

Sağlık Bölümlerinde Eğitim Alan Üniversite Öğrencilerinin AIDS'e Yönelik Bilgi Düzeyleri ve Tutumlarının Belirlenmesi

Identification of Knowledge and Attitudes of University Students Enrolled in Health Departments about AIDS

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ÖZ

Amaç: Bu çalışmanın amacı sağlık bölümlerinde öğrenim gören üniversite öğrencilerinin HIV/AIDS konusundaki bilgi ve tutumlarını belirlemektir. Bu tanımlayıcı bir çalışmadır.

Yöntem: Bu çalışma Aralık 2021-Şubat 2022 tarihleri arasında gerçekleştirilmiştir. Araştırmanın örneklemini sağlık bölümlerinde öğrenim gören 710 öğrenci oluşturmuştur. Veri toplama aracı olarak Sosyodemografik Form, AIDS Bilgi Ölçeği ve AIDS Tutum Ölçeği kullanılmıştır. Verilerin analizinde SPSS istatistik paket programı kullanıldı. Tanımlayıcı istatistikler, Kruskal Wallis testi, Spearman Korelasyon analizi ve Mann-Whitney U testi yapıldı.

Bulgular: HIV/AIDS bilgi ve tutum puanları arasında zayıf fakat istatistiksel olarak anlamlı pozitif bir ilişki gözlemlendi ($r = 0.142$, $p < 0.05$). Bilgi puanları, dördüncü sınıf öğrencileri, yeterli HIV/AIDS bilgisine sahip olduğunu bildirenler, bilgiyi bilimsel makalelerden edinenler ve HIV/AIDS tanısı konmuş hastalara bakım vermeye veya bu hastalarla çalışmaya istekli olanlar arasında anlamlı olarak daha yüksekti ($p < 0.05$). Tutum puanları ise, bakım vermeye istekli olanlar, kendilerini korumayı bilenler ve HIV/AIDS tanısı konmuş sağlık profesyonelleri ile çalışmaya istekli olanlar arasında anlamlı olarak daha yüksekti ($p < 0.05$). Çoklu doğrusal regresyon analizi, HIV/AIDS tanısı konmuş sağlık profesyonelleri ile çalışmaya istekli olmanın tutumların en güçlü yordayıcısı olduğunu gösterdi ($\beta = -0.252$, $p < 0.001$); bunu sırasıyla, bu profesyonellerle çalışmak zorunda kaldığında rahatsız hissetme ($\beta = 0.177$, $p < 0.001$), bakım vermeye istekli olma ($\beta = -0.118$, $p = 0.001$) ve bakım verirken rahatsız hissetme ($\beta = 0.103$, $p = 0.016$) takip etti. Toplam HIV/AIDS bilgi puanı ise anlamlı bir yordayıcı değildi ($\beta = 0.028$, $p = 0.417$). Model, HIV/AIDS'e yönelik tutumlardaki toplam varyansın %23.1'ini açıkladı ($R^2 = 0.224$).

Sonuç: Hemşirelik eğitimi müfredatı, öğrencilerin HIV/AIDS konusunda doğru bilgi ve tutum geliştirmelerine yardımcı olacak teorik ve uygulamalı dersleri içermelidir.

Anahtar Kelimeler: Edinilmiş İmmün Yetmezlik Sendromu, Sağlık Bilgisi, Tutum ve Öğrenciler.

ABSTRACT

Objective: This study aims to identify health department students' knowledge and attitudes about HIV/AIDS.

Method: The study used a descriptive design and was conducted between December 2021 and February 2022. The sample included 710 health department students. The Socio-demographic Form, the AIDS Knowledge Scale, and the AIDS Attitude Scale were utilized to collect data. Data analysis was conducted in SPSS statistical package program. Analyses used were descriptive statistics, the Kruskal Wallis test, Spearman Correlation analysis, and the Mann-Whitney U test.

Results: A weak but statistically significant positive correlation was observed between AIDS knowledge and attitude scores ($r = 0.142$, $p < 0.05$). Knowledge scores were significantly higher among fourth-year students, those reporting adequate AIDS knowledge, those obtaining information from scientific articles, and those willing to provide care or work with patients diagnosed with AIDS ($p < 0.05$). Attitude scores were significantly higher in students willing to provide care, those who knew how to protect themselves, and those willing to work with health professionals diagnosed with AIDS ($p < 0.05$). Multiple linear regression analysis showed that willingness to work with health professionals diagnosed with AIDS ($\beta = -0.252$, $p < 0.001$) was the strongest predictor of attitudes, followed by feeling uneasy when required to work with such professionals ($\beta = 0.177$, $p < 0.001$), willingness to provide care ($\beta = -0.118$, $p = 0.001$) and feeling uneasy when providing care ($\beta = 0.103$, $p = 0.016$).

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Total AIDS knowledge was not a significant predictor ($\beta = 0.028$, $p = 0.417$). The model explained 23.1% of the variance in attitudes toward AIDS (Adjusted $R^2 = 0.224$)

Conclusion: The Nursing education curriculum should include theoretical and practical courses to help students develop the right knowledge and attitudes about HIV/AIDS.

Key words: Acquired Immunodeficiency Syndrome, HIV Infections, Health Knowledge, Attitudes, Students.

1. INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) is one of the important public health issues of modern medicine and a contagious immune system disease threatening the world (1). Improvements have been made in access to antiretroviral treatment in most parts of the world, yet according to the report published in 2018 by the Joint United Nations Programme on HIV/AIDS (UNAIDS), globally about 1,7 million people were infected with HIV/AIDS-related diseases and around 770 thousand AIDS-related deaths happened (2).

According to 2024 data, HIV infections among young people aged 15–24 continue to represent a serious public health problem. According to the UNICEF report, approximately 370,000 new HIV infections were reported in the 15–24 age group in 2024, indicating that young people in this age group constitute a significant proportion of the HIV epidemic (3). Students enrolled in health departments, due to the age group they are in and the profession they fulfill, are among the groups that are most at risk of encountering HIV (4). Students enrolled in health departments are healthcare providers of the future. Health professionals should have adequate knowledge about anything related to health so that they can perform the roles assigned to them (educational, curative, consultant, etc.) (5). However, studies show that the health service providers of the future have moderate or little knowledge about AIDS (6,7).

Studies have also demonstrated that the attitudes of health service providers toward patients significantly influence patients' medical outcomes as well as their health-related behaviors. Negative or stigmatizing attitudes may lead to adverse consequences such as decreased treatment adherence, refusal of recommended therapies, or leaving the hospital before completing the prescribed course of treatment (8,9). Such disruptions in continuity of care can compromise disease management and worsen overall health outcomes. Furthermore, behaviors including reluctance to initiate treatment or outright refusal of treatment hinder effective control of AIDS-related symptoms and increase the risk of unintentional transmission of the disease within the community (10). The literature indicates that an increase in health service providers' knowledge about AIDS is associated with a reduction in their prejudices and anxiety levels, and facilitates the adoption of more professional approaches toward affected individuals. In particular, improved knowledge appears to enhance understanding of transmission routes, prevention strategies, and clinical management, thereby reducing unfounded fears and misconceptions. As a result, healthcare providers are more likely to exhibit supportive, empathetic attitudes in their interactions with patients (11,12).

Therefore, students enrolled in health departments should be provided with sufficient information to manage their anxiety and fear caused by a lack of knowledge about AIDS and inaccurate knowledge about the transmission of the disease. In addition, appropriate education models could increase students' knowledge about AIDS and enable them to demonstrate positive attitudes towards people diagnosed with AIDS (1).

Aim of Study

In line with this information, it is highly important to identify the knowledge and attitudes of students enrolled in health departments about AIDS. Hence, the purpose of this study is to identify the knowledge and attitudes of university students enrolled in health departments about AIDS.

2.MATERIALS AND METHODS

Design and Setting

This study, which was conducted between December 2021 and February 2022, included students enrolled in the Nutrition and Dietetics (participation ratio: 52.4%), Nursing (participation ratio: 59.1%), Midwifery (participation ratio: 80.5%), First Emergency Aid (participation ratio: 78.3%), and Pharmacy (participation ratio: 20.3%) departments of a university in eastern Turkey.

Participants

The target population of the study was 1411 students who were enrolled in the aforementioned departments. The sample size was calculated based on the formula for a known population (13). The calculation assumed a 5% margin of error, a 95% confidence level, and an estimated prevalence of 50% ($p=0.50$). The prevalence was set at 50% to ensure a conservative approach by reaching the maximum possible sample size. Based on these parameters, the minimum required sample size was determined to be 302. However, as additional eligible students expressed interest in participating while data collection was still ongoing, they were also included in the study. Consequently, the final sample size reached 710 participants.

Inclusion Criteria

The study included those who were enrolled in the health-related departments of the university, who were aged 18 and over, who had online access, who attended school during the time the study was conducted, and who agreed to participate in the study.

Data Collection Tools

Data collection tools included the Socio-demographic Form, the AIDS Knowledge Scale, and the AIDS Attitude Scale.

The Socio-Demographic Form: The form was prepared by the researchers and contained 21 questions about age, department, class year, income level, and AIDS.

The AIDS Knowledge Scale: Developed by Aydemir et al., the AIDS Knowledge Scale aims to identify the level of knowledge about AIDS and is composed of 21 items and three sub-scales. Kuder-Richardson-20 coefficient of the scale was reported .76 (14). The higher the scale score is, the higher the knowledge about AIDS is (14). Kuder-Richardson-20 coefficient of the scale was detected .86 in the present study.

The AIDS Attitude Scale: Developed by Aydemir et al. (14), the AIDS Attitude Scale is utilized to identify individuals' attitudes towards AIDS. The scale, responded on a 5-point Likert Scale,

contains 17 items and two sub-scales. Aydemir et al. (14) reported the Cronbach's alpha value of the scale as 0.90, and it was found 0.87 in this study.

Data collection

Prior to data collection, all students who volunteered to participate in the study provided informed verbal consent. The data collection process was conducted in a classroom setting under the supervision of the researcher. The survey was distributed online, allowing participants to access and complete the questionnaire via their mobile devices during class hours. The survey instrument began with a paragraph providing a brief overview of the research, followed by a question asking the participants to indicate their voluntary consent to participate. This procedure ensured that informed consent was obtained from all students.

Data Analysis

SPSS statistical package was used to analyze the data collected in the study. Descriptive statistics such as numbers, percentages, and means were utilized. Histogram, skewness and kurtosis values and Kolmogorov Smirnov analyses were performed to determine whether the data set distributed normally. As the data set **was** not normally distributed, the Mann-Whitney U test was utilized to compare the mean scores in two independent groups. As for the comparisons of more than two independent groups, the Kruskal Wallis test was utilized. Spearman Correlation analysis was performed to analyze the relationship between the scale scores. Statistical significance was taken $p < 0.05$.

3. RESULTS

The average age of the participating students was found 20.67 ± 1.75 . Of all the students, 72% were females, 52.1% had income less than expenses, 32.8% were enrolled in the Nutrition and Dietetics Department, and 38.6% were enrolled in the first year. Besides, 65.4% had very little knowledge about AIDS, 41.3% of those who knew about AIDS learned it from the courses at school, 62.4% reported to need health education about this issue, and 97.9% did not have tests for AIDS. Of all the students, 50.7% thought that their profession did not increase the risk of AIDS transmission, 58.3% would be willing to provide health services to patients diagnosed with AIDS, 61.7% would feel uneasy while providing health services to patients diagnosed with AIDS, 62% did not know how to protect themselves while providing care to patients diagnosed with AIDS, 57.5% would not be willing to work with health professionals diagnosed with AIDS, and 64.6% would feel uneasy when they have to work with health professionals diagnosed with AIDS. Besides, 3.9% of the participants received a blood transfusion, 10.4% were injured with sharp objects contaminated with patients' blood and bodily fluids during their education, 12.1% experienced sexual intercourse, and 59.3% of those who experienced sexual intercourse used a condom during sexual intercourse. The AIDS Knowledge Scale mean score of the participants was found 8.85 ± 5.00 while the AIDS Attitude Scale mean score was 52.68 ± 10.45 (Table 1).

Table 1. Students' Socio-demographic Characteristics (n=710)

Descriptive Characteristics		n	%
Marital Status	Married	13	1.8
	Single	697	98.2
Gender	Female	511	72.0
	Male	199	28.0
Income level	Income less than expenses	370	52.1
	Income equal to expenses	291	41.0
	Income more than expenses	49	6.9
Department	Nutrition and Dietetics	233	32.8
	Midwifery	33	4.6
	Pharmacy	72	10.1
	Nursing	228	32.1
	First and Emergency Aid	144	20.3
Class Level	1	274	38.6
	2	219	30.8
	3	133	18.7
	≥4	84	11.8
Level of knowledge about AIDS	Very little knowledge	464	65.4
	No knowledge	72	10.1
	Adequate knowledge	174	24.5
Source of knowledge about AIDS	Scientific articles	45	6.3
	Doctor/health personnel	41	5.8
	Courses at school	293	41.3
	No knowledge at all	72	10.1
	Media/friends/social environment	259	36.5
Needing health education about AIDS	Yes	443	62.4
	No	267	37.6
Having had tests for AIDS	Yes	15	2.1
	No	695	97.9
Do you think your profession increases the risk for AIDS transmission?	Yes	350	49.3
	No	360	50.7
Would you be willing to provide health services to patients diagnosed with AIDS?	Yes	414	58.3
	No	296	41.7
Would you feel uneasy if you had to provide care to patients diagnosed with AIDS?	Yes	438	61.7
	No	272	38.3
Do you know how to protect yourself if you have to provide care to patients diagnosed with AIDS?	Yes	270	38.0
	No	440	62.0
Would you be willing to work with health professionals who were diagnosed with AIDS?	Yes	302	42.5
	No	408	57.5
Would you feel uneasy if you had to work with health professionals diagnosed with AIDS?	Yes	459	64.6
	No	251	35.4
Have you ever received a blood transfusion?	Yes	28	3.9
	No	682	96.1
Have you ever been injured with sharp objects contaminated with patient blood and bodily fluids during your education?	Yes	74	10.4
	No	636	89.6
Have you ever had a permanent tattoo (requiring the use of needles)?	Yes	16	2.3
	No	694	97.7
Have you experienced sexual intercourse?	Yes	86	12.1
	No	624	87.9
What method do you use to protect yourself during sexual intercourse? (n=86)	Condom	51	59.3
	Other methods	35	40.7
	$\bar{X} \pm SD$	Min.	Max.
Age	20.67±1.75	18	33
AIDS Knowledge Scale	8.85±5.00	0	21
AIDS Attitude Scale	52.68±10.45	18	85

Table 2. Comparison of Students' AIDS Knowledge and Attitude Scale Mean Scores according to Some Characteristics (n=710)

		Knowledge Scale			Attitude scale	
		n	$\bar{X} \pm SD$	Test value and significance	$\bar{X} \pm SD$	Test value and significance
Marital Status	Married	13	10.08±6.37	U=3822.0	49.69±15.35	U=3973.0
	Single	697	8.83±4.98	p=.333	52.74±10.34	p=.446
Gender	Female	511	8.66±4.95	U=47181.5	52.97±10.36	U=47967.0
	Male	199	9.35±5.12	p=.135	51.95±10.66	p=.241
Income level	Income less than expenses	370	8.79±4.80	KW=.614	52.62±10.97	KW=.791
	Income equal to expenses	291	8.83±5.26	p=.736	52.36±9.57	p=.673
	Income more than expenses	49	9.39±5.03		55.04±11.22	
Department	Nursing	228	8.87±5.08	U=54674.0	52.56±10.06	U=54918.5
	Other	482	8.84±4.97	p=.914	52.74±10.63	p=.991
Class level	1	274	7.81±4.80		52.21±10.67	
	2	219	8.15±4.91	KW=63.854	51.85±10.30	KW=6.604
	3	133	10.03±5.06	p=.001	54.27±9.85	p=.086
	4	84	12.21±3.92		53.87±10.80	
What method do you use to protect yourself during sexual intercourse?	Condom	51	9.84±5.26	KW=2.071	52.33±11.25	KW=.268
	Other methods	35	8.80±4.91	p=.355	51.91±11.94	p=.874
	I have not experienced sexual intercourse	624	8.77±4.99		52.75±10.31	

		Knowledge Scale			Attitude Scale	
		n	$\bar{X} \pm SD$	Test Value and Significance	$\bar{X} \pm SD$	Test value and Significance
Level of knowledge about AIDS	Very little knowledge	464	8.50±4.78	KW=100.801	52.66±10.32	KW=1.828
	No knowledge	72	4.69±3.95	p=.001	51.72±8.31	p=.401
	Adequate knowledge	174	11.51±4.54		53.14±11.54	
Source of knowledge about AIDS (n=638)	Scientific articles	45	10.98±4.75		54.98±11.72	
	Doctor/health personnel	41	10.29±4.77	KW=77.297	53.85±13.07	KW=8.683
	Courses at school	293	9.83±4.80	p=.001	53.42±10.33	p=.070
	No knowledge at all	72	4.69±3.95		51.72±8.31	
	Media/friends/social environment	259	8.30±4.87		51.53±10.34	
Needing health education about AIDS	Yes	443	8.39±4.73	U=51185.0	52.98±10.11	U=56360.0
	No	267	9.61±5.35	p=.003	52.18±10.99	p=.293
Do you think your profession increases the risk for AIDS transmission?	Yes	350	9.30±4.89	U=56211.0	52.46±10.08	U=62519.5
	No	360	8.41±5.08	p=.013	52.90±10.78	p=.860
Would you be willing to provide health services to patients diagnosed with AIDS?	Yes	414	9.17±4.94	U=55431.0	55.08±10.04	U=41514.5
	No	296	8.41±5.07	p=.030	49.32±10.09	p=.001

Table 2. Comparison of Students' AIDS Knowledge and Attitude Scale Mean Scores according to Some Characteristics (n=710) (continued).

Would you feel uneasy if you had to provide care to patients diagnosed with AIDS?	Yes	438	8.78±4.96	U=57781.5	50.25±10.30	U=39486.0
	No	272	8.97±5.08	p=.501	56.60±9.46	p=.001
Do you know how to protect yourself if you have to provide care to patients diagnosed with AIDS?	Yes	270	11.06±4.53	U=34788.0	54.49±10.77	U=49836.0
	No	440	7.49±4.80	p=.001	51.58±10.10	p=.001
Would you be willing to work with health professionals who were diagnosed with AIDS?	Yes	302	9.55±4.98	U=52647.0	57.48±9.73	U=32508.5
	No	408	8.33±4.96	p=.001	49.13±9.51	p=.001
Would you feel uneasy if you had to work with health professionals diagnosed with AIDS?	Yes	459	8.56±4.81	U=51637.0	49.93±9.69	U=32893.5
	No	251	9.37±5.31	p=.022	57.71±9.92	p=.001

KW = Kruskal Wallis test

U= Mann-Whitney U test

The AIDS Knowledge Scale mean score was found to be significantly higher in those who were enrolled in the fourth year, who reportedly had adequate knowledge about AIDS, who obtained information about AIDS from scientific articles, who did not need health education about this issue, who thought that their profession increased the risk of AIDS transmission, who would be willing to provide health services to patients diagnosed with AIDS, who would be willing to work with health professionals diagnosed with AIDS, and who reportedly would not feel uneasy when they have to work with health professionals diagnosed with AIDS ($p<0.05$) (Table 2).

The AIDS Attitude Scale mean score was found to be significantly higher in those who would be willing to provide health services to patients diagnosed with AIDS, who would not feel uneasy while providing health services to patients diagnosed with AIDS, who knew how to protect themselves while providing health services to patients diagnosed with AIDS, who would be to work with health professionals diagnosed with AIDS, and who would not feel uneasy when they have to work with health professionals diagnosed with AIDS ($p<0.05$) (Table 2).

Table 3. Relationship between Knowledge and Attitude about AIDS

AIDS Attitude Scale	AIDS Knowledge Scale	
	r	.103
	p	.006

A weak, statistically significant, positive relationship was detected between the mean scores of the AIDS Knowledge Scale and the AIDS Attitude Scale (Table 3).

Table 4: Multiple Linear Regression Analysis Predicting Attitudes Toward AIDS

Variables	B	SE	β	t	p
Constant	0.345	0.198	–	1.740	0.082
Total knowledge score (Z score)	0.039	0.033	0.039	1.159	0.247
Willingness to provide health care to patients diagnosed with AIDS	-0.241	0.075	-0.119	-3.223	0.001
Feeling uneasy if required to provide care to patients diagnosed with AIDS	0.211	0.087	0.102	2.411	0.016
Willingness to work with health professionals diagnosed with AIDS	-0.508	0.079	-0.251	-6.451	<0.001
Feeling uneasy if required to work with health professionals diagnosed with AIDS	0.374	0.093	0.179	4.036	<0.001
Model statistics: R = 0.479; R ² = 0.229; Adjusted R ² = 0.224; Standard error of the estimate = 0.881 <i>B = unstandardized coefficient; SE = standard error; β = standardized coefficient.</i>					

According to the results of the multiple linear regression analysis, a moderate relationship was observed between the independent variables included in the model and attitudes toward AIDS (R = 0.480). The coefficient of determination (R²), which indicates the explanatory power of the model, was 0.231, demonstrating that the independent variables explained 23.1% of the total variance in attitudes toward AIDS. When the sample size and the number of variables included in the model were taken into account, the adjusted coefficient of determination (Adjusted R²) was 0.224, indicating that the model explained approximately 22.4% of the variance in the dependent variable.

Examination of the regression coefficients revealed that willingness to provide health care to patients diagnosed with AIDS (β = -0.118, p = 0.001), feeling uneasy if required to provide care to patients diagnosed with AIDS (β = 0.103, p = 0.016), willingness to work with health professionals diagnosed with AIDS (β = -0.252, p < 0.001), and feeling uneasy if required to work with health professionals diagnosed with AIDS (β = 0.177, p < 0.001) were statistically significant predictors of attitudes toward AIDS. In contrast, the total AIDS knowledge score (β = 0.028, p = 0.417) was not found to have a statistically significant effect on attitude scores. An examination of the standardized coefficients indicated that willingness to work with health professionals diagnosed with AIDS was the strongest predictor of attitudes toward AIDS among the variables included in the model (Table 4).

4. DISCUSSION

In this study, the knowledge levels and attitudes toward AIDS among university students enrolled in health departments were evaluated. The findings indicate that students' knowledge and attitude scores were at a moderate level and that knowledge levels differed significantly according to certain sociodemographic and educational variables. In particular, factors such as year of study, perceived level of knowledge, source of information, and the perceived need for health education were found to be significant determinants of knowledge levels. Studies in the literature showed that as their theoretical and practical courses increase, fourth-year students become more knowledgeable about AIDS as well as infectious diseases and ways of

transmission (5,7,15); the participants who reportedly had sufficient information about AIDS were reported to have a high level of knowledge about AIDS (16); students who obtained information from scientific sources increased their level of knowledge about AIDS (17), and adolescents who had a good level of knowledge about AIDS did not need health education on this issue (18).

This study found that the scale scores were significantly higher in those who thought that their profession increased the risk of AIDS transmission, who would be willing to provide health services to patients diagnosed with AIDS, who knew how to protect themselves while providing health services to patients diagnosed with AIDS, who would be willing to work with health professionals diagnosed with AIDS, and who reportedly would not feel uneasy when they have to work with health professionals diagnosed with AIDS.

Studies that utilized different education models to investigate their effects on the knowledge and attitudes about AIDS detected statistically significant differences in the post-test mean scores of the participants who were concerned about the transmission via blood, who hesitated contact with individuals who tested positive (patient/health professional), and who did not know how to protect themselves while providing care to patients tested positive (1,19). The education models utilized were found to increase students' level of knowledge about protection from AIDS, ways of transmission, and treatment issues, and as the level of knowledge increased, there was an increase in the number of students who would be willing to provide care to patients diagnosed with AIDS (1). The AIDS Attitude Scale mean score was found to be significantly higher in those who would be willing to provide health services to patients diagnosed with AIDS, who would not feel uneasy while providing health services to patients diagnosed with AIDS, who knew how to protect themselves while providing health services to patients diagnosed with AIDS, who would be willing to work with health professionals diagnosed with AIDS, and who reportedly would not feel uneasy when they have to work with health professionals diagnosed with AIDS.

Studies show that students who would not feel uneasy about people diagnosed with AIDS (patient/health professional), who provided health services to patients diagnosed with AIDS and who reportedly knew how to protect themselves while providing the health care had more positive attitudes than other students (6,20). Studies conducted with students enrolled in health departments reported that providing accurate information about how to provide care to patients with AIDS enabled to decrease students' anxiety about catching AIDS while providing care and help to improve their attitudes and willingness about care (11,12,21). A positive, statistically significant, but weak correlation was found between the mean scores of the AIDS Knowledge Scale and the AIDS Attitude Scale. This finding indicates that although an increase in knowledge level may contribute to more positive attitudes toward AIDS, attitude change cannot be explained solely by knowledge improvement. Similarly, the literature generally reports a positive but weak relationship between HIV/AIDS knowledge and attitudes. In the study conducted by Andrew et al. in 2020, it was reported that as HIV/AIDS knowledge increased, attitude scores also increased significantly; however, the strength of the relationship was limited. In the study conducted by Elghazaly et al. in 2023, a positive relationship was found between HIV/AIDS knowledge and attitudes among both healthcare workers and the general population. Likewise, in the intervention-based study conducted by Gökçe and Özer in 2025, it was shown that the increase in knowledge level after education positively affected

attitude scores, although the correlation coefficient remained at a weak level. These findings suggest that improving attitudes toward HIV/AIDS is not solely dependent on knowledge increase but that educational programs should integrate cognitive, affective, and behavioral components to support attitude change (22-24).

Limitations

The participation ratios of the departments were not equal, which is a limitation of the study. Another limitation is that the sample was based on voluntary participation and established through non-probability sampling methods, which increases the risk of selection bias; this should be considered a methodological constraint that may limit the generalizability of the findings.

5. CONCLUSION AND RECOMMENDATIONS

In conclusion, the majority of participating students receiving health education were found to have very little knowledge about AIDS and reportedly needed health education about this issue, and more than half of the students were found not to know how to protect themselves while providing health services to patients diagnosed with AIDS. The level of knowledge was found to be the same as other students among future nurses, who work in close contact particularly with patients and are more at risk. Identification of knowledge and attitudes of students receiving nursing education is of importance in terms of assessing their ability in managing risk conditions to develop during their education. The Nursing education curriculum should include theoretical and practical (simulation or virtual reality) courses to help students obtain the right knowledge and attitudes about AIDS. Besides, the curriculum of other departments educating health professionals should also be revised accordingly.

Consent to participate

The students were given information about the purpose of the study, and verbal consent was received from those who agreed to participate in the study.

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Ethical Considerations

This study was performed in line with the principles of the Declaration of Helsinki. Before the study was conducted, ethics committee approval was obtained from the University Scientific Research Ethics Committee (issue no: E.25897 01.12.2021). Permission to use the scale was obtained from the corresponding author of the original scale.

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