Original Article

Self-Directed Learning Readiness Among Undergraduate Nursing Students in Mirpurkhas District, Sindh, Pakistan

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Abstract

Background: Self-directed learning is an important component of nursing education, enabling students to identify and address their individual learning needs, interests, and strengths. Readiness for self-directed learning is essential for effective learning and lifelong professional development. It encourages students to take responsibility for their learning and develop the ability to learn independently.

Objective: This study aimed to assess self-directed learning readiness among undergraduate nursing students in Mirpurkhas District, Sindh, Pakistan.

Methods: This descriptive cross-sectional study was conducted at the College of Nursing, Mirpurkhas, from December 2024 to February 2025. A convenience sample of 126 undergraduate nursing students completed the 40-item Self-Directed Learning Readiness Scale for Nursing Education (SDLRS-NE), which assesses three domains: self-management, desire for learning, and self-control. The scale uses a five-point Likert response format, with total scores ranging from 40 to 200; a score of greater than 150 was considered indicative of readiness for self-directed learning. Data were analyzed using SPSS version 22.

Findings: The mean total SDLRS-NE score was 155.39 out of 200 (mean item score: 3.88). Mean subscale scores were 59.92 out of 75 for self-control (3.99 per item), 47.83 out of 60 for desire for learning (3.99 per item), and 47.64 out of 65 for self-management (3.66 per item). Overall, 74.7% of item responses were favourable.

Conclusion: Undergraduate nursing students in this sample demonstrated a good level of self-directed learning readiness at the group level, with the mean total score exceeding the established threshold of 150. Self-management was the weakest domain, highlighting the need for educational support to strengthen students' independent learning and time-management skills.

Keywords: Self-Directed Learning; Education, Nursing; Students, Nursing; Educational Measurement; Learning; Pakistan.

Introduction

Self-directed learning (SDL) is an innovative approach in medical education that enhances students' individual learning abilities. Consequently, educational institutions are shifting from teacher-centered instructional approaches towards student-centered learning. In the traditional model, teachers play a central role in delivering knowledge and directing students' learning experiences. Students are primarily passive recipients of information, relying on teachers rather than engaging in independent exploration. As a result, they have fewer opportunities to develop critical thinking,

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creativity, and autonomy in pursuing their academic interests.[1] In modern medical education, SDL has become an increasingly preferred approach, allowing learners to identify their learning gaps, recognize relevant learning resources, and adopt suitable strategies to achieve their academic goals. **Students therefore take an active role and greater responsibility for their educational activities.**[2] In accordance with the principles of andragogy, independent learning helps learners identify and fulfil their educational needs. In this approach, the educator acts as an adviser, while students take charge of their own education. Knowles described self-directed learning as a process in which individuals take the initiative, with or without help from others, to manage their own educational journey.[3]

Self-directed learning readiness (SDLR) enables students to recognize their strengths and limitations and select appropriate strategies and resources to acquire knowledge. It promotes independent learning, motivation, critical thinking, and self-assessment, allowing learners to monitor and evaluate their own progress.[4,5] SDLR also enables learners to develop strategies for acquiring new knowledge and skills within the educational environment.[6,7]

Nursing education, as an integral component of healthcare education, also emphasizes self-directed learning as an essential competency for promoting lifelong learning, continuous professional development, and career progression.[8–10] Assessing students' readiness for self-directed learning is therefore important for identifying areas of strength and those requiring educational support. This study aimed to assess self-directed learning readiness among undergraduate nursing students in Mirpurkhas District, Sindh, Pakistan.

Methods

This descriptive cross-sectional study was conducted from December 2024 to February 2025 at the College of Nursing, Mirpurkhas, following approval from the Institutional Ethical Review Board (letter no. MMC/ERC/2024/April/2). Of the 183 undergraduate nursing students enrolled at the College, 126 students who agreed to participate and provided written informed consent were included in the study. Participants were recruited using a non-probability convenience sampling technique, yielding a participation rate of 68.9%.

A structured questionnaire was used to collect data. It comprised two sections: demographic characteristics and a self-directed learning readiness scale. Self-directed learning readiness was measured using the Self-Directed Learning Readiness Scale for Nursing Education (SDLRS-NE), developed by *Fisher et al.*[2] The scale consists of 40 items divided into three subscales: self-management (13 items), desire for learning (12 items), and self-control (15 items). Each item is rated on a five-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = unsure, 4 = agree, and 5 = strongly agree.

Four items are negatively worded ("I do not manage my time well," "I do not enjoy studying," "I am disorganized," and "I am not in control of my life"). These items were reverse-scored (1 = 5, 2 = 4, 3 = 3, 4 = 2, and 5 = 1) to ensure that higher scores consistently indicated greater readiness for self-directed learning. Subscale scores were calculated by summing the respective item scores (self-management: 13–65; desire for learning: 12–60; self-control: 15–75), while the total score was calculated by summing all 40 items (range: 40–200). A total score greater than 150 was considered indicative of readiness for self-directed learning, whereas a score of 150 or below indicated low readiness.[2]

Data were entered and analyzed using SPSS version 22. Frequencies and percentages were calculated for individual item responses. Means and standard deviations were calculated for item scores after reverse scoring. Subscale and total scores were calculated by summing the corresponding item scores. Descriptive statistics were used to summarize the findings.

Results

The participants' ages ranged from 18 to 32 years, with a mean age of 21.3 years. All participants were female students enrolled at the College of Nursing, Mirpurkhas. The mean scores for the three domains of self-directed learning readiness (self-management, desire for learning, and self-control), along with the overall SDLR score, are presented in Table 1. The mean total SDLR score was 155.39 out of a possible 200, exceeding the established threshold of 150 for readiness at the group level. Among the three subscales, self-control and desire for learning

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had the highest mean item scores (3.99 each), whereas self-management had the lowest (3.66). These findings indicate relatively stronger self-control and desire for learning, while self-management was comparatively weaker among the participants.

Tables 2–4 present the item-wise response distributions for the self-management (13 items), desire for learning (12 items), and self-control (15 items) subscales, respectively. They include the frequencies and percentages of participants selecting each response option (strongly disagree, disagree, unsure, agree, and strongly agree), along with the mean and standard deviation for each item. Item-level means and standard deviations were calculated using the 1–5 scoring scale after reverse-scoring the four negatively worded items (marked †). Percentages are based on the number of valid responses to each item. The self-management subscale had a mean score of 47.64 out of a possible 65, corresponding to a mean item score of 3.66. The highest mean scores were observed for the items 'I am confident in my ability to search out information' (4.17 ± 0.90), 'I prioritize my work' (4.16 ± 0.87), and 'I prefer to plan my own learning' (4.11 ± 0.78). In contrast, the lowest mean scores were observed for 'I set strict time frames' (2.91 ± 1.14), 'I do not manage my time well' (2.97 ± 1.21, after reverse-scoring), and 'I set specific times for my study' (3.14 ± 1.28). These findings suggest that time-management behaviours were comparatively weaker aspects of self-management among the participants.

Desire for learning had a mean subscale score of 47.83 out of a possible 60, corresponding to a mean item score of 3.99. The highest-scoring items were 'I want to learn new information' (mean 4.37 ± 0.81) and 'I learn from my own mistake' (mean 4.35 ± 1.01). The lowest-scoring items were 'When presented with a problem I cannot resolve, I will ask for assistance' (mean 3.14 ± 1.17) and 'I do not enjoy studying' (mean 3.29 ± 1.37, after reverse-scoring).

Table 1. Summary of Self-Directed Learning Readiness Scores Among Undergraduate Nursing Students (n = 126)

SDLR domain	Number of items	Possible score range	Mean subscale score	Mean item score (1–5)
Self-management	13	13–65	47.64	3.66
Desire for learning	12	12–60	47.83	3.99
Self-control	15	15–75	59.92	3.99
Overall SDLR	40	40–200	155.39	3.88

Note: SDLR = self-directed learning readiness. Subscale and total scores were calculated by summing item scores after reverse-scoring negatively worded items.

Table 2: Item-Wise Response Distribution and Descriptive Statistics for the Self-Management Subscale of the SDLRS-NE

Item	Strongly Disagree n (%)	Disagree n (%)	Unsure n (%)	Agree n (%)	Strongly Agree n (%)	Mean ± SD
I solve my problems using a plan	5 (4.0)	8 (6.4)	11 (8.8)	73 (58.4)	28 (22.4)	3.89 ± 0.96
I prioritize my work	3 (2.4)	3 (2.4)	12 (9.5)	61 (48.4)	47 (37.3)	4.16 ± 0.87
I do not manage my time well †	11 (8.7)	43 (34.1)	17 (13.5)	41 (32.5)	14 (11.1)	2.97 ± 1.21
I have good management skills	9 (7.2)	3 (2.4)	9 (7.2)	74 (59.2)	30 (24.0)	3.90 ± 1.03
I set strict time frames	12 (9.4)	40 (31.5)	33 (26.2)	29 (22.8)	12 (9.4)	2.91 ± 1.14
I prefer to plan my own learning	2 (1.6)	3 (2.4)	11 (8.7)	73 (57.9)	37 (29.4)	4.11 ± 0.78
I am systematic in my learning	2 (1.7)	6 (5.0)	42 (35.0)	48 (40.0)	22 (18.3)	3.68 ± 0.89
I am confident in my ability to search out information	3 (2.4)	2 (1.6)	18 (14.3)	50 (39.7)	53 (42.1)	4.17 ± 0.90
I set specific times for my study	17 (13.6)	27 (21.6)	19 (15.2)	46 (36.8)	16 (12.8)	3.14 ± 1.28
I am self-disciplined	6 (4.8)	13 (10.3)	12 (9.5)	67 (53.2)	28 (22.2)	3.78 ± 1.06
I am disorganized †	37 (29.6)	37 (29.6)	21 (16.8)	20 (16.0)	10 (8.0)	3.57 ± 1.28
I am methodical	6 (4.8)	19 (15.2)	42 (33.6)	40 (32.0)	18 (14.4)	3.36 ± 1.06
I can be trusted to pursue my own learning	1 (0.8)	5 (4.0)	17 (13.5)	73 (57.9)	30 (23.8)	4.00 ± 0.78

Note: † Negatively worded items, reverse-scored before calculating mean scores. Response frequencies and percentages are based on valid responses for each item. SD = standard deviation; SDLRS-NE = Self-Directed Learning Readiness Scale for Nursing Education.

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Table 3: Item-Wise Response Distribution and Descriptive Statistics for the Desire for Learning Subscale of the SDLRS-NE

Item	Strongly Disagree n (%)	Disagree n (%)	Unsure n (%)	Agree n (%)	Strongly Agree n (%)	Mean ± SD
I need to know "why"?	7 (5.6)	9 (7.1)	16 (12.7)	48 (38.1)	46 (36.5)	3.93 ± 1.13
I critically evaluate new ideas	3 (2.4)	5 (4.0)	13 (10.3)	64 (50.8)	41 (32.5)	4.07 ± 0.90
I learn from my mistakes	6 (4.8)	4 (3.2)	2 (1.6)	42 (33.3)	72 (57.1)	4.35 ± 1.01
I am open to new ideas	3 (2.4)	3 (2.4)	16 (12.8)	58 (46.4)	45 (36.0)	4.11 ± 0.89
When presented with a problem I cannot resolve, I will ask for assistance	9 (7.1)	35 (27.8)	27 (21.4)	39 (31.0)	16 (12.7)	3.14 ± 1.17
I like to evaluate what I do	4 (3.2)	7 (5.6)	13 (10.3)	64 (50.8)	38 (30.2)	3.99 ± 0.96
I do not enjoy studying †	31 (24.6)	35 (27.8)	14 (11.1)	32 (25.4)	14 (11.1)	3.29 ± 1.37
I have a need to learn	4 (3.2)	3 (2.4)	11 (8.7)	52 (41.3)	56 (44.4)	4.21 ± 0.93
I enjoy a challenge	2 (1.6)	9 (7.1)	12 (9.5)	45 (35.7)	58 (46.0)	4.17 ± 0.98
I want to learn new information	2 (1.6)	2 (1.6)	8 (6.3)	50 (39.7)	64 (50.8)	4.37 ± 0.81
I enjoy learning new information	1 (0.8)	4 (3.2)	11 (8.8)	49 (39.2)	60 (48.0)	4.30 ± 0.83
I like to gather the facts before I make a decision	3 (2.4)	10 (8.1)	21 (16.9)	55 (44.4)	35 (28.2)	3.88 ± 0.99

Note: † Negatively worded item, reverse-scored before calculating the mean score. Response frequencies and percentages are presented as originally recorded. Higher mean scores indicate greater self-directed learning readiness. SD = standard deviation.

Table 4. Item-Wise Response Distribution and Descriptive Statistics for the Self-Control Subscale of the SDLRS-NE

Item	Strongly Disagree n (%)	Disagree n (%)	Unsure n (%)	Agree n (%)	Strongly Agree n (%)	Mean ± SD
I am able to focus on a problem	6 (4.8)	9 (7.2)	7 (5.6)	62 (49.6)	41 (32.8)	3.98 ± 1.05
I prefer to set my own learning goals	5 (4.0)	18 (14.3)	8 (6.3)	53 (42.1)	42 (33.3)	3.87 ± 1.15
I am responsible	9 (7.2)	8 (6.4)	11 (8.8)	52 (41.6)	45 (36.0)	3.93 ± 1.17
I have high personal expectations	6 (4.8)	5 (4.0)	17 (13.5)	36 (28.6)	62 (49.2)	4.13 ± 1.10
I have high personal standards	2 (1.6)	5 (4.0)	16 (12.8)	58 (46.4)	44 (35.2)	4.10 ± 0.88
I have high beliefs in my abilities	0 (0.0)	3 (2.4)	4 (3.2)	72 (57.1)	47 (37.3)	4.29 ± 0.65
I am aware of my own limitations	2 (1.6)	4 (3.2)	8 (6.4)	56 (44.8)	55 (44.0)	4.26 ± 0.84
I am logical	7 (5.6)	14 (11.2)	22 (17.6)	63 (50.4)	19 (15.2)	3.58 ± 1.06
I evaluate my own performance	3 (2.4)	4 (3.2)	17 (13.5)	72 (57.1)	30 (23.8)	3.97 ± 0.85
I prefer to set my own criteria on which to evaluate my performance	3 (2.4)	13 (10.3)	17 (13.5)	61 (48.4)	32 (25.4)	3.84 ± 1.00
I am responsible for my own decisions/actions	3 (2.4)	6 (4.8)	3 (2.4)	60 (48.0)	53 (42.4)	4.23 ± 0.90
I can find out information for myself	4 (3.2)	8 (6.4)	8 (6.4)	69 (55.2)	36 (28.8)	4.00 ± 0.95
I like to make decisions for myself	2 (1.6)	2 (1.6)	10 (7.9)	64 (50.0)	48 (37.5)	4.20 ± 0.80
I prefer to set my own goals	2 (1.6)	3 (2.4)	8 (6.4)	56 (44.8)	56 (44.8)	4.29 ± 0.82
I am not in control of my life †	31 (24.6)	29 (23.0)	23 (18.3)	25 (19.8)	18 (14.3)	3.24 ± 1.39

Note: † Negatively worded item, reverse-scored before calculating the mean and standard deviation. Response frequencies and percentages are presented as originally recorded. Higher mean scores indicate greater self-directed learning readiness. SD = standard deviation.

The self-control subscale had a mean score of 59.92 out of a possible 75, corresponding to a mean item score of 3.99. The highest-scoring items were "I have high beliefs in my abilities" (4.29 ± 0.65) and "I prefer to set my own goals" (4.29 ± 0.82). The lowest-scoring items were "I am not in control of my life" (3.24 ± 1.39, after reverse-scoring) and "I am logical" (3.58 ± 1.06

Across all 40 items, a total of 5,020 valid responses were recorded. Of these, 3,750 (74.7%) were favourable (scores 4–5), 610

(12.2%) were neutral (score 3), and 660 (13.1%) indicated low readiness (scores 1–2).

Discussion

Self-directed learning (SDL) plays an important role in enhancing academic performance and developing clinical competence among nursing students. Promoting readiness for SDL may help students become more independent, motivated, and lifelong learners, thereby supporting their academic and professional development. Assessing students' readiness for SDL can help teachers identify their learning needs and adopt appropriate teaching strategies to foster independent learning. Previous studies have also highlighted the importance of SDL as an effective learning approach in nursing education.[11,12]

As explained by Parbati Nepal *et al.*, assessing students' readiness for SDL enables nursing instructors to identify and adopt appropriate teaching methods that promote independent learning.[3] Nursing students and practising nurses need to remain updated with advances in scientific knowledge and develop the skills required to provide high-quality patient care. SDL provides an effective approach to supporting these educational and professional requirements. Similarly, Abdou *et al.* highlighted the importance of SDL in nursing education.[5]

In the present study, the mean total SDLRS-NE score was 155.39 out of a possible 200, exceeding the established cut-off score of 150 for readiness for self-directed learning. Furthermore, 74.7% of the valid item responses were favourable (scores 4–5), while 12.2% were neutral and 13.1% were unfavourable (scores 1–2). These findings suggest a generally favourable level of self-directed learning readiness among the participating nursing students, as reflected by the overall mean score and distribution of item responses.

The favourable responses suggest that students generally demonstrated positive learning characteristics, including an interest in acquiring new knowledge, confidence in their learning abilities, and awareness of their strengths and limitations. The relatively high mean item scores for self-control and desire for learning further indicate positive characteristics related to personal responsibility, motivation, and willingness to learn. These attributes are important for developing independent learners who actively participate in their educational and professional development.

However, self-management had the lowest mean item score among the three domains. This suggests that time management, study planning, and organization of learning activities may require further improvement. Although students may demonstrate a strong desire to learn, their ability to translate this motivation into well-organized and consistent learning practices remains an important aspect of self-directed learning readiness. This finding highlights the need to strengthen students' time-management and self-management skills through structured learning activities and appropriate academic guidance.

In the present study, self-directed learning readiness was assessed using the three subscales of the Self-Directed Learning Readiness Scale for Nursing Education (SDLRS-NE): self-management, desire for learning, and self-control. The mean item scores were similar for self-control (3.99) and desire for learning (3.99), whereas self-management had a comparatively lower mean item score (3.66). These findings suggest that students demonstrated relatively stronger motivation to learn and personal responsibility than their ability to manage and organize their learning activities.

Teachers and nursing instructors have an important role in facilitating SDL by providing appropriate guidance, learning resources, and opportunities for independent study. Rather than relying exclusively on traditional teacher-centred approaches, instructors should encourage students to identify their learning needs, establish learning objectives, seek relevant information, and evaluate their own progress. Regular feedback, problem-based learning, case-based discussions, and reflective learning activities may further promote the development of self-directed learning skills among nursing students.

Students with greater readiness for SDL are better equipped to manage their study schedules, address learning-related challenges, establish personal learning objectives, and take responsibility for their educational progress. They do not rely entirely on teachers for acquiring knowledge but regard instructors as facilitators and sources of guidance. Developing these capabilities during nursing education may

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help prepare students for lifelong learning, continuing professional development, and the delivery of high-quality patient care.

Various characteristics are associated with SDL, including learner autonomy, continuous learning, self-discovery, and self-improvement. Self-directed learners are generally able to evaluate their learning, monitor their progress towards achieving educational goals, and assess their understanding of course content. They also demonstrate the ability to use their knowledge and skills to address learning-related challenges independently. Sandhya Shrestha *et al.* highlighted the importance of SDL among nurses working in different healthcare settings and discussed the challenges and barriers encountered in professional practice, emphasizing the need to prioritize SDL to address these challenges.[10]

Nursing students need to develop the ability to adapt to the evolving healthcare environment. This requires continuous updating of clinical knowledge and skills, engagement with evidence-based practice, and the ability to identify and address individual learning needs. Promoting SDL during nursing education may therefore contribute to the development of competent, adaptable, and lifelong learners.

Conclusion

Using the validated SDLRS-NE scoring system (total score range: 40–200; a score greater than 150 indicating readiness), undergraduate nursing students in this study achieved a mean total score of 155.39, exceeding the established threshold and indicating an overall favourable level of self-directed learning readiness at the group level. Self-control (3.99 per item) and desire for learning (3.99 per item) were the strongest domains, whereas self-management (3.66 per item) was comparatively weaker, particularly in relation to time-management practices, such as setting strict time frames and allocating specific times for study. Nursing programmes should build on students' existing motivation to learn while strengthening their time-management and study-planning skills through appropriate educational strategies to further enhance their readiness for self-directed learning.

Limitations of the Study

This study had several limitations. First, it was conducted at a single nursing institution in Mirpurkhas, Sindh, which may limit the generalizability of the findings to nursing students in other institutions and geographical settings. Second, non-probability convenience sampling was used, which may have introduced selection bias. Of the 183 enrolled students, 126 participated, resulting in a participation rate of 68.9%; therefore, non-participation may also have influenced the findings. Third, data were collected using a self-reported questionnaire, making the responses susceptible to recall and social desirability bias. Furthermore, the cross-sectional descriptive design provided an assessment of self-directed learning readiness at a single point in time and did not allow evaluation of changes in readiness over time or examination of factors associated with it. Future multicentre studies involving larger and more representative samples, as well as longitudinal designs, are recommended to provide a broader understanding of self-directed learning readiness among nursing students.

Recommendations and Future Research

Nursing institutions should incorporate teaching strategies that promote self-directed learning, with particular emphasis on improving students' time management, study planning, and organization skills. Problem-based learning, reflective activities, and regular feedback may help strengthen these competencies. Future multicentre and longitudinal studies involving larger, representative samples are recommended to assess self-directed learning readiness across different nursing institutions and examine its relationship with academic performance and clinical competence. Intervention-based studies should also evaluate the effectiveness of educational strategies in improving self-directed learning readiness.

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