

• Online First • Current Issue • Archive • Most Downloaded • Most Accessed • Most Cited

Rawal Medical Journal

Current Issue : 2023, Vol: 48, Issue: 2

ISSN : 0303-5212

ISSUES : 4 per year

PUBLISHER : Pakistan Medical Association Rawalpindi Islamabad Branch, Rawalpindi, Pakistan

Rawal Medical Journal is an internationally peer reviewed journal and an official publication of Pakistan Medical Association (PMA) Rawalpindi-Islamabad Branch. It is funded by PMA and HEC Pakistan and 1000 printed copies are distributed to members of PMA and all major hospitals and teaching institutions of Pakistan. It is published every three months in March, June, September and December.



eJM Submit Article
eJManager.com

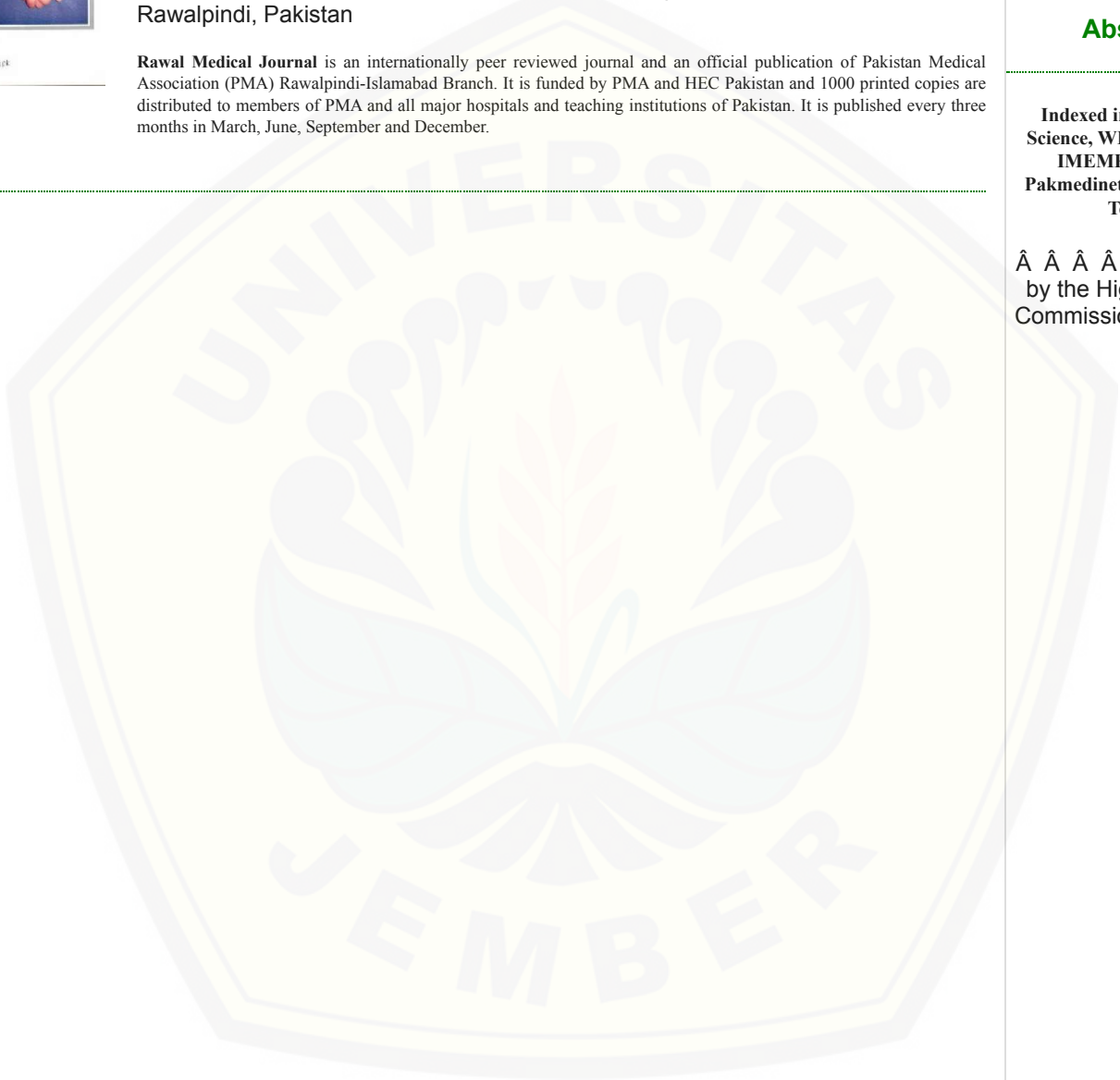
[AUTHOR LOGIN](#)

[REVIEWER LOGIN](#)

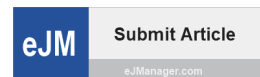
Indexed & Abstracted

Indexed in Scopus, Web of Science, WHO Index Medicus IMEMR, Emromedex, Pakmedinet, ExtraMED and Tehqeeqat

Approved by the Higher Education Commission of Pakistan



- [Online First](#)
- [Current Issue](#)
- [Archive](#)
- [Most Downloaded](#)
- [Most Accessed](#)
- [Most Cited](#)



RAWAL MEDICAL JOURNAL

Editorial Staff

Patron:

Prof. M. Salim Professor of Anesthesiology Islamic International Medical College Rawalpindi

Editor-in-Chief:

Prof. Nasir Khokhar Professor of Gastroenterology, Shifa International Hospital Islamabad

Editors:

Prof Mazhar Malik Professor of Psychiatry Rawal Institute of Medical Sciences Islamabad

Dr Muhammad Usman Ghani Assistant Professor of Psychiatry, Rai Medical College Sargodha

Associate Editors:

Dr Omar Qureshi Assistant Professor of Medicine Pakistan Kidney and Liver Transplant Institute, Lahore

Dr. Mati ur Rehman. Professor of Medicine Riphah International University Islamabad

Dr. Ejaz Khan. Professor of Pediatrics Shifa College of Medicine Islamabad

Nargis Munir Rawal Institute of Health Sciences, Islamabad

Naureen Khan Services Academy, Islamabad

Managing Secretary:

Dr. Muhammad Khurram Professor of Medicine Rawalpindi Medical College Rawalpindi

Finance Secretary:

Dr Zakauallah Warriach Assistant Professor of Medicine Rawalpindi Medical College Rawalpindi

Epidemiologist:

Dr. Sajida Naseem Associate Professor of Community Medicine Shifa College of Medicine Islamabad

Bibliographer:

Muhammad Javed. Chief Librarian, Shifa Tameer e Millat University, Islamabad

National Editorial Board

Prof. Musaddiq Khan
 Professor of Surgery
 Rawalpindi Medical College
 Rawalpindi

Prof. Shawkat Matabdin
 Professor of Anesthesiology
 Shifa International Hospital
 Islamabad

Prof. Mian Abdul Rashid

Prof. M. Yousuf Chaudhary

[AUTHOR LOGIN](#)

[REVIEWER LOGIN](#)

**Indexed
&
Abstracted**

Indexed in Scopus, Web of Science, WHO Index Medicus IMEMR, Emromedex, Pakmedinet, ExtraMED and Tehqeeqat

Approved by the Higher Education Commission of Pakistan

Professor of Forensic Medicine

Muhammad Medical College

Mirpur AJK

Professor of Radiology

Shifa International Hospital

Islamabad

Digital Repository Universitas Jember

Prof. Javed Butt

Professor of Gastroenterology

Pakistan Institute of Medical Sciences

Islamabad

Prof. Rehana Arshad

Professor of Anatomy

Rawalpindi Medical College

Rawalpindi

Dr Naveed Ashfaq

Consultant Surgeon

CDA Hospital

Dr Hina Mehwish

Asstt Prof of Gynecology

Rawalpindi Medical College

Rawalpindi

Dr Khalid Randhawa

Asstt Prof of Surgery

Rawalpindi Medical College

Rawalpindi

Dr. Sajjad Minhas

General Practice

Rawalpindi

Dr Arshad Rana

President PMA Rawalpindi Islamabad Branch

Rawalpindi

International Editorial Board

Prof. Helmut Denk

Professor of Pathology

University of Vienna

Austria

Prof. Graham Foster

Professor of Medicine

University of London

London

Prof. C. L. Lie

Professor of Medicine

University of Hong Kong

Hong Kong

Prof. James Lewis

Professor of Medicine

Georgetown University

Washington DC

Prof. Myron Schwartz

Professor of Surgery

Mount Sain School of Medicine

New York, NY

Prof. Graeme P. Young

Professor of Medicine

Flinders University

South Australia, Australia

Prof. Rene Lambert

Prof. Zhang Gao Wang

International Agency for

Professor of Cardiovascular Surgery

Research on Cancer

Xuan Wu Hospital Capital University

Lyon, France

of Medical Sciences

Beijing, China

Dr Med. Peter Schiedermaier

Dr Dr. Abdurrahman Hamdi inan

Gynecology and Obstetrics
Turkey

Professor of Medicine and Endocrinology

University of Bonn

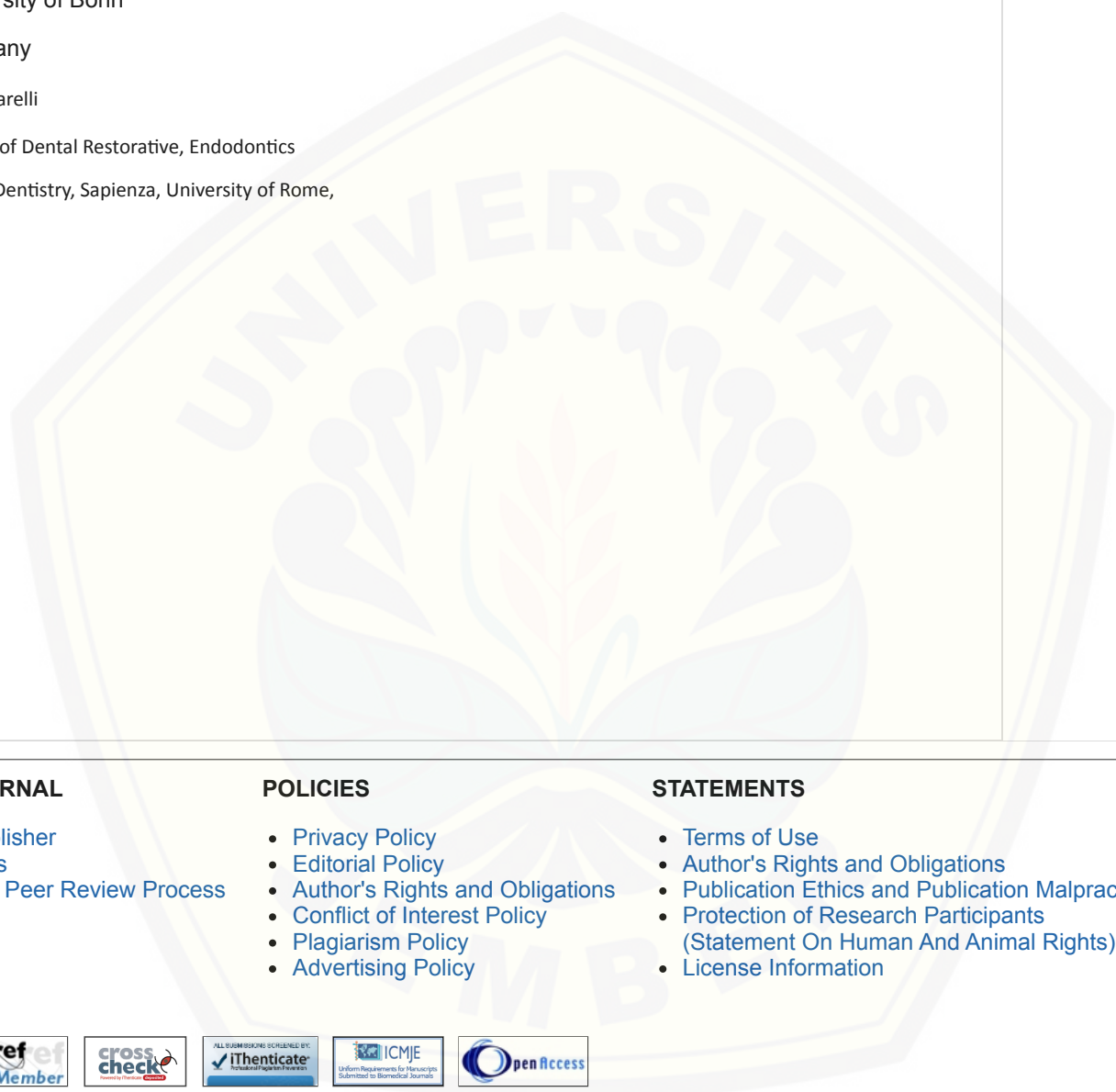
Germany

Luca Testarelli

Professor of Dental Restorative, Endodontics

School of Dentistry, Sapienza, University of Rome,

Italy



ABOUT JOURNAL

- [About Publisher](#)
- [Contact Us](#)
- [Editorial & Peer Review Process](#)

POLICIES

- [Privacy Policy](#)
- [Editorial Policy](#)
- [Author's Rights and Obligations](#)
- [Conflict of Interest Policy](#)
- [Plagiarism Policy](#)
- [Advertising Policy](#)

STATEMENTS

- [Terms of Use](#)
- [Author's Rights and Obligations](#)
- [Publication Ethics and Publication Malpractice Statement](#)
- [Protection of Research Participants \(Statement On Human And Animal Rights\)](#)
- [License Information](#)



This is an open access journal which means that all content is freely available without charge to the user or his/her institution. Users are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this journal without asking prior permission from the publisher or the author. This is in accordance with the Budapest Open Access Initiative (BOAI) definition of open access.

The articles in Rawal Medical Journal are open access articles licensed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc-sa/3.0/>) which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.

Table of Content

Editorial

1. ERAS: anesthetistâ€™s perspective!
Ayesha Fatima, Tassadaq Khurshid
RMJ. 2023; 48(2): 272-273

Original Research

2. Knowledge, attitude and practices of medical students regarding COVID-19 pandemic, Baghdad, Iraq 2022
Ghaidaa Rifaat Hamid
RMJ. 2023; 48(2): 274-277
3. Life Satisfaction and Anxiety in the time of COVID-19 pandemic among general public
Syeda Razia Bukhari, Sitara Asim
RMJ. 2023; 48(2): 278-280
4. COVID-19 vaccine hesitancy and its related factors among Iraqi diabetic patients
Hussein Abdulmohsin Dabis, Rajaa Ibrahim Abed
RMJ. 2023; 48(2): 281-285
5. Relationship between health consciousness, self-compassion and social connectedness among adolescents and young adults during covid-19 lockdown
Arsalan Haider, Kainat Zia, Maaz Sultan, Ayesha Nida
RMJ. 2023; 48(2): 286-288
6. Motherâ€™s knowledge concerning preventive measures of their children during the COVID-19 period
Shahznan Hassan Badr, Mohammed Talib Abed, Ibrahim Faris
RMJ. 2023; 48(2): 289-292
7. Effectiveness of interventional program on nurses' practice about chest physiotherapy techniques for patients with Corona virus disease
Ahmed Yassin Khadyer, Sabah Abbas Ahmed
RMJ. 2023; 48(2): 293-296
8. Comparison of clinical spectrum of omicron strain with previous strains of SARS-CoV 2 in Islamabad, Pakistan
Muhammad Ali, Sehrish Asad, Arshia Bilal, Sher Muhammad Malik, Nighat Arif, Farhat Jabeen Malik
RMJ. 2023; 48(2): 297-300
9. Behavior of men having sex with men with HIV-positive population in preventing HIV/AIDS transmission: A phenomenology study
M. Nur Khamid, Eti Poncorini Pamungkasari, Argyo Demartoto, Dewi Rokhmah
RMJ. 2023; 48(2): 301-304
10. Frequency of ischemic mitral regurgitation in patients with Non ST elevation MI
Batool Jawaid, Hareem Jawaid, Faisal Ahmed, Syeda UmmeHani, Sher Muhammad, Bashir Hanif
RMJ. 2023; 48(2): 305-308
11. Prevalence of atrial fibrillation in acute ischemic stroke
Abdul Hameed Kiani, Shiekh Kashif Rahim, Raja Farhat Shoaib, Nisar Ahmed, Khawaja Ashfaq Ahmed, Tanveer Ahmed Raja
RMJ. 2023; 48(2): 309-311
12. Incidence of fluconazole resistance in candida spp. among immunocompromised patients
Madiha Asghar, Basit Zeshan
RMJ. 2023; 48(2): 312-315
13. Species identification of causative organism in cutaneous leishmaniasis using molecular and histopathology methods
Amna Javed, Afnan Naeem, Sakhawat Ali, Hafsa Waseem, Javaid Usman, Warda Furqan
RMJ. 2023; 48(2): 316-319

14. Instruction program for patient with peptic ulcer about physical and psychological status: a case-control study
Haider Abd AL Ameer Twair AL Hamad, Huda Baker Hassan
RMJ. 2023; 48(2): 320-323
15. Colonoscopic findings in patients presenting with lower gastrointestinal bleeding at a tertiary care hospital
Farman Ali, Naveed Aamir, Muhammad Kamran Hassan
RMJ. 2023; 48(2): 324-326
16. Relationship between eating behaviors and gastrointestinal symptoms of children with autistic spectrum disorder
Lena N. Sajad Al-Joburi, Abdul Mahdi A. Hasa, Ameer Jasim Al-Aaraji
RMJ. 2023; 48(2): 327-330
17. Prevalence of diabetes in young adults between 18-35 years of the population of Sukkur, Sindh, Pakistan
Ghulam Yaseen Khokhar, Shiasta Khan, Vinay Kumar Jesrani, Irfan Ali Gabol, Manzar Ali Sethar
RMJ. 2023; 48(2): 331-333
18. Effectiveness of an educational program on diabetic patients' knowledge about preventive measures for retinopathy
Abbas F. Naji, Rajaa Ibrahim Abed
RMJ. 2023; 48(2): 334-337
19. Electrocardiographic findings in patients presenting with seizures within 12 hours of presenting in Emergency Department
Arsalan Mufti, Shua Nasir, Lal Shehbaz, Inayat Ali Khan, Quratulain Khan, Asad Khan
RMJ. 2023; 48(2): 338-342
20. Clinical features and pattern of Antiphospholipid antibodies in patients of antiphospholipid syndrome with Systemic Lupus Erythematosus
Sheharbano imran, Sadia Taj, Asadullah Khan, Qasim Ahmed, Zia ud din, Muhammad Faiq
RMJ. 2023; 48(2): 343-347
21. Intentions of weight loss: An analysis of behaviour and physical factors
Ayesha Basharat, Umm-e-Farwa, Syeda Rida Zainab, Tooba Ahmad, Hafiza Andleeb Sadia, Shahzaib Hassan
RMJ. 2023; 48(2): 348-351
22. Knowledge, attitude and perception regarding e-cigarette among post graduate medical trainees in Pakistan
Saima Akhter, Shaista Ghazal, Nadeem Rizvi, Hafsa Waqar Aziz, Usman Ali Warraich
RMJ. 2023; 48(2): 352-356
23. Moderating role of self-efficacy in the relationship between self-generated thoughts and symptoms of depression among university students
Iqra Kiran, Sadaf Ahsan, Saadiya Abbasi, Ayisha Naz
RMJ. 2023; 48(2): 357-360
24. Demographic risk factors of prenatal obsessive compulsive symptoms in pregnant women
Sameera Shafiq, Tayyeba Kiran, Qurat-ul-Ain Muhammad
RMJ. 2023; 48(2): 361-364
25. Evaluation of tubal patency and its impact on ovarian blood flow and function: a comparison of hysterosalpingography and HyCoSy
Wasan Adnan Abduhameed
RMJ. 2023; 48(2): 365-369

Behavior of men who have sex with men (MSM) with HIV-positive population in preventing HIV/AIDS transmission: A phenomenology study

M. Nur Khamid,¹ Eti Poncorini Pamungkasari,² Argyo Demartoto,³ Dewi Rokhmah⁴

¹Department of Public Health Program, Sebelas Maret University, ²Department of Medicine, Sebelas Maret University, ³Department of Social and Politics, Sebelas Maret University, ⁴Department of Health Promotion and Behavior, Faculty of Public Health, Jember University, Indonesia

Objective: To explore the behaviors of HIV-positive MSM (risk and protective behavior) in preventing HIV/AIDS transmission based on self-identity, cultural script, interpersonal script, and intrapsychic script among HIV-positive MSM.

Methodology: We conducted this qualitative study in Jember Regency-Indonesia with a phenomenological approach from April and June 2021. Informants were taken by purposive sampling, with the total primary informants being 12 HIV-positive MSM. Data were collected through in-depth interviews with open-ended questions using guidelines and performed using Interpretative Phenomenological Analysis (IPA).

Results: Most of the informants became MSM due to self-actualization. The perspective of self-identity was

mostly insertive. The cultural script shows that most HIV-positive MSMs tend to be open only to people considered. The interpersonal script consists of three stages in the dating process. In the intrapsychic script, the sexual orientation of the informants is based on mutual liking, comfort, and sexual satisfaction.

Conclusion: HIV-positive MSMs have appropriate sexual intentions and plans to prevent HIV/AIDS transmission to their partner. Still, a lack of implementation is presented due to misperception and low information. Therefore, the authorities must disseminate appropriate information about HIV/AIDS control programs in at-risk communities, particularly HIV-positive MSM.

Keywords: Preventive behaviour, MSM, HIV, AIDS.

INTRODUCTION

As a vulnerable population to transmitting HIV/AIDS, men who have sex with men (MSM) need attention. It is related to the high transmission of HIV/AIDS in this population, which can lead to HIV epidemic.¹ The United Nations reports that the MSM population is approximately three million people, with an estimated population in Indonesia during 2015 – 2019 being 2% of the total population.² The Indonesian Biological and Behavioral Integrated Survey (IBBS) in 2018 – 2019 reported that 0.03% of Indonesian were MSM.³ However, the data may underestimate because most of their communities are highly secretive and difficult to identify.

Based on a survey conducted in 140 districts/cities in 2019, Jember is the fifth regency with the highest number of MSM (7.62%). IBBS reported that the MSM population contributed a high number of HIV incidence by 17.9%, followed by drug abuse (13.6%) and shemale (11.9%).³ The survey also reported that 2.3% of MSM lack knowledge about condoms, and a quarter of respondents admitted that they did not have condoms in the last month (24.2%).³ These issues need to be a public health concern in Indonesia, where the lack of availability of condoms during sexual activity among

MSM elevated infectious disease transmission, particularly HIV/AIDS.⁴

Given such epidemiological trends, research on sexual behavior among the MSM population for HIV/AIDS transmission is necessary. It can enlarge information on epidemic behavior, provides practical strategies, and controls its impact on various sectors.⁵ This study aims to explore HIV-positive MSM behaviors (risk- and protective behavior) in preventing HIV/AIDS transmission.

METHODOLOGY

This qualitative research was conducted with a phenomenology approach. The informants were determined by purposive sampling. The inclusion criteria included: a) domiciled in Jember, b) declared HIV positive by the doctor and laboratory-confirmed, c) 18 – 30 years old, d) agree to sign informed consent. The study was conducted in Jember Regency from April and June 2021. This study was approved by the Research Ethics Committee of the Faculty of Medicine, Universitas Sebelas Maret, on March 17, 2021 (registration number: 11/UN27.06.6.1/KEP/EC/2021). We collected data through in-depth interviews with open-ended questions using guidelines (structured). We

used Interpretative Phenomenological Analysis (IPA) to explore individual’s personal perception. The triangulation process involved collecting information through in-depth interviews with significant or supporting informants and verifying the information through direct observation.

Statistical Analysis: We used Interpretative Phenomenological Analysis (IPA).

RESULTS

Table 1 shows the demographic characteristics of respondents. The classification of codes and the process of coding to category and theme are given in Fig. 1 and Fig. 2. The self-identity code determines due to self-identity on the type of expression among HIV-positive MSM, including sexual roles in having sex with men. Most informants explained that sexual roles were determined by their first sexual experience, usually starting with versatile (masculine and feminine) due to curiosity. In addition, traumatic/past experiences also affected the expression type among MSM.

“Versatile. It is more comfortable at the top. I feel uncomfortable at the bottom; the pain is excruciating. I cannot enjoy being at the bottom. But I do not know; when I have sex, I have to be positioned at the bottom” (Informant 6).

Cultural Script: The cultural code determines how they open their HIV status to others. This study found that the informants were aware their status and were only

open to people who were considered trustworthy. *“No one in my family knows my status. I did not open it because I feared somebody would say something bad. My family also does not know I am MSM. The only one who knows is just close friends. Yes, he is also person with HIV/AIDS”* (Informant 8).

“My parents know my HIV status. But my brother/sister do not. The reaction was sad at the beginning. But now, let’s just go with it. They just support it. Because at some point, if there is something wrong, Mama will know too. So, I’d better tell her at the beginning” (Informant 5).

Interpersonal Script: The interpersonal code determines the stages in finding partners. The interpersonal script variables consisted of dating sexual script. The study found that most informants know their boy friends through social media. *“Facebook. In the past, I used a Grinder, Blued. And now the Hornet. Yes, the objective is to find a partner. Then, the second is to find a boyfriend. But I used it mostly looking for sexual experience. It will be a boyfriend if it’s a click (match). If it’s not (suitable), then it has gone. Most of the time, he will disappear after having sex”* (Informant 11).

In sexual script, the study found that most informants choose partners who provide comfort, maturity, mindset, thoughtfulness, physical attractiveness, and economic stability. *“I just look for someone who clicks on me and can connect with my mindset. I do not concern about physics. It is important to think forward. We will*

Table 1: Demographic characteristics of respondents.

Subject	Age	Marital Status	Infected Duration (Month)	ARV Status	MSM Motivation	Ethnicity
Informant 1	29	Single	17	On ARV	Sexual harassment victim	Javanese
Informant 2	30	Single	29	On ARV	self-actualization	Javanese
Informant 3	25	Single	14	On ARV	self-actualization	Javanese
Informant 4	30	Single	2	On ARV	Pleasant	Madurese
Informant 5	24	Single	24	On ARV	Parenting	Javanese
Informant 6	25	Single	60	On ARV	Broken home family	Javanese
Informant 7	28	Single	60	On ARV	Trauma experience in women	Javanese
Informant 8	20	Single	12	On ARV	Pleasant	Javanese
Informant 9	26	Single	24	On ARV	self-actualization	Javanese
Informant 10	27	Single	48	On ARV	Parenting	Madurese
Informant 11	26	Marriage	12	Off ARV	Economy	Madurese
Informant 12	24	Single	36	On ARV	self-actualization	Javanese

CODES	CATEGORY	THEME
First time sex experience, Traumatic, Curiosity, Feeling uncomfortable, Excessive pain. Role of sexual partner, Desire of sexual partner.	The determination of sexual roles in having sex with men. Versatile behavior (Feminine and masculine)	Self-identity in the type of expression among HIV-positive MSM
Closed, Worried, Fellow friends maintain privacy. Trust, Stigma, avoiding stress, worrying about being ostracized.	Do not disclose HIV status. Disclosure of HIV status with partners/friends and family.	Be careful and open about your HIV status with fellow People Living with HIV/AIDS (PLWHA).
Social media, sex gratification, looking for a girlfriend, same-sex dating apps, looking for same-sex friends. Match each other, similarity in mindset, comfort, physical appearance	Looking for a same-sex partner. Criteria for choosing a partner.	The stages in finding a partner include the criteria for choosing a same-sex partner.
Mutual liking, feeling suitable, comfort, seeking sexual satisfaction	Mutual love with same-sex couples.	The experience of having same-sex.

Fig. 1: Classification about code, category and theme.

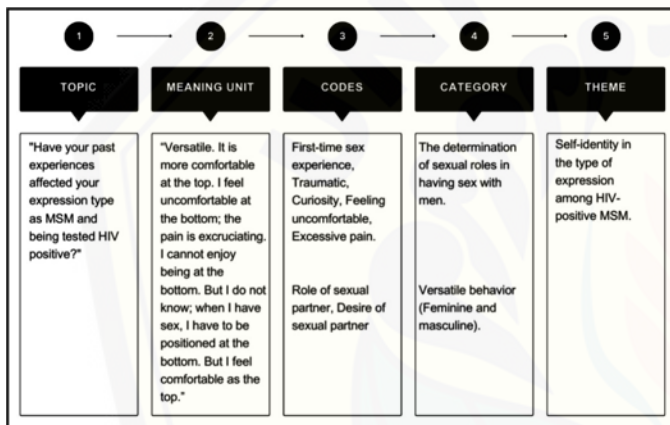


Fig. 2: Process of coding and theme.

continue the relationship if I feel comfortable" (Informant 12).

This study found that the informants had not implemented safe sex behaviour due to misperceptions about preventing HIV/AIDS transmission. It is like removing sperm from the anus and washing the genitals using antiseptics. They did it and considered avoiding HIV transmission.

Intrapsychic script: The intrapsychic code determines due to the experience of having same-sex. In this study, the sexual experience of HIV-positive MSM found that information experience of having sex with men based on mutual liking, feeling suitable and comfort, and sexual satisfaction. "We met and were invited to the hotel. I just liked it. It felt right. The communication was right on the application" (Informant 11).

DISCUSSION

The self-identity in MSM is a characteristic of the MSM population as members of society, including their sexual

roles.⁶ This study revealed that the self-identity among HIV-positive MSM begins with versatile (insertive and receptive), then changes according to the comfort feeling and first experience of having sex. Van Tieu et al reported the appearance of MSM with a sexual role "insertive" are macho and act like a man when having sexual relations with men. The sexual role "receptive" has a feminine appearance. In addition, the sexual role of versatile is commonly known as "insertive or receptive" when having sex with men.⁷ This study found that sexual roles in MSM sexual partnerships are fluid and can change according to the feeling and experience. The ethnicity in Jember consists of Javanese, Madurese, Osing, and Pandalungan (a mixture of Java and Madura), in which these various ethnicities are closely related to public health issues, including HIV/AIDS. The behaviour of HIV-positive MSM is still considered deviant behavior to discuss. This condition forces them to choose to hide their identity from the community.⁸ This finding is similar to a study where HIV-positive MSM tend not to disclose their HIV status to partners or families, however, some informants reveal their HIV status to some people.⁹ We found that due to rejection, self-blaming, and privacy from other people, HIV-positive MSM only reveal their status to people who are trustworthily considered.

This study found that the process of meeting for the first time went through three stages, namely: 1) introduction through social media or dating applications where this stage aimed to recognize each other, 2) appointment to meet either in the open- or closed- location and 3) decision making (reject or accept). This finding is similar to a previous study, where several stages should be passed in starting a relationship.¹⁰ These three stages are carried out by MSM to filter their partners in order to build the relationship.

We found that HIV-positive MSM plans to tackle HIV/AIDS transmission. It includes healthy behaviours, using condoms and lubricants, regularly taking HIV tests and ARV, and being faithful to partners. Besides, educating partners about HIV prevention, maintaining personal hygiene, and being open to each other can prevent HIV/AIDS transmission. A previous study reported that maintaining a lifestyle, condom compliance, and adherence to ARV consumption is a successful effort of MSM to tackle HIV/AIDS transmission.¹¹

Another study added Voluntary Counselling and Testing services (VCT) and Provider Initiated Testing and Counseling (PITC) as an option to prevent HIV transmission.¹² Therefore, adequate knowledge is needed in efforts to prevent the transmission of HIV/AIDS among MSM. This study revealed the behavior of

HIV-positive MSM to prevent HIV/AIDS transmission using *Interpretative Phenomenological Analysis* (IPA). This study is limited to Jember Regency without analyzing by cultural setting (Java, Madura, and Pandalungan). Therefore, the cultural analysis should be performed in further study to provide comprehensive information.

CONCLUSION

The MSM behavior is related to self-actualization. Most informants were insertive (masculine). Based on a cultural script, HIV-positive MSMs are secretive. The interpersonal script consists of introduction on social media, outdoor or indoor meetings and relationship determination/decision. In the intrapsychic script, the sexual behavior of HIV-positive MSM is based on mutual liking, comfort, and sexual satisfaction.

HIV-positive MSMs have appropriate sexual intentions and plans to prevent HIV/AIDS transmission to their partner. This study recommends that the dissemination of preventive behavior related to HIV/AIDS is necessary by the authorities and should be carried out intensively, particularly for HIV-positive MSM.

Author Contributions:

Conception and design: M. Nur Khamid.

Collection and assembly of data: M. Nur Khamid, Eti Poncorini Pamungkasari.

Analysis and interpretation of data: M. Nur Khamid, Dewi Rokhmah.

Drafting of the article: M. Nur Khamid.

Critical revision of article for important intellectual content: Argyo Demartoto.

Statistical expertise: Eti Poncorini Pamungkasari.

Final approval and guarantor of the article: Eti Poncorini Pamungkasari.

Corresponding author email: M. Nur Khamid:

khamid_020192@student.uns.ac.id

Conflict of Interest: None declared.

Rec. Date: Feb 24, 2023 Revision Rec. Date: Mar 12, 2023 Accept Date: Mar 23, 2023.

REFERENCES

1. Beyrer C, Sullivan P, Sanchez J, Baral SD, Collins C, Wirtz AL, et al. The increase in Global HIV epidemics in MSM. *AIDS* 2013;27:2665-78.
2. Ministry of Health RI. The estimation of key population in Indonesia during 2015-2022. Jakarta, Indonesia: Ministry of Health RI: 2015.
3. Ministry of Health RI. Supplement of IBBS Report specific analysis- IBBS - Integrated Biological and Behavioral Survey 2018-2019. Jakarta, Indonesia: Ministry of Health RI; 2020.
4. Fauk NK, Sukmawati AS, Wardojo SS, Teli M, Bere YK, Mwanri L. The intention of men who have sex with men to participate in Voluntary Counseling and HIV Testing and access free condoms in Indonesia. *Am J Mens Health* 2018;12:1175-84.
5. Olusola IA, Nkiruka ER, Obasohan MO, Olanrewaju AK, Titilayo O. Sexual behaviour, HIV/Stiprevention knowledge, and utilization of VCT among the residents in Sagamu Metropolis of Ogun State, Nigeria. *J Prevention Treatment* 2015;4:8-13.
6. Truong N, Perez-Brumer A, Burton M, Gipson J, Hickson D. What is in a label? Multiple meanings of 'MSM' among same-gender-loving black men in Mississippi. *Glob Public Health* 2016 ;11:937-52.
7. Van Tieu H, Li X, Donnell D, Vittinghoff E, Buchbinder S, Parente ZG. Anal sex role segregation and versatility among men who have sex with men: explore study. *J Acquir Immune Defic Syndr* 2013;64:121-4.
8. Demartoto A, Zunariyah S, Bellarminus R. The accessibility of hiv-infected poor women to the prevention of mother to child transmission service in Surakarta Indonesia. *Indian J Community Health* 2016;28:317-23.
9. Dessalegn NG, Hailemichael RG, Shewa-Amare A, Sawleshwarkar S. HIV Disclosure: HIV-positive status disclosure to sexual partners among individuals receiving HIV care in Addis Ababa, Ethiopia. *PLoS One* 2019;14:e0211967.
10. Fikriyah I, Gani HA, Rokhmah D. The lifestyle of "Ayam Kampus/Naughty Undergraduate Student) and the transmission of STD. *J Pustaka Kesehatan* 2013;1:24-8.
11. Khamid MN, Marchianti AC, Rokhmah D. Predisposing characteristic of MSM (Men who Have Sex with Men) in utilizing CST (Care Support and Treatment) services in Jember District. *J Health Notions* 2018;2:483-6.
12. Ningrum K, Darwis I, Karima N. The profilaxispra-and pasca- Exposure of HIV. *J Majority* 2019;8:209-14.