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Knowledge and Attitudes of Healthcare Providers' Towards Individuals Living with HIV

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ABSTRACT

This study aims to measure the knowledge and attitudes of healthcare providers such as nurses, midwives, paramedics, and health technicians (n:122) towards individuals living with HIV. This descriptive, quantitative study targeted allied healthcare providers in Istanbul, such as nurses, midwives, technicians, and paramedics, using the snowball sampling method. Based on the AIDS Knowledge Scale, participants scored between 9 and 21 points, with an average score of 17, indicating a high level of knowledge. A total of 76.2% of healthcare providers reported having received prior information about HIV/AIDS, with 50% (n=61) receiving this training at school. Despite the participants' good knowledge of HIV, it was observed that a small group (average 5.7%) expressed reluctance to provide care to patients with HIV. Furthermore, healthcare providers displayed avoidant attitudes in social interactions with individuals living with HIV, with an average of 44.8% showing hesitancy in their social relationships. These findings indicate that a high level of knowledge about HIV/AIDS is insufficient to overcome prejudices and societal norms. Comprehensive training programs are needed to address attitudes and behaviors in addition to knowledge. Moreover, healthcare providers should be encouraged to adopt more inclusive and supportive practices in both their professional and social interactions.

Sağlık Çalışanlarının HIV ile Yaşayan Bireylere Yönelik Bilgi ve Tutumları

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ÖZET

HIV ile yaşayan bireylere yönelik bilgi ve tutumlarını ölçmeyi amaçlamaktadır. Bu tanımlayıcı nicel çalışma, İstanbul'daki hemşireler, ebeler, teknisyenler ve sağlık görevlileri de dahil olmak üzere sağlık hizmeti sunucularını (n:122) hedef almış ve kartopu yöntemiyle ulaşılmıştır. Veri toplama araçları arasında tanıtıcı bilgi formu, AIDS/HIV Bilgi Ölçeği ve HIV/AIDS Tutum ve Davranış Ölçüm Formu yer almaktadır. AIDS Bilgi ölçeğine göre katılımcıların 9-21 arasında puan aldıkları ve ortalama 17 puan aldıkları görülmüştür. Sağlık çalışanlarının bilgi düzeyi puanları yüksek düzeydedir. Sağlık çalışanlarının %76,2'sinin daha önce HIV/AIDS hakkında bilgi aldığı ve katılımcıların %50'sinin (n:61) bu eğitimi okulda aldığı belirtilmiştir. Çalışmaya katılan sağlık hizmeti sunucularının HIV bilgi durumu iyi olmakla birlikte, ortalaması düşük bir grubun (ortalama %5.7) HIV'li hastalara bakım verme konusunda isteksiz olduğu gözlenmiştir. Ayrıca sağlık hizmeti sunucularının sosyal ilişkilerinde HIV ile yaşayan bireylere yönelik tutumlarında büyük oranda (ortalama %44.8) kaçınmacı oldukları görülmüştür. Bu bulgular, HIV/AIDS hakkında yüksek bilgi düzeyine sahip olmanın, ön yargı ve toplumsal normlar karşısında yeterli olmadığını göstermektedir. Bu nedenle, sadece bilgi vermekle kalmayıp, tutumları ve davranışları değiştirmeyi hedefleyen kapsamlı eğitim programlarının geliştirilmesi gerekmektedir. Ayrıca, sağlık hizmetleri sunan kişilerin hem mesleki hem de sosyal yaşamlarında daha kapsayıcı ve destekleyici bir yaklaşım benimsemeleri teşvik edilmelidir.

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INTRODUCTION

HIV or human immunodeficiency virus, infects and damages the cells of the human immune system, impairing their function. This infection leads to the gradual weakening of the immune system, resulting in immunodeficiency. The virus was first identified in the United States in 1981 and was reported in our country in 1985 (AIDS forum cite; Un AIDS platrorm [UNAIDS], 2024)

Individuals living with HIV can maintain a healthy life with regular antiretroviral therapy. Research has demonstrated that when follow-up and treatment are properly managed, the life expectancy of those living with HIV can be comparable to that of HIV-negative individuals (Durning & Williams, 2004; Foster et al., 2020; Sabranski et al., 2021). However, the lack of knowledge about HIV among both the public and healthcare providers presents challenges in HIV testing and the ongoing management of treatment and follow-up care (Waluyo et al., 2022; Webber, 2007;).

Even in Sweden, where healthcare services are highly accessible, some patients avoid getting tested for HIV (George-Svahn et al., 2021). The main barrier to testing is the fear of stigma, and those who are diagnosed often hesitate to disclose their HIV status to healthcare providers (Mundt et al., 2016; Jacobi et al., 2013; Pecoraro et al., 2014; Rajaraman & Palmer, 2008; Vaughan et al., 2020). Additionally, the lack of knowledge about HIV and negative attitudes towards HIV-positive patients among healthcare providers, who play a crucial role in the follow-up, treatment, and care of individuals living with HIV, complicate patients' access to healthcare services (Inci et al., 2018; Mundt et al., 2016; Rajaraman & Palmer, 2008; Waluyo et al., 2022; Webber, 2007). Healthcare providers must have adequate knowledge about HIV infection and avoid discrimination against individuals living with HIV (Waluyo et al., 2022). In the past, HIV treatment was challenging and often associated with uncertainty and fear. However, with the advent of antiviral treatments, the disease is now manageable, allowing patients to live long, healthy lives (Bouza et al., 2022). Additionally, the infectiousness of HIV is lower than that of many other infectious diseases. Nevertheless, healthcare providers may still exhibit anxiety when interacting with HIV-positive patients due to a lack of knowledge. Therefore, this study aims to assess the knowledge and attitudes of healthcare providers towards individuals living with HIV.

METHOD

This study was designed to assess the knowledge and attitudes of healthcare providers, including nurses, midwives, technicians, and paramedics, towards individuals living with HIV. Based on the findings, the study will identify the training needs of healthcare providers, who are in closest contact with patients, by analyzing their knowledge gaps and attitudes.

Research Design

This study was designed as a descriptive, quantitative research. The scales were distributed to the sample group through an electronic form.

Research Sample/Study Group/Participants

The study population includes healthcare providers such as Turkish nurses, midwives, technicians, and paramedics. The sample consists of healthcare providers working in Istanbul who were approved to participate in the study. Healthcare providers were recruited through the snowball sampling method. Data collection tools, created as electronic forms, were shared with participants online. Healthcare providers who consented to participate and confirmed their acceptance via the online survey were included in the study.

Research Instruments and Processes

In this study, the researchers used an introductory information form, the AIDS/HIV Knowledge Scale, and the HIV/AIDS Attitude and Behavior Measurement Form (Aydemir et al., 2018), which were developed through a literature review to assess the attitudes and behaviors of healthcare providers (Akin et al., 2013; Kaladharan et al., 2021;Safran & Wilson, 1996; Tung et al., 2008).

***Introductory Information Form*:** This section includes questions regarding the healthcare providers' age, gender, educational background, occupation, and professional experience.

AIDS/HIV Knowledge Scale (AKS): Developed by Aydemir, Yakın, and Arslan (2018) specifically for Turkey, the AKS is a 3-point Likert-type scale consisting of 21 items. Correct answers are scored as '1', while incorrect or undecided answers are scored as '0'. Items 4, 5, 7, 9, 10, 12, 13, 14, 15, 16, 17, and 19 are reverse scored. The reliability coefficient of the AKS is reported as 0.76, reflecting the reliability established by the scale's original developers. The maximum possible score on the scale is 21, with higher scores indicating a greater level of knowledge.

HIV/AIDS Attitude And Behavior Measurement Form: This form was developed by the researchers through a review of the literature. It is designed to assess the attitudes and behaviors of healthcare providers towards individuals living with HIV in both their social and professional lives.

Data Analysis

The mean and standard deviation of the data collected through the online survey were calculated. The participants' knowledge levels were assessed based on the data obtained from the general information form. Scores from the AIDS/HIV Knowledge and Attitude Questionnaire were also calculated. Statistical analysis was performed using the "Statistical Package for the Social Sciences (SPSS) 20.0 for Windows, Chicago, IL, USA" software. To assess the normality of the data distribution, the Kolmogorov-Smirnov/Shapiro-Wilk test was conducted. The results showed that the data did not follow a normal distribution ($p < 0.05$ for both tests). As a result, nonparametric tests, specifically the Kruskal-Wallis H Test and Mann-Whitney U Test, were used to analyze the differences between groups.

RESULTS

Demographic Characteristics

This study involved 122 healthcare providers, including nurses, midwives, health technicians, and paramedics. The average age of the participants was 32 years. Of the participants, 71.3% were female and 28.7% were male. Regarding their educational background, 41.8% had an associate degree, 21.3% had a master's degree, 15.6% held a bachelor's degree, and 21.3% had a doctorate or higher education. Among the participants, 31.1% were nurses, 2.5% were midwives, 27% were paramedics, 15.6% were health academics, and the remaining 23.8% were health technicians.

The participants were observed to work in various areas, including the emergency clinic, gynecology outpatient clinic, intensive care, neonatal and pediatric services, surgical units, 112 ambulance services, and management staff. Additionally, it was found that 30.5% of the participants had 0-3 years of professional experience, 9.1% had 4-6 years, 22.3% had 7-9 years, and 38% had 10 or more years of professional experience.

Healthcare Providers' Responses to The AIDS Knowledge Scale

In this study, the participants' scores ranged from a minimum of 9 to a maximum of 21 points. The median score was 16.5, with an interquartile range (IQR) between 14.5 and 19. These results suggest that the healthcare providers generally have a high level of knowledge, as indicated by the central tendency and dispersion of the scores.

No significant difference was found between the participants' years of work experience and their scores on the AIDS Knowledge Scale ($p = 0.237 > 0.05$). Similarly, there was no significant difference between the participants' educational background and their AIDS Knowledge Scale scores ($p = 0.562 > 0.05$).

Regarding participants' knowledge of HIV/AIDS, half of them believed that HIV could be transmitted through kissing or by using the same pool and toilet as someone with HIV. Additionally, 86% of the participants responded that monogamy and condom use can protect against HIV, while 78.6% were aware that HIV can be transmitted from mother to child. Furthermore, 81.9% knew that there are medications used in HIV treatment, and 63.1% recognized that there is no vaccine for HIV. Overall, the participants' average knowledge level was found to be at the "high score" level.

Healthcare Providers' Attitudes Toward People Living with HIV in Social Relationships

Regarding the attitudes of healthcare providers towards individuals living with HIV in their social relationships, the percentage of responses for each item are as follows:

- For the statement "I would not date an HIV-positive person," 56.5% (n=69) agreed, and 43.5% (n=53) disagreed.
- For the statement "I would not marry an HIV-positive person," 60.6% (n=74) agreed, and 39.4% (n=48) disagreed.
- For the statement "I would not kiss an HIV-positive person," 67.2% (n=82) agreed, and 32.8% (n=40) disagreed.
- For the statement "I would not want to eat food cooked by an HIV-positive person," 20.5% (n=25) agreed, and 79.5% (n=97) disagreed.
- For the statement "I would not want to enter the same bath/sauna with an HIV-positive person," 43.5% (n=53) agreed, and 56.5% (n=69) disagreed.

There was no statistically significant difference between healthcare providers' attitudes towards individuals living with HIV in their social relationships and their scores on the AIDS Knowledge Scale. The comparison of the responses and the knowledge-attitude scale scores is presented in Table 1.

There was no significant difference between healthcare providers' attitudes towards HIV-positive individuals presenting as patients and their AIDS knowledge scale scores. A significant difference was found only between the response to the attitude question "I don't want to take blood from a patient with HIV" and the AIDS knowledge score ($p = 0.032$). Participants who answered "I agree" to this question had a higher knowledge score. The scores are presented in Table 2.

Tablo 1

Comparison of The Attitudes of Healthcare Providers Towards İndividuals Living With HIV in Their Social Relations and AIDS Knowledge Scores

Scale items	Group	N (122)	%	Mean Rank	Test	p
I do not flirt with someone who has HIV	disagree	53	%43.5	59.26	U=1710.000	0.537
	agree	69	%56.5	78.38		
I wouldn't marry someone who has HIV	disagree	48	%39.4	59.04	U=1658.000	0.533
	agree	74	%60.6	63.09		
I don't want to kiss someone who has HIV	disagree	40	%32.8	52.86	U=1294.000	0.057
	agree	82	%67.2	65.71		
I don't want to eat food made by someone with HIV	disagree	97	%79.5	61.35	U=1197.500	0.924
	agree	25	%20.5	62.10		
I don't want the hammam/sauna used by someone with HIV	disagree	69	%56.5	56.39	U=1476.000	0.066
	agree	53	%43.5	68.15		

*U: Mann Whitney U test statistic *p<0.05*

Table 2

Comparison of The Attitudes of Healthcare Providers Towards HIV-Positive Individuals Presenting As Patients With AIDS Knowledge Scores

Scale items	Group	N (122)	%	Mean Rank	Test	p
I do not want to take blood from an HIV carrier	disagree	105	%86.1	58.77	U=605.500	0. 032*
	agree	17	%13.9	78.38		
I do not want to insert a catheter in an HIV carrier patient	disagree	107	%87.7	59.89	U=630.000	0.175
	agree	15	%12.3	73.00		
I do not want to examine a patient with HIV	disagree	112	%91.8	60.11	U=404.000	0.142
	agree	10	%8.2	77.10		
I do not want to participate in the birth of a woman with HIV	disagree	104	%85.2	59.55	U=733.500	0.140
	agree	18	%14.8	72.75		
I do not want to care for the baby of an HIV-infected woman	disagree	112	%91.8	60.11	U=404.000	0.142
	agree	10	%8.2	77.10		
I do not want to make an emergency intervention to an HIV carrier patient	disagree	111	%91.0	60.22	U=468.000	0.199
	agree	11	%9.0	74.45		
I do not want to work urgently in the service where the HIV carrier patient is hospitalized	disagree	113	%92.6	60.23	U=364.500	0.155
	agree	9	%7.4	77.50		
I do not want to undergo surgery of an HIV carrier patient	disagree	106	%86.9	60.04	U=693000	0.236
	agree	16	%13.1	71.19		
I do not want to care for a patient with HIV	disagree	108	%88.6	61.01	U=703.500	0.670
	agree	14	%11.4	65.25		

*U: Mann Whitney U test statistic *p<0.05*

In our analysis of whether healthcare providers had previously received information about HIV/AIDS, it was found that 76.2% of the participants had received such information. Additionally, 50% of the participants (n = 61) reported that they had received this training during their schooling.

To the question "Have you heard the concept of U=U (Undetectable = Untransmittable) before?", 62.3% (n = 76) of healthcare providers answered "no." Those who answered "yes" (37.7%) reported that they had learned about this concept primarily through the internet.

DISCUSSION

Healthcare providers' fears of contamination and their negative prejudices against disadvantaged groups influence their attitudes. These prejudices are also a significant source of HIV-related stigma (Ekstrand et al., 2020; Vaughan et al., 2020; Jaimes et al., 2024).

Despite the high level of HIV/AIDS knowledge observed in our study, which would suggest that healthcare providers should not harbor such fears, prejudices persist. This discrepancy underscores a critical issue: while knowledge is important, it does not always lead to changes in attitudes or behaviors.

Patients living with HIV often face exclusionary practices, such as healthcare providers asking intrusive questions like, "How did you contract the disease?", wearing double gloves unnecessarily, or avoiding certain procedures upon learning the patient's HIV status. Staff members may also improperly communicate the patient's HIV status by warning each other with statements like, "The patient is HIV positive" (Vaughan et al., 2020).

These practices contribute to the stigmatization and marginalization of individuals living with HIV. Therefore, addressing prejudices and improving attitudes, in addition to enhancing knowledge, is crucial to reducing HIV-related stigma and improving the quality of care for affected individuals.

Studies suggest that one of the reasons healthcare providers hold prejudices against HIV/AIDS is a lack of knowledge about the disease (Bayrak et al., 2014; Kaya et al., 2021; Aziz et al., 2023). However, in our study, healthcare providers demonstrated adequate knowledge about HIV/AIDS. Additionally, when examining the relationship between healthcare providers' attitudes towards HIV-positive patients and their knowledge levels, no statistically significant difference was found between most attitude questions and knowledge levels, except for one. This suggests that prejudice or stereotyped beliefs may play a more significant role in shaping healthcare providers' attitudes towards HIV-positive patients.

It is believed that factors other than a lack of knowledge, such as religious and social judgments or the sexual transmission of the disease, may contribute to the prejudices against HIV/AIDS. To break these prejudices, HIV/AIDS should be a topic that is more openly discussed and debated. Türkiye, with its patriarchal structure and majority Muslim population, also has many conservative individuals. However, a review of the literature shows that prejudice and stigmatization toward HIV/AIDS are prevalent among healthcare providers in various countries, not just in Türkiye (Jacobi et al., 2013; Mundt et al., 2016; Ekstrand et al., 2020; Vaughan et al., 2020; Waluyo et al., 2022).

In a study conducted in Thailand, although no discrimination was observed in legislation and policies, discriminatory practices were prevalent. These included behaviors ranging from breaches of confidentiality to the outright refusal to treat HIV-positive patients (Sringernyuang et al., 2005). Similarly, a study in India identified barriers faced by pregnant women living with HIV in accessing healthcare for follow-up and delivery (Rahangdale et al., 2010). In China, a study highlighted how the stigma faced by patients also negatively impacted their access to health services and antiretroviral treatment (ART) (Zhang et al., 2016).

In our study, healthcare providers' prejudices towards caring for HIV/AIDS patients were significantly lower than their prejudices towards individuals with HIV/AIDS in their social lives. This discrepancy can be attributed to the understanding that healthcare providers are bound by health ethics and professional standards, which prevent discrimination in a clinical setting. However, in their private lives, where there is no professional obligation, they may exhibit more avoidant behavior, influenced by various social and emotional factors.

CONCLUSION AND SUGGESTIONS

To conclude, the attitudes of healthcare providers play a crucial role in ensuring that HIV/AIDS patients receive and maintain their treatment and care, which are fundamental human rights. In our study, no significant difference was found between the attitudes of healthcare providers towards HIV-positive patients and their AIDS Knowledge Scale scores. This suggests that factors beyond knowledge should be further explored to understand healthcare providers' attitudes. Therefore, it is essential to investigate the underlying reasons for the existing prejudices against HIV/AIDS patients and to develop measures to address them. Notably, our study found that healthcare providers obtained most of their knowledge about HIV/AIDS during their schooling.

This also highlights the need for more in-service training on HIV/AIDS within hospitals. Some studies suggest that involving HIV-positive individuals in sharing their personal experiences with healthcare professionals could help reduce stigmatizing behaviors among providers. Providing opportunities for HIV-positive individuals to openly discuss their feelings, thoughts, and experiences with healthcare workers may be an effective strategy in addressing stigma and fostering a more empathetic, supportive environment for patients.

LIMITATIONS

This study cannot be generalized to all healthcare providers, as it was conducted with a specific group of healthcare professionals in the Istanbul region through an e-form. Moreover, no qualitative research was conducted to thoroughly explore the participants' views, meaning the root causes of prejudice towards HIV-positive patients have not been clearly identified. Additionally, only Turkish healthcare personnel who volunteered for the study were included, and no exclusion criteria were applied. Future studies may benefit from conducting in-depth interviews with participants who exhibit prejudices, as this could provide deeper insights into the underlying factors.

Ethic Approval

The study was approved by the Maltepe University Ethics Committee (approval number 2021/30), with approval granted on 05.11.2021. Informed consent was obtained from all participants whose data would be collected for the study.

Conflict of interest

The authors declare no conflict of interest.

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Author Contributions

Design: Ö.İ., Ö.Ç. Data Collection or Processing: Ö.İ., Ö.Ç. Analysis or Interpretation: Ö.İ., Ö.Ç. Literature Search: Ö.İ., Ö.Ç. Writing: Ö.İ.

REFERENCES

2025 AIDS Targets: 2025 Target setting and 2020-2030 resource needs and impact estimation | UNAIDS. (n.d.). Retrieved August 13, 2024, from https://www.unaids.org/en/topics/2025_target_setting

Akin, S., Mendi, B., Mendi, O., & Durna, Z. (2013). Turkish nursing students' knowledge of and attitudes towards patients with HIV/AIDS. Journal of Clinical Nursing, 22 (23–24), 3361–3371. https://doi.org/10.1111/jocn.12378

Aydemir, N., Yakın, İ., & Arslan, H. S. (2018). AIDS bilgi ve tutum ölçeklerinin geliştirilmesi ve psikometrik özelliklerinin sınanması. Psikoloji Çalışmaları, 38(1), 73-93. https://doi.org/10.1111/jocn.12378

Aziz, M. M., Abdelrheem, S. S., & Mohammed, H. M. (2023). Stigma and discrimination against people living with HIV by health care providers in Egypt. BMC Health Services Research, 23(1), 663. https://doi.org/10.1186/s12913-023-09676-1

Bayrak, B., Keten, S., & Fincancı, M. (2014). Sağlık çalışanlarının HIV/AIDS olgularına yaklaşımları. Klimik Journal / Klimik Dergisi, 27(3), 103–108. https://doi.org/10.5152/kd.2014.30

Bouza, E., Arribas, J. R., Alejos, B., Bernardino, J. I., Coiras, M., Coll, P., Romero, J. D., Fuster, M. J., Górgolas, M., Gutiérrez, A., Gracia, D., Hernando, V., Martínez-Picado, J., Sesmero, J. M. M., Martínez, E., Moreno, S., Mothe, B., Navarro, M. L., Podzamczer, D., … Palomo, E. (2022). Past and future of HIV infection. A document based on expert opinion. Revista Española de Quimioterapia, 35(2), 131–156. https://doi.org/10.37201/req/083.2021

Durning, P. E., & Williams, R. S. (2004). Factors influencing expectations and fertility-related adjustment among women receiving infertility treatment. Fertility and Sterility, 82, S101. https://doi.org/10.1016/j.fertnstert.2004.07.256

Ekstrand, M. L., Raj, T., Heylen, E., Nyblade, L., Devdass, D., Pereira, M., Mazur, A., & Srinivasan, K. (2020). Reducing HIV stigma among healthcare providers in India using a partly tablet-administered intervention: The DriSti trial. AIDS Care, 32(sup2), 14–22. https://doi.org/10.1080/09540121.2020.1739221

Foster, C., Ayers, S., & Fidler, S. (2020). Antiretroviral adherence for adolescents growing up with HIV: Understanding real life, drug delivery and forgiveness. Therapeutic Advances in Infectious Disease, 7, 2049936120920177. https://doi.org/10.1177/2049936120920177

Inci, A., Altan, Y., Bicer, I. G., Derbent, A., & Salihoglu, Z. (2018). Knowledge level about HIV/AIDS among health care workers at Intensive care unit/yogun bakim unitesinde calisan saglik personelinin hıv/aıds konusundaki bilgi düzeyi. KLIMIK Journal, 31(2), 110–115. https://doi.org/10.5152/kd.2018.27

Jacobi, C. A., Atanga, P. N. J. I., Bin, L. K., Mbome, V. N., Akam, W., Bogner, J. R., Kropf, S., & Malfertheiner, P. (2013). HIV/AIDS-related stigma felt by people living with HIV from Buea, Cameroon. AIDS Care, 25(2), 173–180. https://doi.org/10.1080/09540121.2012.701715

Jaimes, Y. A. P., Lozada-Martínez, I. D., Tosàs, M. R., & Tiraboschi, J. (2024). Stigma and fear of getting sick in the care of people living with HIV: an exploratory systematic review. Le Infezioni in Medicina, 32(2), 168–182. https://doi.org/10.53854/liim-3202-6

Kaladharan, S., Daken, K., Mullens, A. B., & Durham, J. (2021). Tools to measure HIV knowledge, attitudes & practices (KAPs) in healthcare providers: a systematic review. AIDS Care, 33(11), 1500–1506. https://doi.org/10.1080/09540121.2020.1822502

Kaya, S., Arac, E., Akgul, F., Comoglu, S., Kaya, S., Araç, S., Yildiz, Y., Buyuktuna, S. A., Kayaaslan, B., Parlak, E., Baysal, B., Karakecili, F., Balik, E. Z., Akkoç, A., Ozdemir, K., Kavak, S., Dogan, S. A., Günay, E., Karabela, S. N., … Aksoz, S. (2021). Retracted: Measuring the knowledge and attitudes of physicians towards patients with HIV/AIDS: study of Anatolian group. International Journal of Human Rights in Healthcare, 17(1), 1–16. https://doi.org/10.1108/IJHRH-10-2020-0093

Mundt, S., Briggs, S., Mundt, S., & Briggs, S. (2016). HIV-related stigma and discrimination in the New Zealand healthcare setting: a mixed-methods study. Sexual Health, 13(6), 582–588. https://doi.org/10.1071/SH16063

Pecoraro, A., Mimiaga, M. J., O'Cleirigh, C., Safren, S. A., Blokhina, E., Verbitskaya, E., Krupitsky, E., Dvoriak, S., & Woody, G. (2014). Lost-to-care and engaged-in-care HIV patients in Leningrad Oblast, Russian Federation: barriers and facilitators to medical visit retention. AIDS Care, 26(10), 1249–1257. https://doi.org/10.1080/09540121.2014.897910

Rahangdale, L., Banandur, P., Sreenivas, A., Turan, J. M., Washington, R., & Cohen, C. R. (2010). Stigma as experienced by women accessing prevention of parent-to-child transmission of HIV services in Karnataka, India. AIDS Care, 22(7), 836–842. https://doi.org/10.1080/09540120903499212

Rajaraman, D., & Palmer, N. (2008). Changing roles and responses of health care workers in HIV treatment and care. Tropical Medicine & International Health, 13(11), 1357–1363. https://doi.org/10.1111/j.1365-3156.2008.02176.x

Sabranski, M., Erdbeer, G., Sonntag, I., Stoehr, A., Horst, H.-A., Plettenberg, A., Lebherz, L., Stellbrink, H.-J., & Hoffmann, C. (2021). Physical and mental health in HIV-infected patients with virological success and long-term exposure to antiretroviral therapy. AIDS Care, 33(4), 453–461. https://doi.org/10.1080/09540121.2020.1733466

Safran, M. A., & Wilson, R. W. (1996). Surveillance of HIV knowledge, attitudes, beliefs, and behaviors in the general population. Public Health Reports (1974-), 111, 123–128. https://pmc.ncbi.nlm.nih.gov/articles/PMC1382053/

Sringernyuang, L., Thaweesit, S., & Nakapiew, S. (2005). A situational analysis of HIV/AIDS-related discrimination in Bangkok, Thailand. AIDS Care, 17(sup2), 165–174. https://doi.org/10.1080/09540120500120161

Tung, W.-C., Hu, J., Davis, C., Tung, W.-K., & Lin, Y.-M. (2008). Knowledge, attitudes, and behaviors related to HIV and AIDS among female college students in Taiwan. Journal of Human Behavior in the Social Environment, 17(3–4), 361–375. https://doi.org/10.1080/10911350802068102

Vaughan, D., Shah, J., Penzias, A., Domar, A., & Toth, T. (2020). Infertility remains a top stressor despite the COVID 19 pandemic. Reprod Biomed Online, 41, 425–427. https://doi.org/10.1016/j.rbmo.2020.05.015

Waluyo, A., Mansyur, M., Earnshaw, V. A., Steffen, A., Herawati, T., Maria, R., & Culbert, G. J. (2022). Exploring HIV stigma among future healthcare providers in Indonesia. AIDS Care, 34(1), 29–38. https://doi.org/10.1080/09540121.2021.1897777

Webber, G. C. (2007). Chinese health care providers' attitudes about HIV: a review. AIDS Care, 19(5), 685–691. https://doi.org/10.1080/09540120601084340

Zhang, C., Li, X., Liu, Y., Qiao, S., Zhang, L., Zhou, Y., Shen, Z., & Tang, Z. (2016). Emotional, physical and financial burdens of stigma against people living with HIV/AIDS in China. AIDS Care, 28(sup1), 124–131. https://doi.org/10.1080/09540121.2016.1146206