Evaluation of the relationship between lifelong learning tendency and health literacy of midwifery students

Ebelik bölümü öğrencilerinin yaşam boyu öğrenme eğilimleri ile sağlık okuryazarlığı arasındaki ilişkinin değerlendirilmesi

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ABSTRACT

Aim: This study was conducted to evaluate the relationship between lifelong learning tendencies and health literacy of midwifery department students.

Methods: This descriptive study was conducted to evaluate the relationship between midwifery students' lifelong learning tendencies and health literacy. This study was conducted with midwifery students of a state university in a province in eastern Türkiye between December 2020 and January 2021. It was completed with 274 people who agreed to participate in the research. The study data were collected using the Student Introductory Form, Lifelong Learning Tendency Scale (LLTS), and Turkish Health Literacy Scale (TSOY-32).

Results: In the study, it was found that the LLTS scores of midwifery students differed significantly according to their age (p<0.05). It was determined that the midwifery students had a lifelong learning tendency above the moderate level and had sufficient health literacy and It was determined that there was no significant relationship between LLTS score and TSOY-32 score of midwifery department students (r=0.096; p=0.114).

Conclusion: It was determined that the relationship between lifelong learning tendencies and health literacy was not at a significant level.

Keywords: health literacy; lifelong learning; midwifery; public health

ÖZ

Amaç: Bu çalışma ebelik bölümü öğrencilerinin yaşam boyu öğrenme eğilimleri ile sağlık okuryazarlığı arasındaki ilişkinin değerlendirilmesi amacıyla yapılmıştır.

Yöntem: Bu tanımlayıcı araştırma, ebelik öğrencilerinin yaşam boyu öğrenme eğilimleri ile sağlık okuryazarlığı arasındaki ilişkiyi değerlendirmek amacıyla yapılmıştır. Bu çalışma Aralık 2020-Ocak 2021 tarihleri arasında Türkiye'nin doğusundaki bir ilde bulunan bir devlet üniversitesinin ebelik bölümü öğrencileri ile yapılmıştır. Araştırmaya katılmayı kabul eden 274 kişi ile tamamlanmıştır. Araştırmanın verileri Öğrenci Tanıtım Formu, Hayat Boyu Öğrenme Eğilim Ölçeği (YBÖEÖ) ve Türkçe Sağlık Okuryazarlığı Ölçeği (TSOY-32) kullanılarak toplanmıştır.

Bulgular: Araştırmada, ebelik öğrencilerinin yaşına göre YBÖEÖ puanının anlamlı düzeyde farklılık gösterdiği (p<0.05), ebelik öğrencilerinin orta düzeyin üzerinde yaşam boyu öğrenme eğilimine sahip oldukları ve yeterli sağlık okuryazarlığına sahip oldukları ve YBÖEÖ puanı ile TSOY-32 puanı arasında anlamlı düzeyde bir ilişki olmadığı belirlenmiştir (r=0.096; p=0.114).

Sonuçlar: Yaşam boyu öğrenme eğilimleri ile sağlık okuryazarlığı arasındaki ilişkinin anlamlı düzeyde olmadığı belirlendi.

Anahtar kelimeler: ebelik; halk sağlığı; sağlık okuryazarlığı; yaşam boyu öğrenme

Introduction

Lifelong learning is defined as "purposeful learning carried out by individuals throughout their lives to ensure their personal development and to improve their quality of life" (Dunlap, 2005). Today, rapid change in every field obliges individuals to adapt to the era and constantly learn, evaluate, and adapt new information to succeed in their profession. In recent years, a shift has begun in many fields, including education and healthcare, moving away from systems based on providing information to individuals and towards systems that teach them how to access and utilize knowledge in their lives. The name of this change in education systems is "lifelong learning" (Gökyer & Türkoğlu, 2018).

In an active lifelong learning process, individuals should know literacy types and can use this information. Computer literacy, information literacy, policy literacy, media literacy, nutrition literacy, and health literacy are among the major types of literacy (Bruce, 2003; Karaman & Aydoğmuş, 2018). The concept of health literacy can be defined as the capacity of individuals to read, comprehend, and apply health information essential for making informed health decisions and adhering to treatment instructions (Kindig et al., 2004; Weiss, 2003).

By combining lifelong learning and health literacy skills, the young generation, which is in the complexity of the health system, which is difficult to understand and innovations created by developing technology, will be curious about health-related information, research, reach the right information, apply the information they reach, and will also affect and change their surroundings (Coskun, 2009; Önal, 2010; Karaman & Aydoğmuş, 2018).

Midwives, who have important responsibilities in the development of public health, are expected to have good health literacy, to be able to determine the health literacy of the individual they serve and to carry out care, education, and counseling practices by using understandable language. For these skills to be applied, midwifery education also needs to support lifelong learning. In particular, the midwifery department students, who represent the future generation of midwives, are likely to possess enhanced health literacy when

they exhibit enthusiasm, curiosity, and a strong motivation to continuously seek out new information as lifelong learners (Celikkanat, 2020).

This study is anticipated to make a valuable contribution to the scientific literature by investigating the correlation between students' inclinations towards lifelong learning and their level of health literacy.

Materials and Methods
Study type
The study was conducted descriptively to examine the relationship between students' lifelong learning tendencies and health literacy.

Study design and participants
This study was carried out between December 2020 and January 2021 with students studying in the Midwifery Department of the Faculty of Health Sciences of a university located in a province in the east of Türkiye. The study was completed with 274 students. In the study, 73% of the universe has been reached.

Data collection
The data collection instruments were distributed to willing participants among the students through Google Forms under the guidance of the researcher. Prior to commencing data collection, the researcher provided the students with comprehensive information regarding the study's objectives, methodology, scope, timeline, ethical considerations, as well as the structure and content of the data collection forms. The process of filling out the data collection forms typically required around 5 minutes to complete.

Data collection tools
The study data were collected using the Student Introductory Form, Lifelong Learning Tendency Scale (LLTS), and Turkish Health Literacy Scale (TSOY-32).

Student introductory form
It is developed by the researcher in line with the literature and consists of 17 questions prepared to describe the socio-demographic characteristics (age, place of residence before undergraduate education, place of residence, family type, social security status, monthly income), characteristics related to educational status (class, order of entry to the department, cumulative grade point average-CGPA), and academic orientation (participation in the congress) of the midwifery department students (Gökyer & Türkoğlu, 2018; Karaman & Aydoğmuş, 2018).

Lifelong Learning Tendency Scale (LLTS)
The scale has been translated into Turkish and undergone validity and reliability assessments by Coskun (2009), is intended for use in this study. Prior authorization was obtained from the scale's author via email for its utilization. The scale employs a 6-point Likert-type rating system, with the following options: (1) strongly applicable, (2) somewhat applicable, (3) slightly applicable, (4) slightly inapplicable, (5) moderately inapplicable, and (6) strongly inapplicable (Coskun, 2009).

The LLTS comprises four dimensions, namely:
1. Motivation (6 items)
2. Perseverance (6 items)
3. Lack of Regulatory Learning (6 items)
4. Lack of Curiosity (9 items)

In total, the scale comprises 27 items. Scores on the scale range between a minimum of 27 (calculated as 27 items multiplied by the lowest score of 1) and a maximum of 162 (calculated as 27 items multiplied by the highest score of 6) (Coskun, 2009).

In this study, the internal consistency coefficient Cronbach's alpha value was calculated as 0.97 for the LLTS (27 items). The internal consistency coefficient Cronbach's alpha values for the sub-dimensions of LLTS are as follows: Internal consistency coefficient Cronbach's alpha value for the "Motivation" sub-dimension (6 items) is 0.85; The internal consistency coefficient Cronbach's alpha value for the "Persistence" subscale (6 items) is 0.71; The internal consistency coefficient Cronbach's alpha value for the "Lack of Regulating Learning" subscale (6 items) was found to be 0.76, and the internal consistency coefficient Cronbach's alpha value for the "Lack of Curiosity" subscale (9 items) was found to be 0.81.

Turkish Health Literacy Scale (TSOY-32)
The scale is a self-report assessment designed to gauge health literacy among literate individuals aged fifteen and above. This scale is grounded in the conceptual framework outlined by the European Health Literacy Research Consortium (Sørensen et al., 2012). However, TSOY-32 diverges from the original model by adopting a 2X4 matrix structure, condensing the three original dimensions into two core dimensions. This revised structure comprises eight distinct components, characterized by the two dimensions (Treatment and Service, and Disease Prevention/Health Promotion), alongside four essential processes (Access to Health-Related Information, Comprehension of Health-Related Information, Critical Evaluation of Health-Related Information, and Application of Health-Related Information) (Abacıgil et al., 2016).

The Turkish version of the scale underwent reliability assessment through an evaluation of internal consistency, specifically using Cronbach's alpha coefficient. The scale exhibited a high degree of internal consistency, with a Cronbach's alpha coefficient of 0.927. This high reliability is also reflected in the sub-dimensions: the first sub-dimension, "Treatment and Service," yielded a Cronbach's alpha coefficient of 0.880, while the second sub-dimension, "Disease Prevention and Health Promotion," had a Cronbach's alpha coefficient of 0.863 (Abacıgil et al., 2016).

The scale's conceptual framework encompasses two dimensions related to health, namely "Treatment and Service" and "Disease Prevention and Health Promotion". It also involves four processes for acquiring health-related information—access, understanding, evaluation, and application—pertaining to health-related decision-making and practices. Each item in the scale is rated on a scale from 1 to 4, with values corresponding to "Very easy," "Easy," "Difficult," and "Very difficult," respectively. Additionally, code 5 is assigned to the response "I have no idea". Before progressing to score calculations, the codes need to be transformed into a range of 1-4 and 4-1. For the sake of simplifying calculations, the total score is standardized using the following formula to yield a value between 0 and 50 (Abacıgil et al., 2016).

In this study, the overall internal consistency coefficient Cronbach's alpha value of the TSOY-32 (32 items) was calculated as 0.93. Internal consistency coefficient Cronbach's alpha values for the sub-dimensions of TSOY-32 are as follows: Internal consistency coefficient Cronbach's

alpha value is 0.87 for the "Treatment Service" sub-dimension (16 items) and internal consistency coefficient Cronbach's alpha value is 0.87 for the "Disease Prevention and Health Promotion" sub-dimension (16 items). The consistency coefficient Cronbach's alpha value was found to be 0.88.

Statistical analysis

The data collected from the study were digitized and subjected to analysis utilizing the Statistical Package for the Social Sciences (SPSS) version 23.0. Using descriptive statistical tests on the data obtained from the Student Introductory Form, the maximum and minimum values, number, percentage, mean, and standard deviation values of the descriptive characteristics of the midwifery department students participating in the study were determined. The distribution normality of the data was determined using the Kolmogorov-Smirnov (K-S) test. Based on the obtained data, the scale and sub-dimension mean scores, standard deviation, median, interval, maximum, and minimum values used in data collection were calculated. Reliability analysis determined the internal consistency coefficient Cronbach alpha values of the scale and sub-dimensions. In the study, to compare whether there is a difference between the means of the independent groups over the data obtained from the descriptive characteristics of midwifery department students, an "independent groups t-Test" was used for two groups for data with normal distribution, and One-Way ANOVA Analysis of Variance was used for more than two groups. The homogeneity of the groups was examined by Levene's Test. Tukey test was used to determine the difference between the groups that were determined to have a significant difference in the ANOVA analysis of variance. The Pearson Correlation Coefficient analysis was performed to determine the direction and level of the correlation between dependent and independent variables that fit the normal distribution. In the evaluation of the data, the significance level was accepted as $p<0.05$.

Ethical considerations

Before starting the study, permission was obtained from the Ethics Committee of Sivas Cumhuriyet University (Date: 15.01.2020 and Number: 2020-01/31). The study was conducted in accordance with the Declaration of Helsinki Principles on the code of ethics.

This descriptive study was conducted between 01 July 2021 and 01 February 2022 in the province of Siirt which is located in the "Southeastern Anatolia Region of Türkiye".

Results

The tables and findings of the study, which was carried out as a descriptive to examine the relationship between lifelong learning tendencies and health literacy of midwifery department students, are given below.

Table 1. Comparison of LLTS and TSOY-32 scores according to the introductory characteristics of midwifery students (n=274)

Variables	n	%	LLTS X ±SD	TSOY-32 X ±SD
Age (X±SD; 20.47±1.57)				
18-20 years old	158	57.7	94.60± 9.63	36.02± 6.88
21 years old and older	116	42.3	89.94± 15.69	37.44± 7.12
Test value			t=3.034	t=-1.660
Significance level			**p= 0.003***	p=0.098
Class				
1st grade[1]	110	40.1	93.89± 11.05	35.07± 6.60
2nd grade[2]	66	24.1	91.60± 13.30	35.69± 6.44
3rd grade[3]	62	22.6	93.53± 13.27	39.79± 7.00
4th grade[4]	36	13.1	89.13± 15.15	37.59± 7.55
Test value			F=1.513	F=7.090
Significance level and difference			p=0.211	**p=0.000*, 3>1****
Place of residence before undergraduate education				
City center	165	60.2	92.92± 13.65	36.80± 6.84
District center	69	25.2	94.02± 10.01	36.99± 7.20
Village/town	40	14.6	89.02± 12.67	35.25± 7.38
Test value			F=2.077	F=0.907
Significance level			p=0.127	p=0.405
Family type				
Extended family	62	22.6	89.38± 14.79	35.73± 7.47
Nuclear family	203	74.1	93.61± 12.05	36.88± 6.89
Fragmented family	9	3.3	92.88± 9.95	36.86± 6.47
Test value			F=2.647	F=0.644
Significance level			p=0.073	p=0.526
Monthly income				
Income more than expenses	67	24.5	95.37± 11.27	36.36± 7.13
Income equivalent to expense	158	57.7	92.03± 12.88	36.74± 6.74
Income less than expenses	49	17.9	90.81± 13.80	36.58± 7.80
Test value			F=2.238	F=0.069
Significance level			p=0.109	p=0.933
CGPA (X±SD; 3.36±0.33)				
2.00 to 2.50[1]	7	2.6	78.00± 20.93	34.93± 4.74
2.51 to 3.00[2]	28	10.2	90.42± 15.21	36.29± 7.79
3.01 to 3.503	148	54.0	93.54± 12.36	36.41± 7.23
3.51 to 4.004	91	33.2	92.96± 11.17	37.19± 6.57
Test value			F=3.735	F=0.397
Significance level and difference			**p=0.012*, 3-4>1****	p=0.755
Status of participation in the congress				
Yes	60	21.9	92.16± 13.68	37.71± 7.06
No	214	78.1	92.76± 12.49	36.31± 6.98
Test value			t=-0.322	t=1.366
Significance level			p=0.748	p=0.173

*p<0.05, ** Tukey Test, LLTS: Lifelong Learning Tendency Scale, TSOY-32: Turkish Health Literacy Scale; CGPA: class, order of entry to the department, cumulative grade point average

Table 1 shows the comparison of LLTS and TSOY-32 scores of midwifery department students. The mean age of the midwifery department students participating in the study was 20.47±1.57 years old; 57.7% of the participants were in the 18-20 age range, 40.1% were in the first year, 60.2% lived in the city center before undergraduate education, and 74.1% have a nuclear family; the mean CGPA of midwifery department students was 3.36±0.33, 54% had a CGPA between 3.01-3.50, and 78.1% had not attended the congress before (Table 1).

The study found that the LLTS score of the midwifery department students significantly differs according to their age (p<0.05). It was determined that the lifelong learning tendency of students aged 18-20 is significantly higher than students aged 21 and over (t=3.034; p=0.003). It was determined that midwifery department students' LLTS scores differed significantly according to CGPA (p<0.05). According to the results of the Tukey test, it was determined that the lifelong learning tendency of students with CGPA between 3.01-3.50 and between 3.51-4.00 was significantly higher than students with CGPA between 2.00-2.50 (F=3.735; p=0.012). In the study, it was determined that the LLTS scores of midwifery department students did not differ significantly according to their class, place of residence before undergraduate education, family type, monthly income, and participation in the congress (p>0.05) (Table 1).

The TSOY-32 score of midwifery department students differed significantly according to the class they studied (p<0.05). According to the Tukey test results, it was determined that the health literacy level of the students studying in the third year was significantly higher than the students studying in the first year (F=7.090; p=0.000). It was determined that the TSOY-32 scores of midwifery department students did not differ significantly according to their age, place of residence before undergraduate education, family type, monthly income, CGPA, and participation in the congress (p>0.05) (Table 1).

Table 2. LLTS and TSOY-32 scores of midwifery students

Scale	Mean	SD	Median	Min.-Max.
LLTS Total	92.64	12.75	95.0	34-124
TSOY-32 Total	36.62	7.01	36.39	17.24-50

LLTS: Lifelong Learning Tendency Scale, TSOY-32: Turkish Health Literacy Scale

Table 2 shows the LLTS and TSOY-32 scores of the midwifery department students who participated in the study. The mean LLTS score of midwifery department students was 92.64±12.75, and the mean TSOY-32 score was 36.62±7.01. It was determined that the midwifery department students had a lifelong learning tendency above the moderate level and had sufficient health literacy (Table 2).

Table 3. Distribution of health literacy levels of midwifery students (n=274)

Health literacy level	n	%
Insufficient	12	4.4
Problematic-limited	85	31.0
Adequate health	106	38.7
Excellent	71	25.9

Table 3 shows the distribution of health literacy status of midwifery department students. The analysis revealed that

among the participating midwifery department students, 38% exhibited an adequate level of health literacy, 31% displayed limited and problematic health literacy, 25.9% demonstrated a excellent level of health literacy, and 4.4% exhibited an insufficient level of health literacy (Table 3).

Table 4. Examination of the correlation between LLTS score and TSOY-32 score (n=274)

Correlation*	TSOY-32 Total
LLTS Total	
r	0.096
p	0.114

*Pearson Correlation Analysis was applied, LLTS: Lifelong Learning Tendency Scale, TSOY-32: Turkish Health Literacy Scale

Table 4 shows the results of the Pearson Correlation Analysis conducted to examine the relationship between the LLTS score and TSOY-32 score of the midwifery department students. It was determined that there was no significant correlation between the LLTS score of the midwifery department students and the TSOY-32 score (r=0.096; p=0.114). In the study, it was found that the relationship between lifelong learning tendencies and health literacy of midwifery department students was not significant (Table 4).

Discussion

In a previous study where the lifelong learning skills and competencies of young people were examined, it was determined that the effective lifelong learning levels of the young people participating in the study were high (Aydın, 2023). In another study conducted on nursing students, it was determined that there was no significant difference between the lifelong learning tendencies scale and age (Eray, 2022). In the study conducted by Akyol et al. (2018) with 435 trainees who were taking courses in public education centers in Aydın provinces and districts, it was found that lifelong learning tendencies did not show a significant difference according to age. In the study conducted by Yasa (2018) with 410 teacher candidates studying at Bartın University Faculty of Education, it was concluded that lifelong learning tendencies differed significantly according to age in favor of the 17-20 age range. Our study uncovered a noteworthy disparity in LLTS scores among midwifery department students, based on age. Notably, the lifelong learning inclinations of students within the 18-20 age bracket were significantly higher compared to those aged 21 and above.

Aydoğan (2019) found a significant difference in lifelong learning perception levels between teachers in central districts and rural districts in Siirt province. However, in another study with similar results to our study, it was determined that the location (central-rural) where young people lived did not affect their effective lifelong learning levels (Aydın, 2023). In our study, it was determined that the place where the students lived did not affect their lifelong learning levels.

Coskun (2009) emphasized that students who defined their academic achievement level as "good" and "very good" have higher lifelong learning tendencies compared to others. Contrary to the results of this study, Dündar (2016) found in his research with classroom teacher candidates that grade point average did not have a significant effect on lifelong learning. In this study, it was found that the LLTS score of the

midwifery department students showed a significant difference according to their CGPA. It was determined that the lifelong learning tendency of the students with a CGPA between 3.01-3.50 and 3.51-4.00 was significantly higher than the students with a CGPA between 2.00-2.50.

In the study conducted by Türkmen (2021) on university students studying in the field of health, it was determined that the health literacy rate did not vary according to the class in which the students studied. In our study, the literacy rate of midwifery department students varies according to the class they study. As the class level increases, so does the level of health literacy. In line with our study, Tatar's (2020) study with 746 medical faculty students showed that the level of health literacy increased as the class level increased. It is important that midwives who provide care practice to society, provide education and counseling, have high health literacy, and can identify the problems of individuals related to health literacy. In this regard, it is significant that 63.9% of the participants have a sufficient-perfect level of health literacy. In Bahadır's (2019) study on a total of 321 students studying at the Faculty of Education, the mean LLTS was 98.64, and in the study conducted by Eray (2022) on nursing students, the mean LLTS was 66.67. In our study, it was determined that midwifery department students' LLTS mean score is 92.64±12.75, and the median score of the scale is 94.5. Therefore, it was found that midwifery department students' lifelong learning tendencies are slightly below the average.

Tatar (2020) found that 746 (59.8%) medical faculty students had a sufficient-perfect SOY level. Türkmen (2021) found that 27.4% of university students studying in the field of health had an adequate and 15.2% had an excellent SOY level. In our study, similarly, 38.7% of midwifery department students had a sufficient SOY level.

In our study, when we jointly evaluated lifelong learning and health literacy parameters, which were approached differently from other studies, it was determined that there was no significant relationship between midwifery department students' lifelong learning tendencies and health literacy. We consider that the relationship could not be established because our study was carried out during the pandemic and the motivation of the students was low.

Limitations of the Study

This research was carried out with a similar sample group. Therefore, the study findings can only be generalized to this group. This situation constitutes the limitation of our research.

Conclusion

The age and the CGPA of midwifery department students affect the lifelong learning tendency. In addition, the class in which midwifery department students study affects the level of health literacy. It was determined that the midwifery department students had a lifelong learning tendency above the moderate level and had sufficient health literacy. It was determined that the relationship between lifelong learning tendencies and health literacy was not significant. To elevate the health literacy level to an excellent level, a health literacy course can be added to the curriculum, to increase lifelong learning opportunities can be created for students to attend conferences that contribute to their personal development, and it can be ensured that appropriate content is added to the curricula. Good health literacy of midwives, who play a key role in the development of public health, will enable them to determine the health literacy of the individual they provide care to and to carry out care, education, and counseling practices using understandable language. For these skills to be practiced, it is essential for midwifery department students, who are the midwife candidates of the future, to be lifelong learners.

Conflict of Interest

There is no conflict of interest.

Ethics Committee Approval

Ethical approval for this study was obtained to Ethical Committee of Sivas Cumhuriyet University (Date: 15.01.2020 and Number: 2020-01/31).

Informed Consent

Participation in this survey was anonymous, consensual and voluntary with informed consent provided by all respondents.

Peer-Review

Externally peer-reviewed.

Author Contributions

M.A.B: Literature Search, Design, Supervision, Critical Review, Concept, Writing Manuscript, Materials, Data Collection and Processing.

B.C.: Literature Search, Design, Supervision, Critical Review, Concept, Writing Manuscript, Materials, Data Collection and Processing, Analysis and/or Interpretation.

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