ORIGINAL RESEARCH ORİJİNAL ARAŞTIRMA

The Relationship Between Mental Health Literacy and Stigmatization of Mental Illness in Undergraduate Nursing Students: Descriptive Correlational Study

Hemşirelik Öğrencilerinin Ruh Sağlığı Okuryazarlığı ve Ruhsal Hastalıklara Yönelik Damgalama Durumları Arasındaki İlişki: Tanımlayıcı İlişkisel Çalışma

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ABSTRACT Objective: The objective of the study was to ascertain the correlation between the mental health literacy of student nurses and the stigmatization of mental illness. **Material and Methods:** The sample of the study consisted of 259 nursing students studying at the faculty of nursing of a university between November 2024-January 2025 who had not yet practiced mental health and psychiatric nursing. Demographic form, Stigma Scale for Mental Illnesses for Healthcare Workers, and Mental Health Literacy Scale were used as data collection tools in the study. Data was collected using a Google form. In the data analysis, Spearman Correlation test was applied to examine the correlation between the scales. **Results:** The mean scores of student nurses on the Stigmatization Scale for Mental Illnesses for Healthcare Workers were found to be moderate (X±standard deviation=52.76±7.29). The mean scores of the Mental Health Literacy Scale of student nurses were high (X±standard deviation=16.94±3.46). A negative and significant weak relationship was identified between the mental health literacy of student nurses and the stigmatization of mental illnesses (rho: -0.290, p<0.05). **Conclusion:** The present study found that an increase in the mental health literacy of student nurses was associated with a decrease in the stigmatization of mental illnesses. It is recommended that interventions be implemented with a view to increasing mental health literacy and reducing stigmatization at the undergraduate level.

Keywords: Mental health; literacy;
stigmatization; students; nursing

ÖZET Amaç: Bu çalışmada, öğrenci hemşirelerin ruh sağlığı okuryazarlığı ile ruhsal hastalıklara yönelik damgalama durumları arasındaki ilişkinin belirlenmesi amaçlanmıştır. **Gereç ve Yöntemler:** Araştırmanın örneklemini, Kasım 2024-Ocak 2025 tarihleri arasında bir üniversitenin hemşirelik fakültesinde öğrenim gören ve henüz ruh sağlığı ve psikiyatri hemşireliği uygulaması yapmamış 259 hemşirelik öğrencisi oluşturmuştur. Araştırmada veri toplama aracı olarak "tanıtıcı bilgi formu", "Sağlık Çalışanları İçin Ruhsal Hastalıklara Yönelik Damgalama Ölçeği" ve "Ruh Sağlığı Okuryazarlığı Ölçeği" kullanılmıştır. Verilerin analizinde, ölçekler arasındaki korelasyonu incelemek için Spearman korelasyon testi uygulanmıştır. **Bulgular:** Öğrenci hemşirelerin, Sağlık Çalışanları İçin Ruhsal Hastalıklara Yönelik Damgalama Ölçeği puan ortalamaları orta düzeyde bulunmuştur (X±standart deviasyon=52,76±7,29). Öğrenci hemşirelerin Ruh Sağlığı Okuryazarlığı Ölçeği puan ortalamaları yüksektir (X±standart deviasyon=16,94±3,46). Öğrenci hemşirelerin ruh sağlığı okuryazarlığı ile ruhsal hastalıklara yönelik damgalama arasında negatif yönde ve anlamlı zayıf bir ilişki saptanmıştır (rho: -0,290, p<0,05). **Sonuç:** Bu çalışma, öğrenci hemşirelerin ruh sağlığı okuryazarlığındaki artışın, ruhsal hastalıkların damgalanmasındaki azalmayla ilişkili olduğunu ortaya koymuştur. Lisans düzeyinde ruh sağlığı okuryazarlığının artırılması ve damgalamanın azaltılması amacıyla müdahale çalışmalarının uygulanması önerilmektedir.

Anahtar Kelimeler: Ruh sağlığı; okuryazarlık;
damgalama; öğrenciler; hemşirelik

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Mental illnesses are chronic diseases that are seen in all societies and require treatment and care. One in every 8 people worldwide struggles with mental illness.[1] A significant impediment to the effective treatment of mental illnesses is stigmatization and discriminatory attitudes towards mental illnesses.[2] Negative attitudes and stigmatization towards mental illnesses cause discriminatory actions to continue, negatively affect the well-being of patients, and cause significant barriers in receiving health care services, accessing opportunities and integration into society.[3,4] As stated in a report published in the Lancet, stigmatization has been found to have a more detrimental effect on individuals than the actual condition itself.[5]

Despite the high incidence of mental illnesses, low mental health literacy is known to increase stigmatization of mental illnesses.[6,7] Mental health literacy includes the knowledge and understanding levels of individuals about mental health, recognizing mental health problems, identifying risk factors and symptoms, having knowledge about help-seeking options and treatments.[8,9] Mental health literacy is a pivotal factor in developing awareness against stigmatization and social prejudices towards mental illnesses.[7] Mental health literacy has been identified as a significant factor in the reduction of stigmatization. Studies show that stigmatization towards mental illnesses are important determinant of mental health literacy.[6,10]

In studies, it has been stated that health professionals with low mental health literacy have high rates of stigmatization, while nurses from health professionals with high mental health literacy are more willing to care for individuals with mental illness.[6,11] It is known that stigmatization of mental illness is quite common among health professionals.[12,13] On the other hand, health professionals are expected to disseminate mental health knowledge to society and to show a more understanding and empathetic approach to people diagnosed with mental illness. As the largest professional group within the mental health workforce, nurses' attitudes and behaviors have a significant impact on individuals with mental health problems.[3,4] For nursing students, the knowledge and skills acquired during this period of professional development will have a significant impact on their future practice.[14] Investigating the mental health literacy and stigma attitudes of nursing students without clinical experience is critically important during the early stages of their professional development, as attitudes and knowledge formed during education directly influence future professional practices. Therefore, examining the relationship between mental health literacy and stigma among nursing students prior to clinical exposure provides unique data that can inform the development of targeted educational programs. Addressing this relationship early in nursing education is essential to reduce stigma, improve patient care outcomes, and foster a more empathetic healthcare workforce.

1. What is the mental health literacy level of student nurses?

2. What is the stigmatization level of student nurses towards mental illnesses?

3. What is the correlation between the mental health literacy level of student nurses and the level of stigmatization towards mental illnesses?

MATERIAL AND METHODS

This descriptive and correlational study was conducted to examine the relationship between mental health literacy and stigmatization of mental illnesses in student nurses who have not yet practiced as mental health and psychiatric nurses.

STUDY DESIGN AND PARTICIPANTS

The study population consisted of 739 students enrolled in the 1st, 2nd and 3rd years of the course. As the students will undertake mental health and psychiatric nursing practice placements from the 3rd year onwards, the sample consisted of 1st (n=261), 2nd (n=287) and 3rd (n=191) year students. First, the required sample size was calculated using the sampling method for a known population. This method is given below.

$$n = \frac{Nt^2pq}{d^2(N-1) + t^2pq}$$

Sample calculation formula with known population (t=1.96, p=0.5, q=0.5, d=0.05).

This calculation targeted 254 students, and the sample group consisted of the 259 nursing students who responded to the questionnaire. The stratified sampling method was used in this study. This method involves dividing a population into different strata (classes) and taking an appropriate sample size from each stratum. The sample size (n=259) was divided by the total population size (n=739) and multiplied by the number of students in each class to calculate the number of people to be reached from each class. Consequently, data were collected from 92 1st-year students, 100 2nd-year students, and 67 3rd-year students. Inclusion criteria: 1) Willing participation, 2) Answering the questions in the form completely. Students who did not want to answer the questions in the form or who answered incompletely constituted the exclusion criteria.

DATA COLLECTION INSTRUMENTS

Demographic form: It consists of a total of 7 questions including age, gender, class, place of birth, mental illness status, presence of mental illness in the family and willingness to work with psychiatric patients.

Mental Health Literacy Scale: Jung et al. developed the scale, and Göktaş et al. ensured the validity and reliability of the scale.[8,15] The scale consists of a total of 22 items. The scale has 3 subscales: knowledge-oriented RNOS, belief-oriented RNOS and resource-oriented RNOS. The scale ranges from 0, representing the lowest possible score, to 22, representing the highest attainable score. A high score indicates a high level of mental health literacy. The Cronbach alpha value of the scale is 0.71 and it was found as 0.76 for this study.

Mental Illness Stigma Scale for Healthcare Providers: The scale developed by Kassam et al. and validated by Azazi et al. (2021) consists of a total of 20 items.[16] The scale employed is of the Likert type, with a 5-point scale. The scores that can be obtained from the scale vary between a minimum of 20 and a maximum of 100. The higher the score obtained from the scale, the higher the level of stigma experienced. As the scale score increases, the level of stigmatization towards mental illnesses increases. The Cronbach alpha value of the scale is 0.82, and it was determined as 0.61 for this research.

Procedures

The study was conducted from November 2024 to January 2025. The "demographic form", the "Mental Health Literacy Scale (MHLS)" and the "Stigma Scale for Mental Illnesses for Health Workers (MISS-HP)" scale were utilized as data collection tools. Data collection has been via online Google forms. The research link created on Google forms was shared with the students via WhatsApp. Participants were requested to respond to all questions in the survey in full.

ETHICAL CONSIDERATIONS

Ethical approval was obtained from Ege University Scientific Research and Publication Ethics Committees (date: November 30, 2023; no: 23-11.2T/20). Institutional permission was attained from the university where the students study (decision no: 2656). The study was conducted in accordance with the principles of the Declaration of Helsinki. Students were informed about the research. Students were informed about the confidentiality of their data. The privacy of students who did not wish to take part in the study was respected. The study was carried out in a way that would not interfere with the students' education.

DATA ANALYSIS

The SPSS (IBM SPSS Statistics for Windows, Version 25.0) programme was used to analyze the study data. The demographic information of the students was analyzed using number, percentage, mean, and standard deviation values. The compatibility of the total mean scores of the scales with normal distribution was tested by Kolmogorov-Smirnov. As a result of the test, the distribution was found to be normal for MISS-HP ($p>0.05$) and non-normal for MHLS ($p<0.05$). In the context of the study, parametric tests were used for the purpose of analysis of normally distributed data, whilst non-parametric tests were employed for the analysis of non-normally distributed data. For normally distributed data, independent sample t-test and analysis of variance were used. For the data that did not show normal distribution, Mann-Whitney U test and Kruskal-Wallis test were used. The relationship between MHLS and MISS-HP was evaluated using Spearman correlation analysis, with

a p value <0.05 being considered statistically significant.

RESULTS

Table 1 presents the descriptive information and characteristics of the students and comparison of the mean scores of MHLS and MISS-HP.

The mean age of the student nurses was found to be 20.78±2.33 (Table 1). A significant difference was found between the mental health literacy levels of student nurses and the variables of gender, having mental illness and willingness to work with psychiatric patients (t=-2.341, p<0.05; t=-2.069, p<0.05; t=-3.111, p<0.05). A statistically significant difference was found between the willingness to work with psychiatric patients and stigmatization levels of student nurses (t=-5.067, p<0.001) (Table 1).

The mean total score of mental health literacy of student nurses was found to be high and the mean total score of the stigma scale for mental illness was found to be moderate (Table 2).

Footnote: Values between 0.00 and 0.19 indicate a very weak correlation, 0.20 to 0.39 a weak correlation, 0.40 to 0.59 a moderate correlation, 0.60 to 0.79 a strong correlation, and 0.80 to 1.00 a very strong correlation.

The correlation between student nurses' mental health literacy and stigmatization scale for mental illnesses was determined as a negative weak relationship (rho=-0.290, p<0.001) (Table 3).

DISCUSSION

In this study, which was conducted to examine the correlation between mental health literacy and stigmatization of mental illnesses in student nurses who will practice mental health and psychiatric nursing, it was found that the mean scores of the MHLS increased as the grade level of the student nurses in-

TABLE 1: Descriptive information and characteristics of the students and comparison of the mean scores of MHLS and MISS-HP								
	X̄±SD	Minimum-maximum	MHLS	MHLS		MISS-HP	MISS-HP	
Age (years)	20.78±2.33	17.00-45.00						
	n	%	X̄±SD	Test statistics	p value	X̄±SD	Test statistics	p value
Sexuality								
Female	223	86.1	17.15±3.34	-2.341[c]	**0.019**	52.45±7.35	-1.714[a]	0.088
Male	36	13.9	15.63±3.94			54.69±6.67		
Class								
1. class	92	35.5	16.84±3.26	1.369[d]	0.504	52.39±7.27	1.684[b]	0.188
2. class	100	38.6	16.98±3.74			52.18±7.10		
3. class	67	25.9	17.02±3.33			54.16±7.52		
Place of birth								
Village	81	31.3	16.60±3.60	3.949[c]	0.267	55.73±5.98	1.506[b]	0.213
District	71	27.4	16.88±3.21			52.93±5.81		
Province	92	35.5	16.60±3.65			53.15±8.40		
Metropolitan	15	5.8	17.38±3.55			51.69±7.87		
Experience with mental illness								
Yes	33	12.7	18.06±2.47	-2.069[c]	**0.039**	51.36±7.83	-1.185[a]	0.237
No	226	87.3	16.78±3.55			52.97±7.20		
Experience with mental illness for family								
Yes	31	12.0	18.00±2.51	-1.882[c]	0.060	51.87±8.87	-0.729[a]	0.466
No	228	88.0	16.80±3.55			52.89±7.06		
Willingness to work with psychiatric patients								
Yes	152	12.0	17.51±3.03	-3.111[c]	**0.002**	50.92±7.21	-5.067[a]	**0.000**
No	107	88.0	16.13±3.85			55.38±6.60		

MHLS: Mental Health Literacy Scale; MISS-HP: Beliefs Toward Mental Illness Scale; SD: Standard deviation; aIndependent sample t-test; bAnalysis of variance test; cMann-Whitney U test; dKruskal-Wallis test

TABLE 2: Mean scores of students from the scales		
	X̄±SD	Minimum-maximum
MHLS	16.94±3.46	0-22
MISS-HP	52.76±7.29	30-74

MHLS: Mental Health Literacy Scale; MISS-HP, Beliefs Toward Mental Illness Scale; SD: Standard deviation

TABLE 3: Correlation between the MHLS and MISS-HP scores		
	Spearman correlation	Significant
Beliefs toward mental illness score and mental health literacy score	-0.290*	<0.001

*Spearman correlation coefficient; MHLS: Mental Health Literacy Scale; MISS-HP: Beliefs Toward Mental Illness Scale

creased. This may be due to student nurses' interest in how to communicate with the patient, types of diseases and treatment methods, how to reduce stigmatization and how to provide care. A study conducted in Australia to determine the mental health literacy level of undergraduate nursing students showed that 3rd-year students had a higher literacy rate than 1st and 2nd-year students.[17] These data support our research.

In our study, the mean scores of the stigmatization scale of student nurses who had mental illness and who had a family member or relative diagnosed with mental illness were found to be low. At the same time, according to the results of the study, a significant difference was found between student nurses who were willing to work with psychiatric patients and those who were not. In the studies conducted, it has been stated that the stigmatization levels of medical and nursing students who have mental illness in their family, friends or relatives, those who encounter patients with mental health disorders and those who have knowledge about mental health are lower.[18-21] The researches conducted support our data.

In our study, mental health literacy level were found to be high in student nurses who had mental illness and who had a family member or relative diagnosed with mental illness. At the same time, the mean total scores of the MHLS of student nurses were also found to be high. This result is an important finding considering the correlation between mental health literacy and help-seeking behavior. With in-

creased mental health knowledge, students are likely to recognize the symptoms of mental illness and show help-seeking behavior when necessary.[22] Furnham and Swami stated that low mental health literacy negatively affects help-seeking behavior in a mental problem.[23] On the other hand, among university students, those who have information about mental health seek help more.[24,25]

In the study, the mean scores of the stigmatization scale for mental illnesses of student nurses were found to be at a moderate level. The reason for this may be that the study was conducted on student nurses who have not yet started mental health and psychiatric nursing practice. It is thought that when student nurses have the opportunity to contact, communicate and care for patients with mental disorders during practice, their stigmatization levels will decrease. The level of stigmatization of mental illness in Chinese nursing students was found to be moderate, similar to our study.[26] Hawthorne et al. concluded that the greater the exposure of nursing and midwifery students to people diagnosed with mental illness, the lower the stigmatization rates.[27] Fernandes et al. found that the stigmatization rates of students who did clinical internship in the 4th grade were low, supporting our research data.[20] It was emphasized that the education received only in the classroom environment is not sufficient and that the student should have contact with the patient clinically. Considering that the students in our study will do clinical internship practice in the spring semester of the 3rd year and in the 4th year, it is thought that there will be similar changes in the stigmatization levels of student nurses.

In our study, it was found that as students' mental health literacy increased, their stigmatization of mental illnesses decreased. On the other hand, according to the results of the research, this relationship between mental health literacy and stigmatization towards mental illnesses was found to be a weak relationship. This situation is thought to be related to the fact that student nurses have not yet started clinical internship practice. Although the mean mental health literacy scores of the students were high, the mean stigmatization scores were moderate. It is thought that this may be due to the prejudiced and stigmatizing attitudes of student nurses who have not yet had

the opportunity to work with psychiatric patients. It is predicted that the stigmatizing attitudes of student nurses towards mental illnesses will decrease after they start mental health and psychiatric nursing practice. In similar studies in the literature, it has been stated that as mental health literacy increases, stigmatization and negative beliefs about mental illness will decrease.[19,21,28,29] As Uguz et al. emphasized, nurses who receive mental health education, particularly during their student years, are more likely to deliver effective and sensitive care in future mental health services.[6]

In another study conducted in the United States of America, psychiatric nurses were found to have a higher level of knowledge and a lower level of stigmatization than surgical nurses.[18] This may be due to the fact that psychiatric nurses have more knowledge about mental illness and have the opportunity to work one-to-one with psychiatric patients.

In the research examining the practices to reduce stigma related to mental health among medical and nursing students, data were obtained that anti-stigma interventions increased. It was emphasized that future studies should focus more on outcomes related to communication skills and behavior in the clinical setting.[30] Also, mental health literacy has a great place in interventions against stigmatization.

The results of this study contribute uniquely to the literature by examining the relationship between nursing students' mental health literacy and their stigma tendencies toward mental illness. Evaluating students before they have undertaken clinical practice allows for an understanding of attitudes based on theoretical knowledge, thus enhancing the significance of the study. The results suggest that increasing mental health literacy may help reduce stigmatizing attitudes. However, the cross-sectional design, the single-center sample, and the use of self-reported data limit the generalizability of the results. Nevertheless, focusing on the pre-clinical phase sheds light on the formative stages of students' attitudes and offers valuable insights for the development of future educational and intervention programs. In this regard, the study presents a unique perspective by emphasizing the importance of assessing and promoting mental health-related attitudes early in nursing education.

CONCLUSION

In this study, the level of mental health literacy of student nurses was found to be high and the level of stigmatization towards mental illnesses was found to be moderate. In line with the data obtained from the study and the literature, it is thought that increasing the mental health literacy of student nurses will reduce the level of stigmatization towards mental illnesses. In order to reduce stigmatizing attitudes and improve mental health literacy among nursing students, it is recommended to revise the curriculum, implement experiential learning methods, provide pre-clinical preparation, organize awareness-based activities, and evaluate students' attitudes through structured feedback mechanisms.

REFERENCES

1. World Health Organization [Internet]. © 2025 WHO [Cited: October 27, 2024]. Mental Health and Substance Use. 2019. Available from: Https://Www.Who.İnt/MenTal_Health/En/

2. World Health Organization [Internet]. © 2025 WHO [Cited:]. The overwhelming case for ending stigma and discrimination in mental health. Available from: https://www.who.int/europe/news-room/26-06-2024-the-overwhelming-case-for-ending-stigma-and-discrimination-in-mental-health

3. Foster K, Withers E, Blanco T, Lupson C, Steele M, Giandinoto JA, et al. Undergraduate nursing students' stigma and recovery attitudes during mental health clinical placement: a pre/post-test survey study. Int J Ment Health Nurs. 2019;28(5):1065-77. PMID: 31338978

4. Happell B, Platania-Phung C, Bocking J, Scholz B, Horgan A, Manning F, et al. Nursing students' attitudes towards people diagnosed with mental illness and mental health nursing: an international project from Europe and Australia. Issues Ment Health Nurs. 2018;39(10):829-39. PMID: 30346220

5. Thornicroft G, Sunkel C, Alikhon Aliev A, Baker S, Brohan E, El Chammay R, et al. The Lancet Commission on ending stigma and discrimination in mental health. Lancet. 2022;400(10361):1438-80. PMID: 36223799

6. Uguz O, Gulcan E, Keskin G. A survey on the relationship between mental health literacy and beliefs toward mental illness among nurses in general hospitals in Turkey. Arch Psychiatr Nurs. 2024;53:144-50. PMID: 39615927

7. Göktaş S, Işıklı B, Metintaş S. Ruh sağlığı okuryazarlığı [Mental health literacy]. Türk Dünyası Uygulama ve Araştırma Merkezi Halk Sağlığı Dergisi. 2018;3(2):68-75. https://dergipark.org.tr/tr/download/article-file/546009

8. Göktaş S, Işıklı B, Önsüz MF, Yenilmez Ç, Metintaş S. Ruh Sağlığı Okuryazarlığı Ölçeği'nin (Rsoy Ölçeği) Türkçe geçerlilik ve güvenilirliğinin değerlendirilmesi [Evaluation of validity and reliability of the Turkish version of the Mental Health Literacy Scale (MHL Scale)]. Konuralp Tıp Dergisi. 2019;11(3):424-31. https://doi.org/10.18521/ktd.453411

9. Özel Y, Duzcu T. Ruh sağlığı okuryazarlığı [Mental health literacy]. The Journal of Academic Social Science. 2018;6(77):380-7. https://asosjournal.com/?mod=makale_tr_ozet&makale_id=35864#

10. Wu CY, Liu SI, Chang SS, Sun FJ. Surveys of medical seeking preference, mental health literacy, and attitudes toward mental illness in Taiwan, 1990-2000. J Formos Med Assoc. 2014;113(1):33-41. PMID: 23611453

11. Elyamani R, Hammoud H. Mental health literacy of healthcare providers in Arab gulf countries: a systematic review. J Prim Care Community Health. 2020;11:2150132720972271. PMID: 33179551; PMCID: PMC7675914

12. Lien YY, Lin HS, Lien YJ, Tsai CH, Wu TT, Li H, et al. Challenging mental illness stigma in healthcare professionals and students: a systematic review and network meta-analysis. Psychol Health. 2021;36(6):669-84. PMID: 33017193

13. Oliveira AM, Machado D, Fonseca JB, Palha F, Silva Moreira P, Sousa N, et al. Stigmatizing attitudes toward patients with psychiatric disorders among medical students and professionals. Front Psychiatry. 2020;11:326. PMID: 32425827; PMCID: PMC7207477

14. Patterson C, Roberts M, Yousiph T, Robson G, Lewer K, Jay EK, et al. Non-traditional mental health clinical placements: an effective means for reducing self-stigma in pre-registration nursing students. J Psychiatr Ment Health Nurs. 2025;32(1):143-51. PMID: 39118420; PMCID: PMC11704999

15. Jung H, von Sternberg K, Davis K. Expanding a measure of mental health literacy: development and validation of a multicomponent mental health literacy measure. Psychiatry Res. 2016;243:278-86. PMID: 27423635

16. Kassam A, Papish A, Modgill G, Patten S. The development and psychometric properties of a new scale to measure mental illness related stigma by health care providers: the Opening Minds Scale for Health Care Providers (OMS-HC). BMC Psychiatry. 2012;12:62. PMID: 22694771; PMCID: PMC3681304

17. Saito AS, Creedy DK. Determining mental health literacy of undergraduate nursing students to inform learning and teaching strategies. Int J Ment Health Nurs. 2021;30(5):1117-26. PMID: 33760328

18. Kolb K, Liu J, Jackman K. Stigma towards patients with mental illness: an online survey of United States nurses. Int J Ment Health Nurs. 2023;32(1):323-36. PMID: 36285570

19. Meng N, Huang X, Wang J, Wang M, Wang Y. The factors and outcomes of stigma toward mental disorders among medical and nursing students: a cross-sectional study. BMC Psychiatry. 2022;22(1):357. PMID: 35614424; PMCID: PMC9131538

20. Fernandes JB, Família C, Castro C, Simões A. Stigma towards people with mental illness among Portuguese nursing students. J Pers Med. 2022;12(3):326. PMID: 35330326; PMCID: PMC8955632

21. Samari E, Seow E, Chua BY, Ong HL, Abdin E, Chong SA, et al. Stigma towards people with mental disorders: perspectives of nursing students. Arch Psychiatr Nurs. 2018;32(6):802-8. PMID: 30454620

22. Jeong YW, Kim JH, Park HK. Study on the relationship between mental health literacy and psychological symptoms of university students: mediating effect of grit. International Journal of Mental Health Promotion. 2023;25(7):813-21. https://doi.org/10.32604/ijmhp.2023.027383

23. Furnham A, Swami V. Mental health literacy: a review of what it is and why it matters. Int Perspect Psychol. 2018;7(4):240-57. https://psycnet.apa.org/record/2018-54979-004

24. Kim HC. Mediating effect of stigma on the relationship between mental health literacy and help-seeking attitudes among university students in South Korea. International Journal of Mental Health. 2023;52(2):163-78. https://doi.org/10.1080/00207411.2021.1965397

25. Kim EJ, Yu JH, Kim EY. Pathways linking mental health literacy to professional help-seeking intentions in Korean college students. J Psychiatr Ment Health Nurs. 2020;27(4):393-405. PMID: 31954091

26. Shi X, Wu Y, Wang X, Xu J, Miao J, Zang S. Factors associated with nursing students' mental health-related stigma: a multisite cross-sectional study. Nurse Educ Today. 2024;142:106346. PMID: 39146919

27. Hawthorne A, Fagan R, Leaver E, Baxter J, Logan P, Snowden A. Undergraduate nursing and midwifery student's attitudes to mental illness. Nurs Open. 2020;7(4):1118-28. PMID: 32587731; PMCID: PMC7308689

28. Beasley L, Kiser R, Hoffman S. Mental health literacy, self-efficacy, and stigma among college students. Social Work in Mental Health. 2020;18(6):634-50. https://doi.org/10.1080/15332985.2020.1832643

29. Ross SG, Bruggeman B, Maldonado M, Deiling M. Examining personal, perceived, treatment, and self-stigma in college students: the role of parent beliefs and mental health literacy. Journal of College Student Psychotherapy. 2020;34(3):183-97. https://doi.org/10.1080/87568225.2019.1580657

30. Heim E, Henderson C, Kohrt BA, Koschorke M, Milenova M, Thornicroft G. Reducing mental health-related stigma among medical and nursing students in low- and middle-income countries: a systematic review. Epidemiol Psychiatr Sci. 2019;29:e28. PMID: 30929650; PMCID: PMC6848770