hence effective learning strategies can enhance the use of SDL.

6. STRENGTHS OF THE STUDY

It is the first study of its kind carried out in Karachi Pakistan.

7. LIMITATIONS

In this study all three nursing institutes were private institutes; Public nursing institutes may also be added in the future.

This study has been conducted in an urban setting; results may differ from a rural settings.
Only three institutions were assessed therefore results cannot be generalized.

8. RECOMMENDATIONS

8.1 For Practice

It is recommended to make changes in undergraduate curriculum by focusing on SDL. Moreover; it is also recommended to PNC (Pakistan Nursing Council) to conduct teachers training for effective SDL strategies and to ensure all nursing institutions have infrastructure and equipment available for SDL.

8.2 For Research

Study on SDL should include public and private nursing institutions with a large sample sizes.
The Interventional studies may be conducted to see the impact of SDL.

CONSENT

As per international standard and hospital protocol, written informed consent has been taken from entire participants for voluntary participation.

ETHICAL APPROVAL

It is not applicable.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Pryce-Miller M. Are first year undergraduate student nurses prepared for self directed learning?. Nursing times. 2010;106(46):21-4.
2. Shirazi F, Sharif F, Molazem Z, Alborzi M. Dynamics of self-directed learning in M. Sc. nursing students: A qualitative research. Journal of advances in medical education & professionalism. 2017;5(1):33.
3. Örs M. The self-directed learning readiness level of the undergraduate students of midwife and nurse in terms of sustainability in nursing and midwifery education. Sustainability. 2018;10(10):3574.
4. Knowles MS. Self-directed learning: A guide for learners and teachers.
5. Du Toit-Brits C. Towards a transformative and holistic continuing self-directed learning theory. South African Journal of Higher Education. 2018;32(4):51-65.
6. Noh GO, Kim DH. Effectiveness of a self-directed learning program using blended coaching among nursing students in clinical practice: a quasi-experimental research design. BMC medical education. 2019;19(1):1-8.
7. AbuAssi NE, Alkorashy HA. Relationship between learning style and readiness for self-directed learning among nursing students at king Saud University, Saudi Arabia. International journal of advanced nursing studies. 2016;5(2):109-16.
8. Cadorin L, Suter N, Saiani L, Naskar Williamson S, Palese A. Self-Rating Scale of Self-Directed Learning (SRSSDL): Preliminary results from the Italian validation process. Journal of Research in Nursing. 2011;16(4):363-73.
9. Cadorin L, Ghezzi V, Camillo M, Palese A. The self-rating scale of self-directed learning tool: Findings from a confirmatory factor analysis. Journal of Nursing Education and Practice. 2017;7(2):31-7.
10. Cadorin L, Bortoluzzi G, Palese A. The self-rating scale of self-directed learning (SRSSDL): A factor analysis of the Italian version. Nurse Education Today. 2013;33(12):1511-6.
11. Jouhari Z, Haghani F, Changiz T. Factors affecting self-regulated learning in medical students: a qualitative study. Medical education online. 2015;20(1):28694.
12. Cheng SF, Kuo CL, Lin KC, Lee-Hsieh J. Development and preliminary testing of a self-rating instrument to measure self-directed learning ability of nursing students. International journal of nursing studies. 2010;47(9):1152-8.
13. Al-Nasseri Y. The Effectiveness Of Self-Directed Learning On The Professional Development Of Pre-Registration Nursing Students: A Systematic Review Of The Literature. Journal of Kufa for Nursing Science Vol. 2014;4(1).
14. Shen WQ, Chen HL, Hu Y. The validity and reliability of the self-directed learning instrument (SDLI) in mainland Chinese nursing students. BMC medical education. 2014;14(1):1-7.
15. Huston C. The impact of emerging technology on nursing care: Warp speed ahead. The Online Journal of Issues in Nursing. 2013;18(2).
16. Cadorin L, Cheng SF, Palese A. Concurrent validity of self-rating scale of self-directed learning and self-directed learning instrument among Italian nursing students. BMC nursing. 2016;15(1):1-0.

17. Cadorin L, Rei A, Dante A, Bulfone T, Viera G, Palese A. Enhancing self-directed learning among Italian nursing students: A pre-and post-intervention study. Nurse education today. 2015;35(6):746-53.

18. Houser J. Nursing Research: Reading, Using and Creating Evidence: Reading, Using and Creating Evidence. Jones & Bartlett Learning; 2016.

19. McLeod SA. Qualitative Quantitative Simply Psychology. 2008.

20. Williamson SN. Development of a self-rating scale of self-directed learning. Nurse researcher. 2007;14(2).

21. London M, Smither JW. Empowered self-development and continuous learning. Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management. 1999;38(1):3-15.

22. Alkorashy HA, Assi NE. Readiness for self-directed learning among bachelor nursing students in Saudi Arabia: A survey-based study. International Journal of Nursing Education and Research. 2016;4(2):187-94.

23. Abedini Z, Parvizy S. The effects of group discussion and self-learning on nursing students' civility. Iranian journal of nursing and midwifery research. 2019 Jul;24(4):268.

24. JIANG M, BAI Q, CHEN CR, XU S. The relationship between self-directed learning ability and clinical communication competence among nursing students during clinical practice. Chinese Journal of Nursing Education; 2016.

25. Nizami R, Latif MZ, Wajid G. Preferred learning styles of medical and physiotherapy students. Annals of King Edward Medical University. 2017;23(1).

26. Rascón-Hernán C, Fullana-Noell J, Fuentes-Pumarola C, Romero-Collado A, Vila-Vidal D, Ballester-Ferrando D. Measuring self-directed learning readiness in health science undergraduates: A cross-sectional study. Nurse education today. 2019;83:104201.

27. Gebru AA, Ghiyasvandian S, Mohammodi N, Kidane M. A self-directed in learning among undergraduate nursing students' in school of nursing and midwifery, TUMS, Tehran, Iran. Education Journal. 2015;4(4):158-65.

28. Oktaviani M, Elmanora E, Doriza S. Students' Self-Directed Learning and Its Relation to the Independent Learning-Independent Campus Program.

29. Behar-Horenstein LS, Beck DE, Su Y. An initial validation study of the self-rating scale of self-directed learning for pharmacy education. American journal of pharmaceutical education. 2018;82(3).

30. Darling-Hammond L, Flook L, Cook-Harvey C, Barron B, Osher D. Implications for educational practice of the science of learning and development. Applied Developmental Science. 2020;24(2):97-140.

31. Cadorin L, Rei A, Dante A, Bulfone T, Viera G, Palese A. Enhancing self-directed learning among Italian nursing students: A pre-and post-intervention study. Nurse education today. 2015;35(6):746-53.

32. Ojekou GP, Okanlawon FA. Nursing Students' Readiness for Self-Directed Learning and Its Effect on Learning Outcome in South-West Nigeria. Open Journal of Nursing. 2019;9(6):586-601.

33. Mulube SM, Jooste K. First-year learner nurses' perceptions of learning motivation in self-directed learning in a simulated skills laboratory at a higher education institution: part 1: contemporary issues in nursing. South African Journal of Higher Education. 2014;28(6):1776-94.

34. Horntvedt ME, Nordsteien A, Fermann T, Severinsson E. Strategies for teaching evidence-based practice in nursing education: a thematic literature review. BMC medical education. 2018;18(1):1-1.

35. Nizami R, Latif MZ, Wajid G. Preferred learning styles of medical and physiotherapy students. Annals of King Edward Medical University. 2017;23(1).

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