

Knowledge of HIV/AIDS Among Young People Living in Türkiye and Its Relationship with Health Literacy: A Cross-Sectional Study

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What is already known on this topic?

- HIV is one of the sexually transmitted infections that spreads silently in Turkish society.
- One of the groups most at risk for HIV is young people.
- The spread of HIV can be prevented by improving the health literacy level of society.

What this study adds on this topic?

- Our study was designed to determine AIDS knowledge and its relationship with health literacy in a large sample in Turkey.
- This study was particularly timely at a time when AIDS prevalence in Turkey is quietly and steadily increasing, and when individuals hold false myths about AIDS.
- Determining the HIV/AIDS knowledge of young people, the most at-risk group, and identifying ways to prevent HIV/AIDS is important for countries like Turkey where HIV prevalence is increasing.

ABSTRACT

Purpose: This study was conducted to determine the relationship between human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) knowledge levels and health literacy among young people living in Türkiye.

Methods: This cross-sectional study was conducted in Türkiye to assess the relationship between HIV/AIDS knowledge levels and health literacy among young adults. The data were collected between April and August 2023. Data were analyzed using the Descriptive Information Form, AIDS Knowledge Scale (AIDS-KS), and Health Literacy Scale (HLS) to examine the correlation between them.

Results: Among the young adults, 52.1% stated that they needed health education for sexually transmitted infections (STIs). Also, 70.1% reported that they knew about HIV/AIDS, and 74.8% reported that they had information about the ways of transmission. The participants' mean score on the AIDS-KS (8.04 ± 4.58) was low, and the mean score on the HLS (101.99 ± 19.28) was good. There was a significant positive correlation between the total score of the AIDS-KS and the total score of the HLS ($P < 0.001$).

Conclusion: Given the strong relationship between young adults' HIV/AIDS knowledge and health literacy, the development of innovative education and awareness campaigns that integrate these 2 areas can be a strategic step in improving public health and preventing the spread of infection among young people.


Keywords: HIV/AIDS, risk factor, health literacy, emerging adults, public health

Introduction

Human immunodeficiency virus (HIV) is a virus targeting the immune system and weakening its defenses against infections and some types of cancer. If HIV infection is not treated, acute immunodeficiency syndrome (AIDS) develops depending on individual characteristics.¹ The HIV/AIDS epidemic is one of the most important global health problems in history. Joint United Nations Programme on HIV/AIDS (UNAIDS) data show that 4,000 people, 1,100 of whom are young (aged 15-24), are infected with HIV every day. It also reported that in 2021 alone, AIDS-related deaths were estimated at 650 000 people.²

While HIV cases have been decreasing worldwide in recent years, the number of infected individuals in Türkiye has been increasing every year.² According to 2022 official data, there are 2,971 HIV/AIDS cases in Türkiye. It was reported that the majority of the notified cases were in the 25-29 age group.¹ It is estimated that the number of reported cases in the country is much lower than the actual number of cases. It is known that many HIV-infected individuals do not seek hospital care due to reasons such as

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stigmatization, social isolation, work anxiety, or unwillingness to face the disease, making it difficult to determine the actual number of cases. Individuals' reluctance to seek preventive health behaviors and confront the fear of HIV infection are also barriers in this area.³

Improving the level of knowledge about HIV/AIDS is an important factor in preventing its spread. Lack of knowledge about HIV/AIDS often creates serious barriers to initiating risky behaviors and self-protection among young adults.⁴ Young adults are in the group at serious risk for HIV infection. However, it is known that even university students studying in health departments in Türkiye do not have sufficient HIV/AIDS knowledge.⁵ In this respect, it can be said that the concept of health literacy, which has gained importance in recent years, will positively improve HIV/AIDS knowledge and behaviors. Individuals with good health literacy are thought to participate in preventive health services and show positive health behavior characteristics.^{6,7}

Prevalence of Human immunodeficiency virus in Türkiye has been increasing in recent years. If adequate measures are not taken, especially for risk groups, the spread of HIV infection will increase along with the deaths due to infection.² It is important to ensure that all young adults in the risk group have access to accurate and up-to-date information on HIV. It can be said that an increase in the health literacy level of society will contribute to preventing and curing diseases such as HIV/AIDS.^{6,7} As HIV/AIDS continues to pose a critical threat to global health, understanding the level of knowledge of young adults in Türkiye about this disease is of great importance to control the spread of the disease. In this context, the level of health literacy of individuals can directly affect their knowledge and awareness of HIV/AIDS.^{6,7} Health literacy, as the ability of individuals to understand, evaluate, and apply health-related information, enables young people to access accurate information about HIV/AIDS and to make healthy decisions using this information. Measuring the relationship between HIV/AIDS knowledge and health literacy not only reveals existing knowledge gaps but also paves the way for the development of more effective education and awareness programs at the community level.⁸⁻¹⁰ This study will contribute to improving public health policies and adopting more effective approaches to disease control by providing a scientific basis for the development of health literacy-based strategies to increase HIV/AIDS awareness among young adults in Türkiye.

Studies conducted in Türkiye reveal that young people lack knowledge about HIV/AIDS.^{8,9} The limited access of young people to sexual health education prevents them from obtaining accurate and comprehensive information about HIV/AIDS.¹⁰ As HIV/AIDS continues to pose a critical threat to global health, understanding the level of knowledge about the disease among young adults in Türkiye is critical to controlling the spread of the disease. In this context, the level of health literacy of individuals can directly affect their knowledge and awareness of HIV/AIDS.

For this purpose, answers were sought to the following questions:

- Does the health literacy of young people have an effect on HIV/AIDS knowledge?
- What are the sociodemographic characteristics of young people that affect their health literacy and HIV/AIDS knowledge?

Methods

This study was designed as a descriptive cross-sectional study to determine the knowledge levels of young adults aged 18-35 in Türkiye about HIV/AIDS and its relationship with health literacy.

In order to determine the sample size, we used the formula ($n = N \cdot t^2 \cdot p \cdot q / d^2 (N-1) + t^2 \cdot p \cdot q$) from the "Address Based Population Registration System Results, 2021" of the Turkish Statistical Institute (TSI) with a total population of 16 940 475 young people between the ages of 18-35¹¹ and the prevalence of Health Literacy in the society is 30% in line with the literature,¹² and the sample size was found to be 896 with a 95% confidence interval and a sensitivity of 0.03. In order to increase the generalizability of the study, 1,071 people were reached. In order to increase the generalisability of the study, a total of 1,071 participants were reached. Participants were determined by an online survey method, aiming to ensure maximum diversity. The data were collected between April and August 2023. Data were collected through social media platforms, e-mail, and messaging applications. This method aimed to increase the diversity of the demographic characteristics of the participants by providing access to a wide audience. Furthermore, the online data collection process allowed participants to complete the survey in their own time and in a relaxed environment, increasing the accuracy and reliability of responses. This approach supports the generalizability of the study findings to a wider population. The study was conducted between April and August 2023. Literate, non-HIV (+) Turkish youth aged 18-35 were included in the study.

Ethical Considerations

Ethical approval (Number: E-14679147-663.05-484749, Date: 24.04.2023) was obtained from Ethics Committee of University Dicle. Participants were informed about the online questionnaire, and written informed consent was requested.

Descriptive Information Form, AIDS Knowledge Scale (AIDS-KS), and Health Literacy Scale (HLS) were used as data collection tools.

The descriptive information form consisted of a total of 12 questions developed by the researchers in line with the literature to determine the sociodemographic status, sexually transmitted infections (STI), and HIV/AIDS knowledge status of young people.^{5,13}

AIDS Knowledge Scale

The scale contains 21 items in total. The AIDS-KS consists of 3 sub-dimensions: transmission routes, prevention and general knowledge, and treatment. The scores that can be obtained from the knowledge scale vary between 0 and 21, and a higher score means higher HIV/AIDS knowledge. The scale was developed by Aydemir et al. The Cronbach alpha value of the AIDS-KS was determined to be 0.76.¹⁴ In this study, the Cronbach Alpha value of the AIDS-KS was found to be 0.77.

Health Literacy Scale

The scale consists of 25 items. It has 4 sub-dimensions: accessing information, understanding information, appraisal, and application. The scores that can be obtained from the scale vary between 25-125; as the score increases, the health literacy level of the individual increases. The scale was validated for the Turkish population. The Cronbach α value of the scale was calculated as 0.91.^{15,16} In this study, the Cronbach Alpha value of the HLS was found to be 0.96.

The data were processed and evaluated using the Statistical Package for Social Sciences (IBM SPSS Corp.; Armonk, NY, USA) 21.0 package program. Data were analyzed by number, percentage, mean, standard deviation, Mann-Whitney, Kruskal-Wallis, Pearson correlation coefficient, and *P*-value was taken as <.05.

In this study, the normality of the distribution of variables was examined by the Kolmogorov-Smirnov test, and the homogeneity of variances was evaluated by Levene's test. An online questionnaire was used in the study, which may cause non-response. The fact that the questionnaires

took approximately 5 months to complete and that different geographical regions were attempted to be reached for maximum diversity can potentially be considered to reduce bias. The use of web-based data collection may be associated with some level of bias. In addition, this study was conducted when the social impact of HIV infection was decreasing, and most of the population was not infected with HIV. It also excludes important HIV-related variables such as participants' sexual orientation, HIV testing history, and sexual activity status. The results are limited by the number of participants in the study and do not represent the views of all young people on HIV/AIDS and health literacy.

Results

In this study, the mean age of the participants was 26.28 ± 5.83 years; 59.4% were female, 36.4% were in the 18-23 age group, 74.6% were single, and 42.6% were high school graduates. It was determined that 72.3% of the young adults had moderate income, and 61.9% were unemployed.

When the descriptive characteristics were compared with the mean AIDS-KS scores, it was found that the AIDS-KS scores of *women* ($P=.003$), *those with secondary school education or less* ($P=.006$), and *other occupational groups* ($P=.012$) were statistically significantly lower ($P < .05$).

When the descriptive characteristics and mean HLS scores were compared, it was found that the HLS scores of *males* ($P=.001$), *those aged 21 years and over* ($P=.003$), *married individuals* ($P=.008$), *those with secondary school education or less* ($P=.000$), and *workers and self-employed individuals* ($P=.000$) were statistically lower ($P < .05$, Table 1).

When the descriptive characteristics of the participants were compared with HIV/AIDS knowledge and HLS mean scores, it was found that the mean scores of AIDS-KS and HLS were statistically significantly higher in young people who had STI ($P=.000$) and HIV/AIDS ($P=.000$) knowledge and knew the HIV/AIDS transmission route ($P=.000$) ($P < .05$, Table 2).

It was determined that the mean scores of AIDS-KS of the young people who participated in this study were at a low level (8.04 ± 4.58), and the mean scores of HLS total (101.99 ± 19.28) and all sub-factors were at a high level (Table 3).

A significant relationship was found between the HLS total score and AIDS-KS total score ($P < .01$). A significant weak correlation was found between the HLS total score and AIDS-KS total and AIDS-KS Sub-factor 2 positively, and with AIDS-KS Sub-factor 1 and AIDS-KS Sub-factor 3 negatively ($P < .01$, Table 4).

Discussion

A total of 1,071 people participated in the study, and the demographic characteristics of the participants were analyzed in terms of factors such as gender, age, marital status, education level, family income level, and employment status. According to the results obtained, the average HIV/AIDS knowledge of women is higher than that of men. When the age group was analyzed, it was observed that participants in the 18-20 age group had the highest scores in terms of HIV/AIDS knowledge and health literacy, while the group aged 25 and over showed lower scores. In terms of educational level, university graduates had higher HIV/AIDS knowledge and health literacy scores than other educational levels,

Table 1. Mean Scores of AIDS-KS and HLS Based on the Descriptive Characteristics of the Participants (n = 310)

| Variables (n : 1,071) | Number/Percentage | | AIDS Knowledge | Test | HLS | Test |
|----------------------------|-------------------|------|---------------------------|--------------------------------|----------------------|--------------------------------|
| | n | % | Scale $\bar{X} \pm SS$ | | $\bar{X} \pm SS$ | |
| Gender | | | | | | |
| Female | 636 | 59.4 | 7.67 ± 4.70 | $MU = -2.957$ | 103.40 ± 18.96 | $MU = -3.217$ |
| Male | 435 | 40.6 | 8.58 ± 4.34 | $P = .003^*$ | 99.92 ± 19.56 | $P = .001^*$ |
| Age | | | | | | |
| 18-20 | 390 | 36.4 | 8.42 ± 4.69 | $KW = 4.398$ | 104.90 ± 17.17^a | $KW = 11.835$ |
| 21-24 | 388 | 36.2 | 8.05 ± 4.47 | $P = .111$ | 100.03 ± 20.27^b | $P = .003^*$ |
| 25 and above | 293 | 27.4 | 7.52 ± 4.54 | | 100.70 ± 20.12^b | |
| Marital status | | | | | | |
| Single | 799 | 74.6 | 8.18 ± 4.52 | $MU = -1.510$ | 103.36 ± 17.64 | $MU = -2.634$ |
| Married | 272 | 25.4 | 7.63 ± 4.74 | $P = .131$ | 97.93 ± 22.97 | $P = .008^*$ |
| Education level | | | | | | |
| Secondary school | 162 | 15.1 | 6.96 ± 4.96^a | $KW = 10.219$ | 92.56 ± 22.46^a | $KW = 40.230$ |
| High school | 456 | 42.6 | 8.19 ± 4.60^b | $P = .006^*$ | 103.24 ± 18.35^b | $P = .000^*$ |
| University degree or above | 453 | 42.3 | 8.27 ± 4.37^b | | 104.09 ± 17.95^b | |
| Family income level | | | | | | |
| Good | 126 | 11.8 | 7.97 ± 4.55 | $KW = .304$ | 100.29 ± 21.78 | $KW = 3.275$ |
| Middle | 774 | 72.3 | 8.10 ± 4.61 | $P = .859$ | 102.63 ± 18.92 | $P = .194$ |
| Bad | 171 | 16.0 | 7.83 ± 4.47 | | 100.29 ± 18.76 | |
| Employment status | | | | | | |
| Working | 408 | 38.1 | 8.36 ± 4.37 | $MU = -1.938$ | 101.50 ± 19.37 | $MU = .602$ |
| Not working | 663 | 61.9 | 7.83 ± 4.69 | $P = .053$ | 102.28 ± 19.21 | $P = .547$ |
| Profession | | | | | | |
| Officer | 145 | 13.5 | 8.50 ± 4.23^a | $KW = 12.948$ | 104.84 ± 18.60^a | $KW = 30.728$ |
| Worker | 100 | 9.3 | 8.64 ± 4.90 | $P = .012^*$ | 93.13 ± 24.38^b | $P = .000^*$ |
| Student | 467 | 43.6 | 8.22 ± 4.50^a | | 104.28 ± 16.55^a | |
| Self-employment | 98 | 9.2 | 8.25 ± 4.85 | | 94.92 ± 23.19^b | |
| Other | 261 | 24.4 | 7.15 ± 4.59^b | | 102.34 ± 18.85^a | |

^{a,b}Groups with the same letter are the groups where there is a difference * $P < .05$, ** $P < .01$

AIDS, acquired immunodeficiency syndrome; HLS, health literacy scale; KW, Kruskal Wallis H test; MU, Mann Whitney U Test; SD, standard deviation; X, mean.

Table 2. Participants' STI and AIDS Knowledge Status

| Variables (n : 1,071) | Number n | Percentage % | AIDS-KS $\bar{X} \pm SS$ | Test | HLS $\bar{X} \pm SS$ | Test |
|---|-------------|-----------------|-----------------------------|-----------------|-------------------------|-----------------|
| STI Knowledge | | | | | | |
| Yes | 693 | 64.7 | 8.66 \pm 4.12 | MU = -6.258 | 104.96 \pm 16.66 | MU = -5.934 |
| No | 378 | 35.3 | 6.90 \pm 5.14 | P= .000* | 96.53 \pm 22.33 | P= .000* |
| Needing healtheducation for STI | | | | | | |
| Yes | 558 | 52.1 | 8.08 \pm 4.56 | MU = -.457 | 101.07 \pm 17.01 | MU = -3.878 |
| No | 513 | 47.9 | 7.99 \pm 4.60 | P= .648 | 102.98 \pm 19.27 | P= .000* |
| HIV/AIDS knowledge | | | | | | |
| Yes | 751 | 70.1 | 8.54 \pm 4.11 | MU = -5.785 | 105.23 \pm 16.42 | MU = -7.418 |
| No | 320 | 29.9 | 6.85 \pm 5.35 | P= .000* | 94.37 \pm 23.00 | P= .000* |
| Knowing the HIV/AIDS transmission route | | | | | | |
| Yes | 801 | 74.8 | 8.58 \pm 4.11 | MU = -6.844 | 105.27 \pm 16.14 | MU = -8.134 |
| No | 270 | 25.2 | 6.43 \pm 5.45 | P= .000* | 92.23 \pm 23.95 | P= .000* |

AIDS, Acquired immunodeficiency syndrome; AIDS-KS, AIDS-knowledge scale; HIV, human immunodeficiency virus; HLS, health literacy scale KW, Kruskal Wallis H test; MU, Mann Whitney U Test; SD, standard deviation; STI, sexually transmitted infections; X, mean.

while employed participants had higher scores than unemployed participants in terms of employment status. In addition, a positive and significant relationship was found between the AIDS-KS and the HLS scores, and it was determined that health literacy increased as AIDS knowledge increased. These findings suggest that educational programs and awareness-raising activities are critical to improving young people's HIV/AIDS knowledge and health literacy. Since information on STIs is generally not provided in educational institutions, the spread of these infections cannot be prevented. It is clear that informing young people, one of the riskiest groups, will be effective in reducing future cases.

Human immunodeficiency virus infection is one of the widely known dangerous viruses. Young people are one of the important risk groups for HIV infection. In order to prevent the spread of infection among young people, promotion and access to health services and prevention methods are important. For this reason, it is clear that promoting health literacy will be effective in the spread or management of infections such as HIV/AIDS as well as all other STIs. So far, studies have focused on the importance of health literacy in HIV(+) individuals.^{9,10,17,18} Türkiye has a high rate of young population and an increasing HIV prevalence (TSI, 2022). In this study, HIV/AIDS knowledge and health literacy of participants in the 18-20 age group were higher. This may indicate that this age group may have been exposed to the subject more or has better access to education and awareness programs. In particular, it is possible that this age group is more open to information about HIV/AIDS and has a higher sensitivity to health issues during youth. On the other hand, in this study, HIV/AIDS knowledge and health literacy were found to be lower in the group aged 25 years and older. This may suggest that individuals in this age group do not benefit from HIV/AIDS education and information activities sufficiently or show less interest in these issues. These differences suggest that strategies for

combating HIV/AIDS should be customized according to age groups. For example, a study conducted in Türkiye revealed that the level of knowledge of young people about HIV/AIDS has increased and this has positive effects on the prevention of HIV infection.¹⁹ A study conducted with university students in Italy showed that young people have uncertainty about HIV/AIDS knowledge.²⁰ However, in another study, it was emphasized that the level of HIV/AIDS knowledge of individuals aged 25 and over was significantly lower than that of young people.⁴ Although studies on HIV/AIDS in Türkiye aim to increase the knowledge level of young people, similar education and information activities should be increased for individuals aged 25 years and over.

Sexually transmitted infections often spread silently and rapidly in developing countries. Especially among young people, knowledge about safe sex and other STIs, including HIV, is insufficient.^{20,21} In this study, although a large proportion of young people reported that they knew about STIs and HIV/AIDS, their low scores on the AIDS-KS total (8.04 \pm 4.58) and its subscales support this conclusion. A study conducted with midwifery students in Türkiye reported that AIDS-KS scores were at an intermediate level (10.27 \pm 4.23).²² It is understood that midwifery students receiving education about STIs have a positive effect on their results. In another study conducted in China, it was reported that students studying in the education department had the lowest level of knowledge about HIV/AIDS, while medical students had the highest level.²³ The young people who participated in this study have differences representing the sample of Türkiye. These findings emphasize the importance of educational programs to improve young people's knowledge of STIs and HIV/AIDS. For this reason, it is important to develop community-based assessments and community-appropriate projects to prevent this in recent years when cases have started to increase.

Table 3. Participants' AIDS-KS and HLS Total and Sub-Factors Total Scores

| Scales and Subscales | Mean \pm SD | Min-Max Values | N |
|---|--------------------|----------------|-------|
| AIDS-KS total score | 8.04 \pm 4.58 | 0-21 | 1,071 |
| AIDS Subfactor 1: transmission routes | 1.57 \pm 2.15 | 0-7 | 1,071 |
| AIDS Sub-Factor 2: protection and general knowledge | 5.32 \pm 2.78 | 0-9 | 1,071 |
| AIDS Sub-Factor 3: treatment | 1.15 \pm 1.46 | 0-5 | 1,071 |
| HLS Total Score | 101.99 \pm 19.28 | 25-125 | 1,071 |
| HLS Subfactor 1: access to information | 20.49 \pm 4.35 | 5-25 | 1,071 |
| HLS Subfactor 2: understanding information | 28.73 \pm 5.79 | 7-35 | 1,071 |
| HLS Subfactor 3: appraisal/evaluation | 32.75 \pm 6.71 | 8-40 | 1,071 |
| HLS Subfactor 4: implementation/use | 20.01 \pm 4.24 | 5-25 | 1,071 |

AIDS-KS, AIDS-knowledge scale; HLS, health literacy scale

Table 4. The Relationship between AIDS-KS and HLS Total Scores

| | | AIDS-KS Total Score | AIDS-KS Sub1 | AIDS-KS Sub 2 | AIDS-KS Sub 3 | HLS Total Score | HLS Sub 1 | HLS Sub 2 | HLS Sub 3 | HLS Sub 4 |
|----------------------|----------|------------------------|--------------|---------------|---------------|--------------------|--------------|--------------|--------------|--------------|
| AIDS-KS Sub-factor 1 | <i>r</i> | .669** | | | | | | | | |
| | <i>P</i> | .000 | | | | | | | | |
| AIDS-KS Sub-factor 2 | <i>r</i> | .798** | .193** | | | | | | | |
| | <i>P</i> | .000 | .000 | | | | | | | |
| AIDS-KS Sub-factor 3 | <i>r</i> | .630** | .258** | .312** | | | | | | |
| | <i>P</i> | .000 | .000 | .000 | | | | | | |
| HLS total score | <i>r</i> | .075* | -.057 | .213** | -.085** | | | | | |
| | <i>P</i> | .014 | .060 | .000 | .005 | | | | | |
| HLS Sub-factor 1 | <i>r</i> | .090** | -.064* | .249** | -.098** | .875** | | | | |
| | <i>P</i> | .003 | .035 | .000 | .001 | .000 | | | | |
| HLS Sub-factor 2 | <i>r</i> | .072* | -.051 | .209** | -.098** | .929** | .792** | | | |
| | <i>P</i> | .019 | .096 | .000 | .001 | .000 | .000 | | | |
| HLS Sub-factor 3 | <i>r</i> | .060 | -.067* | .196** | -.087** | .952** | .764** | .834** | | |
| | <i>P</i> | .051 | .028 | .000 | .004 | .000 | .000 | .000 | | |
| HLS Sub-factor 4 | <i>r</i> | .058 | -.019 | .118** | -.014 | .872** | .660** | .724** | .821** | 1 |
| | <i>P</i> | .057 | .525 | .000 | .653 | .000 | .000 | .000 | .000 | |

, **P* < .05, ***P* < .001

AIDS-KS, AIDS-knowledge scale; HLS, health literacy scale; *r*, Pearson correlation coefficient

In this study, we found that university graduates had higher HIV/AIDS knowledge and health literacy scores compared to other education levels. This finding shows that the education level plays an important role in increasing knowledge and awareness about HIV/AIDS. Education is a critical factor affecting individuals' access to health information and their ability to understand and apply this information. Individuals with higher levels of education generally have access to more sources of information and can develop more critical thinking skills on health issues. For example, 1 study indicates that a higher education level increases the level of knowledge about HIV/AIDS and enables individuals to access health services more effectively.²⁴ In addition, university education helps individuals to develop social and cognitive skills that will increase their health literacy. Health literacy refers to the ability of individuals to understand and use health information, which is critical in complex health issues such as HIV/AIDS. A study has shown that a higher education level is directly related to health literacy, which leads to more informed decisions on issues such as HIV/AIDS.²⁵ On the other hand, the fact that individuals with low education levels have less knowledge about HIV/AIDS may cause this group to experience difficulties in accessing health services and being exposed to health risks. Therefore, increasing the level of education in the fight against HIV/AIDS stands out as an important strategy to raise awareness in society. The higher HIV/AIDS knowledge and health literacy scores of university graduates emphasize the importance of education policies in the fight against HIV/AIDS. Strengthening education programs, especially for individuals with low education levels, will be a critical step in increasing the level of knowledge about HIV/AIDS.

Health literacy is known to be effective in protecting and improving current health. Adequate health literacy in society increases the use of preventive health services and the development of desired health behaviors. Inadequate health literacy is an obstacle to accessing health services and increases the burden and negative consequences of existing diseases.^{6,7} Different studies conducted in Türkiye show that health literacy is at a good level.²⁶⁻²⁸ When HLS scores were examined in studies in different samples, it was reported that surgical patients scored 100.82 ± 15.62 , elderly individuals scored 113.03 ± 12.24 , and nursing students scored 107.3 ± 15.1 .²⁶⁻²⁸ Similarly, our study determined that young people had a high level of health literacy with 101.99 ± 19.28 points. It is seen that individuals of different ages and professions living in Türkiye have high health literacy. One of the positive aspects of health literacy is its effect on individuals' compliance and maintenance of health behaviors when health education and counseling are provided. According to

the World Health Organization (WHO), health education is the only way to combat HIV/AIDS, and vulnerable groups should be at the top of the agenda.²⁹ Health education should be planned using these results, and studies should be planned to monitor the outcomes.

Sexually transmitted infections have serious implications for sexual and reproductive health. There are more than 1 million new cases of STIs worldwide every day. According to the UNFPA report, 1 in 3 young people do not know how to protect themselves from STIs, and young people account for one-third of all new HIV (+) cases.²⁹ Our study determined that more than half of the young people had knowledge about STIs and HIV/AIDS, and the scores of the same young people on both AIDS-KS and HLS were significantly higher. However, even young people who thought they had knowledge about STIs and HIV/AIDS scored low on the AIDS-KS. This result suggests that young people lack basic knowledge about STIs. The fact that young people think that they have knowledge about STIs may be one of the barriers to accessing correct information. Therefore, there should be mechanisms to provide access to accurate information without demand. Public health trainings should be disseminated and interaction should be ensured through mobile applications and social media tools.

Health literacy is an important concept that enables individuals to understand and interpret medical information and exhibit appropriate behaviors.³⁰ In the study, it was determined that the scores of the (Health Literacy Level) HLQ increased with the increase in the AIDS-KS score. This finding shows that as the level of health literacy among young people increases, the level of knowledge about HIV/AIDS also increases. A study conducted in Denmark with HIV-infected individuals showed that the participants had a high level of health literacy.⁹ Although young people in our study also had a high level of health literacy, this alone is not sufficient to prevent HIV infection. Increased health literacy can enable individuals to access and use health services more effectively. For this reason, the importance of education and awareness-raising activities aimed at increasing the health literacy levels of young people emerges. It is thought that such studies can contribute to raising awareness among young people on an important issue such as HIV/AIDS and preventing the spread of the disease. In this direction, policies with individual and cultural sensitivity should be developed. In our country, HIV is still one of the infections that cause high stigmatization and may result in social exclusion. This situation should also be taken into consideration.

Strengths and Limitation

The limitation of this study is that young people from all regions of Türkiye could not be reached. In addition, the fact that the questionnaires were filled out only through the circles of the researchers is also a limitation. The fact that the participants had different sociodemographic characteristics and that the study was conducted with more participants than the sample size representative of the population may reduce the effect of the study limitation and generalizability.

On the other hand, the fact that the results of this study were not compared with HIV/AIDS-infected individuals is another limitation. It is recommended to plan studies that include comparisons with infected individuals.

Conclusion

Our study observed that the HIV/AIDS knowledge of young people was low, and their health literacy was good. We think that health education and counseling about STIs and HIV/AIDS for young people in Türkiye can be effective. In Türkiye, information about STIs is inadequate. Sexually transmitted infections are not sufficiently covered in schools, hospitals, or community centers where basic health education can be provided. Young people do not attach importance to STIs as if they will never encounter them and do not consider the consequences. The provision of health counseling appropriate for age groups and the planning of studies that will draw the attention of young people to infections such as HIV will make the spread of HIV less risky for Türkiye in the future.

Data Availability Statement: The data that support the findings of this study are available upon request from the corresponding author.

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