# **Self-Directed Learning Readiness Level and Personality Traits Among Nursing Students**

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#### Abstract:

**Background:** Assessing self-directed learning (SDL) readiness and personality traits among nursing students can help in identifying some educational and psychological factors that can be considered to create a positive psychological learning atmosphere in nursing education. **Objective**: assess self-directed learning readiness level and personality traits among nursing students. Setting: All academic departments at the Faculty of Nursing, Alexandria University. Subjects: comprised of 350 nursing students selected randomly in the first semesters of the academic year 2020-2021. Tools: Two tools were used to collect data 1- Self Rating Scale of Self-Directed Learning to assess the level of nursing students' self-directed learning readiness. 2- Big Five Personality Inventory to assess nursing students' personality traits. Results: The majority of nursing students (86.0%) have a high level of self-directed learning readiness while the rest (14%) of them have a moderate level. Furthermore, they have a higher mean score of agreeableness and conscientiousness personality traits and followed by openness, extraversion, and finally neuroticism. Also, it was observed that neuroticism of them has a significant negative correlation with total self-directed learning. Awareness and interpersonal skills aspects of SDL were positively correlated with openness and extraversion personality traits respectively. Conclusion: Self-directed learning (SDL) cannot be assessed without considering personality traits among nursing students. Thus personality traits assessment is considered the cornerstone of SDL among nursing students that affect their learning preferences or desires for accepting responsibility for their learning process. Recommendation: Educational workshops should be conducted for all nursing educators about the assessment of students' SDL readiness and personality traits.

**Keywords**: Self-directed learning, Personality traits, Nursing student

#### **Introduction:**

The outbreak of the Corona virus (COVID-19) pandemic affected learning activities worldwide, leading to the widespread closures of schools

and the transition to distance learning. It changes learning strategies by relying more on using technology in education. These changes make learners assign more responsibility for their learning (Sen et al,2020). Moreover, explosion of knowledge, the rapid development of technology, and the accelerated rate of changes in all aspects of life have led to transformation in education (Lubbe & Mentz,2021). Therefore, traditional nursing education and training no longer effectively assist students to meet future learning desires (Du toit-Britis ,2019). Accordingly, attention has been shifted to lifelong continuous learning which is achieved through SDL approaches (Abdou, Sleem, EL-Wkeel,2021).

Self-directed learning is disposition that reflects an individual's preference to be in charge of their learning process; ability conceptualize, plan, implement, and evaluate their academic experience. It keeps learners to be goal-oriented and work independently (Olivier&Wentworth, 2021). SDL can with personality associated characteristics of learners that affect students' learning preferences or desires for accepting responsibility for their thoughts and actions as learners (Alfian, 2019). Personality traits play an important role in the learning process as they encompass different personal capabilities and strengths that make students more confident to face any experiential challenge Rajapakshe, 2017; Nyakecho & Owino-O,2020 ). Also, they are a dynamic organization of those psycho-socio physical systems within the individual that determine students' unique the learning adjustments to environment (Kothari& Pingle, 2015).

Personality traits are considered the foundations for self-direction readiness in learning processes. They can represent an "organizing scheme that helps in understanding the relation between self-direction readiness and

personality trait in learning process ( Cazan & Schiopca, 2014). Studies proved that self-directed learning can't achieved without considering personality traits, and it is connected with a wide range of personality traits (Morris, 2019; Kirwan, et al, 2014). Five- Factor Model (FFM) is the most commonly taxonomy used classifying personality traits. It is considered as powerful and broad measure of normal personality (Nunes et al.,2018). FFM is based on the idea that people describe themselves and others in terms of five fundamental dimensions of individual differences (Greinacher et al,2021).Big personality traits include openness (curious creative), conscientiousness (reliable, trustworthy, organized), and extraversion (sociable, talkative and outgoing),agreeableness (participative, helpful and kindness), and neuroticism (inverse emotional stability) (Misron& Hee,2021 Khan,2020 ).

Assessing SDL readiness and personality traits among nursing students can help in identifying some educational and psychological factors that can be considered to create positive psychological learning atmosphere in nursing education. Also, it raises awareness of nursing educators with significance of selection learning strategies and activities suitable for students' traits and foster them to be self directed in their learning. In Egypt, self directed learning readiness among postgraduate nursing students was investigated by Abd El-Samad (2012) who found that approximately two thirds of the postgraduate nursing students had high readiness toward SDL. However, it has not been yet studied among undergraduate nursing students Egypt. Additionally, in personality traits have not been investigated among nursing students despite its significant effect on nursing education. Hence, the studying of SDL readiness and personality traits may be promising to increase the quality of nursing education and professional performance.

# Aim of the study:

This study aims to assess self-directed learning readiness level and personality traits among nursing students.

# Research Questions:

- What is the self directed learning readiness level among nursing students?
- What are the personality traits among nursing students?

# Materials and Method

#### **Materials**

# Research design:

**Tools:** two tools were used in this study for data collection.

# Tool I: Self Rating Scale of Self-Directed Learning (SRSSDL)

This scale was developed Williamson (2007). It was adopted by the researcher to assess level of nursing students' self-directed learning readiness. It consists of 60 items categorized under five broad areas of self-directed learning includes; awareness(12items), learning strategies (12 items), learning activities (12 items), evaluation (12 items), interpersonal skills (12items). Students' Responses were measured on the 5 point Likert scale as follows; always (5), often (4), sometimes (3), seldom (2), never (1). The scoring system of this tool was ranged from 60-300 distributed as follows: 60-140 indicates low level of self-directed learning, 141-220 indicates moderate level of self-directed learning and 221-300 A descriptive design was used in this study.

# Setting:

This study was carried out at the Nursing, Alexandria of University in the following departments namely; Medical Surgical Nursing, Critical care and emergency Nursing, Pediatric Nursing, Obstetric and Nursing Gynecological nursing, Administration, Psychiatric and Mental Health Nursing, Community Health Nursing and Gerontological Nursing.

# Subjects:

The subjects of this study comprised of 350 Students who selected randomly from all nursing students (N=1704) at the first semesters of the academic year 2020-2021. Total sample size distributed using a proportional allocation technique to recruit and represent students in all academic semesters.

indicates high level of self-directed learning. The scale was proved to be valid and reliable, since it was applied on nursing students in Alexandria at Faculty of Nursing which demonstrated high testretest reliability(r= 0,72) ( Abd El-Samad ,2012 ).

# **Tool II: Big Five personality Inventory:**

This inventory was developed by John and Srivastava (1999) to assess individual on the big five factors of personality. It was adopted by the researcher to assess nursing students' personality traits. It consists of 44 items including 16 reversed items and categorized under five broad areas of personality traits which are: extraversion, neuroticism, openness, agreeableness and conscientiousness. Extraversion includes 8 items (e.g. I am talkative), Neuroticism includes 8 items( e.g. I can be tense), Openness includes 10 items( e.g. I am creative and deep thinker), Agreeableness has 9 items(e.g. I like to cooperative with

others),and Conscientiousness has 9items (e.g. I am reliable worker). Scale items was measured on five point Likert – type scale ranged from strongly agrees (5), Agree (4), undecided (3), disagree (2), to strongly disagree (1). The test was proved to be valid and reliable, it demonstrated high test-retest reliability (r=0,7) (Hee ,2014).

#### Method

- Permission to conduct the study was obtained from the Research Ethics Committee (REC) Faculty of Nursing, Alexandria University.
- Permission to conduct the study was obtained from the Dean of the Faculty of Nursing and the Heads of all scientific departments, Alexandria University.
- 3. Tool I and II were translated into Arabic by researcher, and were tested for its content validity by five experts in the related field such as Nursing Education, Psychiatric and Mental Health Nursing then the necessary modifications were accordingly made.
- 4. A pilot study was be carried out on 10% (35) of nursing students in previously mentioned setting to assess the feasibility, clarity and applicability of the tools, and they were be excluded from the total study sample.
- 5. The reliability of the tools were tested using Cronbach'sAlpha. The Tool I (SRSSDL) was 0.830 and for subscales were awareness .682; learning strategies 0.730; learning activities 0.778; evaluation 0. 845; interpersonal skill 0.420. Tool II (BFI) was extraversion 0.500; neuroticism 0.555; openness 0.737; agreeableness 0.603; and conscientiousness 0.080.
- 6. Students were be selected randomly and proportionality from each current semester according to their clinical distribution of groups.
- Data collection was carried out at the Faculty of Nursing, Alexandria University in all of the following departments namely; Medical

- Surgical Nursing, Pediatric Nursing, Obstetric and Gynecological nursing, Nursing Administration, Psychiatric and Mental Health Nursing. Community Health Nursing. Gerontological at Nursing the beginning of the first academic semester 2020-2021
- 8. Data were collected through distributed questionnaire over a period of month and a half starting from the beginning of November 2020 and continued till the middle of December 2020.
- 9. The researcher introduced herself to students, the aim of the study was explained to them, and they were assured that their responses would be kept secret.
- 10. The questionnaire was distributed to each nursing student at the end of the clinical day practice to prevent learning interruption they were asked to fill them in and return it back to the researcher. Each student needed about 15-20 minutes to respond to the questionnaire.

# Statistical Analysis

Data were collected, revised, coded, and fed to the computer and analyzed using IBM SPSS software package version 20.0. Qualitative data were described using number and percent. The used tests were: F-test (ANOVA); Pearson coefficient; Cronbach's Alpha; Chi-square test.

# **Ethical Consideration:**

- A written informed consent from all the study subjects was obtained after explanation of the study aim.
- Students were informed that they have right to refuse to participate in the study.
- Confidentiality of data of all study subjects was maintained.

• Anonymity of all study subjects was maintained.

# Results:

Table (1) **shows the distribution** of nursing students according to their socio-demographic and academic data. Regarding age, it was found that nearly two-thirds of the nursing students (62.6%) were aged 20 years old with a mean age of  $20.21 \pm 1.65$ . Also, most of them were female (71.4%) and single (96.0%) from urban areas (89.4%). As regards their academic data, it was observed that the ascending percentile distribution of the nursing students was as follows: 30.0%, 19.4%, 23.1%, 27.4% for each of the following academic semesters, first, third, fifth, and seventh respectively. Also, it was found that nearly half of nursing students (47.3%) their GPA was ranged from 3 to less than 3.5, whereas 26.9% of them their GPA was ranged from 2.5 to less than 3 and 6.1% of them their GPA was less than 2.5 with a mean grade of  $3.08 \pm 0.44$ .

Table (2) reveals the distribution of the nursing students according to levels of self-directed learning readiness; it was found that the majority of nursing students (86.0%) had a high level of self-directed learning readiness while the rest (14%) of them had a moderate level of self-directed learning readiness.

Table (3) shows the descriptive analysis of the nursing students according to their mean percent score of big five personality inventory, It noticed agreeableness was that personality trait had the highest mean percent score  $(65.41\pm17.33)$ followed by conscientiousness, openness personality traits  $(64.37\pm15.84,$ 59.53±16.85) respectively. Whereas mean percent score of neuroticism personality trait was 47.49±17.35.

Table (4) reveals the correlation **Self-directed** learning readiness and Big Five personality traits among nursing students, it was observed that neuroticism as one of big five personality traits has significant negative correlation with the total selfdirected learning (r = -0.179, p = 0.001) and all aspects of self-directed learning namely awareness ( r = -0.157, p =0.003), learning strategies (r = -.0.138,p=0.010), learning activities (r=-0.200,p<0.001) and evaluation (r=-0.144,p=0.007) except interpersonal skills (r=-0.091, p=0.090). Also, it was found that openness and extraversion personality traits were positively significantly correlated with awareness and interpersonal skills aspects of SDL respectively (r= 0.114 p=0.033; r= 0.116, p=0.030) and openness is positively significantly correlated with awareness. Moreover, it was found that there no significant correlation between overall self-directed learning and other personality traits (extraversion, openness, agreeableness and conscientiousness).

# Discussion:

The present study results revealed that the majority of undergraduate nursing students had high level of self-directed learning readiness and all its aspects. These results indicate that undergraduate nursing students have tendency toward self-direction in their learning; these results could be due to corona virus pandemic that compelled

the students to adjust with diversities facing particularly nursing education. Using distance learning most of time gave opportunities for students to depend on themselves in searching, locating, interpreting and discussing more quality information. In addition, rapid development of technological learning innovations were developed that can facilitate SDL readiness in nursing education (Microsoft team, **MOOCS** flipped classroom, development and management and open education resources (OER) (Sen et al,2020 ;Karatas& Arpaci,2021)

Similary, Abdou, Sleem & EL-Wkeel (2021) postulated that less than three quarter of nursing students had high level of SDL readiness. This may be due to their experiencing with different problems and struggles during their clinical practice. Thus, enhance their knowledge and skill toward autonomous learning and develop their confidence to make appropriate decisions. Also, Ejaz et al (2018)found that majority undergraduate nursing students in Lahore university in Pakistan had high level of SDL readiness as they receive more educational courses and activities such as plan to solve problem, evaluate their performance, and set their learning goals, as in turn fulfill their learning needs, as well as increase their level of knowledge and level of SDL readiness.

On the contrary to the present result, Abuassi and Alkorashy (2016) found that the majority of the baccalaureate nursing students in Saudi Arabia had lower levels of self-directed learning because they haven't time management and autonomous learning skills that acted as barriers in the management of their learning process.

Undoubtedly, learners' personality traits have a great influence on learning process. The result of the present study showed that agreeableness personality trait had the highest mean percent score followed conscientiousness openness then extraversion. While neuroticism personality trait has the least mean percent score among nursing students. This may be attributed to the integration of human relation and sociology courses into the program of baccalaureate nursing education that prepare nursing students to embrace agreeableness characteristics such as cooperative, being empathetic, supportive, kindness, and sociable. Similary, Bruso(2019) postulated that agreeableness and Openness had the highest mean score followed conscientiousness, extraversion and finally neuroticism among college students. They found that these students utilize self-regulated learning strategies and behaviors related to goal setting, environmental structuring, and time management, such as creating to-do lists, subtasks, and scheduling times for schoolwork on their calendars.

Concerning the correlation between Self-Rating Scale of Self-Directed Learning (SRSSDL) and Big Five Personality Traits, the present study result revealed that neuroticism had a significant negative correlation with the total of self-directed learning and its aspects namely; awareness, learning strategies, learning activities and evaluation. Neuroticism

compassing negative emotions as anger, fear, and depression. These results could be attributed to some of studies founded that these negative emotions consume energy of the students, distract attention and decrease of their cognitive abilities. In addition, they affect negatively on their abilities to achieve self-directed activities such as explore information and participate in group discussion, decrease of their using self-regulated learning strategies (Lotfi et al,2016; Ahmed, Rehman&Shiekh,2019).

Correspondingly, Kirwan et al. (2014), Kirwan,2014 and Kirwan (2012) found that there was inverse relationship between neuroticism and SDL. Learners who have low mean score of neuroticisms and higher score of emotional stability are more likely to have higher levels of self-direction as they were more focused, purposeful, as well as less distracted and emotionally reactive than traditional learners.

# Conclusion:

It can be concluded from findings of the present study that, most undergraduate nursing students had high readiness toward self-directed learning (SDL). In addition, most of them have higher mean score of agreeableness followed by conscientiousness, openness, extraversion, and finally neuroticism personality traits. Also, awareness as one aspect of SDL was positively

correlated with openness personality trait that SDL is enhanced when nursing students are open minded curious, creative and have intellectual flexibility. Moreover, interpersonal skills were positively correlated with extraversion personality trait.

Furthermore, SDL was negatively correlated with neuroticism as it can be developed when nursing students able to control emotions and have emotional stability.

#### Recommendations:

Based on the findings of the present study, the following recommendations are offered

- Integration of teaching sessions within the nursing curriculum which direct nursing students to regulate their emotions and have more emotional stability.
- -Assessment of nursing students' personality traits to select appropriate self-directed learning strategies.

Table (1): Distribution of the nursing students according to their socio-demographic and academic data.

Socio-demographic and academic data	NO.	0/0		
Age (years)				
< 20	131	37.4		
≥ 20	219	62.6		
Min- Max	17.0-26.0			
Mean $\pm$ SD.	20.21± 1.65			
Sex				
Male	100	28.6		
Female	250	71.4		
Marital status				
Single	336	96.0		
Married	14	4.0		
Residence				
Urban	313	89.0		
Rural	37	10.6		
Academic semester				
First	105	30.0		
Third	68	19.4		
Fifth	81	23.1		
Seventh	96	27.4		
Academic achievement (GPA) (n=245)				
<2.5	15	6.1		
2.5 –	66	26.9		
3-	116	47.3		
3.5-4	48	19.6		
Min- Max	1.0-3.80	1.0-3.80		
Mean $\pm$ SD.	$3.08 \pm 0.44$	$3.08 \pm 0.44$		

Table (2): Distribution of the nursing students according to the level of self-directed learning readiness.

Level of Self-Directed Learning	No.	%
Low level of SDL (60-140)	0	0.0
Moderate level of SDL (141 – 220)	49	14.0
High level of SDL (221-300)	301	86.0

Table (3): Descriptive analysis of the nursing students according to mean percent score of big five personality inventory.

Tool II: Big Five personality Inventory	Total score	% score	
Extraversion (8-40)			
Min – Max.	13.0 - 38.0	15.63 – 93.75	
Mean $\pm$ SD.	24.55±4.22	51.71±13.17	
Neuroticism (5-40)			
Min – Max.	9.0 - 37.0	3.13 - 90.63	
Mean $\pm$ SD.	23.20±5.55	47.49±17.35	
<b>Openness</b> (10-50)			
Min – Max.	17.0 - 50.0	17.50 - 100.0	
Mean $\pm$ SD.	33.81±6.74	59.53±16.85	
Agreeableness (9-45)			
Min – Max.	16.0 - 45.0	19.44 - 100.0	
Mean $\pm$ SD.	32.55±6.24	65.41±17.33	
Conscientiousness (9-45)			
Min – Max.	17.0 - 45.0	22.22 - 100.0	
Mean $\pm$ SD.	32.17±5.70	64.37±15.84	

Table (4): Correlation between Self Directed Learning and Big Five personality traits among nursing students

Tool I: Self-Rating Scale of Self		Tool II: Big Five personality Inventory				
Directed Learning (SRSSDL)		Extraversion	Neuroticism	Openness	Agreeableness	Conscientiousness
Awareness	R	0.067	-0.157*	$0.116^{*}$	-0.047	0.038
	P	0.212	0.003*	$0.030^{*}$	0.380	0.481
Learning strategies	R	0.070	-0.138*	0.028	-0.031	0.014
	P	0.193	$0.010^{*}$	0.599	0.567	0.791
Learning activities	R	0.057	-0.200*	0.022	-0.014	0.066
	P	0.291	<0.001*	0.685	0.791	0.220
Evaluation	R	0.025	-0.144*	0.016	0.033	0.068
	P	0.645	$0.007^{*}$	0.759	0.533	0.205
Interpersonal skills	R	0.114*	-0.091	0.001	0.035	0.090
	P	$0.033^{*}$	0.090	0.978	0.512	0.092
Overall Self-Rating Scale of Self	R	0.082	-0.179*	0.045	-0.006	0.068
Directed Learning	P	0.127	0.001*	0.402	0.917	0.205

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