Original Article

Locus of Control and Self Directed Learning Relation on Nursing Students

Burcu Arkan, PhD
Uludag University School of Health, Psychiatric Nursing Department, Bursa, Turkey

Elif Ünsal Avdal, PhD
Associate Professor, Izmir Kâtip Celebi University Faculty of Health Sciences, Nursing Department of Internal Medicine, İzmir, Turkey

Hatice Yildirim Sari, PhD
Associate Professor, Izmir Kâtip Celebi University Faculty of Health Sciences, Department of Pediatric Nursing, İzmir, Turkey

Correspondence: Burcu Arkan, Uludag University School of Health, Psychiatric Nursing Department, Bursa, Turkey E-mail: arkanburcu@yahoo.com

Abstract

Background: This research is a descriptive study aiming to examine the relationship between nursing students' locus of control and being ready for self directed learning.
Materials and Methods: The sample of the study consists of the entire first, second, third and fourth graders studying at Uludag University, School of Health in the academic year of 2012-2013. The study was conducted with 171 students who volunteered and filled in the forms completely. In the study the Locus of Control Scale and Self Directed Learning Skill Scale were used. Descriptive statistics, correlation analysis and two independent sample t test were used in the data analysis.
Results and Conclusion: It was found that students with high levels of internal locus of control are more ready to self-directed learning and that there is not a relationship between locus of control and self-directed learning by the year of study.

Keywords: locus of control, self-directed learning, nursing, nursing students

Background

Knowledge used in the field of health is changing and being renewed day by day. In order for professional development to be provided, it is necessary to reach and use this knowledge (Shokar, 2002). In order for graduates to have these features, the development of self-directed learning skill should be supported (Greening, 1998; Shin, Kim, 2013; Prosser, Sze, 2014).

Self-directed learning skill (SDL) which is among the goals of education programs is one of the most significant criteria that enable students to be professionals in their occupation. The importance of SDL skill, which forms the basis of adult education, was proved by met analytic and systematic studies (Shokar, 2002; Ozuah, 2001). SDL skill is defined as determining the learning goals with or without the help of educators, choosing the right source, using proper learning strategies and evaluating the results (Charlotte, Tommie & Joy, 1998; Kenney, 1998; O'Shea, 2003).

Although the concept of self-directed learning was first used in the process of learning by Dewey(1918, 1938), it began to be used in the education process after being defined as a learning skill by Knowles (1975, 1980) (Knowles,1975). Self-directed learning skill is the skill of learning individually.

In many studies it was concluded that SDL skill would be effective in acquiring professional knowledge and this would be reflected on

students' success. (Linarens, 1999; Regan, 2003). It was reported that in nursing programs students use correct knowledge effectively by SDL skill (William, 2001; Pedley, 1996; Stover, 1998).

Thanks to SDL skill individuals take more responsibility and reflect their knowledge on their success better (O'Shea, 2003; Fleisher et al, 1997). In Taylor's study (2001) it was found that in nursing education programs related to paediatric care, students with SDL skill take more responsibility.

Lunky-Child et. al. (2001) stated that self-directed learners take more responsibility, synthesize their knowledge better and reflect this on their success scores.

In their study, Miflin, Compel and Price (1999) observed that the two-year training classes related to acquiring SDL skill taken by general practitioners increased the doctors' success positively. In the study carried out by Shokar et.al (2002) it was revealed that students got higher scores thanks to SDL. Thus, it was concluded that thanks to SDL, students did not memorise for they knew what they wanted to learn and had higher scores.

It is known that one of the factors that affect SDL is Locus of control (LC) (Duman and Sengun 2011). As cited by Dağ (2002) an individual expects to reach a result after exhibiting some behaviour. When it is resulted positively or negatively, the individual believes that it will result in that way in the future, as well; that is, generalizes. The individual believes that this results from either herself or forces beyond herself such as luck or destiny. Internal locus of control explains that the control related to future results depends mainly on the individual herself while external locus of control means it depends on outer forces (Destiny, luck, other people) (Cirakoglu and Tezer 2010; Dag 2002).

The effects of locus of control on the life of an individual have been revealed by many studies. For example Dincyurek, Caglar and Birol (2010) revealed the relationship between assertiveness and locus of control, Konan (2013) found the relationship between problem solving skills and locus of control, Basol and Turkoglu (2009) determined the relationship between thinking stills and locus of control and Tumkaya (2000) found the relationship between burnout and locus of control. Cırakoglu and Tezer (2010) stated that locus of control is related to the reactions of university students in their emotional relationships and Bedel (2009) revealed that external locus of control had a positive relationship with sociotropy and the internal locus of control had a negative relationship with autonomy.

Studies examining the effect of locus of control in education are carried out, as well. There are studies which examine the relationship of locus of control with students' success.

In Dil and Bulantekin's study (2011) it was reported that there was not a meaningful relationship between students' academic success and locus of control.

In nursing education, there are studies which examine the effect of locus of control. Neaves (1989) found a meaningful relationship between nurse students' internal locus of control and making independent decisions. Callaghan (1998) determined in his study carried out in the UK that locus of control influenced nurses' behaviours regarding health. Duman and Sengun (2011) found that in students trained by the method of Problem Based Education, locus of control scores decreased whereas their SDL scores increased and that there was a weak, negative relationship between SDL and LC. The relationship between self-directed learning and locus of control was evaluated in students educated with problem based education, but it was not examined whether there was a relationship between SDL and LC in nursing students educated with classic methods. Be it PBL or classic education, nursing is a discipline where lifelong learning and professional development are mandatory. For this reason it is rather important for nurses to be ready for self learning process. In this research whether there is a relationship between locus of control and being ready for self-directed learning is examined.

The aim of this study is to determine whether there is a relationship between locus of control and self-directed learning in nursing students educated with classic education method and whether this relationship differs by students' years.

Research Question

- Is there a relationship between nursing students' locus of control and being ready for self-directed learning?
- Do LC and SDL differ by students' years?

Methodology

Participants

This research is a descriptive study aiming to examine the relationship between nursing students' locus of control and being ready for self-directed learning. The sample of the study consists of the entire first, second, third and fourth graders (348 students) studying at Uludag University, School of Health in the academic year of 2012-2013. The study was conducted with 171 students who volunteered and filled in the forms completely. (Rate of participation: 49.1 %).Dependent variables of the study are the students' locus of control score and being ready for self-directed learning score. Independent variable of the study is the students' years.

Data Collection Tools

Locus of Control Scale

In the study the Locus of Control Scale (LCS) developed by Dag (2002) was used. The scale is a likert type scale consisting of 47 items. Items are scored as follows: 'Not appropriate at all'(1), 'Not appropriate'(2), 'Appropriate' (3), 'Quite Appropriate' (4) and 'Totally Appropriate' (5). An increase in the scores indicates the belief of external locus of control. In the reliability-validity done by Dag, internal consistency co-efficient of the scale was found to be Cronbach alpha= .92. Cronbach alpha of the sub-scales of LCS are as follows: Auto-control=.87, Belief in Luck is .79, Meaninglessness of Striving is .76, Fatalism is .74, Unfair World Belief is .61. Permission of Prof. Dag to use the scale was obtained via e-mail. In this study, Cronbach alpha value of LCS was calculated as .85.

Self-Directed Learning Scale

Fisher et. al (2001) develop Self Directed Learning Skill Scale to measure self-directed learning skill. At first, they developed 93 items, but after applying Delphy technique dropped to 52 items. Also co-efficient of 10 items were below .30 and thus were not included in scoring and the scale was reduced to 42 items by the researchers. In the factor analysis, two items were excluded for being below .30. The scale consisted of three sub-factors, namely self-management (n:13), willingness to learn (n:12) and auto-control (n:15) and consisted of 40 items in total. The lowest score is 40 and the highest score is 200. As the scores increase, self-directed learning skill improves (Fisher et al., 2001). Self Directed Learning Skill Scale can be applied to teenagers and adults (Fisher et al., 2001). The scale is a 5 point likert scale. In the original scale Cronbach Alpha internal co-efficient is 0.92 whereas in the reliability-validity study for 40 items done by Kocaman et.al (2003), Cronbach alpha co-efficient was found to be 0.94. I this study, Cronbach alpha co-efficient for 40 items was found to be 0.84.

Data Analysis

Descriptive statistics, correlation analysis and two independent sample t test were used in the data analysis. The data was analysed using SPSS 16.00 package program.

Research Ethics

During applying the forms, each class was met separately. Before applying the forms, the students were explained the aim of the study and approval was obtained. The forms were handed out collectively. Data was collected between 01.05.2013 and 15.06.2013

Results

SDL score average of the students was 150.31±12.94 (Min:90, Mx:185) and LCS score average was 131.40±17.27 (Min:85, Mx:179). LCS sub-scales' score averages are as follows:

Auto-control: 45.37±8.91 (Min:23, Mx:79),

Belief in Luck: 31.12±6.21 (Min:13, Mx:49),

Meaninglessness of Striving: 22.21±6.24 (Min:10, Mx:43),

Fatalism: 10.52±2.64 (Min:5, Mx:15),

Unfair World Belief: 10.44±3.32 (Min:5, Mx19).

There was not a meaningful difference in the students' LCS ($F=1.223$, $p>0.05$) and SDL ($F=0.506$, $p>0.05$) score averages by their year of study.

As it can be seen in Table 2, there is a positively meaningful correlation between SDL and LCS ($r=.249$, $p=.001$). Also there is a negatively meaningful correlation between Auto-control ($r=-.307$) sub-scale and SDL.

As is seen in Table 3, the lowest and highest score in the scale of locus control was consisted of two groups with a rate of 20% (n=34 and n=34). A significant difference was obtained between the LCS and SDL score averages of individuals in lower and upper 20% quintiles.

Table 1. SDL and LCS Score Averages of the Students

	Average	SD	Min	Max
SDL	150.31	12.94	90	185
LCS	131.40	17.27	85	179
LCS/Auto control	45.37	8.91	23	79
LCS/Belief in Luck	31.12	6.21	13	49
LCS/Meaninglessness of Striving	22.21	6.24	10	43
LCS/Fatalism	10.52	2.64	5	15
LCS/Unfair world Belief	10.44	3.32	5	19

Table 2. The Correlation between SDL and LCS and LCS Sub-Scales

Scales	r	P
LCS and SDL	.249	.001
Auto control and SDL	-.307	.000
Belief in Luck and SDL	.011	.884
Meaninglessness of Striving and SDL	.033	.666
Fatalism and SDL	.091	.239
Unfair World Belief and SDL	-.004	.958

Table3. Comparison of LCS's lower and upper twenty percent quantiles and SDL averages.

	LCS		SDL	
	Ave	**SD**	**Ave**	**SD**
Minimum %20	109.65	8.95	146.00	10.38
Maximum %20	156.71	10.19	154.00	14.75
	t=20.221 p=0.000		t=-2.585 p<0.05	

Discussion

As a result of this study, a meaningful difference was not found between the students' SDL and LCS score averages by the years they study and a positively meaningful correlation was found between the students' SDL and LCS. Also there was a negatively meaningful correlation between Auto-control (r=-.307) sub-scale and SDL.

According to the scales used in this study, as locus of control scores decrease, internal locus of

control increases and as self directed learning scores increase, the student takes her/his own responsibility. In this case, it is expected students with internal locus of control would have higher SDL score, which means that there would be a negative correlation between SDL and LCS. Interestingly enough, in our study, a positive, weak correlation was found between SDL and LCS. As it is shown in Table 2, there was a negative correlation between auto-control sub-scale and SDL. Moreover, as is seen in Table 3, SDL scores of the upper 20%-group whose external locus of control was high were significantly lower than the 20%-group whose internal locus of control was high. As is seen in Table 3, the LCS scores of the 20%-group whose external locus of control was high were determined to be significantly lower than the scores of the 20%-group whose internal locus of control was high.

There was not a relationship between the students' general locus of control scores and SDL, and when the groups with high external or internal locus of control were separated, a meaningful relationship between external locus of control and SDL was determined, which supports the literature (Duman and Sengun 2011; Duman and Sen 2012).

In their studies, Duman and Sengun (2011) and Duman and Şen (2012) revealed that students with higher internal locus of control were more ready for SDL. Similarly Linares (1999) found in his study done with nursing students that students with high internal locus of control had higher SDL scores compared to students with high external locus of control. In Yu's study (2002) it was reported that individuals with the belief of internal locus of control performed better in learning and had higher readiness levels for self-directed learning. The result of our study is similar to the ones in the literature and supports the ideas that students with the belief of internal locus of control are more responsible for learning and have higher levels of self-directed learning.

Conclusions and Suggestions

It was found that students with high levels of internal locus of control are more ready to self-directed learning and that there is not a relationship between locus of control and self-directed learning by the year of study.

Since self-directed learning levels of students with high levels of locus of control is higher, it is required to determine the variables affecting locus of control in nursing students and to conduct studies to identify what the practices to increase internal control might be.

By following these results some attempts may be planned to develop internal locus of control in nursing students.

Limitations

The limitations of this study are as follows: low participation, being conducted in one nursing school only and the relationship not being examined by socio-demographic variables.

References

Basol G. & Turkoğlu E. (2009) The relationship between the locus of control and thinking styles of teacher candidates. Journal of International Human Sciences 6 (1): 732-757.

Bedel AF. (2009) Relationship between locus of control and sociotropy-autonomy orientations. International Journal of Arts and Sciences 3 (3): 1-6.

Callaghan P. (1998) Social support and locus of control as correlates of UK nurses' health-related behaviours. Journal of Advanced Nursing 28 (5): 1127-1133.

Charlotte A. Tommie B. & Carlson H. (1998) Using Self-Directed Learning Modules: A Literature Review. Lippincott Raven Publishers, March / April, 1998; 14 (2): 73-80.

Cirakoglu OC. & Tezer E. (2010) The Predictor Role of Locus of Control and Critical Thinking on University Students' Reactions to Relationship Non-satisfaction. Turkish Psychology Writings 13 (26): 29-41.

Dag I. (2002) Locus of Control Scale (LCS): Developing a Scale, Reliability and Validity Study. Turkish Psychology Journal 17 (49): 77-90.

Dewey J. (1938). Experience and education. Collier Macmillan, London Knowles M.S. (1975). Self Directed Learning: A Guideline for Learners and Teacher. Follett Publishing, Chicago, IL.

Dil S. & Bulantekin O. (2011) Determination of the relationship between family functionality and locus of control and levels of academic success among nursing students. Journal of Psychiatric Nursing 2 (1): 17-24.

Dincyurek S. Caglar M. & Birol C. (2010) Assertiveness and Focus of Control Level: Impacts to the Future. Hacettepe University Journal of Faculty of Education (H. U. Journal of Education) 39, 142-150.

Duman ZC. & Sen H. (2012) Longitudinal investigation of nursing students' self-directed learning readiness and locus of control levels in problem-based learning approach. The New Educational Review 27 (1): 41-52.

Duman ZC. & Sengun F. (2011) The Relationship between Locus of Control and Self-Directed Learning Readiness among Nursing Students. Anatolian Journal of Nursing and Health Sciences 14 (3): 26-31.

Fisher M. King J. Tague J. Development of a self-directed learning readiness scale for nursing education. Nurse Education Today, 2001; 516–525.

Fleisher D. Fleiszer T. & Russell R. (1997) Doughout rounds: a self-directed learning approach to teaching critical care in surgery. Medical Teacher 19 (3): 190-193.

Greening T. (1998) Scaffolding for Success in Problem Based Learning. Med Edu Online [serial online] 3, 4. Available from URL http://www.utmb.edu/med

Kenney A. (1998) Self Direction an Appropriate Model for Teaching Skill. Aejne 4 (1) October.

Kocaman G. Okumus H. Bahar Z. Kizilci S. & Seren S. (2003) The application of problem based learning in nursing education and the examination o the results, Dokuz Eylul Research Fund Project No: 0957.99.01.02, Izmir.

Konan N. (2013) Relationship between locus of control and problem solving skills of high school administrators. International J. Soc. Sci. & Education 3 (3): 786-794.

Linares ZA. (1999) Learning Styles of Students and Faculty in Selected Health Care Professions. Journal of Nursing Education, 38 (9): 407-415.

Lunyk-Child OL. Crooks D. Ellis PJ. Ofosu C. Mara L. & Rideout E. (2001) Self Directed Learning Faculty and Student Perceptions. Journal of Nursing Education, March 40 (3): 116-123.

Miflin BM. Compbell DA. & Price DA. (1999) A Lesson from The Introduction of A Problem Based, Graduate Entry Course: The Effects of Different Views of Self Direction. Medical Education 33: 801-807.

Musal B. Ozan S. Taskiran HC. & Semin I. (2001) Reliability Study towards the Evaluation Forms of Problem Based Learning at Dokuz Eylul University, Faculty of Medicine. DEU Journal of Faculty of Medicine, December, 365-370.

Neaves JJ. (1989) The relationship of locus of control to decision making in nursing students. J Nurs Educ 28 (1): 12-7.

O'Shea (2003) Self Directed Learning in Nurse Education: A Review of The Literature. Journal of Advanced Nursing 43 (1): 62-88.

Ozuah PO. Curtis J. & Stein KR. (2001) Impact of Problem Based Learning on Residents' Self Directed Learning. Archives of Paediatrics & Adolescent Medicine 155 (6): 689-672.

Pedley GE. (1997) Nursing Students' Responses to self-Directed Learning: An Evaluation of A Learning Process Applying Jaruis' Framework. Journal of Advanced Nursing 25: 405-411.

Prosser M. & Sze D. (2014) Problem-based learning: Student learning experiences and outcomes. Clinical Linguistics & Phonetics 28 (1–2): 131–142.

Shin I. & Kim J. (2013) The effect of problem-based learning in nursing education: a meta-analysis. Adv in Health Sci Educ 18: 1103–1120.

Shokar GS. Shokar NK. Romero CM. & Bulik RJ. (2002). Self-Directed: Looking at Outcomes with Medical Students. From Med, 34 (3), 197-200.

Stover D. (1998) Problem Based Learning: Redefining Self Directed Instruction and Learning. Forum Fall Vol. 7, Issue 1.

Taylor HJ. (2001) Self-Directed Learning: Views of Teachers and Students. Journal of Advanced Nursing 36 (4): 494-504.

Tumkaya S. (2000) Locus of Control and its Relationship with Burnout in Primary School Teachers. PAU Journal of Faculty of Education 8 (Special): 1-8.

Williams B. (2002) The Self Directed Learning Readiness of Baccalaureate Nursing Students and Faculty After One Year in A Problem Based Undergraduate Nursing Program. Spring 1-24.

Yu YP. A. (2002) Study on the Relationships among Employee Personality, Self-Directed Learning and Work Performance. Human Research Management Master Thesis