ORIGINAL PAPER

Identifying the role of emotional factors in the adoption of HIV/AIDS risky behaviors in Iranian young people: a qualitative study

Zahra Ebrahimi[1], Ahmadali Eslami[2], Zohre Fathian-Dastjerdi[2], Majid Rahimi[2], Fahimeh Bagherikholenjani[3]

[1]Student Research Committee, School of Health, Isfahan University of Medical Sciences, Isfahan, Iran
[2]Department of Health Education and Health Promotion, School of Health, Isfahan University of Medical Sciences, Isfahan, Iran
[3]Isfahan Cardiovascular Research Center, Cardiovascular Research Institute, Isfahan University of Medical Sciences, Isfahan, Iran

Abstract

Introduction: Youth are now among the most at risk for human immunodeficiency virus (HIV) infection. Approximately half of the individuals with HIV diagnosis became infected before the age of 25 years. The current qualitative study was conducted to identify emotional aspects of HIV/acquired immune deficiency syndrome (AIDS) risky behaviors in Iranian young people.

Material and methods: Data were collected among young people to explore emotional aspects of HIV/AIDS risky behaviors using directed content analysis. Study population consisted of youth considered key informants and willing to participate in the current study. To improve the results and data saturation, other participants were also enrolled, including parents, family members, friends, and relatives of young people as well as counselors, infectious disease specialists, coaches, university professors, and those with whom these young people were in contact. An in-depth, face-to-face, semi-structured interview was implemented as the primary data collection technique.

Results: The study cohort consisted of 43 individuals, including 23 females and 20 males, with a mean age of 30.19 years. Of the 43 participants, 29 (67.4%) were single, 11 (25.6%) were married, and 3 (7.0%) were divorced. In examining the factors contributing to high-risk behaviors associated with HIV/AIDS, individual characteristics played a significant role, among which emotions emerged as a crucial factor. Persons engaging in high-risk behaviors often exhibited diverse characteristics, such as individualism, excitement, impulsiveness, and curiosity. These emotional dimensions can influence decision-making and risk-taking behaviors, potentially impacting the spread of HIV/AIDS.

Conclusions: Individual factors, including personality traits, play a significant role in the emergence and persistence of high-risk behaviors, which lead to HIV/AIDS in young people. The results of the current study may be useful for researchers in HIV/AIDS prevention.

HIV AIDS Rev 2026; 25, 3: 256-262
DOI: https://doi.org/10.5114/hivar/189389

Key words: HIV, acquired immunodeficiency syndrome, young people, behavior, emotions.

Address for correspondence: Prof. Ahmadali Eslami, Department of Health Education and Health Promotion, School of Health, Isfahan University of Medical Sciences, Isfahan, Iran, e-mail: eslami@hlth.mui.ac.ir

Article history:
Received: 17.02.2024
Revised: 25.05.2024
Accepted: 27.05.2024
Available online: 25.09.2026

International Journal of HIV-Related Problems
HIV & AIDS Review

This is an Open Access journal, all articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License (http://creativecommons.org/licenses/by-nc-sa/4.0/)

Introduction

Despite the passage of more than 40 years since the first case of acquired immune deficiency syndrome (AIDS) reported as well as and significant advances in research and interventions, this disease continues to be an essential public health problem worldwide [1]. AIDS is known as a significant social and health issue in developed and developing countries. Based on the last report of the Centers for Disease Control and Prevention (CDC), nearly 1.2 million individuals were infected with HIV/AIDS in the United States [2, 3]. Moreover, the Joint United Nations Program on HIV and AIDS estimated that as of 2022, approximately 39 million people were living with HIV/AIDS worldwide [4]. In Iran, it was reported that by the end of 2021, a total of 53,000 people were living with HIV/AIDS [5].

Youth are now among the most at risk for HIV infection. Approximately half of the individuals with HIV diagnosis became infected before the age of 25 years [6]. Because this virus affects primarily young people of reproductive and working age, it is an obstacle in the way of a society's progress [7]. Young people are mostly infected with HIV through substance use due to its role in inaccurate use of condoms and impairing decision-making, in addition to unprotected sexual activity [8]. Therefore, further attempts are needed to identify relevant high-risk behaviors of youths, which lead to HIV/AIDS.

To prevent HIV, empowering the community and counseling are among the suggested strategies [9]. How and why individuals change their behaviors is the fundamental part of every successful health promotion program; however, identification of factors in adopting high-risk behaviors leading to HIV/AIDS in young people is important before the implementation of these programs [10]. Individual, economic, cultural, and social factors contribute to elevated risk and vulnerability to HIV/AIDS among youth [11]. Knowledge about practices and habits prevalent in young people is essential, because it provides a basis for undertaking epidemiologic surveillance, evaluating ongoing interventions, and planning preventive strategies [11].

Previous studies have been conducted to identify factors related to HIV/AIDS high-risk activities [12-16]. Due to the religious and cultural structure of Iran, it is not possible to accurately assess the prevalence rate, high-risk groups, and influencing factors in the occurrence of this disease [17]. However, based on our knowledge, no qualitative study was carried out among Iranian young people to identify the role of emotional factors in adopting high-risk behaviors leading to HIV/AIDS. Identification of these factors may help health staff and practitioners design preventive strategies for youth to decrease the risk of HIV/AIDS. Therefore, the study was conducted to identify emotional aspects of HIV/AIDS among Iranian young people.

Material and methods

The current qualitative research was a qualitative study conducted using directed content analysis approach.

Population

The study population was youth aged 18-24 years, who were considered key informants. Inclusion criteria were as follows: individuals aged between 18 and 24 years, living in Isfahan, Iran, willing to participate in the current study, and agreed to share their knowledge and experiences. To improve the results and data saturation, other participants were also enrolled, including parents, family members, friends, and relatives of young people as well as counselors, infectious disease specialists, coaches, university professors, and people with whom these young people were in contact. Moreover, those infected with HIV/AIDS were included to provide their experiences regarding HIV/AIDS. Selection of participants was done purposefully. Participants were informed through advertisements in social media (i.e., Telegram, Instagram, WhatsApp, and LinkedIn) and social networking sites. Subsequently, the snowball method was employed, meaning that initial participants introduced others who were eligible for the study. Snowball sampling is a common technique for qualitative research, based on the principles of networking and referral. Researchers start with a few initial contacts (seeds) who meet a research criteria and are asked to join the research. Those who agree are then requested to suggest other contacts who also meet the research criteria and might be willing to participate, etc. Researchers use their social networks to create initial connections, and then the sampling grows, forming an expanding chain of participants. Sampling usually stops when a desired sample size or saturation point is reached [18].

Study design

An in-depth, face-to-face, semi-structured interview was implemented as the primary data collection technique. Interviews were performed by the leading investigator (ZE), a doctoral candidate in health education and health promotion, who was mainly familiar with participants' culture. She has the necessary skills to conduct qualitative interviews and was trained in this field. Interviews were conducted from May 2021 to April 2022 in locations where participants felt safe and comfortable, so that they could express their experiences effortlessly. A semi-structured interview allowed them to think about HIV/AIDS critically. Moreover, it enabled the authors to understand participants' perspectives regarding HIV/AIDS [19]. The protocol of the current study was approved by the Ethics Committee of Isfahan University of Medical Sciences (approval number: IR.MUI.RESEARCH.REC.1397.106). Before each interview session, individuals were informed about the aim of the research, ensuring confidentiality of their responses. Also, they had the opportunity to ask questions, and their right to withdraw from the study at any time was assured. They provided their verbal and written consent to participate prior to enrollment. Each interview was done in a face-to-face approach, in Persian, and lasted between 60 and 90 min. The interviews were facilitated using an interview guide based on the social

cognitive theory, which was approved by an expert panel before the study. The critical question of the study was, "What are the influencing factors of high-risk behaviors leading to HIV/AIDS in Iranian young people?". Each interview started with general questions about participants' awareness of HIV/AIDS, followed by more detailed questions, including influential factors in the occurrence of high-risk behaviors leading to HIV/AIDS and respondents' perceptions and experiences in this field. Based on conversations, probing questions were used to encourage them to provide more explanations and details when necessary. The interviewer took notes during each session to manage the interview and data analysis. Interviews continued until data saturation was reached.

Data management and analysis

All interviews were audio-recorded digitally and transcribed verbatim immediately after the end of each session. Data analysis was performed continuously and concurrently with data collection, based on Graneheim and Lundman's methodology [20] and using MAXQDA-2020 software. Consequently, each transcribed text was reviewed several times for better understanding and achieving better comprehension of the content. In the next step, each text was divided into smaller meaningful phrases, with each meaningful phrase assigned to a "compact meaningful unit" and codes extracted based on these units. Two authors (ZE and FB) coded all the interviews. Then, all transcript statements were compared to identify the codes' similarities and differences. The authors discussed any disagreements until a consensus was reached. Coding of the following interviews was achieved similarly to the first interview conducted.

Results

The study group included 43 individuals, with 23 females and 20 males, and a mean age of 30.19 years. Of the 43 participants, 29 (67.4%) were single, 11 (25.6%) were married, and 3 (7.0%) were divorced. The general characteristics of the enrolled individuals are presented in Table 1.

In examining the factors contributing to high-risk behaviors associated with HIV/AIDS, individual characteristics played a significant role, among which emotions emerged as a crucial factor. Participants engaging in high-risk behaviors often exhibited diverse traits, including individualism, sensation-seeking, impulsiveness, diversity-seeking, and curiosity (Table 2). These emotional dimensions can influence decision-making and risk-taking behaviors, potentially impacting the spread of AIDS.

Personality traits are stable structures that affect people's thoughts, feelings, and responses to inter-personal situations. Therefore, personality disorders impair people's ability to adapt to the inevitable challenges of relationships. The study participants were often unstable in different aspects of their lives, and greatly craved to change them continuously. They also expressed a desire for diversity in relation to their sexual relationships.

A 23-year-old man said: "I always begin new jobs and relationships with great enthusiasm and passion. However, as I progress, I tend to become bored and uninterested. This leads me to move on to something or someone else, even in my romantic relationships. I put in much effort at the start to establish a connection and make friends but after a while, it all becomes repetitive, and I start craving for something new."

They stood out from others, always attracting attention and sparking curiosity.

A 22-year-old woman said: "I enjoyed wearing my clothes and makeup in a way that would draw attention to me, both on the street and at parties. I did it intentionally, so that people would notice me more. Often, it didn't matter to me that I was beautiful; what was important was being in their eyes."

Compared with other people in society, they often exhibit an extreme desire for excitement, new experiences, and adventure.

A 24-year-old man said: "I find myself particularly drawn to married women. The clandestine nature of such relationships introduces an intriguing element of secrecy and discretion. The need to be cautious, to avoid detection, adds a certain thrill - a heightened awareness that accompanies our interactions. Unlike conventional relationships, these connections remain far from mundane."

Many young people admitted acting impulsively, often without considering the consequences of their actions. Driven by external stimuli, they reported reacting without intellectual or logical support, leading to regrettable outcomes. The lack of thoughtful deliberation can result in unpleasant experiences and lasting repercussions.

A 23-year-old man said: "Sometimes, we act on impulse and lose control. I remember once I went to a party with my friend. It was a celebration for the girlfriend of one of the guys. There was plenty of alcohol and inhalants at the party. We joined a drinking contest with others. I drank so much that I got sick and had to go to the hospital. The doctors said I was lucky to be alive. I could have died from alcohol poisoning."

A 24-year-old man said: "When I desire something, waiting patiently is not my strong suit. The mere suggestion of delay can ignite my impatience, often leading to heated arguments. There have been instances when I clashed with my parents over such matters, storming out of the house and remaining absent for days."

Some young people expressed curiosity as the reason for their tendency to engage in risky behaviors. They mentioned that they want to experience everything at least once.

A 24-year-old man said: "I went on a search for drugs on my own. I had heard about it from fellow students at my university, but no one directly suggested it to me. It was a common topic among the students, and I was curious to try it out. I wanted to see firsthand how it would affect me."

Table 1. General characteristics of the study population

Number	Sex	Age (years)	Marital status	Occupation	Education
1	F	35	Married	Employee of the Infectious and Behavioral Diseases Consultation Center	Bachelor's degree
2	F	29	Married	Employee of the Infectious and Behavioral Diseases Consultation Center	Bachelor's degree
3	M	48	Married	Infectious disease specialist	MD
4	F	52	Married	Infectious disease specialist	MD
5	F	42	Married	Housekeeper	Elementary
6	M	61	Divorced	Unemployed	Elementary
7	M	51	Married	Employed	Bachelor's degree
8	M	56	Married	Self-employed	Diploma
9	F	45	Married	Housekeeper	Diploma
10	F	43	Married	Teacher	Bachelor's degree
11	F	46	Married	Nurse	Bachelor's degree
12	F	20	Single	Student	Bachelor's degree
13	F	24	Single	Unemployed	Associate degree
14	F	40	Divorced	Unemployed	Illiterate
15	F	23	Single	Salesperson	Diploma
16	F	18	Single	Student	Diploma
17	F	23	Single	Employed	Bachelor's degree
18	M	24	Single	Employed	Bachelor's degree
19	M	47	Married	Consultant	Master of Science
20	M	44	Divorced	Construction worker	Diploma
21	F	24	Single	Student	Bachelor's degree
22	M	24	Single	Student	Master of Science
23	F	22	Single	Student	Bachelor's degree
24	F	23	Single	Student	Master of Science
25	F	24	Single	Unemployed	Diploma
26	M	19	Single	Student	Associate degree
27	F	18	Single	Unemployed	Diploma
28	M	24	Single	Unemployed	Bachelor's degree
29	F	23	Single	Student	Bachelor's degree
30	F	24	Single	Employed	Bachelor's degree
31	M	22	Single	Student	Bachelor's degree
32	M	23	Single	Unemployed	Bachelor's degree
33	M	24	Single	Taxi driver	Bachelor's degree
34	M	22	Single	Student	Bachelor's degree
35	F	23	Single	Unemployed	Bachelor's degree
36	F	24	Single	Unemployed	Bachelor's degree
37	M	24	Single	Employed	Bachelor's degree
38	M	23	Single	Soldier	Bachelor's degree
39	M	24	Single	Student	Bachelor's degree
40	M	23	Single	Soldier	Bachelor's degree
41	M	23	Single	Self-employed	Diploma
42	M	24	Single	Self-employed	Diploma
43	F	23	Single	Unemployed	Diploma

Table 2. Categories of emotional factors relating to high-risk behaviors

Emotions/Behaviors
Sensation-seeking
Being brave
Willingness to engage in risky behaviors
Disobeying social norms
Higher arousal level
Diversity-seeking
Fatigue and reluctance to perform an activity
Enjoying various activities
Individualism
Trying to get the attention of others
Trying to be different from others
Impulsiveness
Quick and thoughtless decision-making
Instant gratification
Perfunctory
Curiosity
Seeking new experiences
Search for new information

Many people exploited young people's curiosity to encourage risky behavior.

A 22-year-old woman said: "My boyfriend always told me about the pleasure of drinking alcohol. He said that if you don't drink, half of your life will be wasted. He told me so much that I was tempted to drink."

Discussion

An individual's personality traits can significantly impact their thoughts, emotions, and actions, affecting their overall health and well-being. When facing life stressors, such as a life-threatening disease, i.e., HIV/AIDS, one's personality characteristics become crucial in determining the way they cope with the situation. Some individuals may have a higher risk of developing HIV/AIDS due to their personality traits and unhealthy coping mechanisms.

Based on a great deal of early behavioral research, a relatively consistent set of high-risk behavior predictors has emerged. This included having little social and peer support in changing risky behaviors, being in risk-increasing situations (such as using drugs or alcohol), having different relationship types (with safer sex more common in casual, short-term, or "first-time" partnerships than romantic, long-term, or primary relationships), lacking skills to reduce HIV/AIDS risk (such as using condoms correctly, negotiating or asserting sexual preferences, and solving personal problems related to risk reduction), and presenting cognitive and attitude factors (such as expecting adverse outcomes from safer sex, inability to change own behavior, believing wrong information about HIV/AIDS risk, weak intentions/will to change behavior, and negative attitudes toward condoms) [21-24]. Many factors contributing to risky behaviors are psychological, while behavioral interventions can modify others [25].

The purpose of the current study was to identify the role of individual emotional characteristics in adopting high-risk behaviors related to HIV/AIDS in young adults. We found that those engaging in high-risk behaviors often exhibit diverse traits, including diversity-seeking, individualism, sensation-seeking, and curiosity. In this study, the participants stated that more than other people, they were tired of the monotony and repetition in various aspects of their lives, including sexual relations, and they were looking for new experiences. This characteristic led them to engage in any action, including risky behaviors, purely because they were new. In a study, seeking diversity was reported as an influential factor in the occurrence of extramarital relationships [26]. According to our findings, people tried to attract their attention by performing actions different from others. Therefore, they exhibited behaviors outside the customs and norms of the society. In other studies, ignoring social norms and non-adherence to collective values have been stated as a factor contributing to high-risk behaviors [27, 28]. In this study, young people usually tended to engage in behaviors that gave them more excitement. They enjoyed the occurrence of actions that others felt threatened by doing, estimating their risk and harm as lower than in other's viewpoints, making it a superior trait for themselves. In other studies, it has been stated that people with high sensation-seeking behaviors act recklessly without worrying about the consequences of their actions [29-31]. For instance, people preferred more excitement in sexual relationships to the benefits of using condoms [32]. Sensation-seeking is associated with behaviors, such as engaging in frequent sexual activity, having multiple partners, and non-condom use among young people [33, 34]. We also found that individuals with impulsive behaviors were more likely to engage in high-risk behaviors leading to HIV/AIDS. Impulsive people act instantly without thinking about the consequences of their actions [35]. In line with the present study, other research have also emphasized the role of impulsivity in the occurrence of high-risk behaviors [36-38]. Curiosity is the desire to discover new things, which motivate people to think and behave in new ways [39]. Curiosity has been proposed as a factor in developing risky behaviors in young people and adolescents [40, 41]. The participants of our study stated that the reason for their tendency to engage in risky behaviors is to satisfy their curiosity. They considered curiosity a natural phenomenon and believed that they should experience everything in their youth, so that they regret not experiencing it in adulthood. A recent focus has been on how emotional regulation can help promote healthy behavior. People with solid emotion regulation skills are better equipped to deal with difficult situations and are less likely to engage in risky behaviors [42]. HIV prevention programs are now starting to teach emotion regulation techniques

through modeling and learning. Although certain personality traits are not easy to change, strategies are being developed to address them [43].

We implemented a directed content analysis approach to extract individual-based high-risk behaviors regarding HIV/AIDS. Qualitative content analysis is a research methodology used to systematically analyze and interpret the contents of texts, images, or any other form of reality without quantification [44]. The findings of this approach can be used in the context of behavior change programs and risk-reduction strategies. However, caution should be exercised while interpreting the results of this approach due to bias and contextual understanding. In the latter case, directed content analysis provides insights into what is said, but may not fully capture the context or underlying motivations [44, 45].

There are some limitations that need to be acknowledged. The current study was conducted among young adults in Isfahan, Iran. Considering the cultural and social differences in various regions of Iran and worldwide, the generalization of the results of this study in other places should cautious. The research topic is about understanding the reasons behind high-risk behaviors, which lead to HIV/AIDS. Despite assuring the participants about confidentiality of their identities, some individuals may felt ashamed to disclose certain intimate information.

Conclusions

Public health planners are facing challenges in formulating effective behavioral interventions related to HIV/AIDS due to the lack of a clear understanding of different aspects of the problem. The present study's findings can help researchers in the field of studying individual personality traits related to high-risk behaviors leading to HIV/AIDS in young population. We found that those engaging in high-risk behaviors often exhibit diverse characteristics, including individualism, diversity-seeking, impulsiveness, sensation-seeking, and curiosity.

Disclosures

1. Institutional review board statement: This research was approved by the Ethics Committee of Isfahan University of Medical Sciences, with approval number: IR.MUI.RESEARCH.REC.1397.106.
2. Assistance with the article: None.
3. Financial support and sponsorship: This work was supported by the Isfahan University of Medical Sciences, with grant number 397186.
4. Conflicts of interest: None.

References

1. De Cock KM, Jaffe HW, Curran JW. Reflections on 40 years of AIDS. Emerg Infect Dis 2021; 27: 1553-1560.
2. Peters R. Fighting the good fight: nearly four decades after the first diagnosis, the fight to treat HIV/AIDs continues. BioPharm Int 2019; 32: 5-6.
3. Bosh KA, Hall HI, Eastham L, Daskalakis DC, Mermin JH. Estimated annual number of HIV infections – United States, 1981-2019. MMWR Morb Mortal Wkly 2021; 70: 801-806.
4. Tian X, Chen J, Wang X, Xie Y, Zhang X, Han D, et al. Global, regional, and national HIV/AIDS disease burden levels and trends in 1990-2019: a systematic analysis for the global burden of disease 2019 study. Front Public Health 2023; 11: 1068664. DOI: 10.3389/fpubh.2023.1068664.
5. Reshadat-Hajiabad T, Khajavi A, Hosseinpour AM, Bojdy A, Hashemi-Meshkini A, Varmaghani M. Determinants and economic burden of HIV/AIDS in Iran: a prospective study. BMC Health Serv Res 2023; 23: 251. DOI: 10.1186/s12913-023-09229-6.
6. Xu B, Li J, Wang M. Epidemiological and time series analysis on the incidence and death of AIDS and HIV in China. BMC Public Health 2020; 20: 1906. DOI: 10.1186/s12889-020-09977-8.
7. Mami D, Cuthrell KM, Manteghian M. Burden of HIV on society current management options and future prospective. Int STD Res Rev 2024; 13: 43-62.
8. Davids EL. Factors that influence adolescents condom use decision-making in the Western Cape, South Africa. University of Cape Town; 2019. Available at: https://open.uct.ac.za/items/ab15afb6-3038-45eb-8bec-8936c4714c65.
9. Kerrigan D, Kennedy CE, Morgan-Thomas R, Reza-Paul S, Mwangi P, Win KT, et al. A community empowerment approach to the HIV response among sex workers: effectiveness, challenges, and considerations for implementation and scale-up. Lancet 2015; 385: 172-185.
10. Nguyen PT, Gilmour S, Le PM, Nguyen TT, Tanuma J, Nguyen HV. Factors associated with high-risk behaviors of people newly diagnosed with HIV/AIDS: results from a cross-sectional study in Vietnam. AIDS Care 2021; 33: 607-615.
11. Naidoo P, Chirinda W, Mchunu G, Swartz S, Anderson J. Social and structural factors associated with vulnerability to HIV infection among young adults in South Africa. Psychol Health Med 2015; 20: 369-379.
12. Morrison-Beedy D, Grove L, Ji M, Baker E. Understanding the "why" for high-risk behavior: Adolescent girls' motivations for sex. J Assoc Nurses AIDS Care 2017; 28: 877-887.
13. Probst C, Simbayi LC, Parry CD, Shuper PA, Rehm J. Alcohol use, socioeconomic status and risk of HIV infections. AIDS Behav 2017; 21: 1926-1937.
14. Kasahun AW, Yitayal M, Girum T, Mohammed B. Risky sexual behavior and associated factors among high school students in Gondar City, Northwest Ethiopia. Int J Public Health Sci 2017; 6: 257-265.
15. Chandler R, Anstey EH, Ross H, Morrison-Beedy D. Perceptions of Black college women on barriers to HIV-risk reduction and their HIV prevention intervention needs. J Assoc Nurses AIDS Care 2016; 27: 392-403.
16. Lando-King E, McRee A-L, Gower AL, Shlafer RJ, McMorris BJ, Pettingell S, et al. Relationships between social-emotional intelligence and sexual risk behaviors in adolescent girls. J Sex Res 2015; 52: 835-840.
17. Mohammadi Y, Mirzaei M, Shirmohammadi-Khorram N, Farhadian M. Identifying risk factors for late HIV diagnosis and survival analysis of people living with HIV/AIDS in Iran (1987-2016). BMC Infect Dis 2021; 21: 390. DOI: 10.1186/s12879-021-06100-z.
18. Parker C, Scott S, Geddes A. Snowball sampling. In: SAGE Research Methods Foundations 2019. https://doi.org/10.11157/anzswj-vol34iss2id932.
19. Raisi F, Yekta ZP, Ebadi A, Shahvari Z. What are Iranian married women's rewards? Using interpersonal exchange model of sexual satisfaction: a qualitative study. Sex Relatsh Ther 2015; 30: 475-489.
20. Elo S, Kääriäinen M, Kanste O, Pölkki T, Utriainen K, Kyngäs H. Qualitative content analysis: a focus on trustworthiness. SAGE Open 2014; 4: 2158244014522633. DOI: https://doi.org/10.1177/2158244014522.

21. Oakley A, Fullerton D, Holland J. Behavioural interventions for HIV/AIDS prevention. AIDS 1995; 9: 479-486.
22. Hubert M, Bajos N, Sandfort T. Sexual Behaviour and HIV/AIDS in Europe: Comparisons of national surveys. Routledge; 2022.
23. Choudhary HA, Ali RA, Altaf S. Knowledge, behaviour and attitudes regarding HIV/AIDS among undergraduate students in an Irish university. Int J Surg Med 2015; 1: 58-66.
24. Delavande A, Kohler H-P. HIV/AIDS-related expectations and risky sexual behaviour in Malawi. Rev Econ Stud 2016; 83: 118-164.
25. Baban A, Craciun C. Changing health-risk behaviors: a review of theory and evidence-based interventions in health psychology. J Cogn Behav Psychother 2007; 7: 45-66.
26. Jafarzadehkhorrami S, Kalantarkousheh SM. Sensation seeking among Persian married and divorced women. J Psychol 2015; 2: 73. DOI: https://doi.org/10.12974/2313-1047.2015.02.02.4.
27. Rasoulzadeh Aghdam S, Akbarpour H. A study on students' high-risk behaviors and their relationship with adherence to collective values and media consumption (case study: Students of Azarbaijan Shahid Madani University). SSYS 2017; 16: 95-112.
28. Akhuni FP. Study of high-risk behaviors of students and their related factors. Health Spiritual Med Ethics 2018; 5: 9-14.
29. Mohammadi Gharehghani MA, Khosravi B, Irandoost SF, Soofizad G, Yoosefi lebni J. Barriers to condom use among female sex workers in Tehran, Iran: a qualitative study. Int J Womens Health 2020; 12: 681-689.
30. Harris B, McCredie MN, Truong T, Regan T, Thompson CG, Leach W, et al. Relations between adolescent sensation seeking and risky sexual behaviors across sex, race, and age: a meta-analysis. Arch Sex Behav 2023; 52: 191-204.
31. Hull SJ, Hong Y. Sensation seeking as a moderator of gain-and loss-framed HIV-test promotion message effects. J Health Commun 2016; 21: 46-55.
32. Ruiz-Palomino E, Gil-Llario MD, Giménez-García C, Ballester-Arnal R. Explanatory psychological factors of inconsistently condom use among Spanish university students: gender differences. Span J Psychol 2020; 23: e12. DOI: 10.1017/SJP.2020.14.
33. Shuper PA, Joharchi N, Rehm J. Personality as a predictor of unprotected sexual behavior among people living with HIV/AIDS: a systematic review. AIDS Behav 2014; 18: 398-410.
34. Adejumo AO. Perceived HIV stigmatization, HIV/AIDS cognition and personality as correlates of HIV self-disclosure among people living with HIV in Ibadan, Nigeria. Gen Behav 2011; 9: 3854-3869.
35. Anchal M, Mahavidyala DM. Impulsive Behaviour: Comparison of undergraduate and postgraduate female students. Nāsadīyam 2023; 2: 43-47.
36. Soni U, Sharma R, Sharma M, Khurana E, Chopra J, Julka D, et al. Impulsivity and risk-taking behavior in school-going adolescents. Cureus 2023; 15: e40728. DOI: 10.7759/cureus.40728.
37. Carvalho CB, Arroz AM, Martins R, Costa R, Cordeiro F, Cabral JM. "Help me control my impulses!": Adolescent impulsivity and its negative individual, family, peer, and community explanatory factors. J Youth Adolesc 2023; 52: 2545-2558.
38. Yunus FM, Standage C, Walsh C, Lockhart P, Thompson K, Keough M, et al. High peak drinking levels mediate the relation between impulsive personality and injury risk in emerging adults. Inj Epidemiol 2024; 11: 5. DOI: 10.1186/s40621-024-00487-4.
39. Stupple EJN, Pitchford M, Ball LJ, Hunt TE, Steel R. Slower is not always better: response-time evidence clarifies the limited role of miserly information processing in the Cognitive Reflection Test. PLoS One 2017; 12: e0186404. DOI: 10.1371/journal.pone.0186404.
40. Farnia V, Ahmadi Jouybari T, Salemi S, Moradinazar M, Khosravi Shadmani F, Rahami B, et al. The prevalence of alcohol consumption and its related factors in adolescents: Findings from Global School-based Student Health Survey. PLoS One 2024; 19: e0297225. DOI: 10.1371/journal.pone.0297225.
41. Attila FL, Agyei-Sarpong K, Asamoah-Gyawu J, Dadebo AA, Eshun E, Owusu F, et al. Youthful curiosity as a predictor of substance use among students. Mediterr J Soc Behav Res 2023; 7: 59-64.
42. Bonanno GA, Burton CL. Regulatory flexibility: an individual differences perspective on coping and emotion regulation. Perspect Psychol Sci 2013; 8: 591-612.
43. Malow RM, Rosenberg R, Donenberg G, Dévieux JG. Interventions and patterns of risk in adolescent HIV/AIDS prevention. Am J Infect Dis 2006; 2: 80-89.
44. Forman J, Damschroder L. Qualitative content analysis. In: Empirical Methods for Bioethics: a Primer. Jacoby L, Siminoff LA (eds.). Emerald Group Publishing Limited; 2007, p. 39-62.
45. Mayring P. Qualitative content analysis: Theoretical background and procedures. In: Approaches to Qualitative Research in Mathematics Education: Examples of Methodology and Methods. Bikner-Ahsbahs WA, Knipping C, Presmeg N (eds.). Springer; 2015, p. 365-380.