ABSTRACT

Title of dissertation:	DIGITAL MEDIA AND SEXUAL HEALTH: A MIXED METHOD EXPLORATION OF YOUNG MEN'S EXPOSURE AND ENGAGEMENT WITH DIGITAL MEDIA SEXUAL CONTENT IN INDIA
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Nearly 90% of the world's youth live in low-and middle-income countries, where many face significant sexual and reproductive health (SRH) challenges. India, home to the largest youth population globally, has invested considerable effort in improving SRH among young people ages 18 to 24 years. As in many locations, these efforts have historically prioritized young women due to gender inequalities and SRH vulnerabilities. Young men are often positioned negatively, as allies in advancing young women's health, or sidelined altogether, despite having unique SRH challenges and informational needs. At the same time, rapid internet expansion and young people's online presence have made mass media act as a "sexual super peer," exposing them to sexual content across digital media platforms, including social media, online games, and streaming platforms. While existing research links media exposure to sexual attitudes, early sexual initiation, and risky sexual behaviors, most evidence comes from high-income countries, focuses on isolated media

platforms, rarely considers men exclusively, and fails to capture the complex ways digital media shape viewers' SRH outcomes.

This dissertation addressed these gaps through an exploratory sequential mixed-methods study conducted among young men aged 18 – 21 years in Delhi, India. Specifically, aim 1 used in-depth interviews with 22 young men to explore how they use digital media to navigate SRH content. Findings reveal how different digital media content (e.g., algorithm-driven reels on Instagram, how-to videos on YouTube, online communities on Reddit, romantic and masculine scripts in streaming content, and hypersexualized characters in digital games), along with other online platforms such as Google, functioned not only as private informational environments where they sought, encountered, and interpreted information about their bodies, relationships, sexual feelings, and safe sexual practices, but also as spaces that shaped their expectations around masculinity.

In aim 2, we developed and validated a novel, culturally grounded, character-based measure of digital sexual media exposure called REceptivity to Characters Appearing in digital media Platforms (RECAP) using survey data from 234 young men. RECAP captures exposure across multiple digital media platforms through media characters, offering a contextually adaptable, easy-to-administer tool for measuring digital media exposure.

In Aim 3, we applied RECAP to examine pathways linking sexual media exposure to 205 young men's condom use knowledge, attitudes, peer and masculine normative beliefs, self-efficacy, intentions, and condom use behaviors. We found two indirect associations between exposure to sexual digital media content and condom use intention through masculine normative beliefs and condom use self-efficacy.

By centering young men in a middle-income-country context, this study advances global SRH research by integrating culturally-grounded measurement with theory-driven condom use pathways. The findings provide actionable insights for designing gender-inclusive, digitally-relevant SRH interventions and offer an adaptable tool for measuring media exposure across diverse health domains.

DIGITAL MEDIA AND SEXUAL HEALTH: A MIXED METHOD EXPLORATION OF YOUNG MEN'S EXPOSURE AND ENGAGEMENT WITH DIGITAL MEDIA SEXUAL CONTENT IN INDIA

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Dedication

To all the women in my life whose strength, support, and motivation shaped who I am today.

To the 10-year-old dreamer, Angshuman K. Kashyap.

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Table of Contents

List of figures and tables ..... *ix*

Key terms ..... *x*

List of abbreviations ..... *xi*

CHAPTER 1: INTRODUCTION *1*

The broader context of young men's sexual and reproductive health (SRH) 2

Young men's SRH risks and consequences 3

Young men in India: A deeper dive **4**

Young men in India do not consider SRH their problem 6

The role of media to fulfil SRH needs **9**

The relationship between media exposure on SRH attitudes, knowledge and behaviors 10

The role of media to fulfil SRH needs **12**

Young people's use of digital media in India 13

Gaps in existing SRH and media research **14**

Specific aims, research questions, and hypotheses **16**

Aim 1: Explore digital media use (Qualitative) 17

Aim 2: Tool adaptation and validation 18

Aim 3: Examine condom use relationships 19

Theoretical framework **21**

Significance to global health **31**

Implications for policy, practice, and future research **32**

CHAPTER 2: LITERATURE REVIEW *34*

Changes during adolescents' transition to adulthood **35**

Risk-taking behaviors among young adults **38**

Programs and interventions addressing risky sexual behaviors in LMICs **39**

Why do we need to focus on young men? **42**

Young people growing up in a digital world **43**

Prevalence of sexual content in traditional and digital media 44

Young people's involvement with sexual content in digital media **48**

Effects of media influence on youth's SRH outcomes **51**

CHAPTER 3: METHODS *53*

Study setting 55

Data collection team and training 56

Recruitment of participants 57

Aim 1: Explore digital media use **59**

Sampling 59

Data collection and study instrument 60

Data analysis 61

Aim 2: Develop and evaluate digital media exposure measure **63**

Step 1: Item development procedure 63

Step 2: Scale validation and development procedure ... 66
Participant demographic characteristics ... 67
Measures ... 69
Psychometric analysis for validating RECAP ... 73

Aim 3: Examine relationships ... **76**
Measures ... 77
Data analysis ... 80

Ethical considerations and human subject involvement ... **83**
Potential risks and adequacy of protection against risks ... 83
Data management ... 85

CHAPTER 4: AIM 1 FINDINGS (QUALITATIVE) ... ***86***

Digital media used by young men in their daily lives ... **87**

Young men's use of digital media for understanding the self & relationships ... **90**
Learning about one's own body ... 90
Learning about relationships ... 92
Digital media and sexual feelings ... 95
Pornography and masturbation ... 97

Safe and unsafe sexual practices ... **98**

Conversations about sexual content ... **100**

Media & masculine ideals ... **102**
An ideal man ... 102
An ideal boyfriend ... 103
Bad men ... 104
Real men in media ... 104

Young men's recommendations about future sexual health needs ... **106**

CHAPTER 5: AIM 2 RESULTS (MIXED METHODS) ... ***108***

Character listing and ranking ... **109**

Pilot-testing feedback ... **110**

Psychometric evaluation results ... **112**

CHAPTER 6: AIM 3 RESULTS (QUANTITATIVE) ... ***122***

CHAPTER 7: DISCUSSION OF FINDINGS AND FUTURE IMPLICATIONS ... ***128***

Aim 1 discussion ... **129**

Aim 2 discussion ... **137**

Aim 3 discussion ... **144**

Strengths and limitations ... **150**
Strengths of the study ... 150
Aim 1 limitations ... 151
Aim 2 limitations ... 152
Aim 3 limitations ... 155

Implications for policy, practice, and future research ... **157**
Policy implications ... 157
Practice implications ... 158
Future research ... 159

APPENDIX *161*
Appendix A. IRB approvals **162**
Appendix B. Recruitment materials **165**
Appendix C. In-depth interview guide for interviews with young men **169**
Appendix D. Pilot-test of survey instrument (Hybrid cognitive interviews) **174**
Appendix E. Survey instrument **179**
Appendix F. Consent forms **222**
Appendix G. Positionality and qualitative research memos **240**
Appendix H. Supplementary tables for Aims 2 and 3 ..... **245**
REFERENCES *254*

List of figures and tables

Figure 1. Trends in sexual behavior among adolescent and young men in India.
Figure 2. Three phases of the mixed method study
Figure 3. Theoretical Framework
Image 4. Fortnite characters in various costumes
Image 5. Trendy character dance replicated on social media
Image 6. Delhi district map
Image 7. Snack break with the data collection team after training
Image 8. In-depth interviews with young men in Delhi
Figure 9. Domains and sub-domains developed
Image 10. A participant responding to a character recognition item
Image 11. Surveys with young men in Delhi, India
Image 12. Playerunknown's Battlegrounds Mobile character customization page
Image 13: Falorant (Valorant parody game with Valorant characters - Jett and Cypher)
Image 14. Mirzapur characters
Image 15. Kabir Singh movie poster
Figure 16. ICCs for 7 items sexual character recognition
Figure 17. ICCs for 6 items general character recognition
Figure 18. Direct and indirect effects of exposure to sexual content in digital media on condom use intention

Table 1. Media influence on youth's positive and negative SRH outcomes
Table 2. Character-based digital media exposure measure components, operationalization, and format
Table 3. Descriptive statistics of character RECAP
Table 4. Correlation matrix of the 14 RECAP scores
Table 4.1 Correlation matrix of the 14 RECAP scores by sexual status
Table 5. Descriptive statistics for RECAP and its sub-components for sexual characters by demographic characteristics
Table 6. Descriptive statistics for RECAP and its sub-components for general characters by demographic characteristics
Table 7. Character recognition sub-component item difficulties and fit statistics ordered from the least to most difficult items.
Table 8. Descriptive statistics and correlation matrix between all IMBP study measures
Table 9. Path analysis results where the behavioral determinants acted as mediators between exposure to sexual content in digital media and condom use intention

Key terms

Term	Definition
Adolescence	10 to 19 years
Comprehensive HIV/AIDS knowledge	Knowing that condom use during every sexual intercourse, having one uninfected sex partner can reduce HIV/AIDS risk, recognizing that healthy-looking individuals can carry HIV/AIDS, and rejecting two common misconceptions about its transmission or prevention (International Institute for Population Sciences (IIPS) & ICF, 2021)
Digital media	For the purpose of this study, internet based social media platforms, online gaming and streaming platforms.
Gender-transformative approaches	Programs that seek to address gender inequality by reshaping societal norms, attitudes, roles, and relationships related to gender (MacArthur et al., 2022).
Sex	In many languages and general context, sex means sexual activity
Sexual Health	According to the World Health Organization, "*a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled*." (WHO, 2006)
Sexuality	According to the World Health Organization "*…a central aspect of being human throughout life encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviors, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors."* (WHO, 2006)
Young adults	18 – 24 years
Young people	10 to 24 years
Youth	15 to 24 years

List of abbreviations

AFHCs	Adolescent-Friendly Health Clinics
AIDS	Acquired Immunodeficiency Syndrome
ARSH	Adolescent Reproductive and Sexual Health
BGMI	Battlegrounds Mobile India
CDC	Centers for Disease Control and Prevention
CSE	Comprehensive Sexuality Education
CSW	United Nations Commission on the Status of Women
DHS	Demographic and Health Surveys
DIY	Do It Yourself
E10+	"Everywhere 10+" (for games and apps)
FAO	Food and Agriculture Organization
GoI	Government of India
GSMA	Groupe Speciale Mobile Association
HIV	Human Immunodeficiency Virus
IDIs	In-depth Interviews
IIPS	International Institute for Population Sciences
IMBP	Integrated Model of Behavioral Prediction
IPPF	International Planned Parenthood Federation
LMICs	Low- and Middle-Income Countries
MIC	Middle-Income Country
MoH	Ministry of Health
MSD	Media System Dependency theory
NCR	National Capital Region
NFHS	National Family Health Survey
OTT	Over-the-top
PC	Personal Computer
QR code	Quick Response code
RAs	Research Assistants
RECAP	REceptivity of Characters Appearing in digital media Platforms
RKSK	Rashtriya Kishor Swasthya Karyakram
RQ	Research Question
SRH	Sexual and Reproductive Health

STIs	Sexually Transmitted Infections
U.S.	United States
UNFPA	United Nations Population Fund
WHO	World Health Organization

Chapter ONE

INTRODUCTION



Photo by Aman (data collection team member)

Chapter 1: Introduction

The broader context of young men's sexual and reproductive health (SRH)

In 2024, the world had 1.3 billion young people aged 15 to 24 years, with nearly 90% living in low-and middle-income countries (LMICs) (United Nations, 2024). As adolescents transition into the "in-between" years of emerging adulthood (18 to 24 years), they enter a crucial developmental stage marked by accelerated cognitive growth, evolving social and emotional development, and identity formation within cultural and gendered contexts (Arnett, 2015; National Research Council, 2015). In LMICs, there has been considerable public health effort to improve young people's health and well-being, particularly their sexual and reproductive health (SRH) (Beckwith et al., 2024; Blum & Chandra-Mouli, 2024). However, these efforts have historically prioritized young women due to systematic gender inequalities and SRH vulnerabilities (Aantjes & Govender, 2024; Mmari et al., 2024; Sawalma et al., 2023; UNFPA & IPPF, 2017). Young men are often positioned negatively or recommended as allies in advancing young women's health or are sidelined altogether, despite their unique SRH necessities and challenges (Greene et al., 2019; Kennedy et al., 2020; Ruane-McAteer et al., 2019, 2020).

Young men go through a broad range of SRH experiences during their emerging adulthood phase (Aantjes & Govender, 2024; UNFPA & IPPF, 2017). Some experiences relate directly to their bodies, including sexual development, masturbation, sexual dysfunctions, infertility, and reproductive cancers like testicular cancer. Other experiences center around social norms and identity formation, such as navigating cultural expectations of hypermasculinity, transitioning to manhood, or what it means to achieve that state. Many experiences also emerge in the inter-personal context of their relationships, including

intimacy, pleasure, contraceptive use, communication with partners, peers, and sexually transmitted infections (STIs) (Greene et al., 2019; Marcell & Ellen, 2012).

Young men's SRH risks and consequences

The period between adolescence and young adulthood is a life stage when many emerging sexual behaviors can lead to risk taking, such as having multiple sexual partners, engaging in unprotected sex, participating in non-consensual sex, and drug use during sex (Berhan & Berhan, 2015; R. Chandra et al., 2024; Gómez-Núñez et al., 2023; Grubb et al., 2020). Studies show that young men tend to have an earlier sexual debut and report more sexual partners than young women (Berhan & Berhan, 2015; Muheriwa-Matemba et al., 2024). For example, in the United States in 2023, more high school boys reported sexual intercourse before the age of 13 years (3.3% vs 2.7%) than girls. A higher proportion of boys than girls (7% vs 5%) also reported sexual intercourse with four or more persons. About 18% of boys reported drinking alcohol or using drugs before last sexual intercourse. (Centers for Disease Control and Prevention (CDC), n.d.). Globally, condom use among young men has also declined, with a 10% decrease (71% to 61%) from 2014 to 2022, compared to a 7% decline (61% to 57%) among young women (Költő et al., 2024).

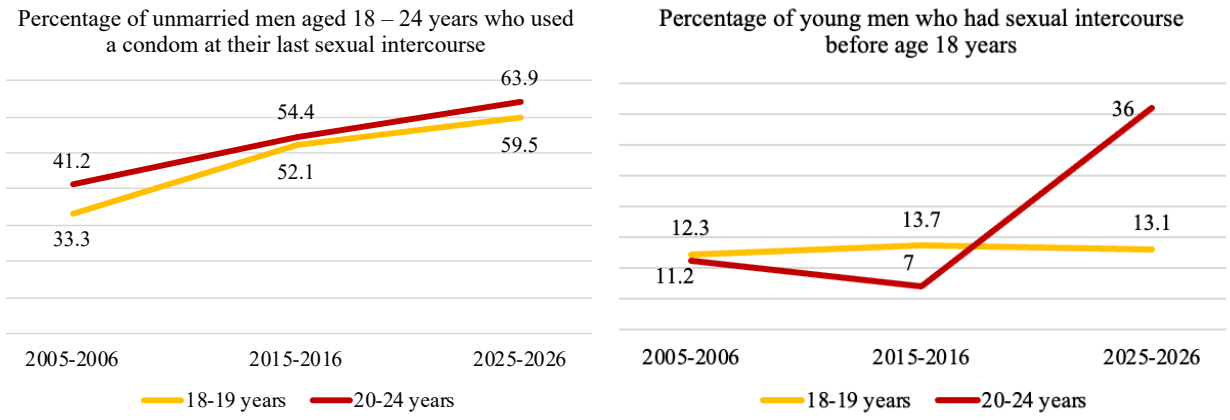
Data from LMICs reflect similar risks. The 2017 Demographic and Health Surveys (DHS) multi-country comparative report shows that the median age at first sex for young men ages 20 to 24 years from 44 countries ranged between 16 and 19 years, with an earlier sexual debut than women in Latin American and Caribbean countries. The report states that the prevalence of premarital sex among adolescent boys is higher than girls across the 44 countries with highest prevalence in Latin American, Caribbean, Southern and Middle African countries (between 45% to 71%) (MacQuarrie et al., 2017).

Risky sexual behaviors increase the likelihood of preventable and alarming health consequences, like HIV and STIs, unintended pregnancies, mental health issues, and violence. In 2019, adolescent boys and young men accounted for 34% of the 0.42 million new HIV cases and 48% of the 132 million new STI cases globally (Zhang et al., 2022). Inconsistent condom use, access to contraceptives, and poor contraceptive use knowledge are connected to unintended pregnancies (Bell et al., 2024). Further, DHS data show that young women most often reported opposite-sex friends, strangers, and intimate partners as perpetrators of sexual violence in many countries (MacQuarrie et al., 2017).

Young men in India: A deeper dive

Young men from India, a middle-income country (MIC) with an enormous youth population, face persistent and under-recognized sexual and reproductive health (SRH) challenges (Ministry of Youth Affairs and Sports, 2023; World Bank, 2025). India holds the world's largest youth population, with 27% of its population aged 15 to 29 years (Ministry of Youth Affairs and Sports, 2023).

Figure 1. Trends in sexual behavior among adolescent and young men in India.



Based on data from NFHS 3, 4, and 5

Figure 1 (left image) shows an increasing trend in condom use among adolescents and young men in India. However, it also shows a sharp increase in early sexual initiation among young Indian men (right image). The National Family and Health Survey (2019 – 2021) (NFHS-5) found that 13% adolescent boys aged 18 to 19 years and 36% of young men aged 20 to 24 years have engaged in sexual intercourse before the age of 18 years (International Institute for Population Sciences (IIPS) & ICF, 2021). Sexual intercourse was significantly higher among boys and young men who were away from home for a month or more at a time than those who were not (32% vs 19%). Over half of all sexually active men reported not using contraception, with this practice particularly pronounced among adolescent boys and young men. More than half (58%) of the sexually active adolescent boys and 66% of young men reported not using any contraceptive methods, despite more than 95% knowing at least one modern contraceptive method. Fourteen percent of young men had a sexual initiation before the age of 18 years. Of the 49% men ages 25 – 29 who were sexually active, the median age at first sexual intercourse was 25, mirroring marriage patterns, with 43% of men in the same age range reporting marrying at that age. The national survey also found that only 3% of adolescent boys and young men reported testing for HIV, who engaged in sexual intercourse in the past 12 months. R. Chandra and colleages (2024) found that factors like urban living, alcohol consumption, and lower household wealth status have been found to significantly predict risky sexual behaviors like early sexual debut, multiple partners, and unprotected sex among young men in the country.

Young men in India do not consider SRH their problem

Young men often fail to view SRH as central to their overall well-being because patriarchal norms position SRH as women's responsibility (Greene et al., 2019). As a result, they underrecognize their SRH needs (Mwaikambo, 2018; Same et al., 2014). Below, I describe several barriers that contribute to this under recognition.

Limited comprehensive SRH knowledge: To have comprehensive SRH knowledge, a young man should have accurate and age-appropriate information about seeking consent and bodily autonomy, puberty, menstruation, contraception, pregnancy, STIs, etc. (UNESCO, 2018). We know from the previous section that the majority (95%) of the young men in India know about at least one contraceptive method; however, over half of adolescent boys (52%) and fewer than half of young men (45%) were unsure if condoms prevented pregnancy when used correctly. Similarly, while over 90% had heard of HIV/AIDS, and most (72%) know that consistent condom use or avoiding contaminated blood products or drug injections reduce HIV/AIDS risk, fewer than one-third (28%) had comprehensive HIV/AIDS knowledge (see page x for definition) (IIPS & ICF, 2021). Adolescent boys in India lack accurate information and are misinformed about menstruation. In a mixed-method study, adolescent boys described menstruation as "*something that happens to women*", and believed that "*pads are used as contraceptive for preventing HIV spread*" (Gundi & Subramanyam, 2020). These gaps reflect the inconsistent implementation of comprehensive sexuality education (CSE) (Chandra-Mouli et al., 2025). A qualitative study with boys ages 13 to 17 years across three Indian states found that while topics related to puberty and menstruation were included in the curriculum, they were either not taught in-depth or skipped. Boys reported learning about

these topics indirectly by overhearing conversations among girls, observing cultural rituals, or noticing when girls experienced menarche at school (Mason et al., 2017). Since 2001, India has worked to integrate SRH content into school curricula and teacher training, but realistic coverage of CSE remains limited (Chandra-Mouli et al., 2025; Joseph, 2023).

Social, cultural norms, and sexual attitudes: Taboo linked with talking about SRH issues and negative beliefs further limit young men's SRH engagement. National data show that 37% of men hold a negative attitude towards women's sexual autonomy (Pradhan & De, 2025), and about 17% boys and 19% young men believed that women who use contraception may become promiscuous (IIPS & ICF, 2021). However, nearly one-third of boys (30%) and just over one-third of young men (35%) agreed that contraception is "a woman's business" (IIPS & ICF, 2021). Another study reported that about 70% of Indian youth believed sexual urges before the age of 18 were harmful, and that high social connections can cause promiscuity (Mukherjee et al., 2019). Other researchers found that many young men expressed favorable attitudes towards early sexual debut or pre-marital sex. Jaya & Hindin (2009) found that adolescent boys in Delhi, India, were significantly more likely than girls to seek information about an opposite-sex person they were interested in (76% vs. 61%), to engage in premarital sex (32% vs. 6%), and to view premarital sex as acceptable if the couple was in love (33% vs. 14%). In a survey of 15,388 adolescents by Muhammad and colleagues (2021) found that boys who had dropped out of school, were exposed to media or pornography, and reported depressive symptoms were significantly more likely to experience early sexual debut compared to their peers. Religious beliefs, and cultural taboos existing in certain communities often limit open discussions around SRH in the country (Alam & Alam, 2025; Alekhya et al., 2025).

Prevailing norms around masculinity that equate it with invulnerability, emotional suppression, dominance, and sexual control further discourage positive SRH attitudes and practices. Such norms prevent young men from acknowledging SRH concerns, increasing their fear of embarrassment, disclosing symptoms, making informed decisions, or seeking timely care (Kato-Wallace et al., 2016; Nyblade et al., 2017; Santhya & Jejeebhoy, 2012; Wamoyi et al., 2010).

Poor engagement with men-friendly SRH services: Globally, young men often report that SRH services and facilities are inaccessible or unwelcoming. Services tailored to men remain limited in availability and operate during inconvenient hours, especially in low-resource settings (Nyalela & Dlungwane, 2023; UNFPA & IPPF, 2017). As young men transition to adulthood, their contact with healthcare providers often declines, reducing opportunities to discuss SRH matters (Grubb et al., 2020; Rice et al., 2018). Negative stereotypes and attitudes held by some health providers about male clients, coupled with inadequate training in empathetically addressing male SRH needs, lack of privacy, further limit the relevance and quality of services available (Greene et al., 2019; Nyalela & Dlungwane, 2023; UNFPA & IPPF, 2017). In India, sexual health concerns are primarily addressed by psychiatrists or gynecologists, with a shortage of specialists trained in sexual medicine (A. Chandra, 2021). Although the Government of India launched the Adolescent Reproductive and Sexual Health Strategy (ARSH) in 2005 and subsequent programs offer SRH services through adolescent-friendly health centers (AFHCs), service delivery often conflicts with prevailing social beliefs. A qualitative study with family planning service providers in two Indian states found providers expressing hesitation or opposition to offering contraceptives to unmarried youth, citing social norms, fear of community

backlash if unmarried youth are recommended contraceptives, and misconceptions about legality (Shukla et al., 2022).

Limited focus on gender transformative SRH programs: Programs that focus on men typically restrict information to male contraceptive methods, offering a narrow view of SRH services (Odira et al., 2025). Programs rarely acknowledge that many SRH decisions occur jointly between men and women and are shaped by broader social contexts. The program narratives tend to be grounded in negative premises, like men's irresponsibility, rather than promotion of men's rights and needs (FAO et al., 1998; Mmari et al., 2024). Although governments and organizations have started advocating and shifting their attention to more gender-transformative programming (see page x for definition), an approach where both men and women are equitably involved (Brennan-Wilson et al., 2024; Mmari et al., 2024; Ruane-McAteer et al., 2020), in practice, progress has been very limited globally and especially in MICs like India (Aantjes & Govender, 2024; Ruane-McAteer et al., 2019).

The role of media to fulfil SRH needs

Two decades ago, Brown and colleagues (2005) described mass media as a "sexual super peer" that exposes young people to sexual content across movies, television, magazines, and music. Young people often turn to media as the default educator about sex, relationships, and intimacy, when parents, schools, or health providers do not fulfil these roles (J. D. Brown & Keller, 2000; Children and Screens, 2024; Maes et al., 2022; Mitchell et al., 2014; Scharrer & Warren, 2022). Media researchers have conducted several studies to understand the nature and prevalence of sexual content targeted towards young people on various traditional mass media platforms (Aubrey & Frisby, 2011; J. D. Brown et al.,

2006; Coyne et al., 2019; Kunkel et al., 2007). Sexual content is also prevalent on newer platforms like social media, streaming services, and interactive games (Fowler et al., 2022; Masterson & Messina, 2023; Noël et al., 2021; Yu et al., 2024). The nature of the sexual content varies by type, genre, and script. Studies consistently show that sexual talk, such as discussions of relationships and flirting, is more prominent than depictions of sexual behaviors like kissing and intercourse (Bond, 2014; Dillman Carpentier et al., 2017; Kashyap et al., 2025; Masterson & Messina, 2023). TV series, comedy shows, and movies typically contain more sexual content than children's cartoons and magazines (Fisher et al., 2004). Heterosexual scripts dominate, where men are more interested in sex than in emotional relationships, objectification of women, and consider women as sexually passive (Aubrey et al., 2020a; J. L. Kim et al., 2007; Kirsch & Murnen, 2015). The rise of the internet has further expanded young men's access to both finding SRH information and pornography (Maas et al., 2025; Walsh-Buhi et al., 2025). Although media provides ample sexual content, exposure carries both risks and benefits.

The relationship between media exposure on SRH attitudes, knowledge and behaviors

Young people's exposure to media's sexual content is associated with developing attitudes and behaviors. Ward's (2016) review of empirical survey research and Coyne and colleagues' (2019) meta-analysis suggests that higher media exposure is associated with more permissive attitudes toward sexual exploration, peer sexual norms, and uncommitted sexual behavior. Young men (more so than young women) are large consumers of pornography, which not only acts as a poor source of sex education, but is also associated with harmful sexual beliefs, like recreational attitudes towards sex and preferences for rough sex. (Bőthe et al., 2020; Doornwaard et al., 2015; Peter & Valkenburg, 2016). When

media become the primary source of sexual exposure, perceiving portrayals and characters as realistic is strongly associated with attitudes supporting heterosexual scripts (Ferris et al., 2007; Ward & Friedman, 2006).

Compared to attitudinal studies, fewer studies have explored the relationship between youth's sexual media exposure and SRH knowledge. A cross-sectional study in India found that adolescent girls exposed to social media had higher odds of knowing about sexual intercourse, pregnancy, and contraceptive methods (Saha et al., 2022). Similarly, a study in three Chinese cities found that youth who used media to learn about sex had significantly greater SRH knowledge than those who relied primarily on family, peers, or schools (Lou et al., 2012). Two systematic reviews on youth-focused internet and social media-based interventions found that such interventions improved knowledge of HIV, STIs, and pregnancy prevention (Guse et al., 2012; Wadham et al., 2019). Collectively, these findings suggest that media exposure can enhance SRH knowledge among youth.

One is likely to adopt attitudes expressed in media due to vicarious learning (Bandura, 2001). An experimental study among youth found that exposure to television portrayals of the negative consequences of sexual intercourse led to more negative attitudes toward premarital intercourse and towards the characters depicted (Eyal & Kunkel, 2008). Other research has shown that exposure to positive portrayals of sexual behavior, such as condom use, increases knowledge and encourages conversations with parents and other adults about pregnancy prevention (R. L. Collins et al., 2003).

However, portrayals of risks and safe sexual practices remain limited across media content (Dillman Carpentier et al., 2017; Masterson & Messina, 2023; Ward, 2016).

Longitudinal studies demonstrate that exposure to sexual content predicts risky sexual behaviors (Bleakley, Hennessy, et al., 2008; A. Chandra et al., 2008; R. L. Collins et al., 2004; Hennessy et al., 2009). In one study with 1792 young people in the U.S., researchers found that those who had viewed more sexual content on television at baseline were more likely to initiate intercourse at 1-year follow-up as compared to those with less at baseline (Snodgrass et al., 2024). The study also showed that greater exposure was linked to progression towards more advanced noncoital behaviors such as oral sex. Using a similar protocol, Brown and colleagues, (2006) found that among 1017 U.S. adolescents, those with greater exposure to sexual content across multiple media platforms were twice as likely to have intercourse at a two-year follow-up.

The role of media to fulfil SRH needs

The media landscape for young people is evolving. Today, adolescents and young adults are almost constantly connected to the internet through smartphones, tablets, and laptops, moving away from traditional mass media and toward interactive digital platforms (Borzekowski, 2019; Jiang, 2018; Pew Research Center, 2024). Unlike the push-based, one-way channels of traditional media, digital media offers multiple, simultaneous avenues of engagement. Youth are rarely confined to one platform; instead, they use multiple apps and platforms depending on their needs. For example, youth report using social media apps like Instagram, TikTok primarily for entertainment purposes (Alhabash et al., 2024), whereas when they need to explore specific SRH information, they prefer to use search-based engines like Google first (Buhi et al., 2009; Stevens et al., 2017). Young people can also encounter sexual content on their social media feeds, friends/influencer reels, interactive online games they play, or the movies and shows they stream on over-the-top

(OTT) platforms (Dubin et al., 2024; Masterson & Messina, 2023; Shoshani & Krauskopf, 2021).

Meaning of digital media in this dissertation: *In this proposed work, the term digital media will encompass internet-based platforms, specifically social media applications, online gaming, and OTT streaming services. These are sources where portrayal of sexual content is widespread.*

Young people's use of digital media in India

Access to digital media among young people in LMICs is expanding rapidly (Ghai et al., 2022; Livingstone et al., 2017). More than 80% of the youth in India report having internet access (Business Standard, 2024; Onditi, 2018). Social media apps such as WhatsApp, Snapchat, Instagram, YouTube are widely used in the country (Suhas, 2025). Young men often have access to the internet or smartphones earlier than young women (Girl Effect, 2023), and such access varies by age, socioeconomic status, shared-phone use, and social influences, which may further shape how they engage with SRH content. Common barriers to mobile ownership among men in India include the cost of phones (and internet data packs), digital skills for mobile and internet use, and concerns around safety and privacy (GSMA, 2023). Digital gaming varies between young men and women. Boys also engage in online multiplayer games significantly more than girls. In India, J. Gurjar and colleagues (2024) found young men were more involved than women in online games such as *Battle Ground Mobile India (BGMI), Free Fire*. Snodgrass and colleagues (2024), in their ethnographic study of gaming parlors in Udaipur, India, reported that young men often play within both offline and online peer networks. These patterns create unique opportunities to address SRH issues among young men through digital media platforms.

Gaps in existing SRH and media research

Several key gaps exist in research on digital media exposure and SRH; this work addresses these gaps and contributes to men's health and the health communication literature.

To begin with, young men remain largely overlooked in the SRH and media-related research and are seldom encouraged to understand their own health challenges, social pressures, and informational environments (Aantjes & Govender, 2024; Mmari et al., 2024; Ruane-McAteer et al., 2020). This gap is further compounded by the geographic concentration of existing evidence linking media exposure to sexual outcomes, which is mostly from high-income countries (Bleakley, Hennessy, et al., 2008; J. D. Brown et al., 2006; Coyne et al., 2019). Socio-economic, gender-related, and cultural dimensions of MICs vary from those of high-income countries. This makes it important to design studies that generate contextual findings closer to the actual audience of focus and health problem (Ghai et al., 2022). In addition, prior studies have either focused on isolated media platforms (e.g., just measuring sexual exposure in movies) or traditional mass media, failing to capture the complex ways the digital media environment shapes viewers' SRH outcomes (Bleakley, Hennessy, et al., 2008; den Hamer et al., 2017; Neijens et al., 2024; Rich et al., 2015; Trekels & Eggermont, 2018; Vandewater & Lee, 2009; Ward, 2016; Ward & Rivadeneyra, 1999).

Little is known about how young men in MICs learn about and engage with sexual content across digital platforms, or how such exposure relates to their sexual behaviors (Livingstone et al., 2017.; Zori et al., 2023). Although seeking sexual health information online is becoming common, dynamic algorithms complicate determining the quality of the

information young people are consuming. Search engines like Google tailor results through personalized algorithms, making it unclear what young men see when they look up terms such as “condoms” or “sex” (Christakis & Hale, 2025; Patterson et al., 2019). Such searches can also introduce pornographic websites (Kirby, 2021). Beyond searches, platforms may also recommend negative masculine and sexual content on viewers’ feeds. Recent research shows that young men are frequently exposed to negative masculine content in their digital media environment (Robb & Mann, 2025a). Studies examining the accuracy of men’s sexual health-related TikTok and Instagram content found that most content focuses on female body parts, orgasm, sexual pleasure, erectile dysfunction, male infertility, and testosterone (Dubin et al., 2024; Fowler et al., 2022).

Finally, measuring media exposure remains a key challenge due to factors like type of behavior, platform, device, content, and viewing context (Neijens et al., 2024). Exposure varies by whether the viewer is actively or passively engaged. Measuring media exposure, its conceptualization, and operationalization also vary based on ease of administration and resource availability. Neijens and colleagues (2024) categorize measures into self-report measures such as questionnaires measuring weekly/weekend frequency, digital traces capturing a user’s app usage data, observation, eye tracking, neurobiological measures, fMRI data, and ecological measures. Children and adolescent health and media researchers have used different types of media exposure measures (Bleakley, Fishbein, et al., 2008; Borzekowski & Macha, 2010; Browne et al., 2021; Rich et al., 2015). Some of the researchers recommend the importance of systematically and uniformly measuring media content rather than just frequency of media use (Annenberg Media Exposure Research Group, 2008; Bleakley, Fishbein, et al., 2008; Jordan et al., 2007). However, culturally-

tailored, validated digital media content-based exposure measures assessing young people's exposure to SRH content in MICs remain scarce.

These gaps point to a critical, unmet need; a comprehensive, context-specific understanding of how young men's exposure to sexual content across digital media platforms shapes their SRH knowledge, sexual attitudes, normative beliefs, self-efficacy, and ultimately their sexual intention and behavior in MIC settings.

Specific aims, research questions, and hypotheses

This dissertation addressed these gaps by employing an exploratory sequential mixed-methods design (see Figure 2 below) to qualitatively explore how young men aged 18 to 21 years from Delhi, India use digital media to engage with sexual content and quantitatively examine how such exposure is associated with their condom use related knowledge, attitudes, peer and masculine normative beliefs, self-efficacy, and condom use intention and behaviors.

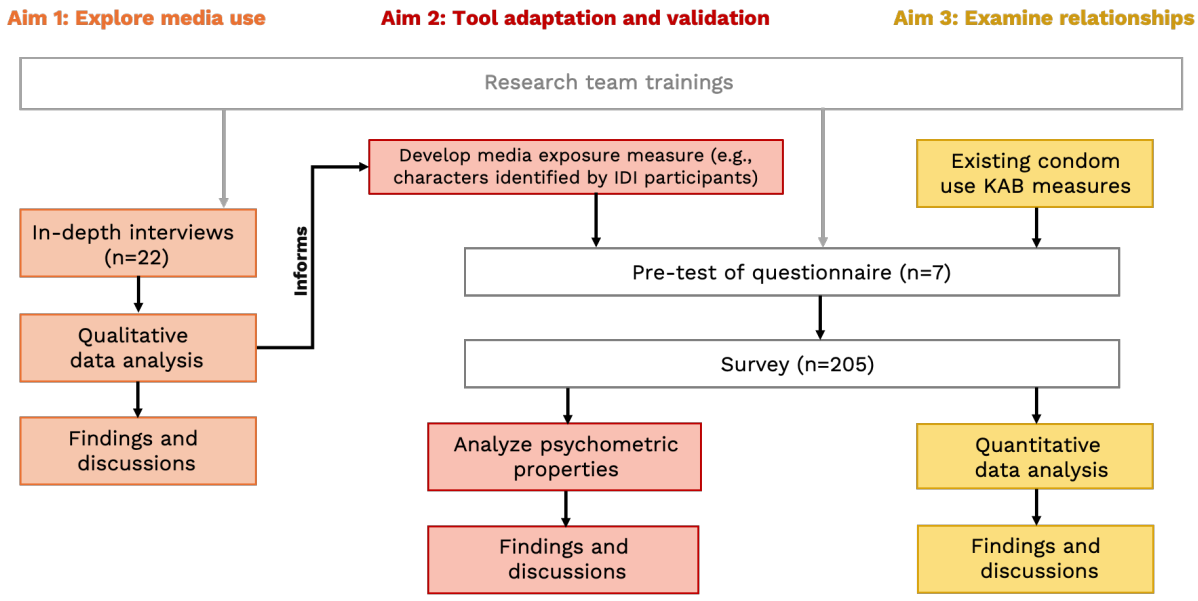


Figure 2. Three phases and corresponding aims of this mixed method study.

Aim 1: Explore digital media use (Qualitative)

Explore how young men aged 18 to 21 years in Delhi, India use digital media to address their sexual and reproductive health and masculine-related goals .

Research Question 1: How do young men in Delhi use digital media to learn about their bodies, relationships, sexual feelings, and masculinity?

Research Question 2: Which digital media characters (e.g., influencers, gaming avatars) are identified by participants to portray sexual content, the valence of such content, and what is the level of their portrayal among the digital media content accessed by young men in Delhi? Insights supported the development of the media exposure measure [Aim 2].

Theory: With limited comprehensive sexuality education, restrictive social norms and taboos in India, media becomes young people's sexual super-peer, fulfilling their SRH-related goals. *Media System Dependency* (MSD) theory uses an ecological approach to explain how limited societal resources intensify people's reliance on media systems to satisfy their personal goals through three dimensions: Understanding, orientation, and play (Ball-Rokeach, 1985; Ball-Rokeach & DeFleur, 1976). Further details on page 22.

Data collection and analysis: We conducted 22 in-depth interviews (IDIs) with purposively-selected young men ages 18 to 21 years from Delhi. The interview guide was grounded in MSD theory, and we assessed participants' SRH *understanding* (e.g., information seeking on digital media platforms), *orientation* (e.g., peer networks), and *play* (e.g., type of characters and content on reels/posts). The interviews also included listing and ranking digital media sexual and general characters by participants. During analysis, we first assessed the participants' listed digital media characters ranking to develop our

media exposure measure. We later analyzed the cleaned transcripts using template analysis (Brooks et al., 2015; Cassell & Symon, 2012).

Aim 2: Tool adaptation and validation

We used findings from Aim 1 to inform the development of the REceptivity to Characters Appearing in digital media Platforms (RECAP) measure to assess character-based digital media sexual exposure. The RECAP has 15 digital media character images (8 sexual characters, 6 general characters, 1 foil) drawn from social media, streaming platforms, and gaming. We pilot tested our survey instrument, including the RECAP measure, with seven young men from Delhi who had characteristics similar to the study participants. During pilot testing, we used hybrid cognitive interview techniques to understand the participants' comprehension, ease in answering, and the relevance of the questionnaire (Wolcott & Lobczowski, 2021). The think-aloud technique was employed for the media exposure battery. For the remaining sections of the questionnaire, verbal probing was used to gather feedback after they completed each section.

AIM 2: *Adapt and validate a contextually-relevant digital media character-based sexual exposure measure among young men ages 18 to 21 years in Delhi, India.*

Theory: Heightened involvement with media can lead viewers to form parasocial relationships with characters, especially when those characters portray realistic and relatable sexual content (Tukachinsky & Dorros, 2018). The Drench hypothesis posits that an immersive and downpour of media portrayals (drench) rather than slow, cumulative exposure (drip-drip) of content shape people's attitudes (Greenberg, 1988). The media exposure measure focused on three factors that facilitate the drench effect: media involvement, perceived realism, and role identification (Bahk, 2001).

Data collection and analysis: Drawing on insights from Aim 1, and online databases such as www.gamerankings.com, https://www.imdb.com, we developed a list of 15 characters popular among young men in Delhi in their digital media environment. Of these, eight characters were those who portrayed varying levels of sexual content, six characters were generic or neutral, and one foil. The media exposure measure (named **RE**ceptivity of **C**haracters **A**ppearing in digital media **P**latforms: RECAP) was administered digitally, but via in-person surveys to 205 young men ages 18 to 21 years in Delhi to assess the measures' psychometric properties. We used Rasch models to validate RECAP at this exploratory stage (Rasch, 1993). We also assessed convergent and concurrent validity. We hypothesized:

Hypothesis 2a: The RECAP scores will have good convergent validity, i.e. positively correlate with another multi-media exposure measure.

Hypothesis 2b: Higher sexual character RECAP scores will be negatively associated with condom use attitudes.

Aim 3: Examine condom use relationships

Examine how exposure to sexual characters on digital media is associated with condom use knowledge, attitudes, peer and masculine normative beliefs, self-efficacy, intention, and condom use behavior among young men aged 18 to 21 years in Delhi, India.

Research Question 3: How is digital media exposure (RECAP) associated with condom use knowledge, attitudes, normative beliefs, self-efficacy, intention, and condom use behavior among young men ages 18 to 21 years in Delhi, India?

In this dissertation, I focused on condom use-related behavioral determinants and outcomes. Consistent and correct condom use remains one of the most effective strategies

for preventing sexually transmitted infections (STIs), including HIV/AIDS, and for reducing unintended pregnancies. Yet, as highlighted in earlier sections, young men often underutilize safe sexual behaviors like condom use due to misconceptions, low perceived risk, or social and cultural influences, placing themselves and their partners at greater risk.

Theory: Exposure to sexual content in media is associated with key behavioral determinants: sexual attitudes, normative beliefs, and self-efficacy to engage in sexual behaviors, which in turn predict sexual outcomes such as condom use (Bleakley, Hennessy, Fishbein, et al., 2011; Hennessy et al., 2009; Noar et al., 2006; van de Bongardt et al., 2015). The Integrated Model of Behavioral Prediction explains how people's intention to act on a behavior depends on background variables like media exposure and behavioral determinants like attitudes, normative peer and masculine beliefs, self-efficacy, and their knowledge or skills about the behavior (Fishbein, 2009). I posit that these variables will operate similarly among young men in Delhi as they do in studies conducted in Western contexts (Bleakley, Hennessy, Fishbein, et al., 2011; Dai et al., 2018; Noar et al., 2006), thereby helping understand which behavioral determinant pathways are more strongly affected by exposure to sexual content in predicting sexual behaviors.

Data collection and analysis: We accomplished this aim through the same in-person survey with 205 young men ages 18 to 21 years in Delhi. Young men were assessed on their condom use knowledge, attitudes, peer and masculine normative beliefs, self-efficacy, intention, and condom use behaviors using pretested and established measures, including the Condom-use Skills Checklist (CUSC) (Stanton et al., 2009), Sexual Risk Behavior Beliefs and Self-Efficacy Scales (Basen-Engquist et al., 1999), peer norm towards safer sex scale (DeHart & Birkimer, 1997), harmful masculinity scale (Hill et al.,

2020), and Condom Use Self-Efficacy scale (Asante & Doku, 2010). Condom use intentions and condom use behavior will be assessed with items adapted from previous studies (Bleakley, Hennessy, Fishbein, et al., 2011; Noar et al., 2006).

We conducted path analysis to estimate a multiple mediation model linking media exposure, behavioral determinants (knowledge, attitudes, peer and masculine normative beliefs, and self-efficacy), behavioral intentions, and condom use. We hypothesized:

Hypothesis 3a: Exposure to sexual content on digital media will be associated with the behavioral condom use determinants: a. knowledge, b. attitudes, c. peer normative beliefs, d. masculine normative beliefs, e. self-efficacy, f. condom use intention, and g. behavior among young men ages 18 to 21 years in Delhi.

Hypothesis 3b: The five behavioral determinants of condom use intention will mediate the relationship between exposure to sexual content on digital media and condom use intention.

Hypothesis 3c: Intention to use condoms in the next 6 months will be related to past or current condom use behavior among young men ages 18 to 21 years in Delhi who have ever engaged in heterosexual penetrative intercourse.

Theoretical framework

This study is grounded in three theories: Media System Dependency theory, the Drench Hypothesis, and the Integrated Model of Behavioral Prediction (see figure 3).

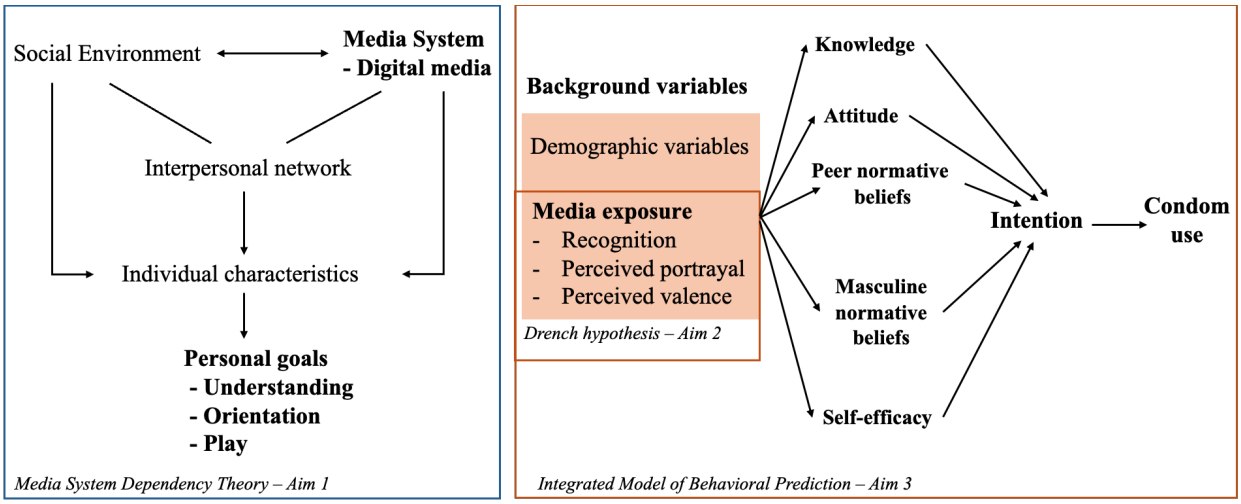


Figure 3. Theoretical Framework

Media System Dependency (MSD) theory (Aim 1): Ball-Rokeach and DeFleur (1985) argue that people's realities are shaped not only by their personal characterisitics and social connections but also by the socital conditions in which they live. As these societal conditions grow more complex, people become less aware of realities beyond their own position in the social structure. At this point, media step in as a system that entertains, informs, and persuades about the reality at the societal, social, and individual levels. The authors emphasize that to shape people's affective, behavioral, and cognitive realities through media, one must account for the interrelationship between *audiences, media systems,* and the *social enviroment* (Ball-Rokeach & DeFleur, 1976). This distinguishes MSD theory from other communication theories like Uses and Gratifications that focus only on the audience (Katz et al., 1973). The MSD theory posits audiences as *goal-seekers* whose choices are limited by the structural conditions of their social environment. Their media system consists of resources that help generate, gather and disseminate information within their interpersonal networks and broader social context. The social environment encompasses political, economic, and other systems on which the media system depends

for growth and existence. Within this interrelationship, when social environment undergoes changes and resource availability is limited, people's dependency (i.e., reliance) on media system intensifies to satisfy their personal information-seeking goals (Y.-C. Kim, 2020). Fulfillment of such personal goals further shapes an individual's cognitive, affective, and behavioral changes (Ball-Rokeach & DeFleur, 1976).

The authors posit that the media satisfies six types of personal and social goals within three dimensions: understanding (self and social), orientation (action and interaction), and play (social and solitary) (Ball-Rokeach, 1985). Self and social understanding goals address how individuals make sense of themselves and their complex/contemporary social environments. Action and interaction orientation goals reflect an individual's need for practical information on how to behave make informed decisions and guidance for social cues and behaviors while interacting with others. Solitary play goals provide an individual temporary escape and relaxation through media, while social play supports their relationship-building and shared experiences with their social network.

Several studies have applied the MSD theory. Morton and Duck (2001) assessed the relationship between social identity and media dependency to predict safe sex attitudes among gay men in two Australian cities. They found that safe sex attitudes were shaped by media dependency and moderated by frequency of media use. Hetsroni (2008) investigated the usefulness of sexuality information among Israeli Jewish and Arab adolescents and found that Arab adolescents perceived sexuality information sources as more useful their Jewish peers. Silberman and Record (2021) conducted a content analysis to explore how college students on Reddit engaged with smoke-free policy compliance messages in non-health related forums. They found that users interacted with the message by commenting

on smoking, and expressing disagreement towards smoke-free policies. Konlan and colleagues (2023) used a mixed methods design to assess men's and women's social media dependency in marital relationships in Ghana. Their study revealed that higher reliance on social media increased partner monitoring, mistrust, and jealousy among couples.

As already described, young men in India often face unmet SRH needs due to societal and community-level gaps in policy, poor implementation, limited men-inclusive programming, and restrictive social/cultural norms (Aantjes & Govender, 2024; Chandra-Mouli et al., 2025; Ruane-McAteer et al., 2020). In such contexts, it is expected that reliance on digital media increases, particularly because it offers multiple avenues and private spaces to explore SRH goals. While studies in the past measured these dependency dimensions quantitatively (Y. C. Kim & Jung, 2017), I used these dimensions to guide my in-depth interview development.

In Delhi, where access to formal SRH education is limited and cultural taboos restrict open discussion, young men may turn to digital media to satisfy their (1) Understanding of SRH goals by exploring sexual content to learn about self (e.g., bodily changes) and social surroundings (relationships, safe and unsafe sexual practices); (2) Orientation goals by navigating masculinity norms, accessing information on where to buy condoms or how to use one (action orientation), or preparing to discuss SRH topics with peers/partners (interaction orientation); (3) Play goals by consuming sexual or non-sexual content for leisure, which may expose them to implicit or explicit sexual messages. Pornographic content can fulfill their solitary play through masturbation, and self-exploration, while sharing sexual memes or reels with peers on social media or the use of

sexually-explicit characters in multiplayer online gaming can fulfill social play. Peers play an important role in shaping media dependencies.

MSD theory argues that interpersonal discourse influences the type of media one consumes. Studies from India show that young men often rely on peers for SRH information (Siddiqui et al., 2020). The valence of peer discussions and preferred platforms, media characters can therefore influence both media choice and sexual content interpretation. By applying MSD theory, aim 1 unpacks the lived experiences of young men's SRH-related digital media engagement to fulfil their SRH goals within broader socio-cultural SRH resource-limited contexts.

The Drench hypothesis (Aim 2): Greenberg and colleagues (1988) critiqued the Cultivation theory (Gerbner et al., 1986), suggesting that media effects are not always cumulative but can occur through downpour of immersive portrayals (drench). Reep and Dambrot (1989) found that drench effects varied by character roles, program types, and the viewers themselves. In relation to digital media, characters portraying realistic and relatable sexual content can act as "drench points," producing heightened media engagement among young men. According to Bahk (2001), three factors facilitate the drench effect: media involvement, perceived realism, and role identification.

Media involvement of a viewer depends on the traits of media characters, viewer's perceptions and needs, and whether viewing is active or passive. Receptivity provides a way to assess a viewer's involvement (Feighery et al., 1998). If a viewer recognizes a character, regardless of exposure frequency, we can assume some level of involvement. When involvement is low, the viewer may struggle to recall the character's traits (Borzekowski & Pires, 2018). Perceived realism is the extent to which viewers believe

media reflects real-world experiences. When viewers watch dramatic presentation, each viewer may interpret its realism differently, based on how they evaluate specific aspects of the content. Therefore, young men who perceive sexual portrayals as realistic are more likely to adopt permissive or positive attitudes, and avoid or engage in risky sexual activities depending on the content realism (Baams et al., 2015; Bleakley, Hennessy, et al., 2008). Role identification refers to the extent to which viewers feel attracted to media characters. Bandura (2001) and Greenberg and colleagues (1979) suggested that when media portrayal is performed by characters people like or consider as role models, the portrayal will be more likely to be imitated or liked by the viewers as compared to characters who are not often liked by characters.

Ward and Friedman (2006) applied the drench hypothesis in a cross-sectional and experimental study to examine how television viewing shapes adolescents' sexual attitudes and behaviors. They found that adolescents who strongly identified with popular music videos and talk show characters reported higher levels of dating and sexual experiences even after accounting for sexual attitudes. Similarly, Bonds-Raacke and colleagues (2007) conducted an experimental study on the priming effects of recalling media portrayals of homosexual characters. They found that participants who recalled a positive portrayal expressed a more positive attitude toward gay men than those who recalled a negative portrayal (especially men).

The development and validation of the media exposure measure (RECAP) was guided by the Drench hypothesis and its three sub-components: media involvement, perceived realism, and role identification (Bahk, 2001; Greenberg, 1988). To improve conceptual clarity in this study, we adapted the terminology for these sub-components.

Media involvement, which reflects young men's receptivity to digital media characters based on their ability to recognize and recall media character names, was operationalized as recognition. Young men's ability to identify eight characters who portray sexual content (verbally or through actions) and six who do not, served as the indicator of the participant's recognition. Similar approaches have been used to assess children's receptivity to television characters (Borzekowski & Henry, 2011; Borzekowski & Macha, 2010; Borzekowski & Pires, 2018). Perceived realism, which captures the extent to which sexual content portrayals align with young men's lived realities, was operationalized as perceived sexual portrayal. Role identification, which reflects whether young men perceive digital media characters' sexual portrayal as positive or negative, was operationalized as perceived valence. Young men's perceived sexual portrayal (perceived realism) and valence (role identification) were assessed based on their personal evaluation of the extent to which media characters engage in sexual portrayals and if such portrayals were positive or negative. This approach acknowledges the inherently subjective nature of how sexual content in media is interpreted (Greenberg & D'Alessio, 1985). A similar strategy was employed by Bleakley and colleagues (2008), who asked adolescents to rate sexual messages across multiple media platforms. They note that such participant-led evaluation helps capture an overall sense of perceived sexual portrayal based on their media and real-world exposure.

The Drench hypothesis thus provides the theoretical rationale for focusing not merely on frequency of exposure but on measuring a more holistic exposure of young men's recognition and perceived judgment of character's sexual portrayal and valence.

The Integrated Model of Behavioral Prediction (IMBP) (Aim 3) is a psychosocial health behavior model that combines elements from several established theories, including the Theory of Reasoned Action and Planned Behavior, Social Cognitive Theory, and the Health Belief Model (Fishbein, 2008, 2009; Fishbein & Ajzen, 2011). The IMBP posits that a small number of identified variables can explain an individual's *intention* to perform a behavior which subsequently can predict the actual behavior. The intention to behavior association is however moderated by an individual's skills or abilities and unanticipated barriers or environmental constraints. Among all the variables in the model, intention is a function of three key determinants: attitudes, normative beliefs, and self-efficacy. Attitude refers to an individual's judgment of whether engaging in a particular behavior would be favorable or unfavorable. Perceived normative beliefs represent the social pressure one anticipates in relation to the behavior. Self-efficacy represents an individual's perceived confidence in their ability to successfully carry out the behavior. The model also includes background variables such as gender, demographics, and media exposure which are conceptualized as beliefs and are considered to indirectly influence behavior.

Several studies have applied the IMBP to examine several risky sexual intentions and outcomes such as condom use, sexual intercourse, and hook-ups (Bleakley, Hennessy, Fishbein, et al., 2011; Dai et al., 2018; Noar et al., 2006), as well as a range of other health behaviors (Dai & Harrington, 2023; Jones et al., 2020; More & Phillips, 2022; Robbins & Niederdeppe, 2015). With regards to sexual outcomes, Noar and colleagues (2006) examined the relationship between personality traits, condom attitude, norms, self-efficacy, and condom behavior among young adults in two southeastern cities in the United States. They found that traits such as sexual sensation seeking and sexual impulsive decision-

making were indirectly related to condom use via condom use attitudes and self-efficacy. Perceived condom norms did not predict condom use behavior. Using a longitudinal design, Bleakley and colleagues (2011) examined whether sexual media content influences U.S. adolescents' sexual intercourse behavior over 12 months. They found that sexual media content indirectly affected intention through normative pressure beliefs. When Dai and colleagues (2018) investigated how the three IMBP determinants predicted hook-up intentions and behavior among U.S. college students, attitude emerged as the strongest predictor of intentions and behavior. These findings indicate that the determinants – intention – behavior mechanism may vary based on different contexts.

Aim 3 was grounded in seven IMBP variables - background variables (particularly media exposure), knowledge, attitudes, normative beliefs, self-efficacy, intention, and behavior. Applying the IMBP in this study offers three advantages. First, it provides a framework for understanding the underlying theoretical mechanisms through which sexual media exposure shapes intention and sexual behavior (condom use) via the model's behavioral determinants. Second, such insights can guide evidence-based recommendations by identifying which specific variable exerts the strongest influence on the relationship between media exposure, condom use intention, and actual behavior. Third, the model's integration of background variables, such as demographic characteristics and media exposure, adds flexibility and its applicability across diverse cultural contexts (Yzer, 2012).

Previous studies confirm the importance of the seven IBPM variables that directly or indirectly influence condom use intention and behavior. Background variables such as gender, religion, and geographic location can positively or negatively influence SRH behavior (Blanc, 2024; Odira et al., 2025). Media exposure also operates as a background

variable that can shape sexual attitudes, perceived norms, knowledge, and sexual behaviors such as condom use (Coyne et al., 2019; Lou et al., 2012). For example, Burns and colleagues (2021) found that when a celebrity promoted condom use on social media, young African American men actively sought out that content. The IMBP determinants of attitude, norms, and self-efficacy are expected to operate in ways that other researchers have found, although their relative strengths may vary in our context and sample (Bleakley, Hennessy, Fishbein, et al., 2011; Dai et al., 2018; Noar et al., 2006). Attitude reflects a young man's evaluation of using condoms as positive or negative. For example, those who view condoms as reducing pleasure are less likely to use them (Higgins & Wang, 2015). Perceived normative beliefs reflect the beliefs that peers or their digital manosphere can exert about condom use behavior. Peer influence is often strong among men, as masculine norms emphasize conformity and can encourage risky sexual behaviors (Duckworth & Trautner, 2019; Merdassa, 2024). Young men's digital environments often expose them to misogynistic and toxic masculinity content, which can reinforce rigid gender norms and promote risky sexual behaviors (Ging, 2019; Iñigo, 2026). Self-efficacy reflects a young man's confidence in using condoms or negotiating their use with a partner. Demographic factors like age, gender, location, and religion are strong predictors of self-efficacy, further contributing to condom purchase and use (Ajayi & Olamijuwon, 2019; Castillo Perez et al., n.d.). Finally, knowledge provides the foundation for condom-related skills. Low levels of sexual health knowledge among young men have been linked to more risky sexual activities, such as a higher number of sexual partners, engaging in more frequent sexual intercourse, and neglecting condom use (Bender et al., 2024; Czaderny, 2024).

Significance to global health

Sexual and reproductive health (SRH) remains a pressing global public health concern (Starrs et al., 2018). International platforms such as the Cairo Declaration (1994), the United Nations Commission on the Status of Women (2004), and the 2014 International Symposium on Engaging Men have consistently underscored the critical role of men in advancing gender equality and improving SRH outcomes for all (CSW, 2004; UN Women, 2014). More recently, the World Health Organization (WHO) issued new recommendations emphasizing youth SRH research and gender-transformative approaches in low- and middle-income countries (Allotey & MacKenzie, 2024). Specifically, the WHO's recommendations highlight a stronger effort to improve youth SRH by expanding comprehensive sexuality education, strengthening social norms to promote gender equality, and SRH rights, and adapting health systems to better serve youth, especially among those who have been overlooked.

As digital media become increasingly integrated into the lives of young people in MICs like India, understanding media's influence on SRH exposure is essential for identifying both risks (e.g., negative condom use attitudes, norms) and opportunities (e.g., access to age-appropriate and accurate information). By focusing on young men in India, this study addresses a critical gap in global and men's health literature. By understanding how they use digital media to fulfil their SRH needs, validating a media measure to assess digital media sexual exposure in a MIC region, and understanding underlying mechanisms that limits or facilitates safe sexual behavior, this study will provide researchers and practitioners with contextually-relevant insights that can inform the design of culturally,

age-appropriate SRH interventions, and support the measurement of similar health issues, thereby advancing gender equity and regional health outcomes.

Implications for policy, practice, and future research

Policy implications: This study emphasizes the need for gender-transformative, men-inclusive policies that position young men as active contributors to advancing sexual and reproductive health. Our findings offer culturally-grounded, media and context-specific insights to address young men's misinformation and challenge harmful social norms around SRH. In addition, the findings help recommend social media platforms to adapt mechanisms that ensure young people's exposure to safe and age-appropriate sexual content. For instance, platforms already use verification symbols such as blue ticks to indicate user authenticity. A similar system could mark sexual content to signal its credibility and real-world relevance, empowering youth to be more informed while they are on digital media platforms.

Practice implications: Findings from this work offer public health professionals, especially community health and health communication practitioners, design recommendations for more effective digital media SRH campaigns. These campaigns can strategically employ popular online characters, influencers, and engaging formats to model young people's safe sexual intentions and behaviors. The application of the Integrative Model of Behavioral Prediction (IMBP) allowed us to identify the specific psychosocial mechanisms that exert the strongest influence on behavior. Such evidence can enable practitioners to tailor interventions to maximize impact on young men's safer sexual intentions and behaviors.

Future research: The development and validation of RECAP provide researchers with an easy-to-use, culturally-appropriate, character-based tool to assess digital sexual media exposure in MICs, addressing a persistent gap in measurement. Future research will need to prioritize further psychometric testing of RECAP with larger and more diverse samples, including subgroups defined by age, geographic region, and urban–rural residence, to evaluate the measure's stability and reliability. Researchers will also be able to adapt RECAP for other health domains by replacing character types or exposure content to study related issues such as drug and alcohol use, body image, violence, and obesity. As this work focuses on urban young men, future research must extend to rural boys, who face comparable levels of risk but remain underrepresented in SRH research. Comparative studies across MICs can further reveal cross-cultural patterns in how young men engage with digital sexual content, producing insights that can inform more robust media measures and young men's SRH priorities. By applying the IMBP in a non-Western MIC context, this work broadens the model's utility and tests the relative influence of behavioral determinants on condom use. Building on these foundations, future longitudinal studies should be conducted to trace causal pathways between digital media exposure and sexual health outcomes.

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Chapter TWO

LITERATURE REVIEW



Photo by Aman (data collection team member)

Chapter 2: Literature review

Introduction

This exploratory sequential mixed methods study aimed to understand how young men aged 18 to 21 years from Delhi, India, use digital media to engage with sexual content and examine how sexual exposure shapes their condom use knowledge, attitudes, peer and masculine normative beliefs, self-efficacy, intentions, and condom use behaviors in Delhi, India. In this chapter, I review the relevant literature by first outlining the developmental changes young people undergo as they transition from adolescence to young adulthood. Next, I explore the risky sexual behaviors associated with this life stage, followed by a discussion of programs and interventions in low- and middle-income countries (LMICs) aimed at addressing such risks. Then I discuss why young men need to be included in SRH, before turning to the media-saturated environments in which today's youth grow up. Finally, I review the types of sexual content prevalent across media platforms, how youth engage with sexual content, and how such media exposure affects their SRH outcomes.

Changes during adolescents' transition to adulthood

Youth between 18 and 24 years (often described as young or emerging adults) represent a crucial developmental stage bridging adolescence and adulthood. Globally, this age group comprises a significant share of the population (United Nations, 2024). In the United States, nearly 13% of the population falls between the ages of 15 to 24 years (U.S. Census Bureau & Population Division, 2025). In middle-income countries (MICs) such as India, which has the world's largest youth population, 27% of the total population is between the ages of 15 to 29 years (Ministry of Youth Affairs and Sports, 2023).

During this developmental stage, young adults continue to undergo gradual but significant changes across physical, cognitive, emotional, and social domains. While the adolescent period is widely focused on in public health research and practice due to rapid, visible changes (e.g. pubertal changes), the gradual changes during emerging adulthood often receive less recognition in the field as a critical developmental stage (Bonnie et al., 2015). This stage is marked by continued pursuit of independence from their family, understanding their bodies, exploring their bodies, and strengthening their social relationships (National Academies of Sciences, Engineering, and Medicine, 2019). Developmental changes during emerging adulthood can be observed across the domains presented below:

Physical Development (body development): Seminal work by Marshall and Tanner (1969, 1970) used growth in primary and secondary sex characteristics to determine the stages of young adulthood. According to them, stage five concludes the pubertal phase in boys with the penis reaching the final adult stage, and among girls, breast size reaching the final adult size (Marshall & Tanner, 1969, 1970). Subsequent research defined developmental stage four as the transition between adolescence and emerging adulthood (Hochberg & Konner, 2020; Shalet, 2004), and found that pubertal changes, such as physical growth, extend up to young people's twenties (Sawyer et al., 2018).

Cognitive Development (changes in brain functions): Brain maturation, one of the significant changes in this age group, continues until the age of 25 years (Hochberg & Konner, 2020), enhancing cognitive abilities such as abstract thinking, logical reasoning, and enhanced learning (Arnett, 2015). This period is marked by the formation of new neural connections, allowing for greater information retention and learning. The brain

undergoes synaptic pruning, eliminating unused neural pathways to improve efficiency in extracting information for the tasks young people do the most. These changes continue into the mid-twenties, shaping young adults' ability to analyze situations, regulate impulses, and make more informed decisions (National Research Council, 2015). The pace of development varies, which means young adults still require guidance in navigating complex situations and weighing long-term consequences of their actions (McNeely et al., 2009; U.S. Department of Health and Human Services, Office of Population Affairs, 2018).

Emotional Development (emotional processes): Young adults deepen their understanding of emotions, learn to express, regulate, and interpret emotions in positive, neutral, and negative contexts. Because the frontal lobe of the brain, responsible for controlling emotions, is still maturing, young people often experience heightened emotional sensitivity, impulsivity, or mood fluctuations (Wood et al., 2018).

Social Development (family, romantic, and social relationships): Young adults extend their social relationships beyond family by adjusting and seeking acceptance among peers while developing their unique identities (Blakemore & Mills, 2014; Eriksson et al., 2020). They grow more attuned to social norms, interpret nonverbal cues more accurately, and refine their ability to empathize with others (U.S. Department of Health and Human Services, Office of Population Affairs, 2018). Romantic interests during this stage are often marked by forming deeper emotional connections and interpersonal skills, but remain unstable due to continued uncertainty, self-exploration, and self-focus (A. Collins & van Dulmen, 2006).

Risk-taking behaviors among young adults

Engagement in risky-taking behaviors generally follows a developmental pattern. Such behaviors remain low during childhood, rise with the onset of puberty, reach the highest levels in late adolescence and early adulthood, and then decline as individuals move further into adulthood (Romer et al., 2017). Despite being physically stronger, faster, more resilient to diseases, equipped with advanced reasoning and decision-making abilities compared to children, their risk of mortality rises nearly 200% (Dahl, 2001). These deaths are not because of diseases but due to challenges in navigating emotions and regulating risky behaviors such as accidents and suicides. (Casey et al., 2010). A recent systematic analysis further highlights youths' vulnerability and public health needs. Between 1990 to 2019, the probability of mortality among 15 to 24-year-olds in 195 countries declined by 34%, yet this progress lagged behind declines in under-5 mortality, which dropped nearly 60% over the same period (Masquelier et al., 2021). In India, mortality among youth ages 20 – 24 years (per 1000) reduced by 8% between 1990 (13%) and 2024 (5%) (UNICEF et al., n.d.).

Risky sexual behaviors: Sexual development is a defining feature of emerging adults. As young people gain independence, they increasingly explore their sexuality (Greene et al., 2019; Marcell & Ellen, 2012). While such exploration contributes to self-discovery and supports the formation of healthy relationships, it also creates pathways to risky sexual behaviors, especially when paired with incomplete cognitive and emotional regulation, peer influence, or limited access to reliable sexual health information (Dahl, 2001; Eriksson et al., 2020; Walsh-Buhi et al., 2025).

Young adults are especially susceptible to negative sexual health outcomes. They face elevated risks of contracting sexually transmitted diseases (STDs), engaging in unprotected sex, and using alcohol and drugs during sexual activity (Berhan & Berhan, 2015; R. Chandra et al., 2024; Gómez-Núñez et al., 2023; Grubb et al., 2020).

Programs and interventions addressing risky sexual behaviors in LMICs

The Introduction chapter highlights factors that contribute to risky sexual behaviors, such as inadequate comprehensive sexuality education, limited knowledge, negative norms and attitudes, and the scarcity of gender-transformative programs in LMICs. In the following section, I discuss national programs and interventions designed to reduce risky sexual behaviors among young people in LMICs.

Two systematic reviews highlight that the most effective SRH interventions in LMICs have primarily addressed contraception and condom use skills, HIV and STI prevention, SRH knowledge, gender-based violence, and sexual self-efficacy. Interventions on psychosocial components focused on assertiveness, communication, and problem-solving skills (Desrosiers et al., 2020; Fantaye et al., 2022). The majority of these programs focus on multiple SRH outcomes among young people ages 11 to 29 years. Gottschalk and Ortayli (2014) systematically reviewed safer sexual behavior interventions centered on contraceptive use, including condoms, found that effective programs integrated community engagement by involving peer educators, civic and religious leaders, and community groups. Adolescent-friendly services often train staff to reduce discomfort when working with young people and provide contraceptives at low or no cost. Educational programs largely focused on SRH curricula and contraceptive choices.

However, evidence on condom use interventions among young people remains mixed. Norr and colleagues (2024) found in Malawi that peer group interventions by trained volunteers increased condom use at last sex and in the past two months, even after controlling for HIV knowledge, safer sex self-efficacy, and partner communication. Meanwhile, Riedel and colleagues (2020) meta-analysis of 31 studies found that psychosocial interventions such as counseling and empowerment strategies improved condom use by just 6% at post-test and 8% at follow-up. Such mixed outcomes can often stem from barriers to accessing and using contraception (Chandra-Mouli et al., 2014). In many LMICs, contraceptives remain unavailable to young people or are limited to just condoms. This can be further limited by unfriendly health staff or scarce contraceptive stock (Chandra-Mouli et al., 2014). Restrictive national laws and policies also prevent unmarried youth or those below a certain age from obtaining contraceptives (Chandra-Mouli et al., 2014). Ravindran and Govender (2020) reviewed essential health services provided by governments in 24 LMICs to find that only maternal and obstetrics care, and family planning services were widely included, but infertility, safe abortion, and comprehensive sexuality education were largely (60%) excluded. SRH services targeting young people in 21 countries mainly offered family planning and STI/HIV prevention services. Even when young people access contraceptives, prevailing social and gender norms hinder consistent use. For example, in many settings, young women who carry condoms or suggest the use of condoms are often labeled promiscuous. In a Kenyan qualitative study, sexually active women ages 15 to 24 years said "*men say that only promiscuous women use the pill and that is why they are against those pill*" or "*they say that using the condoms means that you don't trust your girlfriend*" (Ochako et al., 2015).

Similarly, when condoms are widely available, their consistent use tends to decline in stable relationships, where they are seen as a sign of infidelity or mistrust (Ochako et al., 2015). Infrequent or sporadic sexual activity is another reason young people use contraception inconsistently (Chandra-Mouli et al., 2014; Gibbs et al., 2019).

Government programs in India: India's national adolescent health program (*Rashtriya Kishor Swasthya Karyakram - RKSK*) was launched in 2014 by the Ministry of Health and Family Welfare to ensure holistic development of 253 million adolescents with a special focus on marginalized and underserved groups (Ministry of Health and Family Welfare, GoI, 2014). RKSK works on addressing challenges faced by adolescents, such as social discrimination, poverty, negative social norms, early marriage, and inadequate education. RKSK's guiding principles include adolescent participation and leadership, equity and inclusion, gender equality, and cross-sectoral collaboration. Young people's SRH is one of the six core priorities of the program. Adolescent-Friendly Health Clinics under RKSK serve as hubs for preventive, promotive, curative, and counseling services. These clinics, staffed by trained providers across primary, secondary, and tertiary care levels, cater to both married and unmarried girls and boys.

Despite government programs in LMICs, including India's RKSK, programs have historically prioritized young women due to gender inequalities and vulnerability to early pregnancy, STIs, violence, and school dropout (Aantjes & Govender, 2024; Mmari et al., 2024; Sawalma et al., 2023; UNFPA & IPPF, 2017). Young men, by contrast are often positioned as gatekeepers, or allies in advancing young women's health or are sidelined altogether, despite their unique SRH necessities and challenges (Greene et al., 2019; Kennedy et al., 2020; Ruane-McAteer et al., 2019, 2020). The assumption that all men

uniformly benefit from social power and privilege is misleading. More studies confirm that men experience inequality, lack of opportunity, and deprivation similar to women based on age, class, ethnicity, and geography (Glinski et al., 2018).

There are programs that have specifically focused on boys and young men in LMICs. Marcus and colleagues (2018) reviewed 36 programs that included both genders and found 14 programs to be exclusively male-focused. The programs mainly focused on adolescents aged 15 to 18 years. Many addressed gender norms, equality, violence, and masculinity, while six concentrated directly on sexual communication, condom use, and HIV risk: Pracher (India), Bonding Between Men (India), Program H (Brazil), Reproductive Health for Married Adolescent Couples Project (Nepal), Stepping Stones (South Africa) and Young Men as Equal Partners (Tanzania). Programs that tackled harmful norms around sexuality showed a positive influence on condom use. For example, Program H participants who agreed to the statement "*I would be outraged if my wife asked me to use a condom*" dropped from 24% to 11% at the second follow-up after a year (Ricardo et al., 2010). Similarly, participants in Bonding Between Men reported more frequent discussions with partners about condom use and STI prevention (Verma et al., 2006).

Why do we need to focus on young men?

Young men navigate a range of SRH experiences as they become adults (Aantjes & Govender, 2024; UNFPA & IPPF, 2017). Compared to young women, young men are more likely to seek novelty and intense experiences (Cross et al., 2013), which often translates into risky sexual behaviors, such as having multiple sexual partners, engaging in

unprotected sex, participating in non-consensual sex, and drug use during sex (Berhan & Berhan, 2015; R. Chandra et al., 2024; Gómez-Núñez et al., 2023; Grubb et al., 2020).

Berhan and Berhan's (2015) meta-analysis across 26 LMICs found that among young men ages 15 to 25 who reported sexual activity in the past year, 75% had sex with a non-spousal or non-cohabiting partner. Among adolescent boys aged 15 to 19 years, 90% had sex in 21 out of 26 countries included. Their analysis also found significant associations of higher risk sexual activities among men under 20 years, living in urban areas, having higher education, and belonging to a higher socio-economic stratum. Less than half (40%) of the 15- to 19-year-olds used a condom at last sex, while 51% of 20- to 24-year-olds used a condom at last sex. Evidences also show that young men initiate sex earlier and report more sexual partners than young women (Berhan & Berhan, 2015; Muheriwa-Matemba et al., 2024). Similar risky sexual behaviors have been suggested among young men in India. Adolescent boys in urban areas and from higher socio-economic strata were more likely to engage in high-risk sexual activity compared to young men in rural areas and belonging to lower socio-economic strata (R. Chandra et al., 2024; Sharma & Vishwakarma, 2020).

Young people growing up in a digital world

Young people’s developmental transitions happen in an extremely media and digitally-saturated environment, with youth navigating both the real and “reel” worlds (Massarat, 2022; Sawyer et al., 2018). In the United States, 96% of adolescents use the internet, and nearly half of them report being online almost constantly (Faverio & Sidoti, 2024). Access to digital media among young people in low-and middle-income countries

(LMICs) is expanding rapidly (Ghai et al., 2022; Livingstone et al., 2017). In India, more than 80% of youth report having internet access (Business Standard, 2024; Onditi, 2018).

Prevalence of sexual content in traditional and digital media

Extensive content analyses reveal that sexual content is a persistent and prominent feature across music, films, television, streaming platforms, gaming, and social media platforms.

In music, Aubrey and Frisby (2011) found that sexual objectification of female characters was significantly more prominent in R&B/hip-hop and pop videos than in country videos. Alexopoulos and colleagues (2025) highlighted common themes of sexual demands ("Strip that down") and preferences ("I want it slow") in pop song lyrics released between 2016 to 2019. Karsay and colleagues (2019) analyzed 462 popular music videos between 1995 to 2016, found that sexual objectification remained consistent, though sexual gestures and poses increased over time, with male artists more likely to objectify others than female artists.

In movies and television shows, an analysis of top-grossing films from over 57 years (1950 to 2006) revealed that female characters were twice as likely as male characters to be involved in sex, with sexually explicit scenes growing over time (Bleakley et al., 2012). In television, portrayals of sexual behavior appear equally in casual and committed relationships, though casual content is more likely to depict intercourse, while committed relationships emphasize passionate kissing. Women were also more likely than men to initiate casual sex (Timmermans & Van den Bulck, 2018a). Dillman Carpentier and colleagues (2017) coded 53 hours of television show content and found that 20% shows

included sexual talk or behavior, including jokes, romantic interests, flirting, and kissing. They also note that sexual health messaging was rare.

Among newer entertainment media platforms like streaming services (Netflix, Prime, Hulu, etc.), Masterson & Messina (2023) analyzed 19 Netflix series targeted at adolescents and found sexual content in every episode, often framed around narratives of ending relationships rather than building or maintaining them. Kashyap and colleagues (2025) compared top U.S. and Korean Netflix shows aimed at adolescents and found more sexual talk than sexual behaviors across both contexts. U.S. characters more frequently used sexual jokes and displayed physical intimacy, such as kissing, while Korean characters focused on expressions of affection, such as discussing love or gazing longingly. Yu and colleagues (2024) in their subtitles analysis of adolescent-focused Netflix series found references to sexual interest and behaviors, but risk or negative consequences of such behaviors were hardly discussed. “Rape” and “sex” were the most frequently occurring terms.

Studies on Indian entertainment media (Bollywood) reveal similar patterns. Content analyses of Bollywood music videos highlight greater visual sexualization, such as skin exposure, explicit clothing than behavioral representation, including male gaze, sexualized dance moves (Slatewala, 2019). Mathew (2023) identified four recurring themes in Bollywood songs: glamorization of illicit activities, sexual objectification of the female body, alcohol abuse, and violence. A broader review of Indian media, including movies, television series, and advertisements, documented entrenched gender stereotypes, implicit sexism, and misogyny (Mukhopadhyay & Banerjee, 2021).

Video games have become central to young people's leisure, with U.S. adolescents spending 2.5 to 3 hours daily on gaming (Rideout et al., 2021). Young people are skilled in using multiple gaming platforms, including mobile devices, consoles, and computers (Digital Wellness Lab, 2023), with gaming increasingly serving as a social and interactive experience. For example, Fortnite, a popular multiplayer game created by Epic Games illustrates this evolution. While the core gameplay centers on competing to be the last player standing, its broader appeal lies in the immersive social experience. Voice chat, customizable skins, emotes (dances), and collaborations entertainment franchises transform it into a cultural hub. Players not only compete but also engage in live-streaming, and online communities, making Fortnite both a game and a social platform.



Image source: Gameflip.com

Image 4. Fortnite characters in various costumes



Image source: Guava Juice YouTube

Image 5. Trendy character dance replicated in social media

Image 4 displays a range of customizable Fortnite characters in diverse costumes, and Image 5 shows a Fortnite dance emote alongside a real-life replication, illustrating how in-game behaviors extend into offline and social media contexts.

In terms of sexual content on gaming platforms, Vidaña-Pérez and colleagues (2018) included 23,722 youth-focused games released between 1994 and 2013 and found that 35% of games rated "Mature" and 31% of those rated "Teen" contained sexual content. These researchers noted that sexual content in both categories increased over time

compared to games rated “Everyone” or “E10+”. Lynch and Tompkins (2018, 2024) documented the presence of sexist portrayals in Japanese and U.S.-based games. These included vampire characters framed with overt sexual motivations, women relegated to secondary roles, and “virgin” female characters stereotyped as polite, innocent, and confined to traditional roles such as princesses or cheerleaders. Similarly, De la Torre-Sierra and Guichot-Reina (2025) and Downs and Smith (2010) found that across mainstream platforms like PlayStation, Xbox, Nintendo Switch, and PC, female characters were disproportionately assigned secondary roles, displayed submissive traits, embodied unrealistic body types, and were often depicted as targets of violence.

Sexual content on social media platforms is widespread. Unlike traditional “push” media, social media exposes young people to sexual content while allowing them to create and share it. Shutsko (2020) in an analysis of 1000 TikTok videos found that male creators tended to post comedy content, whereas female creators produced more beauty and DIY-related material. Fowler and colleagues (2022) examined 100 sex education TikTok videos and found that discussions most often centered on female anatomy and sexual pleasure, including orgasms and arousal. Another TikTok study analyzing 150 TikTok videos on sexual assault reported that the majority highlighted awareness-related content and challenged social norms surrounding violence (Nicolla et al., 2025).

Studies show that sexual or unhealthy content garners greater engagement on social media. Hendriks and colleagues (2018) conducted a study where young adults shared their social media profiles for content analysis. They found that Instagram posts featuring young adults holding alcoholic drinks attracted more likes and comments than posts without people. Similarly, Boatman and colleagues (2022) found that although most HPV-related

TikTok videos were pro-vaccine, user engagement was higher with antivaccine content. A study analyzing the presence of graphic sexual appeals on Instagram posts among fashion brands found that graphics with sexual appeals received a higher number of likes and comments than non-sexual appeals (H. Choi et al., 2022). When Yan and colleagues (2022) analyzed 600 university fraternity life pictures on Instagram, they found four key sexualization cues: body, revealing clothing, sexualized mouths, and chest exposure. All these cues were positively associated with the number of likes. Herbenick and colleagues (2023) further highlighted gendered portrayals of sexual choking or strangulation in visual or textual memes common among young men, with men depicted as chokers and women as the choked, often framed as a normalized or inevitable practice.

Young people's involvement with sexual content in digital media

SRH information seeking: Internet search engines remain a common source for young people seeking information on sex and sexual health. Walsh-Buhi and colleagues (2025) reviewed multiple studies and found that between 20% and 77% of youth reported searching online for SRH topics. Online platforms offer privacy, allowing young people to explore sensitive issues at their own pace or cross-check information without the stigma of face-to-face discussions (Waling et al., 2023). Buhi and colleagues (2009) found sexual health to be the most frequently searched health topic among U.S. 18-and 19-year-olds, surpassing other health topics like mental health, fitness, and nutrition. Common searches among young people included STIs and HIV, pregnancy prevention, contraceptives, genitalia, and substance use (L. Simon & Daneback, 2013). Young people in South Asia often sought SRH information related to high-risk sexual behaviors and sexual curiosity (Jayasundara, 2021). Social media, although widely used among young people, is not the

most preferred or frequently used platform for seeking information on sexual health. Stevens and colleagues (2017) found it to be the fourth most frequent source among African American and Latino youth ages 13 to 24 years, after television, movies, schools, and parents. However, those who were exposed to sexual health messages on social media only were almost three times more likely to report contraception or condom use at last intercourse compared to peers exposed through traditional sources.

Young people face barriers while searching for sexual health information on the internet. Patterson and colleagues (2019) conducted peer-paired interviews among Scottish youth ages 16 to 19 years, found participants reporting difficulties filtering relevant and reliable information, a lack of awareness about trustworthy sources, and limited availability of locally-relevant content. They discussed socio-cultural barriers, such as fears of being caught searching, unease with audiovisual content, and accidental exposure to explicit materials. In LMICs, barriers also extend to technological literacy, limited network coverage, electricity shortages, costly internet data, and shared mobile phone use (Feroz et al., 2021; Laar et al., 2024).

Seeking health information differs by gender and sexual orientation, usually among those who don't have others to ask about sexual information. Jayasundara (2021) found adolescent boys more likely than girls to seek SRH information online. Mitchell and colleagues (2014) reported that 78% gay/lesbian/queer U.S. youth ages 13 to 18 years searched for sexual health information online, compared to only 19% of heterosexual peers.

Pornography functions as a double-edged edge when it comes to youths' exposure to sexually explicit content online. Without adequate life experience or comprehensive sexual education, young people often use pornography as a reference point for expectations

about what is acceptable, pleasurable, or "normal" in sex (Gunnoo & Powell, 2023; Maas et al., 2025; Paulus et al., 2024). Some studies highlight potential benefits, suggesting that it facilitates sexual learning and self-discovery. For example, Rothman and colleagues (2021) in their cross-sectional study among 1266 young people ages 18 to 24 years in the U.S. found that 25% of young adults considered pornography a helpful source of information, particularly for learning how to have sex as compared to other sources of information like peers, health professions, etc. Attwood and colleagues (2018) and Meehan (2025) argued that adolescents use pornography to learn about sexual pleasure, a topic largely absent in formal sex education.

Other studies highlight negative outcomes. Rothman and colleagues (2021) noted that pornography consumption is reportedly more common among males, older adolescents, and those with weaker family relationships. Their viewing frequency is linked to negative condom attitudes (Galper et al., 2024). Pornography viewing is also associated with more permissive sexual attitudes, early sexual debut, gender stereotypical sexual beliefs, and casual sexual behaviors (Paulus et al., 2024; Peter & Valkenburg, 2016).

Online communication, relationships, and sexting: Digital platforms like dating and social media platforms provide avenues for sexual communication and relationship building verbally or non-verbally (Macapagal et al., 2025). Verbally, youth engage in direct discussions about sexual desires or about safer sexual measures like condom use. Non-verbal communication can be via sexting or through social media posts, reels, nude images, or emojis that explain sexual desires (e.g., eggplant emoji) (Van Ouytsel et al., 2025). Sexting is another common form of online sexual engagement. A meta-analysis of 39 studies found that 19% of adolescents had sent a sext, 35% had received one, and 15% had

received sexts without consent (Mori et al., 2023). Lykens and colleagues (2019) in their mixed-method study found that 70% of U.S. youth who used dating apps met in person with someone they connected with online. Such apps, along with social media apps, helped them in sexual exploration, learning to flirt, vetting potential partners, and beginning romantic relationships. In India, Menon (2024) found that dating apps like Bumble were used by men for sexual experiences, while women used them for ease of communication. Such sexual communication on digital platforms facilitates safe sexual behaviors. Widman and colleagues (2014) found that consistent condom use was three times higher among youth who discussed condoms and birth control on social media apps like Snapchat or Facebook Messenger compared to those who did not use apps for such discussion.

Effects of media influence on youth's SRH outcomes

Table 1 shows how media exposure both positive and negatively affect young people's SRH outcomes. In general, such exposure enhances young people's knowledge about sex but also contributes to negative psychosocial attitudes and risky sexual behaviors.

Table 1. Media influence on youth's positive and negative SRH outcomes

Positive SRH outcomes	Negative SRH outcomes
Indian adolescent girls use of social media platforms like WhatsApp, Facebook, and Instagram had increased odds of knowledge about sexual intercourse, pregnancy and contraceptive methods (Saha et al., 2022)	Exposure to sexual media is associated with more negative sexual attitudes (permissive, peer norms, rape myths, preference for rough sex) and sexual behaviors (age of sex initiation, risky sexual behaviors). In general, higher in boys. (Bőthe et al., 2020; Doornwaard et al., 2015; Peter & Valkenburg, 2016).
Incidental or non-intentional exposure to sex, sexuality, relationship related social media and advertising content helped young adults identify gaps in their knowledge, revise knowledge about sex	Exposure to sexual content in mass media among adolescents ages 16 to 18 years were positively associated with normative beliefs such

and relationships, provided opportunities to reflect about sexual topic and helped understand others viewpoints about a topic (Lim et al., 2025). Internet, text messaging, and social networking site based interventions were able to increase knowledge of HIV, STIs, and pregnancy prevention, condom self-efficacy, abstinence attitudes, delayed initiation of sex (Guse et al., 2012; Wadham et al., 2019) Exposure to sexual content in mass media among adolescents ages 16 to 18 years were not associated with attitude towards having sex and self -efficacy to engage in sex (Bleakley, Hennessy, Fishbein, et al., 2011).	as peers their age are having sex (Bleakley, Hennessy, Fishbein, et al., 2011). Media interventions on condom self-efficacy, communication and use were not always successful (Guse et al., 2012; Wadham et al., 2019). Adolescents ages 12 to 17 years who reported watching sexual content on television at baseline were more likely to initiate intercourse at 1-year follow-up as compared to those with less exposure to sexual content at baseline (R. L. Collins et al., 2004). Adolescents ages 12 to 14 years who reported watching sexual content on television, movies, music, magazine at baseline were twice as likely to have sexual intercourse at 2-year follow-up as compared to those with less exposure to sexual content at baseline. Sexist content in digital media associated with negative attitudes, and beliefs about women, increased support of rape myth and sexually objectifying thoughts among gamers (Tompkins & Lynch, 2018). Men ages 18 to 37 years who played sexualized video games were more likely to be involved in online sexual harassment towards women then those who played non-sexualized games (Burnay et al., 2019). Ghanian adolescents who used at least one social media platform had significantly higher odds of engaging in early sexual debut, multiple sexual partners, unprotected intercourse, etc. than those who did not (Gyane et al., 2025).

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Chapter THREE

METHODS



Photo by Pritam (data collection team member)

Chapter 3: Methods

This dissertation followed an exploratory sequential mixed-methods design to address the three study aims. Using the instrument development model of exploratory mixed-methods design (Creswell & Clark, 2017), we drew on parts of the qualitative phase to inform the selection of the digital media characters for the exposure measure, which was then simultaneously psychometrically evaluated and used to measure relationships with condom use-related behavioral determinants and outcomes. This chapter outlines how we achieved the three dissertation aims.

We obtained ethical clearance for this dissertation from the University of Maryland, College Park Institutional Review Board (IRB; #2373338-1/2) and locally from Monk Prayogshala's IRB (#202-025).

Aim 1: Explore digital media use - We achieved aim 1 by conducting a qualitative exploration of how young men aged 18 to 21 years from Delhi, India, used digital media to engage with sexual and reproductive health content. This phase included training the research team, conducting 22 in-depth interviews (IDIs), including participants' digital media sexual character elicitation exercise, analyzing data, and writing the results.

Aim 2: Develop and evaluate media exposure measure - We used information from the character elicitation exercise to develop a 15-character media exposure measure, pilot - tested the quantitative survey instrument, including the media exposure measure, and administered a digital, in-person self-reported survey to 205 young men aged 18 to 21 years in Delhi, India, to assess the media exposure measure's psychometric properties.

Aim 3: Examine relationships – We used the same 205 in-person self-reported surveys to examine how the character-based digital media exposure is associated with

young men's condom use knowledge, attitudes, normative beliefs, self-efficacy, intention, and condom use behavior in Delhi, India. A second research team training was conducted before collecting data for aims 2 and 3.

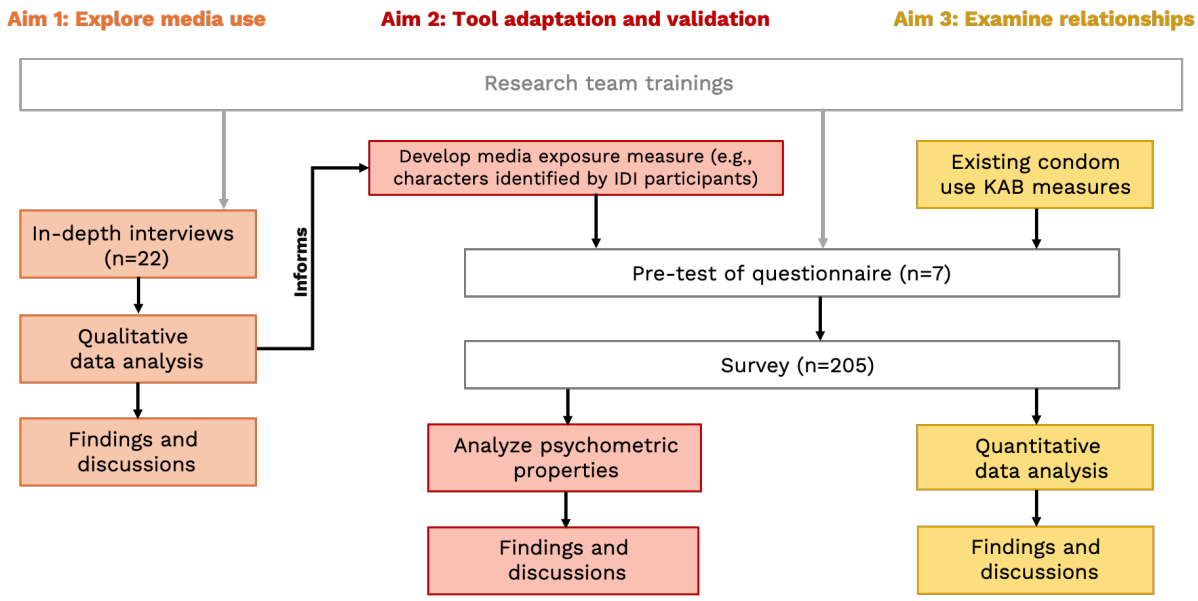


Figure 2. Three phases of the mixed method study

Study setting

This dissertation was conducted among purposively selected young men aged 18 – 21 years in Delhi, India. Delhi is projected to have about 3.1 million young men between the ages of 15 – 29 years by 2031 (National Statistical Office, 2022). According to NFHS-5, in Delhi, young men who understood that condom use during every sexual intercourse can reduce the risk of STIs (39%) is slightly higher than the national average (35%) (IIPS & ICF, 2021). Delhi, a union territory is divided into eleven districts (see Figure 6).



Image 6. Delhi district map *(Image source: https://audit-delhi.aksamity.com/page/delhi-map)*

The recruitment focused on North, South, West Delhi districts due to the presence of various colleges. We focused on the 18–21 age group because among young men who had sex in the past 12 months, the likelihood of having had higher-risk sex increased with schooling and age, from 15 to 24 years (IIPS & ICF, 2021; Ministry of Health (MoH) et al., 2022). Young men are also more likely than younger youth to feel comfortable reflecting on and sharing their experiences with sexual content on media.

Data collection team and training

The data collection team comprised the Principal Investigator (PI - Angshuman Kashyap), one young recruitment manager, and three young research assistants (RAs) based in Delhi. They are native Hindi speakers, fluent in speaking, reading, and writing both Hindi and English. The recruitment manager, a doctoral student in Social Sciences at Ambedkar University in Delhi, led the recruitment of the research assistants.

Training: I conducted two in-person half-day in-person trainings in November 2025 with the data collection team. The first training was conducted before the qualitative data collection, and the second before beginning the quantitative data collection. Both trainings emphasized the research aims, sample, eligibility, and recruitment procedures, interview protocols, translation and transcription protocols, and ethical considerations. Special emphasis was given to confidentiality in collecting SRH and digital media data.



Image 7. Snack break with the data collection team after training

During the qualitative data collection training, we also conducted mock consent-seeking and interview sessions to ensure that the questions flowed smoothly, the Hindi phrasing was appropriate, and the interview length was feasible. It also helped build the data collection team's comfort and confidence in administering the interview guide. The principal investigator and two trained data collectors conducted all interviews.

Recruitment of participants

We recruited eligible young men through project-specific Instagram and Facebook social media platforms (@YoungmenSH) posts targeted at young men in Delhi. The post (See Appendix B) on Instagram and Facebook included study information, eligibility criteria, participation procedures, and a QR code/link to a Qualtrics form through which interested young men in Delhi provided their contact details, like name, phone number, and preferred time of the day to contact them. Eligible young men were between 18 to 21 years

old, residing in Delhi, spoke Hindi, were active on at least one social media platform, and owned a personal mobile phone.

The young men who did not meet the eligibility criteria on the filled-in form saw a message at the end of the screening survey about their ineligibility to participate in the study. The information that was recorded in Qualtrics was deleted within 24 hours and was not used for research purposes.

For those who met the eligibility criteria, the recruitment manager followed up with the interested young men by referring to the contact details provided in the filled-in recruitment sheet to confirm eligibility, explain study procedures, and schedule an in-person interview or survey at a mutually agreed-upon location that is easily accessible by public transport. This follow-up was a telephonic call and functioned as a screening tool to recruit participants to the study. While confirming the eligibility criteria, if the potential young men did not meet the eligibility criteria, the recruitment manager read an ineligibility script (See Appendix B for recruitment script). Each eligible participant who agreed to be interviewed or surveyed received a reminder text a day before their scheduled interview or survey.

The recruitment manager also identified participants offline using a prepared script (See Appendix B). The recruitment manager identified 3 tea stalls in North, South Delhi, and West Delhi who were willing to put up the flyer about the study. These tea stalls were small stand-alone shops selling tea, mouth fresheners, and candies, and were common gathering spots for college-going and working men throughout the day.

Aim 1: Explore digital media use

Explore how young men aged 18 to 21 years in Delhi, India use digital media to address their personal needs of accessing and engaging with sexual and reproductive health content.

RQ1: In what ways do young men in Delhi, India, use digital media to address their sexual and reproductive health-related needs?

RQ2: Which digital media characters (e.g., influencers, gaming avatars) are identified by participants to portray sexual content, the valence of such content, and what is the level of their sexual portrayal among the digital media content accessed by young men in Delhi?

Sampling

In November 2025, we purposively recruited 22 young men aged 18 to 21 years in Delhi (mean - 21 years) to participate in the in-depth interviews (IDIs). The recruitment focused on two groups: 12 participants who have ever engaged in heterosexual sexual intercourse (later labelled as SE: sexually engaged) and 10 participants who have never engaged in sexual activity (later labelled as NSE: never sexually engaged). All the participants were enrolled in college undergraduate programs, spoke Hindi or English, were active on at least one social media platform, and owned a personal mobile phone. Delhi, as the nation's capital, is also a major educational hub with more than 80 colleges (University of Delhi, n.d.). In 2020-2021, the gross enrolment ratio for men in higher education was 48% (Department of Higher Education, n.d.). Many young people from across the country and from diverse socio-economic backgrounds come to the capital to pursue undergraduate studies (Gohain, 2025). Although prior evidence indicates that adolescent boys and young men living away from home for a month or more have significantly higher rates of sexual

intercourse than those who do not (IIPS & ICF, 2021), we included participants regardless of their current living arrangements.

Data collection and study instrument

We sent a text reminder message to all eligible participants before their scheduled interviews. All the interviews were conducted in quiet, well-lit spaces and mutually agreed locations (e.g., office rooms, quiet parks) to minimize distractions. At the start of the interview session, interviewers read the consent form aloud, obtained written consent, and secured permission to audio-record the session. All participants consented to participate in the interviews.

We grounded the in-depth interview (IDI) guide in the Media System Dependency (MSD) theory's three dimensions of personal and social goals (Ball-Rokeach & DeFleur, 1976). Interviews began with general questions about digital media use and progressed to dimension-specific questions on SRH knowledge and self-understanding, relationship norms, practical sexual health information-seeking, peer interactions, and masculinity norms, and leisure-oriented media engagement. To address RQ2, we conducted a ranking exercise. We asked participants to recall popular sexual and general digital media characters who appeared on their social media, streaming platforms, and gaming environments. Participants then ranked their top five sexual characters based on their perceived sexual portrayal and valence. The interview guide is available in Appendix C.

On average, the interviews lasted approximately 60 minutes. At the end of each interview, the interviewer thanked participants for their time and provided an incentive of ₹300 (~$3).

I conducted 10 IDIs, while the two RAs conducted six IDIs each. We completed all IDIs in a week. The interview team participated in daily debrief sessions (5 days) to discuss emerging insights and address any challenges encountered during data collection.



Image 8. In-depth interviews with young men in Delhi, India

Data analysis

Data translation and transcription: A data collection team member completed the transcription and simultaneous translation of the interview audio-recordings. I verified these transcripts for accuracy, completeness, and anonymity against the audio files. Such quality assurance procedures ensured minimal data loss during the translation/transcription process. The final transcripts were appropriately labelled by sexual status, age, and date.

Qualitative analysis: I conducted a template analysis using Atlas.ti to analyze the transcripts. Template analysis is a form of thematic analysis that combines a priori deductive coding with inductive coding to iteratively develop a hierarchical coding template (Brooks et al., 2015; Cassell & Symon, 2012). I began the analysis by familiarizing myself with the data through close reading of all transcripts and developing an initial set of a priori codes derived from the MSD theory and the study goals. I then conducted preliminary coding of 8 transcripts (4 never sexually engaged and 4 ever sexually engaged) using these a priori codes while also inductively identifying new codes emerging from the data. This process informed the development of an initial coding template, in which we organized codes into hierarchically structured domains and sub-domains based on similar meanings. I subsequently applied these codes to the remaining 14 transcripts. During this stage, I iteratively refined the template by adding and reorganizing codes across hierarchical levels as new insights emerged. I also revisited the previously-coded transcripts to incorporate newly developed codes to ensure consistent application across the dataset.

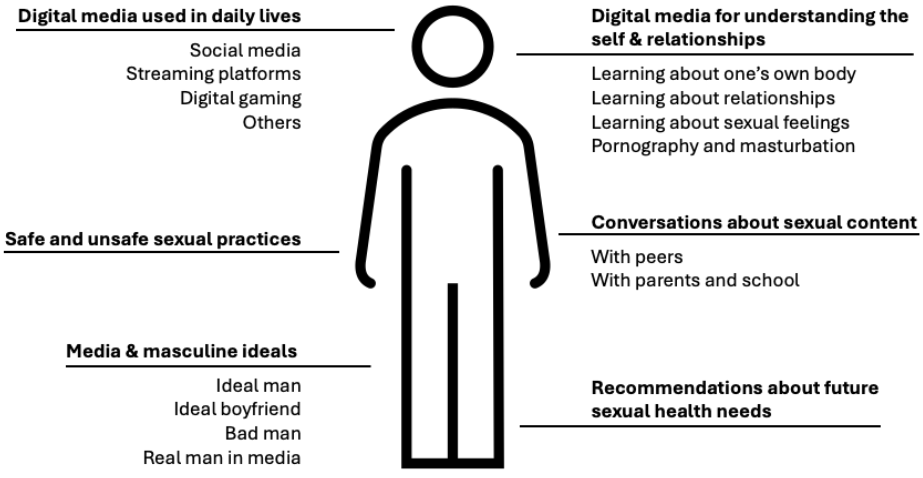


Figure 9. Domains and sub-domains developed

This process yielded 76 codes that captured key patterns across the transcripts and informed the final coding template. I defined domains as coherent groups of related codes with clear conceptual boundaries to ensure that each domain represented a distinct aspect of the data without overlap. I refined the final domain and sub-domain labels to accurately reflect the underlying meanings in the dataset. I provide details about all domains and code groups in Appendix G. Throughout data collection and analysis, I maintained a detailed audit trail that included positionality and memos (Appendix G), as well as a systematically-organized codebook structured by thematic categories.

Aim 2: Develop and evaluate digital media exposure measure

Adapt and validate a contextually-relevant digital media character-based sexual exposure measure among young men ages 18 to 21 years in Delhi, India.

> **Hypothesis 2a:** The RECAP scores will have good convergent validity, i.e. positively correlate with another multi-media exposure measure.
>
> **Hypothesis 2b:** Higher sexual character RECAP scores will be negatively associated with condom use attitudes.

We adapted and validated the character-based digital media exposure measure following best practices for instrument development outlined by Boateng and colleagues (2018). We implemented two steps: item development (Step 1) and scale validation and development (Step 2).

Step 1: Item development procedure

We first defined our media exposure measure constructs by applying the Drench hypothesis and its three sub-components: media involvement (recognition), perceived

realism (perceived sexual portrayal), and role identification (perceived sexual valence) (Bahk, 2001; Greenberg, 1988). For details about the sub-components refer to page 25.

In Fall 2025, we consulted online databases (e.g., www.gamerankings.com, https://www.imdb.com, https://www.hollywoodreporterindia.com) to generate a preliminary pool of 15 geographically-relevant social media, gaming, and streaming content characters popular among young men in India. We selected characters based on current popularity indicators, including influencer reach, game/show rankings, and social media following. Of these, eight characters portrayed varying levels of sexual content, six portrayed no sexual content, and one additional "foil" character to assess response reliability (see Appendix E). We intentionally included more characters portraying sexual content for two reasons. First, as the primary aim of the tool is to assess sexual exposure, an equal distribution of general characters would increase the number of items in the tool, leading to fatigue and item non-response. Second, including a subset of non-sexual characters allowed for random variation within the tool, reducing monotony and minimizing potential response bias (e.g., uniformly rating all characters as highly sexual).

As part of step 1, 22 young men in Delhi participated in a character elicitation exercise, where they recalled and ranked digital media characters, suggesting their perceived sexual portrayal and valence (this was done during Aim 1 in-depth interviews). We compared these participant-generated lists with our initial character pool and finalized a list of 15 characters.

Pilot testing: To establish face validity, we conducted two rounds of qualitative pilot-testing with seven participants (18-21 years) using hybrid cognitive interviewing techniques. During pilot-testing, participants completed a bilingual in-person mobile-based Qualtrics questionnaire that included character headshot images. We also assessed their comprehension, ease of answering, item flow, and item relevance for all measures that were part of the larger study (K. M. Brown et al., 2008; D. Collins, 2003; Wolcott & Lobczowski, 2021).

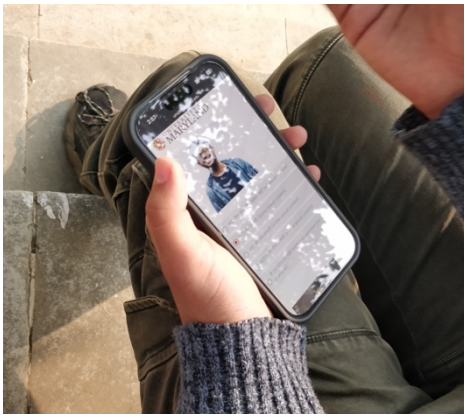


Image 10. A participant responding to a character recognition item.

Cognitive interviewing is a technique that helps researchers understand how participants interpret and respond to survey questions, as well as the factors that influence their responses. Specifically, two cognitive interviewing techniques were employed: *think-aloud* and *verbal probing*.

The think-aloud technique was employed for the media exposure section, where the participants were asked to verbalize their thinking process as they recalled digital media characters' names and rated their sexual portrayal and valence. Questions like "*how did you go about answering this question*" and "*I noticed you hesitated before you answered, tell me what were you thinking about*" were asked to understand their answering process (D. Collins, 2003).

For the remaining sections of the questionnaire, verbal probing was used to gather feedback after they complete each section. This technique was appropriate as the other measures in the questionnaire, such as the Sexual Risk Behavior Beliefs and Self-Efficacy

Scales, have been previously validated (although not in India). Verbal probing involved asking participants to explain their interpretation of item sets, and provide feedback on phrasing and clarity. Compared to think-aloud, verbal probing is more interviewer-driven and places less cognitive burden on participants, which was especially useful after the think-aloud section (D. Collins, 2003). See pilot test interview guide in Appendix D.

Step 2: Scale validation and development procedure

Data collection

In December 2025 and January 2026, we administered in-person, self-reported surveys to 205 purposively selected young men (mean age: 19.86, SD: 1.19) using the pre-tested bilingual online Qualtrics questionnaire (see appendix E). In Delhi, approximately 25% of young men ages 15 - 24 years report ever engaging in sexual intercourse, based on a sample of 528 young men (IIPS & ICF, 2021). Using this prevalence (25%), a 5% alpha level, a *z* value of 1.96, a 5% margin of error, and a population size of 528, we calculated a required sample size of 187 participants. To account for potential incomplete survey responses, we oversampled by approximately 10%, recruiting an additional 20 participants. A sample size of approximately 200 is generally considered adequate for detecting medium mediation effects using bootstrap path analysis (Sim et al., 2022). We employed balanced quota sampling to ensure equal representation of young men with or without prior penetrative heterosexual experience.

Sample size justification for Rasch model analysis: A minimum sample size of 100 is considered appropriate to yield reasonably accurate parameter estimates with item calibrations or person measures within ± .5 logit and 95% confidence interval (Linacre, 1994).

Three trained young male data collectors administered a digital, self-reported bilingual questionnaire (in Hindi and English) hosted on Qualtrics. The in-person format served two purposes: it prevented participants from searching online for answers to survey questions and reduced the self-selection bias that often occurs in online surveys.

The participant eligibility criteria were the same as those of the qualitative interview participants. Similar to the qualitative interviews, each participant received a text reminder a day before their scheduled survey. We arranged in-person survey completion to occur in quiet community halls, office spaces, and parks identified near colleges and metro stations. During data collection, data collectors provided participants with mobile phones preloaded with the Qualtrics survey. Participants were able to access the survey only after providing active consent, indicating their agreement to participate. This unlocked the survey items. The participants independently completed the surveys. Participants received a cash amount of Rs. 200 (~US $2) for their participation.

Participant demographic characteristics

Half of the sample reported penetrative heterosexual sexual experience, whereas the other half reported never being sexually active (Refer to appendix H.3. for table). In terms of education, 68% of participants were in their undergraduate program, 17% in their postgraduate program, 4% were pursuing a diploma or certificate program, 6% completed or were in their high school, and 2% had primary school or no formal education, 2% preferred not to say. All had access to a smartphone; 96% owned a personal device, and the remaining 4% shared a device. While 40% of the participants reported that their households never or once per year had difficulties meeting daily needs, 26% participants reported not having enough money at least once per month or week, and 11% reported facing

difficulties every day. Over two-thirds of the participants (71%) belonged to the general caste. Seventy percent were Hindu, 12% were Muslims, 2% were Christians, 4% were Sikh/Buddhist/Jain or Jewish, 8% either preferred not to say or did not follow a religion. Almost half of the sample (48%) believed religion and religious views to be fairly or very important, and this was significantly associated with their religious affiliation (χ^2 [36, N=200] = 87.86, p <.001), with Hindus commonly indicating high levels of importance.



Image 10. Surveys with young men in Delhi, India

Measures

Table 2 presents the components used to develop the character-based digital media exposure measure.

Table 2. Character-based digital media exposure measure components, operationalization, and format.

Component	Operationalization	Format
Recognition	Number of sexual and general digital media characters correctly recognized by character name. We asked: Please choose the character's name. If you do not know, you can choose "Don't know/Not Sure." Sexual characters talked about or showed: hook-up/make out; sexy clothes; nudity; sex (oral, anal, or vaginal); safe sex (condoms, birth control, etc.); sexual jokes, sex crimes (rape); homosexuality (gay or lesbian); sexual slang (abusive words) or anything else sex related. General characters portrayed educational, fitness, comedy or entertainment content that does not involve sexual content. Adapted the Receptivity measure (Feighery et al., 1998), often used in children's research (Borzekowski & Henry, 2011; Borzekowski & Macha, 2010; Borzekowski & Pires, 2018).	15-character images; 8 sexual characters, 6 general characters, 1 foil. 9 characters from social media, 3 from streaming platforms, 2 from gaming, 1 foil. Participants viewed character image and selected correct name from six options, including "don't know." Nominal responses converted to binary variable: Correct responses = 1, incorrect and "don't know" responses = 0.
Perceived sexual portrayal	To capture participants' ratings of the amount of each character's perceived sexual portrayal. Similar to previous conceptual work by Bleakley and colleagues (2008). Item was placed after each character recognition question. We asked, "For the same character you just saw, rate the amount of sexual content he portrays according to you."	Likert: 4-point responses ranging from "no sexual content" coded as 0 to "a lot of sexual content" coded as 3. "I don't know this character" responses were recoded as 0 to indicate no exposure for analytic purposes.

Perceived valence	To capture participants' ratings of how positively or negatively characters behaved or talked about sex. Placed after each character recognition, and perceived sexual portrayal question. We asked, "Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)" Provided a standard definition explaining positive valence as, "Portrayals that are acceptable, admirable, desirable according to you" and negative valence as, "Portrayals that are offensive, unrealistic, and inappropriate according to you."	Likert: 5-point responses ranging from "very negative" coded as -2, "neutral/ do not portray any sexual content" as 0, to "very positive" as + 2. "I don't know this character" was recoded as 0, suggesting no exposure.

***Character-based digital media exposure measure scoring*:** We constructed the initial 42-item measure (excluding the foil character items) based on the three components described in Table 2. The measure included 14 characters (8 sexual and 6 general), and each character assessed across all the three components. For analytic purposes, character recognition functioned as a qualifier. Only did we include character-level ratings of perceived sexual portrayal and valence when participants could correctly recognized a character, ensuring that the ratings reflected familiarity with the character.

When a participant recognized a character name but selected "I do not know this character" when rating perceived sexual portrayal or valence, we recoded these responses as zero to indicate no exposure. When a participant incorrectly recognized a character, they were treated as missing (NA) for both perceived sexual portrayal and valence.

Similar to the scoring approach recommended by Bleakley and colleagues (2008) for measuring sexual content across multiple platforms, we calculated a weighted average score for each participant. However, several characteristics of our data required modification

of this approach. First, correct character recognition varied substantially across characters (22%–96%; see Supplementary Table H.4.). Restricting analyses to participants who correctly recognized each character created structural missingness in the sexual portrayal and valence variables for some characters, with missingness exceeding 50% for several items and substantially reducing the effective sample size (ranging from 46 to 196). Because missing values were conditional on recognition, they represent missing-not-at-random (MNAR) data; researchers stipulate is not appropriate for standard multiple imputation procedures (Gomer & Yuan, 2021). To maintain analytic consistency and retain a larger sample, we therefore coded these cases as zero, representing non-exposure to sexual portrayal and valence for characters not correctly recognized.

We measured perceived sexual portrayal ratings on a four-point Likert-type scale (0–3). Preliminary inspection showed a skewed distribution with sparse responses for six characters. This skewness was driven by the exclusion of participants who did not recognize certain characters, which reduced the effective sample size. To improve stability of the exposure measure and facilitate interpretation, we dichotomized this variable into 0 = not exposed to sexual portrayal (included response category “No sexual content portrayed”) and 1 = exposed to sexual portrayal (included response categories “Little/some/a lot of sexual content portrayed”). Although this approach resulted in the loss of variation in perceived levels of sexual content exposure, it allowed us to retain the sample size and enhanced interpretability. Supplementary table H.3. presents the frequencies for the recoded categories. Perceived valence scoring remained the same.

We then generated the final scores using the following logic for each participant *i* and character *j*, where,

Rij = Correct recognition (coded = 1)

Pij = Perceived sexual portrayal (coded = 0 - 1)

Vij = Sexual valence (coded = -2 to +2)

For a participant, we computed the character-specific exposure score as *Pij* x *Vij*, if (*Rij* = 1), yielding scores ranging from -2 to +2. For example, if Participant no. 9 correctly recognized Character 1's name (score = 1), rated Character 1's perceived sexual portrayal as "a lot of sexual content" (score = 1) and rated sexual valence as "negative" (score = -1), he will receive a score of -1. We repeated this process for each sexual and general character known by each participant.

We then summed these character-level scores separately to generate weighted summed (WS) sexual content and general content digital media exposure scores. The weighted summed sexual exposure score (WS^{sexexp}) ranged from -12 to 13, and the weighted summed general exposure score (WS^{genexp}) ranged from -3 to 6. Because participants varied in the number of characters they correctly recognized, we adjusted the weighted summed scores by dividing each participant's WS score by their total number of correctly recognized characters. This produced the weighted average (WA) scores, with final WA^{sexexp} ranging from -2 to 2 and WA^{genexp} ranging from -1 to 1.2. Scores at either end indicate higher sexual portrayal, with negative values reflecting negative sexual portrayal and positive values reflecting positive sexual portrayal. Ideally, we expect the WA^{genexp} scores to be closer to 0, meaning no sexual portrayal. We named this media exposure measure as REceptivity to Characters Appearing in digital media Platforms (RECAP).

Psychometric analysis for validating RECAP

We first calculated the descriptive statistics for the overall RECAP score and the character RECAP scores (Table 3, page 112). We then conducted Pearson's correlation analysis to provide an initial assessment of the 14 RECAP character scores using a correlation matrix and to examine how sexual and general character scores clustered within the scale (Table 4, page 114). In table 4.1. (page 115), we also ordered the RECAP scores in the matrix to present two matrices stratified by participants' sexual activity. We examined differences in the overall RECAP score and its sub-component scores across participants' demographic characteristics using ANOVA and independent-samples *t* tests (Tables 5 and 6, pages 116-117). All analyses were conducted using SPSS and R.

A distinguishing feature of the RECAP scale is its use of digital media character images to measure media exposure. As the media involvement (character recognition) sub-component served as the qualifier for the other two sub-components by determining whether participants correctly recognized each character image, we evaluated the psychometric performance of the items within this sub-component. To accomplish this, we conducted Rasch measurement analysis (Boone, 2016; Mair et al., 2023). Rasch modeling, which is part of item-response theory, is widely used in the development and validation of literacy scales (Dogruel et al., 2022; Fleary, 2022), and knowledge-based scales (Fenwick et al., 2013; He et al., 2023). Rasch modeling uses probabilistic models that assess a latent variable by testing the consistency of a set of items. It places both people and items on the same latent scale, showing how likely someone responds to an item of a given difficulty (Wright & Stone, 1979). Participants with higher ability (i.e., more media exposure) have a higher likelihood of recognizing more characters, and items that are more difficult

(characters that are not often viewed) are less likely to be recognized (Fleary, 2022). The models estimate item difficulty and personal ability independently of the sample used, and specific items included in the analysis (Wright & Panchapakesan, 1969). This approach helped evaluate whether the items function as intended, examine the appropriateness of the response structures, and identify potentially misfitting items that may require refinement.

We evaluated key Rasch model assumptions, including unidimensionality, local independence, and monotonicity. Similar to Fleary (2022), we assessed unidimensionality using principal component analysis of the model residuals, and considered residual eigenvalue < 2 as evidence supporting unidimensionality, i.e. the items separately loading as sexual and general characters (Rasch, n.d.; Wolfe & Smith, 2007). Because the recognition sub-component included two item groups, eight sexual characters and six general characters, we initially assessed dimensionality using a single dichotomous Rasch model across all recognition items. The first residual eigenvalue was 2.2, indicating potential multidimensionality. Consequently, we analyzed sexual character (eigenvalue = 1.67) and general character (eigenvalue = 1.60) recognition items as separate sub-components.

We assessed local independence, i.e., participants' responses to character recognition items should not correlate with other character recognition items, by examining if the critical values obtained for Q_3 at 95 percentile fall between 0.19 and 0.24 (Christensen et al., 2017). The Q_3 statistic is the correlation between item residuals and should be close to 0. Monotonicity, i.e., the expected increase in the probability of correctly recognizing a character with increasing levels of media exposure, was visually assessed using item characteristic curves (ICCs; figure 16 and 17) (H.-A. Kang et al., 2018).

Item and person (participant)-level parameters such as item discrimination and item difficulty were estimated using joint maximum likelihood estimation (JMLE) procedure. Item discrimination means how well a character is identified between participants who have higher vs. lower media exposure. Item difficulty is how hard it is to correctly identify a character. JMLE estimates the item and participant parameters simultaneously. We assessed how each item behaves compared to what the Rasch model expects, using mean square fit statistic, with item values between .5 and 1.5, were considered acceptable. Items with values between 2 to 1.6 or < .5 were considered to distort or mislead the measurement system and, therefore, were considered for possible removal (Linacre, 2002).

We used Pearson's correlations to examine convergent validity, i.e., the extent to which the RECAP measure is correlated with another similar measure of multi-media exposure which we included in our instruments. To establish convergent validity, both these measures should be highly correlated. We used an adapted version of the 17-item Content-based Media Exposure scale (C-ME, (Carlson & Herdman, 2012; den Hamer et al., 2017). The scale measures exposure to antisocial (e.g., sex, alcohol use) and neutral content (travelling, cooking) through a 5-point scale from "never" to "very often." Higher scores indicate greater exposure to both antisocial ($M = 2.62$, $SD = .78$; $\alpha = .79$) and neutral content ($M = 3.18$, $SD = .73$; $\alpha = .79$) subscales.

Concurrent validity refers to the extent to which a new measure (e.g., RECAP) relates to another measure in ways that align with prior empirical findings or established theoretical expectations (Bleakley, Fishbein, et al., 2008). To evaluate this, we examined the association between participants' sexual and general digital media content exposure scores and their attitudes toward condom use. Prior meta-analysis suggest that exposure to sexual

media relates to sexual attitudes among young people (Coyne et al., 2019). We used Pearson's correlations to examine the association between young men's RECAP exposure and condom use attitudes. We assessed participants' condom use attitudes using three items from the Sexual Risk Behavior Beliefs and Self-Efficacy Scales (Basen-Engquist et al., 1999). Adapted items included statements like "I believe condoms should always be used if a person my age has sex," were rated on a 4-point scale from "Definitely No" to "Definitely Yes," with higher scores indicating stronger endorsement of condom use (Scale 1 to 4; Mean = 3.27, SD = .78, Cronbach's $\alpha = .81$).

The overall proportion of missing responses for the RECAP items was 1%. Item-level missingness was low (<5% across all items). Schafer (1999) and Bennett (2001) suggest that missing data of ≤ 5% are generally inconsequential and that statistical analyses are unlikely to be biased when missingness remains under 10%. Two participants (1% of the sample) did not respond to up to 15 items.

Aim 3: Examine relationships

Examine how exposure to sexual characters on digital media is associated with condom knowledge, condom use attitudes, peer and masculine normative beliefs, self-efficacy, intention, and condom use behavior among young men ages 18 to 21 years in Delhi, India.

Research Question 3: How is digital media exposure (RECAP) associated with condom use knowledge, attitudes, normative beliefs, self-efficacy, intention, and condom use behavior among young men ages 18 to 21 years in Delhi, India?

Hypothesis 3a: Exposure to sexual content on digital media will be associated with the behavioral condom use determinants: a. knowledge, b. attitudes, c. peer

normative beliefs, d. masculine normative beliefs, e. self-efficacy, f. condom use intention, and g. behavior among young men ages 18 to 21 years in Delhi.

Hypothesis 3b: The five behavioral determinants of condom use intention will mediate the relationship between exposure to sexual content on digital media and condom use intention.

Hypothesis 3c: Intention to use condoms in the next 6 months will be related to past or current condom use behavior among young men ages 18 to 21 years in Delhi who have ever engaged in heterosexual penetrative intercourse.

Measures

Demographics. Participants reported their age, education, caste, religiosity, and penetrative heterosexual sex status.

Condom use knowledge. There is a dearth of validated measures assessing condom use knowledge. We assessed condom use knowledge using an adapted version of the 17-item Condom-use Skills Checklist (CUSC) (Stanton et al., 2009), originally validated among young adolescents (poor reliability, $\alpha = .08$) and adults ($\alpha = .63$) in the Bahamas. The items included eight correct condom use steps (e.g., “Put the condom on when the penis is erect, before any contact between the penis and your partner's body”) and nine incorrect steps (e.g., “Put the condom on any time before you ejaculate (sperm release)”). One item (“Use a lambskin condom”) was removed based on pre-test feedback indicating participant unfamiliarity. Participants were informed through instructions that some condom use statements were correct while others were incorrect, and they were asked to identify them accordingly. Scores reflected the accurate identification of both correct and incorrect items

(Range 4-16; Mean = 9.50, SD = 1.90, KR-20 α = .04). We could not improve the reliability by deleting any item(s).

Condom use attitudes. We assessed attitudes towards condom use using three items from the Sexual Risk Behavior Beliefs and Self-Efficacy Scales (Basen-Engquist et al., 1999), originally validated among U.S. high school students (Cronbach α = .87). Adapted items included statements like "I believe condoms should always be used if a person my age has sex," were rated on a 4-point scale from "Definitely No" to "Definitely Yes," with higher scores indicating stronger endorsement of condom use (Scale 1 to 4; Mean = 3.27, SD = .78, Cronbach's α = .81).

Peer normative beliefs. We assessed perceived pressure from peers to practice safer sex using condoms with seven items from the Sexual Risks Scale (DeHart & Birkimer, 1997), originally validated among U.S. 18 – 25 year olds (Cronbach's α ≥ .84). Adapted items included statements like "If I had sex and I told my friends that I did not use condoms, they would be angry or disappointed." Responses were rated on a 4-point scale from "Almost Never" to "Almost Always," with higher scores indicating greater peer normative beliefs towards condom use. (Scale 1 to 4; Mean = 2.60, SD = .57, Cronbach's α = .61).

Masculine normative beliefs. We assessed participants' harmful masculinities using the 5-item Man Box scale (Hill et al., 2020). Originally validated among young men in the United States (Cronbach's α = .85), the United Kingdom (Cronbach's α = .85), and Mexico (Cronbach's α = .80), the term "Man Box" has been defined as "a set of beliefs, communicated by parents, families, the media, peers, and other members of society, that place pressure on men to be a certain way" (Barker et al., 2017). These expectations often emphasize toxic, hyper or hegemonic masculine ideals like dominance, emotional restraint

which are increasingly reinforced in contemporary digital spaces, including the manosphere, where such norms are amplified and normalized (Ging, 2019; Renström & Bäck, 2024). Each item related to one aspect of harmful masculinity: rigid masculine gender roles, aggression and control, hypersexuality, self-sufficiency, heterosexuality, and homophobia. Items included statements like “In my opinion, a real man should have as many sexual partners as he can,” were rated on a 4-point scale from “Strongly Disagree” to “Strongly Agree,” with higher scores indicating less gender equitable beliefs (Scale 0 to 3; Mean = 1.20, SD = .66, Cronbach’s α = .75).

Condom use self-efficacy. We assessed condom use self-efficacy using a 14-item adapted version of the Condom Uses Self Efficacy Scale (Asante & Doku, 2010), validated among university students in Ghana (Cronbach's α ≥ .93). Items included statements like “I feel confident that I could use a condom with a partner without breaking the mood,” were rated on a 5-point scale from “Strongly Disagree” to “Strongly Agree,” with higher scores indicating stronger perception of condom use efficacy. (Scale 1 to 5; Mean = 3.47, SD = .64, Cronbach’s α = .82).

Condom use intention. Participants reported their intention to use condoms using three adapted items originally used to measure intention to have sexual intercourse in the next 12 months among U.S. adolescents; Cronbach’s α = .96 (Bleakley, Hennessy, Fishbein, et al., 2011). Items included statements like “I am willing to use condom in the next 6 months,” rated on a 5-point scale from “Strongly Disagree” to “Strongly Agree” with higher scores indicating greater intention to use condoms in the next 6 months. (Scale 1 to 5; Mean = 3.51, SD = 1.11, Cronbach’s α = .93).

Condom use behavior. Three items used by Noar and colleagues (2006) about condom behavior were adapted to assess condom use behavior (Original Cronbach's α = .8). Participants were asked items like, "In the past or currently, how often do you talk about condom use with a person you engage sexually/…use condom(s) during sexual activity." Items were rated on a 5-point scale from "Never" to "Every time" with higher scores indicating greater condom use behavior. For analysis, we only included participants (n=102) who have ever engaged in penetrative heterosexual sex. (Scale 0 to 4; Mean = 1.90, SD = .96, Cronbach's α = .73).

Digital media sexual exposure. We developed the REceptivity to Characters Appearing in digital media Platforms (RECAP) measure to assess character-based digital media sexual exposure. Refer to page no. 69 for more details. For this study, we only included the sexual exposure sub-component of RECAP in this study, as we want to examine the relationship between exposure to sexual content in digital media and condom use outcomes. (Mean = -.50, SD = .79, KR-20 α = .67).

Data analysis

Before beginning analyses, we screened the data for missingness. We originally collected 209 survey responses and removed four participants whose surveys had more than 50% missing data. Item-level missingness across all variables was low (<5% across all items), and the missingness was not associated with any demographic variables. All variables described above met the normality criterion except condom use attitude (Z skewness > 3.29) (H.-Y. Kim, 2013). For the mediation analysis, we used bootstrapping (5000 resamples) to test the significance using 95% confidence intervals. This non-parametric approach is robust to non-normality (Shrout & Bolger, 2002). Because listwise

deletion in regression-based mediation models can substantially reduce sample size when multiple variables are included, we handled missing data using Full Information Maximum Likelihood (FIML). FIML uses all available data under the assumption that data are missing at random or completely at random (Cham et al., 2017; Enders & Bandalos, 2001).

To test H1, we used Pearson's correlation to examine the associations between sexual media exposure and IBMP measures (Table 8, page 123).

To test H2 and H3, we conducted path analysis using R to estimate a multiple mediation model linking media exposure, behavioral determinants (knowledge, attitudes, peer normative, masculine beliefs, and self-efficacy), behavioral intentions, and condom use. This approach allowed us to estimate both direct and indirect effects among observed variables and to identify which IMBP behavioral determinant pathways most strongly mediated the association between sexual media exposure and condom use intention and behavior. Prior work by Sim and colleagues (2022) reviewing the mediation and sample size literature suggests that a minimum sample size of approximately 128 is adequate for multiple mediation models. Path analysis also allows the residuals (error terms) of mediating variables to correlate when they share unmeasured variances. Although IMBP does not explicitly specify relationships among constructs such as attitude, normative beliefs, or self-efficacy (Fishbein, 2009), we estimated correlations among their error terms to account for shared variances (See supplementary table 1; Bleakley et al., 2011; Preacher & Hayes, 2008).

Model fit was assessed using three indices. We used Chi-square (χ^2) tests to compare how well the predicted relationships align with the observed data; RMSEA (Root Mean Square Error of Approximation) to account for model complexity and check average

model fit (with values near 0 means a perfect fit, ≤ .05 or .06 considered good and ≥ .08 or .10 indicating poor fit) (Kaplan, 2008); and TLI (Tucker-Lewis Index) to compare how much better a proposed model fits compared to a null model (values above .90 are considered acceptable) (Kaplan, 2008).

These indices help determine whether a model is just-identified, over-identified, or under-identified (Streiner, 2005). A model is just-identified when the number of specified paths equals the number of observed variables, resulting in zero degrees of freedom (df =0). A model is over-identified when the number of specified paths is fewer than the number of observed variables (df > 0), and under-identified when the number of specified paths exceeds the number of observed variables. Model fit can be evaluated only for over-identified models, whereas parameter estimates can be examined for both just-identified and over-identified models.

Mediation was tested in four steps. First, we estimated the total effect by examining whether the exogenous variable (sexual media exposure) was associated with the outcome (condom use intention) without including the mediators. Second, we examined whether sexual media exposure was associated with each mediator as if each were the outcome variable. Third, we tested whether the mediators were associated with condom use intention while controlling for sexual media exposure. Finally, we estimated the direct effect of sexual media exposure on condom use intention after including the mediators to assess whether the association was reduced or became non-significant, indicating mediation. Indirect effects were evaluated using bootstrapped 95% confidence intervals.

Potential demographic confounders were evaluated through preliminary regression analyses examining their associations with the measures included in the study.

Participant age, sexual activity status, and religiosity were significantly associated with at least one key variable in the analytic models and were therefore retained as covariates in the path analysis.

Ethical considerations and human subject involvement

Potential risks and adequacy of protection against risks

The IRB committees determined this work to be of minimal risk. Because discussing SRH remains a taboo topic in India, we adhered to strict ethical protocols at every step of the work to minimize potential risks, participants discomfort, embarrassment, or fatigue.

Before recruitment and data collection: I am CITI Social/Behavioral Research program certified (Record ID: 51478212). I provided two trainings to the data collection team members before beginning the qualitative and quantitative phase of the study. The pilot-test of the tools further reduced the likelihood of unintended consequences for both participants and research team.

During participant screening: Personal identifiers collected during recruitment and screening process (e.g. name, contact details) were discarded within 24 hours and were not used for any research purposes.

During data collection: *Qualitative data collection* - During the in-depth interviews, when participants felt hesitant to respond to certain questions about SRH or felt uncomfortable talking about certain topics, they were reminded that they could skip questions they do not want to answer, return to it in later, or stop at any point. *Quantitative data collection*- During the self-administered surveys, participants were reminded during

the introductory consent process that the questionnaire is anonymous, and will not be linked to individual responses or personal identifiers.

For both the types of data collection, participation was emphasized as entirely voluntary, with no consequences for education, employment, or other aspects of life. Participants could withdraw at any time. The data collection team organized regular virtual debriefing sessions to discuss insights and address any challenges.

Consent process: Informed consent was obtained from all participants. The data collectors read data collection-specific consent scripts (See appendix F) explaining the study's purpose, methods, and participants' rights in simple, in clear language to the eligible participants. It was emphasized that participating is completely voluntary, that their responses were confidential, no personal identifiers will be recorded and that they could skip any questions or withdraw at any time without any consequences. Interview participants who agreed to participate were asked to sign on the consent form and return it to the interviewer. During the consenting process, permissions for audio recording the interview was sought. For the surveys, participants also provided consent on Qualtrics before answering the survey questions. It was ensured that the incentive amount did not influence the study participation. All the participant consented to participate in our study. The consent forms were available in both Hindi and English. Images included in this report feature participants, interviewers, and young men who provided consent to be photographed. Participants' identities have been protected, with no faces shown; any visible faces belong to consenting data collectors and young men who were not part of the study.

Data management

All digital data such as audio recordings from the qualitative phase, pre-test and survey responses from the quantitative phase were stored in a secure, password-protected UMD cloud-based server and will be backed up regularly. The Principal Investigator's computer that stored working transcripts and data files is password-protected (user's fingerprint and case-sensitive password) and regularly backed up to ensure protection. Confidential information, such as participant name, were not linked with the collected data, and the qualitative transcripts and survey dataset used for analysis is fully de-identified. A digital logbook tracked when and with which RAs the audio-recordings were shared during the transcription and translation process, ensuring a strong audit trail. Similarly, for the quantitative dataset, a variable data codebook version control file was used to track decisions made regarding recoding study variables, and variables used in the analysis to help maintain transparency and reproducibility. All the consent forms/personal identifier records will be destroyed/deleted three years after the study is complete from both PI's computer and the UMD cloud-based server. Personal identifiers in the qualitative transcripts were de-identified and qualitative quotes presented as part of the findings only indicate participant age, and sexual activity.

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Chapter FOUR

AIM 1 FINDINGS (QUALITATIVE)



Photo by Pritam (data collection team member)

Chapter 4: Aim 1 findings (Qualitative)

What is missing: Limited evidence from middle-income countries about how young men use their digital media ecosystems (social media, gaming, streaming) to navigate sexual and reproductive health.

What this dissertation adds: Provides nuanced qualitative evidence of how different digital media content (e.g., algorithm-driven reels on Instagram, how-to videos on YouTube, online communities on Reddit, romantic and masculine scripts in streaming content, and hypersexualized characters in digital games), along with other online platforms such as Google, functioned not only as private informational environments where they sought, encountered, and interpreted information about their bodies, relationships, sexual feelings, and safe sexual practices, but also as spaces that shaped their expectations around relationships and masculinity.

How does it advance the field: By centering context-specific young men's perspectives, highlighting the demand for structured, credible, realistic, and practical digital media resources for body image, sexual health, and relationships.

We analyzed interview transcripts using template analysis in ATLAS.ti integrating a priori codes derived from MSD theory with inductively generated codes to iteratively build a hierarchical coding structure resulting in 76 codes organized into conceptually distinct domains and sub-domains. In the sections that follow, we present findings structured by these domains capturing how young men engage with and interpret sexual content in terms of their bodies, relationships, sexual feelings, masculinity across digital media contexts.

Digital media used by young men in their daily lives

Young men frequently used social media platforms in their everyday lives, with Instagram as one of the central digital spaces. Participants described Instagram as a multifunctional platform that combines entertainment, communication, and information-seeking. They primarily used it because of the content diversity, to scroll through reels, fill

idle moments, follow niche interests (e.g., fitness, cars), and interact with friends through messaging, content sharing, or calling. Some participants also framed Instagram as a learning space, where they accessed information ranging from hobbies (e.g., terrace farming) to political updates and social debates, sometimes perceiving it as more informative than formal education when used intentionally. As one 21-year-old SE participant noted, *"Instagram, I won't even say I use it; I use it, and it uses me the most. If you are waiting for 5–10 minutes for someone, and you open Insta, and there you see 30–30 second reels…and get some information…It feels like I am learning a lot of things on Insta now that I didn't learn in my school days…if you can use it properly."* Another 21-year-old NSE participant said, *"Because I get daily updates on it, whether social or political….when I can't read the newspaper, I get updates from Instagram."*

Participants emphasized the appeal of short-form video content (reels), describing it as providing "*instant fun*" and for some, "*instant dopamine*". At the same time, some participants acknowledged excessive time spent watching algorithm-generated short content often described as "doom scrolling" or "brain rot."

For instance, a 20-year-old NSE participant said, *There is a term nowadays, brain rot. There are a lot of reels like that. So, you get all kinds of content on Instagram. I will not say that I have never done brain rot or doom scrolling. I have enjoyed both. But what I enjoy the most is that people get to…you can connect with anyone across the globe. And when you are able to do that, you also can express yourself.*

Beyond Instagram, participants mentioned using WhatsApp primarily for communication and YouTube for both entertainment and learning. They described YouTube as a platform for watching stand-up comedy, political content, gaming videos,

and instructional material. Some participants also used Reddit, LinkedIn, and Telegram for more specific purposes, including technical discussions, professional networking, or downloading movies. For example, a 20-year-old NSE participant shared, *"I mainly use Reddit for IT [information technology]-related purposes…if I have a question, I go to a subreddit…where people can share opinions, express experiences, or help others who are getting into IT."*

Participants also reported using streaming platforms such as Netflix, Amazon Prime, Jio Hotstar, and Zee 5, although access varied based on affordability. They described watching genres such as crime, psychological thrillers, and science fiction, and expressed clear platform preferences based on usability and content availability. As one 20-year-old NSE participant explained, "*Netflix, because the interface is more convenient than Amazon's. Even with Amazon Prime Premium, you still get ads, and sometimes there are software issues…I haven't really faced such problems with Netflix, and it also has a wider range of content."* Many participants navigated access barriers by sharing subscriptions, borrowing login credentials, or using third-party applications via Google Chrome, and Telegram. For example, a 20-year-old SE participant said, *"I have never taken a Netflix subscription…I ask a friend to give me the OTP... There are also third-party apps…Some can be directly downloaded from Chrome."* Others relied on YouTube as a freely accessible alternative. For some participants, however, streaming platforms played a limited role due to cost constraints or lack of interest.

Digital gaming formed another key component of young men's digital media environments, particularly through mobile-based multiplayer games, such as Free Fire, PlayerUnknown's Battlegrounds Mobile India, Clash of Clans, and Call of Duty Mobile.

Participants often described long-term involvement with gaming, often beginning in adolescence and continuing into early adulthood. One 19-year-old NSE participant noted playing Free Fire on his mobile phone "*for more than four years*" often late at night. Gaming served both as a leisure activity and a social space, where participants played with friends, communicated during gameplay, and built shared experiences.

Reflecting on earlier experiences, a 20-year-old NSE participant said, *GTA Vice City became a core memory for me because I didn't play alone. We had 3–4 friends, and we would play together."* Another 20-year-old NSE participant said, "*Whenever I feel like I need to release some stress, I usually play Valorant. It's not the best game in terms of community because it can be quite toxic. Sometimes I also play Counter Strike. Again, not a perfect game, but it's fine if you want to play for an hour or two to vent stress.*

Participants also engaged with gaming-related content on platforms like Instagram and YouTube, where content creators shared gameplay strategies and improvement tips. At the same time, not all participants actively engaged with gaming; some reported occasional use or avoided it due to time constraints or parental restrictions.

Across platforms, participants consistently described being introduced to digital media through friends, classmates, and immediate social circles through daily observations, conversations, and circulating trends.

Young men's use of digital media for understanding the self & relationships

Learning about one's own body

Young men primarily relied on Google and YouTube to learn about their bodies, navigate pubertal changes, seek explanations for bodily experiences, and compare their bodies to what they see online.

Google served as a source for quick, text-based information, while YouTube was used for detailed visual explanations. Participants used these platforms to understand and verify topics that felt uncomfortable to discuss with others, including masturbation, muscle development, and physical appearances.

For example, a 20-year-old NSE participant shared, *"When I used to get pimples, it felt very bad…So I saw a lot of videos on how to remove pimples,"* while another 19-year-old NSE participant using Google to ask, *"…is masturbation good or not? Is it good for our health or not?"* Similarly, a 21-year-old NSE participant explained, *"In Indian culture, it [masturbation] is considered a taboo... and on a scientific basis, it is said that there is no harm in it. So, my main source is YouTube."*

Beyond search engines, some participants turned to AI tools and online communities for more personalized and anonymous guidance. For example, a 19-year-old SE participant noted, "*Most of the time I take my ChatGPT as my doctor,"* while another 20-year-old NSE participant described using Reddit as a space for both information and virtual support. He said, "*If I feel like venting or learning something…I go to those subreddits. Usually, people already have answers. If not, I can ask my question directly. I can write something like I have been feeling strange about this, or…I feel like I am not worthy enough, what should I do, or how should I stop thinking about. People there usually respond."*

Participants interpreted media portrayals in varied ways. Exposure to fitness and transformation content on Instagram and YouTube often motivated behavioral changes while reinforcing comparison. A 20-year-old SE participant explained, "*When I scroll [Instagram], I find videos where boys transform from very thin to very muscular …It*

became a challenge for me when I saw those before-and-after faces and bodies, and then I researched more [on YouTube]. I used some products once or twice, too."

Such comparisons also produced dissatisfaction or triggered ongoing self-evaluation. The same participant said, *As a man is described that he has biceps, he has six-packs, and then look at myself … I cannot reach those standards… I feel a little degraded."* Another 20-year-old never sexually engaged participant said, *"There are reels where random girls are asked what kind of guys they like… when they say tall height... I am short, so it forces me to think….if they say rich guy….one who has six-pack abs….I do not have….it forces you to think.*

Some participants used media content to affirm their own bodies. For instance, a 20-year-old SE participant reflected on a character from a streaming series. He said, " *There is a series called 365 days [Netflix]…he has a full-haired chest without shaving... that inspired me.. that yes, it is my body…. this is a natural thing and I don't need to wax."*

Similarly, another 20-year-old NSE participant described resisting external pressures shaped by social media content. He said, *I am into powerlifting. There is no certain requirement as to what kind of body fat percentage you have to maintain for powerlifting…But I saw an Instagram post…where it said at 21 your looks matter, at 31 your money matters, so if you fail in any of those you would be called a loser. That post really stuck with me. It made me think that I do not really have to focus on my looks for other people. I am doing is for myself.*

Learning about relationships

Young men relied on Google and YouTube (how-to videos, podcasts) to learn how to initiate and manage romantic relationships. Participants described searching for guidance

on how to talk to girls, express interest, and often encountered advice that emphasized giving attention, keeping partners happy, and making them feel special. For instance, a 20-year-old SE participant shared, "*First time was on YouTube using my mother's phone, I searched - how to talk to a girl so she falls in love with me. There were many such videos. Some girls have uploaded such content, and some boys too. They said first get involved with them...ask the girl for a pen, a pencil, a bottle, something. Then she'll remember that this boy asks for a pen a lot. You will form a little habit around her…don't suddenly start talking; slowly build a habit of being around each other."*

Beyond instructional content, participants described Bollywood films and streaming platforms playing a key role in setting expectations about how men should be in relationships. Participants described modeling behaviors directly from films, including gestures like giving letters or gifts and getting influenced by dialogues or character portrayals. As one 21-year-old SE participant noted, *"we just watched movies and copied them. Didn't really know what it meant."* Another 20-year-old SE participant said, "*In Vampire Diaries [Netflix series], there are a lot of good dialogues. Like - I'm not your first, but I intend to be your last."* Media narratives also reinforced expectations of being caring, attentive, and chivalrous by performing activities like *"opening the gate… offering her a chair… paying the bill…so this creates an image of an ideal man in our minds" (21-years-old SE participant)*. At the same time, few participants recognized the limitations of these portrayals, and how they are disconnected from reality, noting that *"shows like you are living a worst life and they [characters in social media] are enjoying. They are just showing the cream, not the reality." (21-year-old NSE participant).*

Instagram also gave young men ideas about navigating relationships. Participants described encountering content that portrayed different relationship types (e.g., casual relationships), promoted norms around daily gestures and emotional expressions. For instance, a 21-year-old NSE participant said, "*Once, my girlfriend said that she saw a cute good morning message on Instagram that she liked. And then I started writing new good morning messages to her every day as a surprise."* Similarly, another 20-year-old SE participant described learning from peers' posts. He said, "*On his girlfriend's birthday, he gave her a gift. She was very happy and posted a nice story on Instagram, saying Thank you, thank you. I was also connected with her on Instagram and saw that she was very happy. Then I thought, let me also give my girlfriend a gift. I learned that they want some special treatment."*

Participants who are not in relationships described how exposure to algorithm-led couple-oriented content on Instagram featuring romantic relationships either triggered feelings of inadequacy, guilt, or jealousy or provided space for reflection and emotional coping for breakups. A 21-year-old NSE participant explained, "*Insta algorithm works very differently…You know, in a night when you are sleeping and you are just scrolling through some reels, you have to get the couple's reel, and actually, you feel very sad about it…like couples are having fun, they are going on a trip, they are cuddling each other…like eating together that actually makes you very jealous.*"

Alternatively, a 20-year NSA participant described how algorithm-based reels on Instagram helped him process his breakup. He said, *you know how phones track conversations or things that we search on the internet. When my breakup happened, I started seeing a lot of relationship-related reels everywhere. On Instagram, I saw a reel*

where they talked about what an ideal relationship should look like. They said that an ideal relationship…is also about how much you respect each other...That reel helped me get out of the phase where I was in denial. I understood that beyond everything else…I have to prioritize my own self-respect. I cannot be available for everyone twenty-four-seven. That understanding stayed with me and will stay with me until the next relationship.

Digital media and sexual feelings

Young men described learning, exploring, and understanding their sexual feelings as a gradual process shaped by repeated exposure to sexual content across media platforms. Participants explained that these digital platforms not only provided information but also triggered, normalized, and regulated their sexual desires. Across interviews, participants described encountering sexual content on streaming and social media platforms that moved beyond intercourse, including pleasure, orgasm, and sexual aids like vibrators and lubricants.

Many participants recalled first recognizing and making sense of their sexual feelings during adolescence through media exposure, with pornography often as an initial entry point of reference. Participants described using porn to understand desire, arousal, and even aspects of their sexual identity. A 21-year-old SE participant explained, "*When I was a 16 or 17-year-old kid, I wanted to understand my identity, like many guys say, 'I don't like the female body, I'm gay,'...I liked girls, but I wanted to be sure, so I used porn sites."*

Participants also emphasized the role of algorithm-driven and incidental exposure to sexual content across platforms. Instagram, in particular, was described as a space where sexualized content, often described as "soft porn," appeared unintentionally while scrolling.

This also included reels featuring *"bikini girls,"* "get ready with me" content, and other suggestive imagery that sometimes triggered sexual arousal. For instance, a 20-year-old NSE participant described, *"Algorithms change for different people…So sexual content like bikini pictures, nude or almost nude pictures, soft porn, as they say, comes on Instagram randomly. You don't even know. Sometimes you're on the Metro, and suddenly you feel hesitation or shame, thinking someone will see and judge. Sometimes you ignore it, sometimes your mind goes down a different tangent."*

Digital games and in-game advertisements also contributed to participants' sexual exposure and sexual feelings. Participants described how female avatars were often hyper-sexualized, with minimal clothing, and customizable female characters using game-based inventories. Some games included advertisements or pop-ups about "virtual girlfriends," penis enlargement, sex performance, people willing to have sex near them, or third-party games where game characters' clothing could be altered or removed as part of sexual gameplay. Participants reported that such exposures sometimes triggered sexual arousal, leading them to masturbate. For example, a 19-year-old NSE participant explained, "*There are game inventories [games like Freefire or PlayerUnknown's Battleground Mobile] where there are clothes. So in the girls' section, sometimes the clothes are so inappropriate that we feel a little sexually aroused. We can make the character wear girls' clothes in the game. We can feel how a girl looks in those clothes."* Another 20-year-old NSE participant described encountering modified game content where characters were made sexually explicit, noting, *"It has a small game between Jett and Cypher [Valorant game characters]. If Cypher kills Jett, he gets to touch her in any way he wants."*

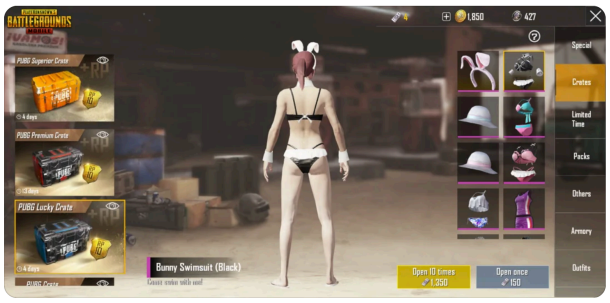


Image 12. Playerunknown's Battlegrounds Mobile character customization page

Image source: https://www.reddit.com/r/PUBGMobile/comments/97xqwt/this_bunny_swimsuit_is_uhhh/



Image 13. Falorant (Valorant parody game with Valorant characters - Jett and Cypher) *Image source: https://optimisticlynx.itch.io/falorant-ep1-revenge*

Participants also highlighted the role of interactive and peer-based digital spaces, such as Reddit and Omegle, in shaping sexual curiosity and behavior. These platforms were described as spaces where sexual content, discussions, and even explicit behaviors are shared openly, and sometimes problematically. For example, a 20-year-old NSE participant shared about anonymous subreddits, "Even 15-year-olds are asking for escorts. '*Yeah, I want an escort…I'm in Delhi, I've come to Delhi, I need this number.*"

Another 20-year-old SE participant described with a sense of shame how young men use Omegle video chat for sexually explicit conversations. He said, *I have used it with a friend. He looks good, I look okay, so we run it together, hoping some girls will connect. When we scroll, we see a lot of boys doing dirty things on camera. We do not do that, but many boys, as soon as a girl appears, they show their private parts… thinking maybe she will get in a mood.*

Pornography and masturbation

Participants often described how sexual content encountered across digital platforms acted as a trigger that led them toward pornography consumption. Exposure to sexualized imagery on Instagram, as well as romantic or explicit scenes in streaming content and films, frequently created curiosity and arousal, prompting further searching. A

20-year-old SE participant said, "*After seeing such things on Instagram or in web-series [referring to Game of Thrones] there is a feeling…like you feel romantic…now I want to search more…then I might go to porn sites.*" Another participant described, "*actually in the winter time when your body is, you know, feeling some warmth in the night, all of a sudden your penis gets hard….and you are watching a movie with a kissing scene…then you also want to do it….you just shift from your movie to watch porn."*

Safe and unsafe sexual practices

Young men described learning about safe sexual practices through a mix of digital media, peer networks, and formal education, with different platforms serving distinct informational roles. Many participants first encountered condoms indirectly through television or YouTube advertisements, which initially sparked curiosity and were later clarified through formal education or Google search. As one 21-year-old SE man explained, "*you can see ads of condoms like Durex, Man force [condom brands] on YouTube. We didn't understand this when we were young. When we studied about it in our biology chapter, then we could connect to it with YouTube ads and why it [condom] is used*." Similarly, another 21-year-old SE man noted, "*I saw a reel of Sunny Leone [Pornstar/celebrity] advertising a condom brand…social media gives you a curiosity… I was then watching some videos on YouTube and then suddenly a condom advertisement popped up….then I googled it and got the idea that it is used for safe sex and the female can't get pregnant, I also learnt about I-pill [oral contraceptive pill]*."

Participants also actively used search engines and other digital platforms to seek procedural knowledge about condom use and safe sex practices. Online articles were

frequently mentioned to learn practical details such as how to use condoms, select appropriate products, and ensure safety.

A 20-year-old NSE man said, *So I went to two or three websites [using Google], of course…But when I headed over to this particular website, they had everything that I was kind of seeking…how to use condoms, how to be careful with it and how to buy the right condom because again, quality matters when you buy some protective gear for your intercourse.*

YouTube complemented this by offering guidance on sexual practices, partner satisfaction, and hygiene. However, participants also described challenges in navigating online information, including exposure to explicit or misleading content.

A 20-year-old NSE man recalled, *I searched [condoms] and the images on Google were horrifying…But at the same time, when I found the right website, I was quite engrossed in it. But if you search something on Google and head over straight to the images, you'll be quite traumatized…It shows something else.*

Participants described platforms such as Reddit as credible spaces for expert-driven sexual health discussions. A 20-year-old NSE participant said, "*like verified doctors actually. Sexologists, I think. So they talk about what safe sex is and what is unsafe sex, how to prevent pregnancies and if it happens, what kind of help should you seek."* In contrast, participants described Instagram and YouTube as spaces where sexual health information appeared more fragmented and incidental. A 21-year-old NSE participant shared, "*Like on YouTube, you must have heard of Harsh Beniwal. He is famous. He makes comedy videos. So there was a video of his regarding sexual wellness. He talks about*

pulling out and says better to use condom than pulling out. So, I got to know about it from there. I haven't seen such content by targeting them. I just see them randomly."

Peers and offline networks were also critical sources of SRH knowledge. Some participants first learned about condoms through friends, jokes, informal conversations, or when discussing protection within peer groups. For instance, a 20-year-old SE participant said, "*We sometimes had parties in a room, and we play porn. We watched it mainly to see the sex, not to see what else was going on. We watched what they were doing during sex. So when I later had sex physically, I knew what happens, what they do, the positions, etc. They also use protection in those videos, so I saw that too."* Another 21-year-old SE participant recalled learning about condoms through humor, "*I heard a friend who said, go to a chemist and rub your index finger, and the chemist will understand that you need a condom. So I got to know this [condom] through that joke.*" A 21-year-old SE man participant also highlighted how digital platforms facilitated access to sexual health products. He said, "*But by my time, it was good that there was Instamart [online delivery app], there were many things available, you can also order from there, and there are many types [condoms]. So online ordering has be very beneficial for this.*"

Conversations about sexual content

With peers: Young men frequently discussed sexual feelings and relationships with peers, often in informal, humorous, and male-bonding contexts. These conversations often centered on shared sexual curiosity, experimentation, and entertainment. For example, a 20-year-old NSE participant described how peers introduced alternative ways of experiencing sexual pleasure.

He said, *he told me that there are other ways you can masturbate…like by hearing music. Sensual music… or reading SMUT*[1] *…Have you watched 50 Shades by Dakota Johnson? So SMUT is reading and imagining such sexual scenes by reading sexual books…My friend argued that when you imagine it, it is more enjoyable…Because then it is in your hands. You can imagine it in whatever way you want to.*

Sexual memes and jokes were also circulated within closed groups and were often limited to close, trusted circles where they are comfortable sharing. A participant explained, "*We have a group where we send dirty videos. We match the content …what we send to a girl friend is different from what we send to male friends*."

Conversations with parents and schools: In contrast, participants described limited, indirect, or absent communication about sexual content with parents and formal institutions. Many reported discomfort avoidance or perceived cultural constraints that restricted open discussion. A 21-year-old NSE participant said, "*not with the parents…it depends on the family background, how expressive you are with them, but definitely with friends.*"

Similarly, another 21-year-old SA participant said, *in Indian society you cannot talk about yourself with your parents…it has changed a lot now. Now, girls are feeling safe to talk about periods with their dads. But if a boy feels any problem about how his body is reacting, he can't go and ask his mother…I can say that it would be very rare that he would go and ask his mother.*

[1] According to Urban Dictionary: Erotic writing that contains explicit, sexual content.

Media & masculine ideals

An ideal man

We asked participants to define qualities that make someone a "real man" among their peers and what are some things that men their age are expected to do if they want to be a good man and good boyfriend or lover. Participants described two distinct understandings of an ideal man: one based on their personal values and another shaped by perceived societal and peer expectations.

According to them personally, many participants defined an ideal man in terms of empathy, respect, equality, and prosocial behavior. They also highlighted patience, emotional awareness, and the ability to balance care for others with self-care as key qualities. For instance, two 20 and 21-year-old NSE men said, "*be empathetic, where you have to bow, bow*," and "*he should be reasonable…he should be respectful*." Another 21-year-old SE man noted, "*A real man is that you should have a ratio of 60–40: 60 percent putting others first, helping others, or putting others' expectations and needs first, and 40 percent you have to give to yourself*."

On the other hand, participants described societal and peer norms as promoting traditional and restrictive ideals of manhood. These ideals were tied to being a provider, maintaining authority, and emotional suppression. For example, two 21-year-old participants noted, "*should be independent…should be the breadwinner…should work, he should earn money*" and "*will give to his wife and children, he will fulfil his girlfriend's needs, and he will take care of his mother*." Physical appearance, such as having a beard, biceps, six-pack abs, height, sexual stamina, and stoicism, also emerged as dominant expectations. For example, participants described their friends' explaining an ideal man,

where one 20-year-old NSE participant explained, "*He should be stoic, he should not be weak, he should be very strong, he should look after everything. He said one more thing, that mental health is an illusion when it comes to men.*" Another 20-year-old NSE participant recalled, "*My female friends said, you have to be nonchalant to get a good girl….Someone who is quiet…who does not react to anything…like straight-facing.*"

An ideal boyfriend

Participants defined an ideal boyfriend in terms of emotional competence, communication, and mutual respect. They emphasized that being a good partner requires actively listening and being attentive to a partner's needs and feelings. For example, a 19-year-old NSE participant explained, "*He should be a good listener… understand what the other person is saying, what she wants to say, and what her feelings are.*"

Participants also stressed the importance of balance and equality in relationships, and rejecting hierarchical or controlling dynamics. A 21-year-old SE participant said, *"Keep it 50-50...he should listen to her when she speaks, and the same applies for her…It should not seem like one of the two is above and the other is below.*"

Another 20-year-old SE participant said, "*A good boyfriend should not cross boundaries and should not be toxic or over-controlling…you should not think too much about the future.*"

Participants also highlighted qualities like honesty, trust, and loyalty in relationships. A 19-year-old NSE participant described, "*honest, showing real emotions, not being fake…Not being double-faced.*" Participants pointed to the importance of effort and care, such as remembering a partner's preferences, spending meaningful time together, and being responsive during emotional or physical discomfort.

Bad men

Participants described bad men as those who exhibit ego-driven, controlling, and dishonest behaviors. They emphasized the rejection of "male ego" and linked such attitudes to socially constructed ideals of masculinity, including emerging trends like "alpha" or "sigma male" identities. Similarly, participants also critiqued controlling and coercive behaviors such as moral policing, restricting a partner's autonomy, and a lack of consent. A 19-year-old SE participant said, "*Moral policing or social policing should not be done….male partner gets angry because their female partner is talking to someone or is socializing with someone,* " while a 21-year-old SE participant emphasized, *"should not dominate… should not force…and consent is the most important."*

Real men in media

We asked participants about the types of digital media characters that they and their peers perceive as representing "real men." Participants drew on a wide range of figures from Bollywood films, web series, social media, and gaming, revealing both aspirational and contradictory ideals of masculinity.

Some participants identified emotionally expressive and relationally-grounded characters as real men. For example, a 19-year-old never sexually active participant described the character Srikant from *The Family Man* (main protagonist in an Amazon Prime series) as someone who, " *doesn't suppress his emotions… he tells everything to his friend.*" Others talked about narratives where male characters transition from violence to responsibility and care, reflecting growth and maturity. Participants also admired public figures who demonstrated humility and respect in their relationships. A 21-year-old SE

participant described actor Ritesh Deshmukh as a "real man," noting "*the way he admires his wife… even after getting all the fame, he still talks nicely… he talks down to earth.*"

At the same time, some participants also talked about dominant, authoritative, and hypermasculine characters as representations of a "real man." Characters from Amazon Prime series such as *Mirzapur*'s Kaleen Bhaiya (character name), were admired for their power and control, where "*he was an authoritative figure… people had respect or fear*" (20-year-old SE participant). Similarly, participants described the influence of movie characters like Kabir Singh (character and movie name) and the broader "angry young man" portrayal among peers. These portrayals emphasized traits such as aggression, substance use, and a stylized masculine appearance, such as "*drinking, smoking cigarettes, beard, moustache, wearing shades [glasses], riding a Bullet [bike]"* (20-year-old NSE participant).



Image 14. Mirzapur characters
Image source: https://open.spotify.com/track/46zRkAw8ljSXgxvkTRVPuV



Image 15. Kabir Singh movie poster
Image source: https://en.wikipedia.org/wiki/Kabir_Singh

Young men's recommendations about future sexual health needs

Participants expressed a need for accessible, structured, and trustworthy digital resources that move beyond fragmented or misleading information currently available online. Many emphasized the importance of clear, age-appropriate guidance on relationships, boundaries, and sexual practices, as well as better content regulation (e.g. sexual appropriateness tags) on social media platforms. For example, a 19-year-old NSE participant highlighted the need for clarity around timing and readiness. He said, "*at what age we can do all this… what should be our boundaries… If we want to have sex, then what should be our age limit? Is it safe or not?"*

Participants also described preferred formats for delivering such information. They highlighted podcasts, YouTube-based tutorials, and short, digestible guides that are easier to retain than short reels or long texts. As a 20-year-old SE participant said, "*I think it should mostly be on YouTube because Reels are only for a minute or two. People watch a little bit and then forget.*"

Participants also highlighted the potential of interactive and personalized AI-based tools for body, fitness, sexual, and relationship guidance. A 21-year-old NSE participant said, "*if fitness and body-related information is shown through AI correctly and respectfully, it can be helpful."*

Beyond technical formats, young men also emphasized the need to normalize discussions around men's sexual and mental health. They called for more holistic and realistic media representations that address issues such as sexual performance pressure, emotional well-being, and relationship challenges. As a 20-year-old SE participant explained, "*There is pressure on them [men] that if you are not sexually active, some*

people make fun of you that you don't have anyone. Or if you are not able to have sex, they make fun of you that you are weak. So, these types of things should be talked about. Things should be normalized.

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Chapter FIVE

AIM 2 RESULTS (MIXED METHODS)



Photo by Angshuman (Principal Investigator)

Chapter 5: Aim 2 results (Mixed methods)

What is missing: Lack of easy-to-administer, and culturally appropriate tools to measure what sexual content young people are exposed to within multi-platform digital media environments.

What this dissertation adds: A validated novel, quick, and easy-to-use character-based measure named REceptivity to Characters Appearing in digital media Platforms (RECAP) to measure sexual media exposure using data from 234 young men in India. RECAP captures exposure across multiple digital platforms (social media, streaming, gaming), reflecting young men's real-world media use.

How does it advance the field: Centers participants' subjective evaluations of media characters, capturing how sexual content is experienced and interpreted in real-world digital environments rather than relying on frequency of use or objectively coded assessments. Provides a flexible, adaptable tool (RECAP) that can be extended to other health domains (e.g., substance use, body image, violence, obesity), enabling broader application in health communication and behavioral research.

Character listing and ranking

The participants who were part of the qualitative interviews listed 40 characters across social media, streaming platforms, films, pornography, digital games, and neutral/general characters. Of these, five characters overlapped with the character set generated from the online database. Their descriptions of sexual content broadly included explicit acts, suggestive visuals, language, and humor. Participants ranked characters based on their perceived explicitness, frequency of exposure, and memorability. Pornographic and Bollywood characters were ranked high on extent of sexual portrayal due to their explicit and often negatively perceived sexual portrayals. Characters from streaming and gaming platforms were ranked mid-level based on their sexualized visuals but expressed mixed views on their sexual valence. For example, a 20-year-old participant said, "*The red and white bikini girl in GTA 5 [game]…it is in my core memory because her poster*

appears while a mission is loading in the game, I don't think that will directly affect how men think about sex." Participants ranked comedians and fashion influencers lower in terms of sexual portrayal based on their use of sexual or double-meaning jokes, revealing clothes, and generally evaluated their sexual valence as neutral. A 21-year-old participant explained, "*Influencer Samay Raina. If we talk about sexual things, he talks about them in a humorous way. I would say that it doesn't seem inappropriate. I am giving this perspective from a male angle, so maybe that's why, but personally, I don't find it inappropriate."* We replaced 7 digital media characters from the initial pool with participant-identified characters (See Appendix H.1).

Pilot-testing feedback

Ability to recognize characters: Participants' recognition and familiarity were largely based on repeated exposure rather than character following. Many participants described recognizing characters through platforms such as YouTube, Instagram Reels, or gaming, often identifying them by context (e.g., "Mirzapur series," "GTA 5 game," or "fitness videos") rather than by name. Some participants reported having seen the characters many times but not remembering their names, particularly for social media influencers and international characters, with some choosing not to rate characters they could not confidently identify. In some cases, character familiarity was tied to specific events (e.g., controversies or viral content). For instance, a 19-year-old participant said, "*Their photo is also going viral…She wears short dresses.*"

Character sexual exposure descriptions: In the questionnaire, we provided participants with a standard definition explaining sexual content to be: *"…talking about or showing: hooking-up/making out; sexy clothes; nudity; sex (oral, anal, or vaginal); safe*

sex (condoms, birth control, etc.); sexual jokes, sex crimes (rape); homosexuality (gay or lesbian); sexual slang (abusive words) or anything else sex related." While rating perceived sexual portrayal of the characters, many participants described characters' sexual portrayal based on elements such as wearing "small clothes," partial body exposure, vulgar language, double-meaning sexual jokes, and verbal sexual abuse. For example, a 21-year-old participant said, "*Carry Minati [YouTube influencer]…He uses very dirty words while playing his games."* At the same time, participants made distinctions between different degrees of sexual content. Some described certain characters as portraying "a little sexual content" based on sexual suggestiveness, while others differentiated between vulgarity and sexuality, noting that the use of obscene language did not always equate to sexual content. Content perceived as humorous without harmful intent (for sexual), respectful or inspirational (for general) was often rated as positive or somewhat positive, particularly when participants believed the character did not actively promote sexual content but used it incidentally (e.g., for humor or storytelling). For instance, some participants described comedians or influencers as "neutral" or "somewhat positive" because their use of sexual language was seen as entertainment. In contrast, participants rated characters negatively when they perceived intent to attract attention, or gain fame through sexualized content, vulgar language, or misleading behavior. Visual presentation (e.g., "wearing small clothes"), or controversies contributed to negative evaluations.

Based on the participant feedback, we made several refinements to improve question clarity, flow, and response accuracy. First, we added a visual example of the character-based questions immediately after the section instructions to help participants better understand the task. Participants highlighted difficulty in rating characters they were

unfamiliar with. To address this, we added a new response option, "I do not know this character," to reduce forced or inaccurate responses and, as recommended by other studies, to reduce the likelihood of guessing (Dogruel et al., 2022). Additionally, participants expressed confusion when rating perceived sexual valence for characters who did not portray any sexual content. Specifically, they said the existing "neutral" response option could be interpreted as either neutral valence or absence of sexual content. To resolve this ambiguity in the survey tool, we introduced a distinct response option, "Does not portray any sexual content," to clearly differentiate between lack of exposure and neutral evaluation. The final instrument is provided in Appendix E.

Psychometric evaluation results

All sexual characters included in the RECAP measure were perceived as portraying negative sexual content, whereas general characters were mostly perceived as portraying neutral content (Table 3).

Table 3. Descriptive statistics of character RECAP

Character RECAP (SC)	N	Mean (SD)	Correct recognition	Character RECAP (GC)	N	Mean (SD)	Correct recognition
SM_Male_SC4	203	-.44 (1.06)	167 (81.5%)	SM_Male_GC5	201	-.005 (.37)	164 (80%)
SM_Male_SC1	203	-.38 (.81)	182 (88.8%)	G_Male_GC12	197	.02 (.21)	147 (71.7%)
SP_Male_SC13	203	-.37 (.93)	97 (47.3%)	SM_Male_GC3	200	.04 (.42)	133 (64.9%)
SM_Female_SC15	203	-.37 (1.07)	108 (52.7%)	SM_Male_GC14	203	.05 (.61)	188 (91.7%)
SM_Female_SC2	205	-.27 (.71)	104 (50.7%)	SP_Male_GC7	202	.05 (.62)	196 (95.6%)
SM_Female_SC6	205	-.17 (.74)	71 (34.6%)	SP_Male_GC9	198	.13 (.62)	174 (84.9%)
SM_Male_SC10	198	-.13 (.87)	106 (51.7%)				
G_Male_SC8	196	-.06 (.56)	46 (22.4%)				
Overall	*202*	*-.50 (.79)*		*Overall*	*205*	*.05 (.28)*	

*Character RECAP = Perceived sexual portrayal * sexual valence; SM = social media, SP = streaming platform, G = gaming, SC = sexual character, GC = general character*

Table 4 presents the overall correlation matrix for the 14 RECAP character scores. Among all participants, sexual-character scores (1 to 8) were positively and weakly or moderately correlated with one another (.19 –.44, $p < .01$). Correlations between sexual-character and general-character and between general characters RECAP scores were mostly not-significant. Table 4.1 presents the correlation matrix for the 14 RECAP character scores by sexual status. In this matrix, correlations above the diagonal correspond to participants who reported ever engaging in penetrative heterosexual intercourse, whereas correlations below the diagonal correspond to those who reported never engaging in penetrative heterosexual intercourse. Among young men who reported ever engaging in penetrative heterosexual intercourse, sexual-character scores were positively and mostly moderately correlated with one another (.30 –.54, $p < .01$). In contrast, correlations between sexual-character and general-character RECAP scores were weak and largely non-significant. This finding indicates that sexual characters were rated more similarly by this group. Among young men who had never engaged in heterosexual intercourse, correlations were weaker overall, with only a few significant associations observed (e.g., $r = .41$, $p < .01$ for items 3 and 1). General-character scores showed weak intercorrelations within their subgroup and remained largely independent from sexual-character scores. Overall, the correlation matrices suggest limited overlap between sexual and general characters.

Tables 5 and 6 present descriptive statistics for sexual and general character RECAP and its subcomponents by demographic characteristics. Overall RECAP scores for sexual characters were significantly associated with education ($F(3,198) = 2.87$, $p = .03$). Tukey post hoc comparisons indicated that participants pursuing postgraduate degree rated sexual character more negatively than those perusing undergraduate degree ($p = .03$), likely

suggesting a greater ability to distinguish sexual portrayals with higher education. Participants who reported never engaging in penetrative heterosexual intercourse had significantly negative RECAP scores (Student's *t* test = 2.13, p = .03) and perceived sexual valence scores (Student's *t* test = 2.14, p = .03) than those who had.

For general characters, RECAP scores (F(3,196) = 3.83, p =.01) and perceived valence (F(3,196) = 2.98, p =.03) varied significantly by religion, with participants identifying as Hindu differing from those with no religious affiliations/others (p = .02) and Muslim (p = .02) participants, respectively. RECAP scores were associated with education (F(3,201) = 6.69, p <.001), with those with high school degrees reporting negative sexual portrayal ratings than those pursuing undergraduate (p=.01) and postgraduate degrees (p<.001).

Table 4. Correlation matrix of the 14 RECAP scores

	Character RECAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	SM_Male_SC1	-													
2	SM_Female_SC2	0.13	-												
3	SM_Male_SC4	.36**	.37**	-											
4	SM_Female_SC6	.20**	.29**	.23**	-										
5	G_Male_SC8	0.06	.20**	0.04	.21**	-									
6	SM_Male_SC10	.31**	.19**	.37**	.28**	0.13	-								
7	SP_Male_SC13	0.13	.16*	.26**	0.1	0.12	.18*	-							
8	SM_Female_SC15	.14*	.26**	.44**	.30**	.14*	.29**	0.11	-						
9	SM_Male_GC3	-0.03	0.04	-0.07	-0.01	0.01	-0.01	-0.1	0.04	-					
10	SM_Male_GC5	0.01	-0.01	0.08	0.05	-0.03	-0.02	0.05	0.06	0.1	-				
11	SP_Male_GC7	-0.01	-0.05	0.09	-0.04	-0.01	0.13	0.02	0.12	-0.01	0.06	-			
12	SP_Male_GC9	-0.02	-0.07	-0.07	-0.09	-0.03	-0.01	0.03	0	0.06	-0.13	.16*	-		
13	G_Male_GC12	-0.06	0.03	0.01	0.02	0	0.07	0.13	0.03	0.05	0	-0.01	0.03	-	
14	SM_Male_GC14	0.01	0.05	0.08	0.02	.15*	-0.05	0.06	0.03	.22**	-0.07	.15*	0.07	-.16*	-

*p < .05; **p < .01; *SM = social media, SP = streaming platform, G = gaming, SC = sexual character, GC = general character*

Table 4.1 Correlation matrix of the 14 RECAP scores by sexual status.

Young men who never engaged in penetrative heterosexual intercourse (below diagonal)		Young men who ever engaged in penetrative heterosexual intercourse (above diagonal)													
Character RECAP		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
SM_Male_SC1	**1**	-	.17	.33**	.22*	-.01	.21*	.07	.1	-.13	-.02	.11	-.06	-.09	.13
SM_Female_SC2	**2**	.08	-	.43**	.52**	.36**	.35**	.2	.44**	.08	-.02	.08	0	.05	.04
SM_Male_SC4	**3**	.41**	.29**	-	.30**	.24*	.49**	.29**	.54**	-.06	.1	.19	-.17	.02	.07
SM_Female_SC6	**4**	.19	-.05	.13	-	.29**	.38**	.22*	.46**	-.08	0	.03	-.13	.03	-.03
G_Male_SC8	**5**	.08	.08	-.12	.16	-	.24*	.13	.32**	0	0	-.07	-.04	-.01	.16
SM_Male_SC10	**6**	.38**	0	.24*	.16	.04	-	.23*	.39**	.03	-.02	.16	0	.01	.01
SP_Male_SC13	**7**	.21*	.1	.22*	-.07	.11	.11	-	.09	-.16	.04	-.01	.1	.19	.04
SM_Female_SC15	**8**	.15	.04	.32**	.12	-.01	.17	.15	-	.06	.03	.17	-.03	.03	-.01
SM_Male_GC3	**9**	.12	-.04	-.1	.13	.03	-.08	.02	0	-	.08	.05	.05	.06	.22*
SM_Male_GC5	**10**	.06	.03	.05	.19	-.1	-.02	.07	.15	.17	-	.06	-.20*	-.01	-.09
SP_Male_GC7	**11**	-.11	-.22*	-.02	-.14	.04	.09	.06	.07	-.11	.09	-	.14	-.01	.01
SP_Male_GC9	**12**	.02	-.18	.06	-.04	-.01	-.02	-.06	.04	.08	.02	.17	-	.03	0
G_Male_GC12	**13**	-.06	-.05	-.05	-.03	-.02	.21*	-.05	-.05	.01	-.01	.01	.02	-	-.23*
SM_Male_GC14	**14**	-0.15	0.06	.09	0.1	0.14	-0.14	0.1	0.08	.24*	0.01	.35**	.16	.01	-

*p < .05; **p < .01; *SM = social media, SP = streaming platform, G = gaming, SC = sexual character, GC = general character*

Table 5. Descriptive statistics for RECAP and its sub-components for sexual characters by demographic characteristics (N=205).

Variables	Overall RECAP		Character Recognition		Perceived sexual portrayal		Perceived valence	
	n (%)	Mean (SD)	n (%)	Mean (SD)	n (%)	Mean (SD)	n (%)	Mean (SD)
Age								
18	44 (21)	-.24 (.72)	44 (22)	4.61 (1.90)	44 (22)	.47 (.25)	44 (22)	-.18 (.44)
19	28 (14)	-.62 (.69)	29 (14)	4.03 (1.97)	29 (14)	.38 (.26)	29 (14)	-.39 (.46)
20	41 (20)	-.49 (.90)	43 (21)	4.30 (2.03)	43 (21)	.49 (.27)	43 (21)	-.22 (.60)
21	89 (43)	-.59 (.78)	89 (43)	4.22 (1.76)	89 (43)	.43 (.24)	89 (43)	-.32 (.47)
Missing	3 (2)		-		-		-	
Education								
High School (9-12)	12 (6)	-.73 (1.06)	12 (6)	4.08 (2.07)	12 (6)	.45 (.29)	12 (6)	-.33 (.67)
Undergraduate	138 (67)	-.40 (.76)	139 (68)	4.47 (1.82)	139 (68)	.46 (.26)	139 (68)	-.26 (.51)
Postgraduate	34 (17)	-.80 (.79)*	35 (17)	4.14 (1.82)	35 (17)	.45 (.23)	35 (17)	-.38 (.46)
Others	18 (8)	-.56 (.69)	19 (9)	3.42 (2.06)	19 (9)	.31 (.21)	19 (9)	-.23 (.29)
Missing	3 (2)		-		-		-	
Caste/tribe								
General	141 (69)	-.51 (.82)	146 (71)	4.40 (1.79)	146 (71)	.46 (.25)	146 (71)	-.30 (.54)
Scheduled caste/ Scheduled tribe	29 (14)	-.43 (.76)	30 (15)	4.13 (2.08)	30 (15)	.44 (.26)	30 (15)	-.28 (.38)
Other backward class	23 (11)	-.54 (.68)	23 (11)	3.96 (2.08)	23 (11)	.38 (.25)	23 (11)	-.18 (.39)
Missing	12 (6)		6 (3)		6 (3)		6 (3)	
Religion								
Hindu	144 (70)	-.44 (.81)	145 (71)	4.43 (1.81)	145 (71)	.46 (.24)	145 (71)	-.26 (.52)
Muslim	24 (12)	-.81 (.69)	25 (12)	4.20 (2.08)	25 (12)	.48 (.29)	25 (12)	-.49 (.44)
Christian/Sikh/ Buddhist/Jain/Jewish	12 (6)	-.36 (.92)	13 (6)	4.23 (2.17)	13 (6)	.40 (.26)	13 (6)	-.19 (.49)
No religion/Other	17 (7)	-.64 (.67)	17 (8)	3.59 (1.77)	17 (8)	.35 (.27)	17 (8)	-.28 (.33)
Missing	8 (5)		5 (3)		5 (3)		5 (3)	
Household funds insufficiency to meet daily needs								
Everyday	21 (10)	-.21 (.77)	23 (11)	3.52 (2.04)	23 (11)	.33 (.24)	23 (11)	-.14 (.30)
At least once per week	27 (13)	-.30 (.86)	27 (13)	4.78 (1.83)	27 (13)	.51 (.23)	27 (13)	-.19 (.62)
At least once per month	27 (13)	-.55 (.68)	27 (13)	4.30 (1.51)	27 (13)	.46 (.20)	27 (13)	-.33 (.40)
At least once per year	16 (8)	-.69 (.73)	16 (8)	3.88 (1.82)	16 (8)	.38 (.25)	16 (8)	-.34 (.33)
Never	65 (32)	-.56 (.79)	66 (32)	4.70 (1.86)	66 (32)	.50 (.26)	66 (32)	-.34 (.56)
Prefer not to say	40 (19)	-.60 (.85)	40 (20)	4.08 (1.93)	40 (20)	.44 (.27)	40 (20)	-.32 (.51)
Missing	9 (5)		6 (3)		6 (3)		6 (3)	
Ever engaged in penetrative intercourse with a woman								
Yes	100 (49)	-.38 (.85)	102 (50)	4.30 (1.90)	102 (50)	.45 (.26)	102 (50)	-.21 (.55)
No	102 (49)	-.61 (.71)*	103 (50)	4.29 (1.85)	103 (50)	.44 (.25)	103 (50)	-.35 (.43)*
Missing	3 (2)		-		-		-	

*p<.05, **p<.01, ***p<.001

Table 6. Descriptive statistics for RECAP and its sub-components for general characters by demographic characteristics (N=205).

Variables	Overall RECAP		Character Recognition		Perceived sexual portrayal		Perceived valence	
	n (%)	Mean (SD)	n (%)	Mean (SD)	n (%)	Mean (SD)	n (%)	Mean (SD)
Age								
18	44 (21)	-.01 (.28)	44 (21)	4.86 (1.00)	44 (21)	.24 (.23)	44 (21)	.19 (.54)
19	29 (14)	.04 (.19)	29 (14)	4.69 (1.26)	29 (14)	.16 (.14)	29 (14)	.27 (.55)
20	43 (21)	.08 (.26)	43 (21)	4.86 (1.26)	43 (21)	.25 (.22)	43 (21)	.25 (.58)
21	89 (44)	.06 (.31)	89 (44)	4.98 (1.02)	89 (44)	.25 (.21)	89 (44)	.30 (.46)
Education								
High School (9-12)	12 (6)	-.02 (.06)	12 (6)	4.08 (2.07)	12 (6)	.03 (.06)	12 (6)	.35 (.75)
Undergraduate	139 (68)	.05 (.27)	139 (68)	4.47 (1.82)	139 (68)	.23 (.20)	139 (68)	.24 (.52)
Postgraduate	35 (17)	.12 (.36)	35 (17)	4.14 (1.82)	35 (17)	.33 (.23)**	35 (17)	.30 (.39)
Others	19 (9)	-.05 (.25)	19 (9)	3.42 (2.06)	19 (9)	.21 (.22)	19 (9)	.27 (.55)
Caste/tribe								
General	146 (71)	.04 (.28)	146 (71)	4.40 (1.79)	146 (71)	.23 (.21)	146 (71)	.27 (.54)
Scheduled caste/ Scheduled tribe	30 (14)	.08 (.33)	30 (14)	4.13 (2.08)	30 (14)	.29 (.25)	30 (14)	.29 (.45)
Other backward class	23 (11)	.08 (.25)	23 (11)	3.96 (2.08)	23 (11)	.22 (.20)	23 (11)	.16 (.42)
Missing	6 (4)		6 (4)		6 (4)		6 (4)	
Religion								
Hindu	145 (70)	.02 (.27)*	145 (70)	4.92 (1.15)	145 (70)	.25 (.21)	145 (70)	.21 (.51)
Muslim	25 (12)	.04 (.26)	25 (12)	4.68 (.80)	25 (12)	.14 (.14)	25 (12)	.53 (.59)*
Christian/Sikh/ Buddhist/Jain/Jewish	13 (6)	.18 (.38)	13 (6)	5.08 (1.04)	13 (6)	.32 (.27)	13 (6)	.24 (.40)
No religion/Others	17 (8)	.23 (.26)	17 (8)	4.94 (.83)	17 (8)	.23 (.21)	17 (8)	.30 (.37)
Missing	5 (4)		5 (4)		5 (4)		5 (4)	
Household funds insufficiency to meet daily needs								
Everyday	23 (11)	.15 (.31)	23 (11)	4.83 (1.19)	23 (11)	.27 (.23)	23 (11)	.30 (.41)
At least once per week	27 (13)	.08 (.34)	27 (13)	4.81 (1.03)	27 (13)	.26 (.25)	27 (13)	.36 (.61)
At least once per month	27 (13)	-.01 (.20)	27 (13)	4.70 (.99)	27 (13)	.21 (.19)	27 (13)	.21 (.53)
At least once per year	16 (8)	.01 (.14)	16 (8)	4.69 (1.20)	16 (8)	.15 (.18)	16 (8)	.38 (.50)
Never	66 (32)	.05 (.31)	66 (32)	5.09 (.97)	66 (32)	.23 (.20)	66 (32)	.23 (.52)
Prefer not to say	40 (19)	.04 (.27)	40 (19)	4.90 (1.22)	40 (19)	.28 (.21)	40 (19)	.19 (.51)
Missing	6 (4)		6 (4)		6 (4)		6 (4)	
Ever engaged in penetrative intercourse with a woman								
Yes	102 (50)	.06 (.30)	102 (50)	4.96 (1.16)	102 (50)	.26 (.23)	102 (50)	.25 (.54)
No	103 (50)	.04 (.26)	103 (50)	4.82 (1.05)	103 (50)	.21 (.19)	103 (50)	.28 (.49)

*p<.05, **p<.01, ***p<.001

We estimated a Rasch dichotomous model for the recognition sub-component that included eight sexual characters and the six general characters (see Table 7). The sexual character items met the unidimensionality, local independence and monotonicity. The items varied in difficulty. Item difficulty parameters ranged from -2.51 to 1.46 logits, indicating that most of the social media male characters were easily recognized (e.g., SM_Male_SC1,

SM_Male_SC4), while the gaming male character, social media female character, and streaming platform male character were more difficult to recognize (e.g., G_Male_SC8, SM_Female_SC6). Mean-square fit statistics were acceptable. However, the outfit statistics for one item (SP_Male_SC13, MNSQ = 1.38) approached the mean-square threshold of 1.5 and exceeded the standardized value threshold of 3, suggesting some misfit. The item's values did not significantly differ across demographic measures. Two reasons could explain this misfit. First, the item represented the only sexual character from a streaming platform show (on Amazon Prime) that some participants may not have watched or had access to. Second, participants may have been unfamiliar with the original character played by a Bollywood actor who has portrayed multiple roles, which may have led to confusion.

We therefore removed this misfit item and reassessed the fit statistics of the remaining 7 items. The final scale met the Rasch assumptions and showed improved internal consistency (Kuder-Richardson-20 α increasing from .60 to .67). We however, retained item SM_Male_SC1 despite its misfitting outfit statistics in the revised set because most participants correctly identified the character, which further helped capture participants' perceived sexual portrayal/valence and removing this item did not meaningfully change the internal consistency of the recognition items.

For the general characters, all six items demonstrated acceptable item fit statistics. Reliability was low (KR-20 = 0.37), likely reflecting the low difficulty of the items, as most participants correctly recognized the characters. We retained all the general characters.

We present the item characteristic curves (ICCs) for the included sexual and general items in Figures 16 and 17. The curves show the relationship between participants'

character recognition ability (X-axis) and the probability of correctly recognizing each character (Y-axis). Items located further to the left of the graphs represent easier recognition, while items positioned to the right represent more difficult characters. The curves display the expected monotonic pattern, indicating that the probability of correct recognition increases with participant ability. For example, if a participant had a character recognition ability value of 2 and the curve for the item G_Male_SC8 was approximately 0.58, the participant had a 58% probability of correctly recognizing that character. See Appendix H.5 for character images and corresponding correct recognition percentages.

Table 7. Character recognition sub-component item difficulties and fit statistics ordered from the least to most difficult items.

Items	Difficulty	SE	Outfit MNSQ	Outfit ZSTD	Difficulty	SE	Outfit MNSQ	Outfit ZSTD
Sexual recall								
		8-items				**7-items**		
SM_Male_SC1	−2.51	0.24	1.23	1.25	-2.77	.25	2.03	4.71
SM_Male_SC4	−1.79	0.19	0.75	−2.49	-1.98	.20	0.78	-2.1
SM_Male_SC10	−0.16	0.16	0.89	−1.91	-.17	.17	0.93	-1.05
SM_Female_SC15	−0.15	0.16	1.08	1.22	-0.17	.17	1.15	2.02
SM_Female_SC2	−0.03	0.15	0.92	−1.36	-0.04	.16	0.98	-0.31
SP_Male_SC13	0.13	0.16	1.38	5.78		Removed		
SM_Female_SC6	0.78	0.16	0.9	−1.49	-1.98	.20	0.78	-2.10
G_Male_SC8	1.46	0.18	0.97	−0.36	1.63	.19	1.06	0.53
Eigenvalue <2		1.67				1.44		
Reliability		.60				.67		
Q3 at 95% (0.19–0.24)		0.11				0.05		
RECAP mean (SD)		-0.47 (.79)						
General recall								
SP_Male_GC7	−3.45	0.35	0.92	−0.30				
SM_Male_GC14	−2.80	0.27	0.75	−1.34				
SP_Male_GC9	−2.03	0.21	0.83	−1.40				
SM_Male_GC5	−1.61	0.19	1.05	0.46				
G_Male_GC12	−1.13	0.17	1.06	0.7				
SM_Male_GC3	−0.76	0.16	1.09	1.32				
Residual contrast eigenvalue <2	1.60							
Reliability	0.37							
Q3 95%	0.26							

MNSQ: Mean Square; ZSTD: standardized statistic.

We then assessed whether the revised sexual character RECAP scores and their sub-components differed by the demographic variables. Overall RECAP scores for sexual characters were significantly associated with participants' education ($F(3,195) = 2.73$, $p = .04$). Participants pursuing a postgraduate degree rated sexual character more negatively than those perusing an undergraduate degree ($p = .04$). RECAP scores ($F(3,190) = 3.21$, $p = .02$) and perceived valence ($F(3,196) = 2.66$, $p = .04$) varied significantly by religion. Participants identifying as Muslims rated portrayal more negatively than those identifying as Christians/Sikh/Buddhist/Jain/Jewish ($p = .03$) and those identifying as Hindu ($p = .04$), respectively. Participants who reported never engaging in penetrative heterosexual intercourse had significantly more negative RECAP scores (Student's *t* test = 2.25, $p = .02$) and perceived sexual valence scores (Student's *t* test = 2.23, $p = .02$) than those who had.

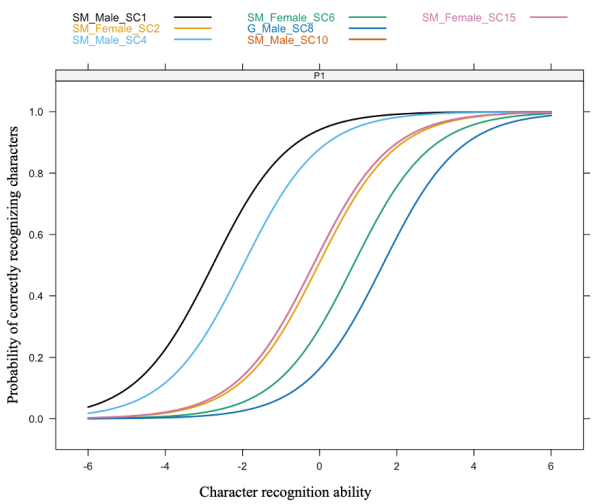


Figure 16. ICCs for 7 items sexual character recognition

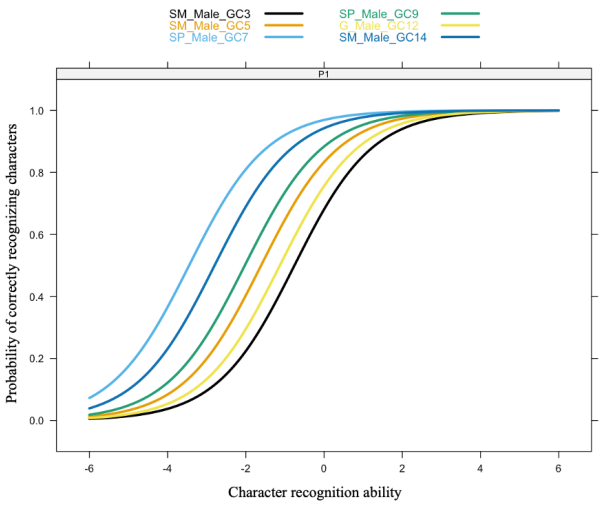


Figure 17. ICCs for 6 items general character recognition

We did not find a significant relationship between the Content-based Media Exposure (C-ME) (see 75 for description) antisocial media subscale and sexual RECAP scores ($r = -.05$), or between the neutral media exposure subscale and general RECAP scores ($r = -.004$). These findings suggest possible construct mismatch as the C-ME sub-

scales capture thematic media exposure rather than just character-based sexual portrayals. Therefore, we could not establish convergent validity.

We established concurrent validity by examining the association between participants' RECAP scores and their attitude towards condom use. Sexual RECAP scores were weakly but significantly correlated with participants' condom use attitudes ($r = -.20$, $p < .01$). This is indicative that participants with higher sexual RECAP scores had lower endorsement of condom use. In other words, participants who perceived the characters as less sexual reported lower endorsement of condom use. We did not find a relationship between RECAP scores for general characters and condom use attitudes.

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Chapter SIX

AIM 3 RESULTS (QUANTITATIVE)



Photo of Aman (data collection team member) with survey participant

Chapter 6: Aim 3 results (Quantitative)

What is missing: Limited understanding of how implicit and fragmented sexual media exposure on digital media platforms affect young men's condom use related knowledge, attitudes, norms, beliefs, intention and use. There is also lack of evidence from low-and-middle-income countries on how such behavioral determinants simultaneously and differentially relate to condom use intention and behavior.

What this dissertation adds: Applies the Integrated Model of Behavioral Prediction (IMBP) to examine how digital sexual media exposure measured using RECAP relates to pathways linking condom use knowledge, attitudes, peer and masculine normative beliefs, and self-efficacy with condom use intention and behavior among 205 young men aged 18 to 21 years in Delhi, India. Identifies two indirect associations between exposure to sexual digital media content and condom use intention through masculine normative beliefs and condom use self-efficacy.

How it advances the field: Identifies specific theory-driven mechanisms through which digital media sexual exposure relates to condom use intention, providing clear targets for behavioral and community health interventions among young men in India.

Table 8 presents the descriptive statistics and correlation matrix for digital media sexual exposure, the behavioral determinants, and condom use intention and behaviors.

Table 8. Descriptive statistics and correlation matrix between all IMBP study measures

Variables	***Mean (SD)***	***Reliability*** α	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***
1. Digital media sexual exposure	-.50 (.79)	.67	-	-.17*	-.20**	-.01	.26**	-.26**	.01	-.17
2. Condom use knowledge	9.50 (1.90)	.04		-	.29**	.06	-.29**	.35**	.16*	.28**
3. Condom use attitude	3.27 (.78)	.81			-	.33**	-.25**	.26**	.11	.32**
4. Peer normative beliefs	2.60 (.57)	.61				-	-.09	.07	.19**	.16
5. Masculine normative beliefs	1.20 (.66)	.75					-	-.27**	.16*	-.35**
6. Condom use self-efficacy	3.47 (.64)	.82						-	.23**	.43**
7. Condom use intention	3.51 (1.11)	.93							-	.06
8. Condom use behavior[#]	1.90 (.96)	.73								-

*p < .05; ** p < .01 (two-tailed). [#]Only for participants who ever engaged in penetrative heterosexual intercourse

Overall, more positive evaluations of sexual characters in digital media were associated with lower condom-related knowledge, lower attitudinal endorsement of condom use, less gender-equitable masculine beliefs, and weaker condom use self-efficacy. Condom use knowledge, attitudes, and self-efficacy showed consistent positive associations with condom use intention and behavior. Peer normative beliefs were associated only with condom use intention and showed limited associations with other variables. Gender-inequitable masculine normative beliefs were significantly associated with most constructs, except peer normative beliefs. Condom use self-efficacy was positively associated with both intention and behavior, whereas condom use intention was not significantly associated with behavior. Overall, the correlation matrix partially supported H3a, as exposure to sexual content on digital media was associated with several, but not all IMBP constructs.

To test H3b, we estimated a path analysis model where the behavioral determinants acted as mediators between exposure to sexual content in digital media and condom use intention. Figure 18 and Table 9 present the results. We obtained a just-identified model (df = 0), so model fit indices were not interpretable; therefore, we focused on the parameter estimates. The model explained 25% of the variance in condom use intention ($R^2 = .25$).

The total effect of sexual media exposure and condom use intention was not significant. Exposure to sexual content in digital media was significantly associated with all behavioral determinants except peer normative beliefs. This suggests that, more positive evaluations of sexual character on digital media was associated with lower condom use knowledge ($\beta = -.17$, $p < .01$), weaker attitudinal endorsement of condom use ($\beta = -.20$, $p < .01$), weaker masculine equitable beliefs ($\beta = .22$, $p < .01$), and weaker perception of

condom use self-efficacy ($\beta = -.26$, $p < .001$). However, only masculine normative beliefs ($\beta = .29$, $p < .001$) and condom use self-efficacy ($\beta = .24$, $p = .014$) were significantly associated with condom use intention. These findings suggest something interesting. Participants with more hypermasculine normative beliefs showed higher intention to use condoms in the next six months. However, when participants had stronger condom-use self-efficacy, they had a higher intention to use condoms in the next six months.

Bootstrapped mediation analysis revealed two significant but opposing indirect effects linking exposure to sexual content in digital media and condom use intention through masculine normative beliefs ($\beta = .07$, $p = .02$) and self-efficacy ($\beta = -.07$, $p = .03$). Specifically, we observed that a one standard deviation increase in positive evaluation of sexual content in digital media was associated with a .07 standard deviation increase in intention to use condoms in the next six months through masculine normative beliefs. In contrast, a similar increase in exposure was related to a .07 standard deviation decrease in condom use intention through reduced condom use self-efficacy. These indirect effect pathways were similar in magnitude and opposite in direction, offsetting each other and resulting in a non-significant total indirect effect (Coutts & Hayes, 2023). Peer normative beliefs were not associated with both digital media exposure and condom use intention, whereas condom use knowledge, attitudes were not associated with condom use intention. Therefore, H3b was partially supported.

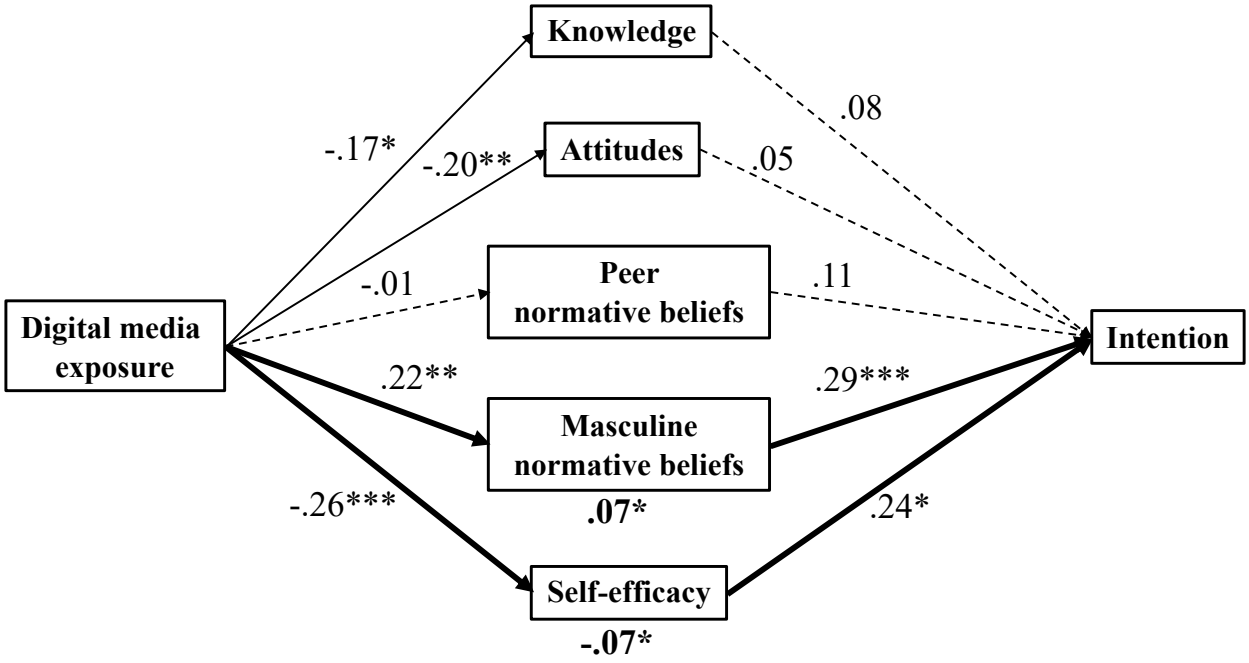


Figure 18. Direct and indirect effects of exposure to sexual content in digital media on condom use intention. N = 194.

Notes: All coefficients are standardized. Correlations between error terms are in Supplementary table H.7, *p < .05; ** p < .01; *** p < .001

Table 9. Path analysis results where the behavioral determinants acted as mediators between exposure to sexual content in digital media and condom use intention.

Relationship / Path	**B**	**β**	**SE**	**z**	**p**
Exposure → Condom use related mediators (Path a)					
Sexual exposure → Knowledge (a1)	-.39	-.17	.15	-2.98	.00
Sexual exposure → Attitude (a2)	-.19	-.20	.07	-2.98	.00
Sexual exposure → Peer Norms (a3)	-.01	-.01	.05	-.55	.89
Sexual exposure → Masculinity (a4)	.18	.22	.06	3.28	.00
Sexual exposure → Self-Efficacy (a5)	-.21	-.26	.06	-4.08	<.001
Mediator → Condom use intention (Path b)					
Knowledge → Intention (b1)	.04	0.08	.04	1.1	.27
Attitude → Intention (b2)	.07	0.05	.10	.66	.51
Peer Norms → Intention (b3)	.22	0.11	.13	1.72	.08
Masculinity → Intention (b4)	.49	0.29	.13	3.86	<.001
Self-Efficacy → Intention (b5)	.41	0.24	.17	2.47	.01
Indirect Effects (Path a×b)					

Knowledge	-.02	-.01	.02	-1.12	.33
Attitude	-.01	-.01	.02	-.3	.55
Peer Norms	-.00	-.00	.01	-.53	.90
Masculinity	.10	.07	.04	2.29	.02
Self-Efficacy	-.09	-.07	.04	-2.05	.03
Direct & Total Effects					
Direct Effect (c′)	-.03	-.02	.1	-.34	.74
Total Indirect Effect	-.03	-.02	.06	-.63	.56
Total Effect (c)	-.07	-.05	.1	-.67	.51

Note: *N=194, 11 cases were dropped from the exogenous variable. B = unstandardized coefficient; β = standardized coefficient;* *p < .05; ** p < .01; *** p < .001 (all significant relationships are in grey)

We then tested H3c using a similar multiple mediation model using path analysis as used in H3b. However, in these models, we only considered those participants who self-reported having had heterosexual penetrative intercourse. The path model was over-identified (df = 8) but demonstrated poor fit to the data (CFI = .65, TLI = −.85, RMSEA = .23, SRMR = .11), primarily due to the low sample size (n = 96). The model explained 10% of the variance in condom use intention (R^2 = .096), and only .5% of condom use behavior (R^2 = .005). Although we see that greater exposure to sexual content in media was significantly associated with lower condom use knowledge (β = −.22, p = .02), and lower condom self-efficacy (β = −.26, p = .01), we found none of the behavioral determinants to be associated with condom use intention. Further, we observed that intention was not significantly associated with condom behavior (β = .07, p = .58). Consequently, none of the indirect effects from media exposure to intention or behavior through the psychosocial determinants were statistically significant. Therefore, H3c could not be established.

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Chapter SEVEN

DISCUSSION OF FINDINGS AND FUTURE IMPLICATIONS



Photo by Manish (data collection team member)

Chapter 7: Discussion of findings and future implications.

Aim 1 discussion

Our qualitative study provides a nuanced understanding of how young men aged 18 – 21 years in Delhi, India, use digital media (social media, gaming, and streaming platforms) to navigate their sexual and reproductive health needs. Ten sexually experienced and 12 inexperienced young men described how different digital media content (e.g., algorithm-driven reels on Instagram, how-to videos on YouTube, online communities on Reddit, romantic and masculine scripts in streaming content, and hypersexualized characters in digital games), along with other online platforms such as Google, functioned not only as private informational environments where they sought, encountered, and interpreted information about their bodies, relationships, sexual feelings, and safe sexual practices, but also as spaces that shaped their expectations around relationships and masculinity. Overall, our findings highlight digital media as a powerful yet unstructured sexual and reproductive health educator among young men and underscore the need for trustworthy digital media interventions that provide accurate information, set realistic expectations about men's bodies, relationships, and sexual feelings, and deliver content in ways that feel personal, realistic, and easy to retain.

Young men described using multiple media sources to learn and verify information about their bodies, how to initiate and navigate romantic relationships. They relied on Google searches for quick information, YouTube videos for detailed visual explanations, and AI tools and online communities like Reddit for more personalized guidance. Prior studies have explained why young people prefer to explore SRH content online. Walsh-Buhi and colleagues' (2025) review of multiple studies found that between 20% to 70% of

young people seek SRH information online. Mitchell and colleagues (2014) in their quantitative study among 5542 internet users in the U.S. and Waling and colleagues' (2023) qualitative study among 37 young people in Australia highlight that young people turn to online sources due to the privacy they afford, the ability to explore information at their own pace, and the opportunity to verify information without fear of stigma or judgment, particularly when alternative sources are limited. Engel (2023) reviewed 8 systematic reviews and highlighted the growing role of social media as a platform for sexual health information, given its accessibility, interactivity, and integration of entertainment.

Importantly, young men's engagement across multiple platforms suggests that media use does not occur as a single, uniform experience; rather, individuals strategically navigate different platforms to meet distinct needs. This aligns with the concept of media affordances, which describes how specific features of digital platforms enable particular user behaviors (Karahanna et al., 2018; Ronzhyn et al., 2023). For example, Wang and colleagues (2024) in their qualitative study among young adults in China identified four types of cross-platform media use patterns, including information seeking, social connection, impression management, and exploratory use. Similarly, Chemnad and colleagues (2023) found that young adults across ten countries, including India, used platforms such as Facebook, WhatsApp, and Instagram for varied purposes, including accessing visual content, engaging in peer communication, and browsing information. Our study extends these insights by showing how young men purposefully combine platforms specifically for SRH-related learning and validation, illustrating how cross-platform navigation not only reflects general media use patterns but also serves as a targeted strategy

for managing sensitive health information needs in contexts where stigma and informational gaps persist.

Media-based sexual scripts affect young men's expectations about romantic and sexual relationships. In our study, participants described how narratives in Bollywood films, streaming content, and content on Instagram often gave them ideas of relationship behaviors, including gestures like gift-giving and sending romantic messages. These accounts align with a substantial body of content analyses that demonstrated films and television to function as cultural storytellers that create and reinforce norms around romance and sexuality (Aubrey, 2004; Aubrey et al., 2020b; Dajches et al., 2021; Kunkel et al., 2007; Masterson & Messina, 2023; Timmermans & Van den Bulck, 2018b). Simon and Gagnon's (1984) Sexual Script Theory (SST) provides a useful framework for interpreting these findings. The theory posits that individuals rely on internalized "scripts" operating at the cultural level based on collective and shared meanings, interpersonal level based on social interactions and intrapsychic level based on personal desire management. Such scripts often depicted by media characters help individuals to interpret social situations, guide expectations, and shape their sexual communication and behavior. In this context, media representations appear to serve as a key source of such scripts, shaping how young men conceptualize and enact romantic relationships.

Social media algorithms function as a double-edged sword, exposing young men to both beneficial and potentially harmful sexual content and, in turn, influencing young men's behaviors. Participants frequently described how platform algorithms, particularly on Instagram, curated highly engaging yet often low-value content, which they referred to as "brain rot," characterized by repetitive, attention-capturing material that provides

immediate gratification or “instant dopamine,” especially through platform features like the For You Page on TikTok, Explore page on Instagram (Yousef et al., 2025). Dr. Anna Lembke, a psychiatrist at Stanford, notes in her book Dopamine Nation, “Dopamine is triggered by our brain's search-and-explore functions, telling us, ‘Hey, pay attention to this, something new has come along.’ Add to that the artificial intelligence algorithms that learn what we've liked before and suggest new things that are similar but not exactly the same” (Goldman, 2021; Lembke, 2021).

Some participants also reported that algorithmically recommended relationship-oriented content often elicited negative emotional responses, including feelings of inadequacy, guilt, and jealousy. In addition, some described frequent exposure to sexually suggestive content, often referring to it as “soft porn” (e.g., “bikini” or “get ready with me” videos), triggering sexual arousal despite not being actively sought. This pattern is consistent with recent evidence from the U.S. indicating that 68% adolescent boys (n=1017) reported seeing masculinity identity related content, like girls only want to date certain types of guys, on social media feeds without intentional searching (Robb & Mann, 2025b). Regehr and colleagues (2025) in their mixed methods study performed algorithmic analysis of over 1,000 social media videos and found algorithmic recommendations amplifying and normalizing harmful misogynistic ideologies by packing them within entertainment formats, which often affected users’ mental health and relationships.

Although empirical research on soft porn[2] remains limited, Dou and colleagues (2025) described how this new form of pornography is increasingly prevalent in social media and has higher user engagement. Social media algorithms often work based on user

[2] Urban dictionary describes soft porn as pornographic content that are less visual and do not contain close up images of genitalia, body fluids or characters engaging in sexual activity explicitly.

engagement predictions (Narayanan, 2023). For example, YouTube and TikTok predict videos based on a combination of user liking, commenting, and length of play time (Covington et al., 2016; Vombatkere et al., 2024). When a user watches a video till the end, the algorithm uses it to recommend similar videos. Participants' descriptions of "doomscrolling," which is the habitual, prolonged consumption of algorithmically curated content, further underscore how soft porn may be passively and repeatedly pushed into users' feeds, even without active searching. This concern is echoed in recent legal and policy discussions highlighting how specific design features of platforms owned by major technology companies may contribute to addictive use patterns (C. Kang et al., 2026).

Boys' and young men's engagement with digital gaming is well established, with games serving as spaces for social connection, skill development, and identity exploration (Maheux et al., 2025; Robb & Mann, 2025b; Sidoti, 2024). However, less attention has been given to regulating sexualized content within gaming environments and to supporting parents in identifying age-appropriate games (Benrazavi et al., 2015; Shin & Huh, 2011). Consistent with prior research (De la Torre-Sierra & Guichot-Reina, 2025; Lynch et al., 2024; Vidaña-Pérez et al., 2018), participants in our study reported frequent exposure to hypersexualized characters and in-game sexualized advertisements, which contributed to their sexual awareness and, at times, arousal. Such presence of hypersexualized characters in video games has been found to shape gender norms and negative interpersonal behaviors. Experimental studies found that participants who played with sexualized female characters in video games showed higher levels of harassment toward female partners and greater endorsement of rape-supportive attitudes compared to those who played non-sexualized characters (Burnay et al., 2019; Noël et al., 2021). At the same time, parental

mediation can play a critical role in mitigating such risks. Meta-analytic evidence suggests that active mediation (e.g., parent–child discussions about media use) and autonomy-supportive restrictive mediation (which combines guidance with adolescent autonomy) are associated with lower engagement in risky behaviors, including sexual activity (Chen & Shi, 2019).

Pornography remains an initial entry point for understanding sexual desire, arousal, and sexual identity. Participants also described how exposure to sexualized content on platforms such as Instagram expanded their knowledge beyond intercourse to include topics such as orgasm, lubricants, and sex toys. Prior research similarly identifies pornography as a primary source through which young people learn about sexual behaviors, norms, and perceptions of pleasure (Gunnoo & Powell, 2023; Kirby, 2021; Maas et al., 2025). At the same time, young men's cross-platform exposure to a more nuanced understanding of sexual health may provide opportunities for them to critically evaluate information and, in some cases, question or challenge harmful social and gender norms (Power et al., 2024).

Participants described learning about safe sexual practices, particularly condom use, initially through peers and subsequently through a combination of online media platforms. They reported using YouTube and television advertisements, Google searches, and online communities to acquire procedural knowledge about condom use and safer sex practices. Consistent with these findings, Burns and colleagues (2021) found that young African American males identified YouTube as an accessible and preferred source for learning condom use, particularly when content featured relatable or well-known figures.

Participants reported limited, indirect, or absent communication about sexual health with parents and formal institutions, often attributing this to discomfort and prevailing socio-cultural constraints. Connecting this to the Media System Dependency theory (Ball-Rokeach, 1985) helps to interpret how digital media becomes the primary space for learning about sexual health in contexts where open discussion remains stigmatized and comprehensive sexuality education is lacking. Supporting this, Guilamo-Ramos and colleagues (2012) in their qualitative study among young people in rural Maharashtra, India, found that young people expressed a strong desire for parental guidance on sexual health. However, another study by Sandra Byers and colleagues (2021) among parents of adolescents in India further showed that such discussions are shaped by their own knowledge, comfort, and prior experiences of non-communication with their parents, contributing to persistent gaps in parent–child communication about sexual health.

Participants' perceptions of the ideal man often diverged from dominant media portrayals, revealing a tension between personally held values and the norms portrayed in digital media. While many participants described an ideal man and partner as empathetic, respectful, emotionally expressive, and a good listener, they also acknowledged, and some endorsed, media representations that emphasize dominance, authority, and economic provision. Consistent with precarious manhood theory, which conceptualizes manhood as a socially-achieved and fragile status requiring continual validation (Vandello et al., 2008; Vandello & Bosson, 2013), these contrasting ideals reflect competing social pressures to embody both personally held values and digital media portrayed norms. Digital media environments appear to intensify this tension by circulating diverse and sometimes contradictory masculine scripts, including both emotionally grounded and dominance-

driven portrayals. Literature on online spaces, including the "manosphere," suggests that algorithmically amplified content may reinforce rigid, adversarial forms of masculinity (Ging, 2019; Renström & Bäck, 2024). Equimundo's recent report highlights how manosphere influencers appear particularly effective in leveraging platform dynamics to reach young men, often framing societal changes as threats to male identity and promoting hyper-independence and aggressive forms of masculinity, thereby enabling the spread of misogynistic narratives and misinformation in online spaces (Brito et al., 2024). Taken together, our findings show that exposure to diverse digital masculinities may simultaneously reinforce and challenge traditional masculine norms.

Finally, participants emphasized the need for structured, credible, realistic, and practical digital resources on body image, sexual health, and relationships. They expressed a preference for concise, engaging formats, such as short YouTube tutorials and reels, that are easier to understand and retain, as well as personalized, AI-driven tools that can provide tailored guidance. These needs align with prior research. For example, Patterson and colleagues (2019) in their qualitative interviews with young people, identified several barriers to engaging with online sexual health content, including difficulty filtering overwhelming information, limited awareness of trusted sources, lack of locally relevant service information, and challenges navigating complex organizational websites. Other researchers have also called for more realistic and inclusive portrayals of youth sexuality and gender, alongside efforts to involve educators in equipping young people with the skills to critically evaluate the quality and reliability of online information (Aubrey et al., 2025; Walsh-Buhi et al., 2025).

Aim 2 discussion

Aim 2 of the dissertation offers a novel, validated, easy-to-administer, and culturally-appropriate digital media exposure measure to assess young adults' exposure to sexual content across social media, streaming, and gaming platforms. We developed and psychometrically evaluated a scale we named REceptivity to Characters Appearing in digital media Platforms (RECAP) using data from 234 young Indian men. Our research offers a solid character-based sexual media exposure that can be used within contemporary, multi-platform digital environments.

How young people interpret sexual media messages remains critical for accurately assessing their exposure to sexual content. In our study, we captured young men's subjective interpretation of sexual and general portrayals depicted by digital media characters. This means two participants exposed to the same character may have reported different levels of sexual portrayal or valence. Participants in our study likely varied in their self-reported ratings of perceived sexual portrayal and valence based on differences in character recognition, attention to characters in their media environment, personal interpretation, relevance and prior sexual experiences (Bleakley, Fishbein, et al., 2008; Bleakley, Hennessy, et al., 2008; Peter & Valkenburg, 2010; Schmälzle & Huskey, 2023). Accordingly, participants' overall sexual RECAP scores tended to cluster toward the midpoint of the scale, indicating more lenient evaluations of sexual content. Our qualitative findings also reinforce this pattern, as some participants did express mixed interpretations of sexual portrayals, particularly for comedic characters.

Traditionally, studies have relied on trained coders to systematically evaluate sexual content and make standardized judgements about sexual portrayals (Aubrey & Frisby,

2011; Dillman Carpentier et al., 2017; Masterson & Messina, 2023), or combined objective coding with self-reported exposure measures (Bleakley, Hennessy, Fishbein, et al., 2011). However, evidence also suggests that substantial differences may emerge between coder-based assessments and viewers' perceptions. For example, Austin (2009) demonstrated that trained coders and viewers differed in their reporting of how frequently certain behaviors, such as underage drinking among boys, appeared in media messages. Additionally, several researchers demonstrated that sexual portrayal in media (other than pornography) often is implied, rather than explicitly expressed along with the inherent subjectivity of sex in media (Manganello et al., 2010; Timmermans & Van den Bulck, 2018b; Ward et al., 2014), making it important to measure participants subjective appraisal of sexual content portrayed by the digital media characters they encounter in their digital media ecosystems. By prioritizing participants' own evaluations of character portrayals, we captured how sexual content is experienced and interpreted in real-world digital media environments. This approach strengthened our study by allowing us to center participants' perceived perspectives based on what they notice, how they interpret it, and what it means to them, rather than relying solely on externally assigned judgments.

Participants who reported never engaging in penetrative heterosexual intercourse had significantly more negative RECAP scores and perceived sexual valence scores than those with sexual experience, whose scores were closer to neutral portrayal. This pattern indicates that sexually inexperienced individuals may evaluate sexual media portrayals more critically or assign less favorable meaning to such content. Existing literature reflects similar variation in how young people respond to sexual media, although most evidence has focused on gender differences. Studies consistently show that girls are more likely to

respond negatively to sexual content, often citing unrealistic or exaggerated portrayals (Cameron et al., 2005; Doornwaard et al., 2014; Lebedíková et al., 2023). By comparison, boys more frequently describe sexual content as arousing or enjoyable (Doornwaard et al., 2017; Nicklin et al., 2020). However, Nicklin and colleagues (2020) found that these responses vary by exposure, where boys with limited or no prior exposure to sexual content shared through peers report less positive reactions, such as finding such content less humorous, than those with greater exposure. Young men who have ever engaged in sexual activity may view sexual portrayals as more normative or emotionally neutral, potentially reflecting habituation or desensitization to such content over time (J. D. Brown & L'Engle, 2009; Martellozzo et al., 2020; Nicklin et al., 2020; Reichert et al., 2007).

The pattern of significant correlations among the RECAP sexual character scores indicates that these exposures represent a coherent and internally consistent construct, particularly among participants who reported engaging in penetrative heterosexual intercourse. The Uses and Gratification Theory and the Media Practice Model suggests that viewer's actively engage with media to fulfil specific needs (Katz et al., 1973) and based on their sexual development (Steele & Brown, 1995), and such engagement likely shapes how consistently sexual content is interpreted across different media characters (Bleakley, Hennessy, & Fishbein, 2011; J. D. Brown, 2000; Rain & Mar, 2021). Previous studies support this interpretation. Longitudinal studies by Bleakley and colleagues (2008) and Brown and colleagues (2006) have shown that sexually active youth both seek out and are more frequently exposed to sexual content in media. More recent research further suggests that sexual experience strengthens schema-based processing of media, leading individuals to interpret sexual cues more consistently and efficiently (Doornwaard et al., 2014).

In contrast, participants who had not engaged in penetrative heterosexual intercourse showed fewer significant correlations across sexual characters, indicating that these exposures do not form a coherent construct within this group. This lack of coherence likely reflects lower personal relevance, selective attention to sexual content and greater variability in interpretation to due to lower cognitive schemas needed to meaningfully interpret sexual portrayals. Rain & Mar (2021) demonstrated that attachment actively shapes how individuals engage with media characters, influencing both their level of immersion and the types of characters they find appealing. An experimental study by Doornwaard and colleagues (2014) also demonstrated that while all participants show selective attention to sexual cues, experimental groups who viewed sexual videos were quicker at detecting hidden sexual cues.

RECAP scores for sexual characters varied significantly by participant's educational attainment, with those pursuing higher degrees rating characters more negatively. This suggests that higher education may enhance media and sexual literacy, enabling participants to better evaluate sexual characters in digital media. Pinkleton and colleagues (2012) and Scull and colleagues (2022) found that youth who received media literacy training were more likely to report sexual media depictions as unrealistic and inaccurate.

Item difficulty estimates indicated meaningful variation in character recognition across platforms. Participants more easily recognized social media male characters, whereas gaming male characters, social media female characters, and streaming platform male characters were more difficult to identify. These differences likely reflect their access and presence across digital media platforms (Horvát & Hargittai, 2021), algorithm-driven

exposure, and pattern of media engagement. In digital media ecosystems, media characters are not restricted to one platform and are present and share content across platforms. For example, many characters in our measure maintain large followings across platforms: CarryMinati (SM_Male_SC1), Samay Raina (SM_Male_SC4) have high following on Instagram (SM_Male_SC1 has 21.3 million followers, SM_Male_SC4 has 7.4 million followers) as well as on YouTube (SM_Male_SC1 has 45.4 million subscribers, SM_Male_SC4 has 7.37 million subscribers). Samay Raina has also appeared in news due to recent controversies (The Times of India, 2025). Similarly, Kapil Sharma (SP_Male_GC7) in addition shows and movies in streaming platforms like Netflix, also has a TV show, and is present in social media platforms (Instagram – 45.6M followers) including YouTube (10 million subscribers). Such presence can amplify repeated exposure and familiarity. This pattern aligns with the Drench Hypothesis (Greenberg, 1988), which posits that immersive and downpour of media portrayals can enhance recognition and engagement with media characters. Algorithmic curation of social media content further reinforces this process by repeatedly exposing users to similar content, often independent of active search behaviors (Weale, 2024).

Participants had lower recognition of female sexual characters (for example Muskan Karia [SM_Female_SC6] with 1.4 million followers on Instagram) where they may not engage with or be exposed to such characters as frequently. Similarly, lower recognition of gaming and streaming characters likely reflects differential access and engagement. Structural constraints, including the cost of gaming consoles, high-performance devices, and subscription-based streaming platforms, may limit exposure (Deskey, 2022; Navani, 2021). This is consistent with broader trends showing a shift

towards mobile-based gaming from desktop/console-based gaming due to affordability and accessibility (KPMG, 2021; Nayak, 2021). Indian studies found that 90% of online gamers in India preferred using mobile phones as their gaming device (KPMG, 2021; Nayak, 2021). In our scale, sexual gaming character Trevor Phillip (G_Male_SC8) was from Grand Theft Auto V, which predominantly runs on desktops or gaming consoles like Play Stations or Xbox (Rockstar Games, n.d.). Qualitative findings from our study further support this explanation, as participants described shared subscriptions, reliance on informal access routes, and selective viewing practices. These access barriers and usage patterns likely contributed to lower familiarity with certain characters (e.g. Baba Nirala - SP_Male_SC13) and may also explain the poor fit of specific items that participants had limited exposure to or found difficult to recognize.

Inspection of the item characteristic curves (ICCs) further highlighted differences in character recognition performances. Sexual character recognition items were distributed across a wide range of the participant ability continuum, indicating variability in item difficulty and strong discrimination across participants. This spread suggests that the items effectively capture differences in recognition ability from lower to higher levels. In contrast, general character recognition items were more tightly clustered, reflecting limited variability in item difficulty and reduced discrimination across participants. This restricted spread likely constrained the scale's ability to capture meaningful variability and may explain the low internal consistency observed for this sub-component. Prior research has similarly reported lower reliability for general media exposure measures (Lee et al., 2008). It is important to note that low reliability introduces measurement error, inflates error variance in statistical models, and can attenuate effect sizes, potentially obscuring

meaningful associations (Fikkers et al., 2017; Jordan et al., 2007; Lee et al., 2008; Neijens et al., 2024).

Conceptually, sexual content may be more salient, distinctive, and memorable than general media portrayals, leading to stronger recognition and sexual portrayal and valence differentiation. This aligns with prior studies showing that individuals recall sexual media content more readily than non-sexual content (Gong et al., 2021; Samson, 2018; Toverljani et al., 2017). The sexual characters recognition items were moderately reliable ($\alpha = .67$) which is consistent with prior research on self-reported media exposure. A meta-analysis by Scharkow (2019) found that self-reported media exposure measures in high-choice media environments typically show moderate reliability (0.69, 90% HDI: 0.65, 0.72), with slightly lower estimates among younger populations. Similar findings have been also reported by Lee and colleagues (2008) suggesting moderate reliability to youth self-reported measures.

We were unable to establish convergent validity, likely due to conceptual differences between the RECAP measure and the comparison scale (C-ME) (see page 75 for measure description). Content-based Media Exposure scale (Carlson & Herdman, 2012; den Hamer et al., 2017) is a 17-item scale that measures exposure to antisocial (e.g., sex, alcohol use) and neutral content (travelling, cooking). Although C-ME captures broader antisocial media exposure across multiple platforms, it includes only two items related to sexual content (people who openly talk about sex/people who are having sex) (den Hamer et al., 2017), resulting in insufficient overlap between constructs.

We established concurrent validity by examining associations between RECAP scores and condom use attitudes. We found that participants with higher sexual RECAP

scores had lower endorsement of condom use. This finding is consistent with prior literature, greater exposure to sexual content was associated with more permissive sexual attitudes (Coyne et al., 2019; Ward, 2016). Additionally, prior research indicates that perceived realism of sexual portrayals strengthens these associations, shaping negative sexual attitudes (Ferris et al., 2007; Peter & Valkenburg, 2016; Ward & Friedman, 2006).

The RECAP scale advances existing measures of sexual media exposure by capturing exposure across multiple digital media platforms rather than relying on single-platform or frequency-based assessments (Jordan et al., 2007; Neijens et al., 2024). It is efficient, easy to administer, and adaptable across formats, including digital and paper-based surveys. Importantly, RECAP is flexible and can be extended to assess exposure to other health-related media content, such as substance use, body image, violence, and gender norms, by modifying the character set. Its emphasis on culturally-appropriateness of media characters allowing for context-specific measurement that can be adapted in both low-and-middle-income or high-income countries, gender, and age groups. Taken together, RECAP offers a systematic, scalable, and adaptable approach to measuring media exposure in increasingly complex digital environments.

Aim 3 discussion

This component of the dissertation applied constructs from the Integrated Model of Behavioral Prediction (IMBP) to examine how exposure to sexual content in digital media, operationalized using our novel measurement approach (RECAP), relates to pathways linking condom use knowledge, attitudes, peer and masculine normative beliefs, and self-efficacy with condom use intention and behavior among 205 young men aged 18 to 21 years in Delhi, India. The path analysis identified two notable indirect associations between

exposure to sexual digital media content and condom use intention through masculine normative beliefs and condom use self-efficacy. These indirect associations are comparable in magnitude but operate in opposite directions, effectively offsetting one another and yielding a non-significant total indirect effect. We did not observe a significant association between condom use intention and condom use behavior. However, these findings still offer important insights by isolating the specific IMBP constructs through which media exposure is linked to condom use intention. This nuanced understanding helps inform evidence-based recommendations by identifying which behavioral determinants may play a more salient role in shaping intention within this population.

Specifically, we found that more favorable evaluation of sexual content in digital media were associated with greater intention to use condoms in the next 6 months, operating through weaker masculine normative beliefs. This pattern diverged from our expectations. Based on prior literature, we anticipated that more favorable evaluations of sexual content would be associated with weaker masculine normative beliefs (Cala et al., 2025; Renström & Bäck, 2024), which would be associated with lower condom use intention (Fleming et al., 2018; Noar & Morokoff, 2002; Shai et al., 2012). When Bleakley and colleagues (2011) conducted a similar study to examine such IMBP relationships, they found only peer normative beliefs to mediate the relationship between media exposure and condom use intention.

Instead, our findings align with a broader body of research suggesting that masculinity is multidimensional, and its different facets (e.g. status, toughness, antifemininity) can have positive, negative, and no effects on health-related behaviors (Addis & Mahalik, 2003; Mankowski & Maton, 2010; Vincent et al., 2016). Particularly,

Shearer and colleagues (2005) and Vincent and colleagues (2016) found that adherence to masculine norms emphasizing men's status (e.g. authority, rationality) were associated with positive condom-related beliefs, whereas Noar and Morokoff (2002) found that norms emphasizing toughness and antifeminism were related to earlier initiation of risky sexual behavior. This suggests that masculine norms do not operate uniformly but instead shape health outcomes in complex and context-dependent ways.

A few possible interpretations may explain what we found. First, heterogeneity in the types of characters present in RECAP and framing of sexual content within digital media young men consumed may differentially influence masculinity-related beliefs, rather than uniformly reinforcing gender inequitable masculine norms. Second, endorsement of young men's masculine ideals may coexist with intentions to engage in sexual activity while still prioritizing condom use, particularly among young men who view condom use as in line with that status such as authority, relationality, responsibility (Gordon et al., 2013; Vincent et al., 2016). Precarious manhood theory posits that manhood is a socially achieved status that must be earned and is tenuous and impermanent if they fail to demonstrate adequate levels of masculinity (Vandello et al., 2008; Vandello & Bosson, 2013). Earlier research indicates that such pressures often manifest in displays of toughness, dominance, and engagement in risk-taking behaviors (Vandello et al., 2024; Vandello & Bosson, 2013). However, these dynamics may be evolving among younger men. In contemporary contexts, certain traditionally risky behaviors, such as foregoing condom use may no longer uniformly function as markers of masculinity. Instead, young men may increasingly recognize that unprotected sex carries potential consequences for their future, including impacts on their social status related to education and life

opportunities (DiMuccio et al., 2017). Finally, measurement considerations may have contributed to these findings. We used a brief version of the Man Box scale that captures multiple dimensions of masculinity (e.g., rigid gender roles, control, hypersexuality, self-sufficiency, heterosexuality, and homophobia) with one item each, which limited our ability to disentangle the effects of specific dimensions such as status, toughness, or antifemininity. Notably, most existing evidence on masculinity and condom-related beliefs comes from high-income settings which also underscores the need for further research to examine how these relationships operate in diverse sociocultural contexts.

We also found that the association between positive evaluation of sexual characters on digital media and lower condom use intention operated through lower condom use self-efficacy. A plausible explanation is that, similar to sexual content in films and television consumed by young people, digital media often do not depict condom-related skills, such as correct use, access, and negotiation (Alexopoulos & Taylor, 2020; Kinsler et al., 2019). In the absence of such portrayal, young men may develop lower confidence in their ability to effectively use condoms, which in turn relates to lower intention to use them in the future (Eversole et al., 2017). Evidence from India partially supports this interpretation. Suryawanshi and colleague's (2016) cross-sectional survey among 2502 married men from four states found that exposure to condom-related mass media messaging was associated with higher condom use self-efficacy and use, particularly among younger men. Ghosh and colleague's (2021) secondary analysis of national data showed that exposure of family planning messages through television was linked to increased uptake of reversible contraceptive methods among women. Sood and colleague's (2006) evaluation of a mass media campaign in Delhi, Rajasthan, Uttar Pradesh demonstrated that media exposure can

improve knowledge and communication about condoms among those exposed to campaign messages but had limited effects on condom use behaviors. Our findings are also consistent with evidence from other settings. For example, Træen and colleagues (2014) used a cross-sectional study among 1391 men who have sex with men in the U.S. found that exposure to sexually explicit media depicting non-condom use was associated with greater sexual risk behavior through lower condom use self-efficacy. Similar findings were also demonstrated by Li and colleagues (2017) in China and by Choi and colleagues (2019) using an experimental study among young adults in the U.S.

Consistent with prior applications of the Integrated Model of Behavioral Prediction and related frameworks (Bleakley, Hennessy, Fishbein, et al., 2011; Noar et al., 2006; Widman et al., 2025), our findings identify key behavioral determinants that may be prioritized in sexual and reproductive health interventions targeting young men. In this study, exposure to sexual content in digital media was associated with all IMBP constructs except peer normative beliefs. Specifically, more positive evaluation of sexual media characters, were associated with lower condom use knowledge, weaker attitudinal endorsement of condom use, less gender-equitable masculine beliefs, and lower condom use self-efficacy.

This pattern could suggest that repeated exposure to sexual content normalizes or desensitizes sexual portrayals, making them appear less risky, negative or problematic. This interpretation aligns with longstanding media effects research demonstrating that repeated exposure to sexual content contributes to the desensitization and normalization of sexually explicit behaviors (Daneback et al., 2018; Linz et al., 1988; Mullin & Linz, 1995). Prior studies also indicate that individuals with limited sexual health knowledge may

struggle to distinguish between healthy and risky portrayals (Macapagal et al., 2025; Scull et al., 2022), and that media content often omits the consequences of risky sexual behaviors (Alexopoulos & Taylor, 2020; Kinsler et al., 2019), thereby fostering more permissive attitudes toward sexual risk-taking (Baams et al., 2015; Coyne et al., 2019).

We did not observe a significant association between condom use intention and behavior. While lower sample size may have contributed to this finding, it may also reflect unmeasured moderators within the IMBP framework (Fishbein, 2009). Behavioral skills and environmental constraints, such as access to condoms, affordability, and situational barriers, can affect whether intentions translate into action. Although we did not directly assess these factors, their omission may help understand the observed intention–behavior non-significance. Future research should explicitly incorporate these constructs to better understand how intentions are enacted in practice.

From a programmatic perspective, these findings highlight two key intervention priorities. First, digital media-based interventions should promote sexual health-supportive constructions of masculinity by leveraging influencers and role-models to frame masculinity around taking responsibility, liberal gender roles, and safe sexual behaviors. By developing condom use-related messaging that is consistent with these values may help shift norms without directly challenging masculine identity. Second, digital media interventions should strengthen condom use self-efficacy by incorporating skill-building components, including communication strategies delivered through short-form videos and podcasts that present realistic scenarios. Such approaches can help enhance young men's confidence in accessing, negotiating, and correctly using condoms.

Strengths and limitations

Strengths of the study

This study is uniquely positioned to address several critical gaps in the sexual and reproductive health (SRH) and media research literature. First, it prioritizes young men, an often-overlooked group in SRH and media-related studies, thereby expanding the gender focus in this field. Second, by centering on a middle-income country, it advances our understanding of SRH of young men in India. Third, unlike prior work that isolates single platforms or traditional media, this study acknowledges the complex, multi-platform digital ecosystem through which young men access and encounter sexual content. Fourth, by applying the Integrative Model of Behavioral Prediction in a non-Western context to identify the specific psychosocial mechanisms, i.e. whether attitudes, perceived norms, or self-efficacy that exert the strongest influence on behavior will enable generating recommendations that can help tailor interventions to maximize impact on young men's safer sexual intentions and behaviors. Finally, the study strengthens the media measure methodological landscape by contributing to the development of a culturally-tailored, character-based media exposure measure that goes beyond frequency of use to capture the nuanced ways in which media exposure can relate to SRH outcomes. Together, these strengths allow the proposed work to generate contextually relevant, innovative insights with significant implications for health communication and SRH interventions.

This dissertation has several limitations that should be considered when interpreting the mixed-methods findings. Below, I outline the limitations by each study aim.

Aim 1 limitations

1. The sample consisted of educated young men enrolled in undergraduate programs in Delhi. These participants likely had relatively greater digital literacy and exposure to diverse online platforms compared to young men who are out-of-school or working, living in peri-urban areas. As a result, the findings provide insight into the experiences of urban, college-attending young men and may not represent the broader population of young men in Delhi. Future research should include participants from varied educational, socioeconomic, and geographic backgrounds to capture a more comprehensive range of digital media engagement for SRH purposes.
2. Participants' engagement with digital media platforms depended on their access to financial and technological resources. Some platforms, particularly certain digital games and streaming services, require computers/devices with gaming capabilities, paid subscriptions, and steady internet access. All participants did not have equal access to these resources, which may have shaped the types of content they encountered and discussed.
3. The sensitive nature of the topic may have influenced participants' responses. Although trained young male interviewers conducted the interviews to increase comfort, discussions about sex remain socially sensitive in many Indian contexts. Social desirability bias may therefore have influenced how openly participants described their engagement with sexual content in digital media.
4. The study relied on participants' self-reported accounts of digital media exposure. Because we focused on understanding the type of sexual content viewed across

platforms, participants were asked to recall sexual media examples. Some participants had difficulty remembering exact names, titles, or details, and were not able to access them on their phones during the interview due to the algorithmic nature of such content. This recall limitation may have reduced the specificity of content descriptions.

Future research should include young men from diverse socioeconomic, and geographic backgrounds such as working professionals and those in rural areas to capture a broader range of digital SRH engagement; account for differential technological access that shapes platform use and content exposure; and improve measurement of sexual exposure by incorporating real-time demonstrations of participants' digital media feeds to reduce recall and social desirability bias.

Aim 2 limitations

1. We recruited a quota sample of predominantly-educated college-attending young men in urban Delhi. This sampling approach was used because this was an exploratory study, bit it limits generalizability among out-of-school, working, or peri-urban young men. Future validation efforts should include more socioeconomically and geographically diverse samples.
2. Although we systematically identified digital media characters through desk review and in-depth interviews, we are concerned that the final RECAP character set did not fully capture the three digital media platforms. Some characters appeared across multiple platforms (e.g., streaming and social media), while gaming characters were underrepresented. We also did not include characters from films or other online

sources where sexual content may appear. As a result, the measure may not fully represent the diversity of sexual exposure across young men's media ecosystem.

3. RECAP uses recognition-based items, which introduce measurement challenges. We provided multiple-choice options with character names to aid recognition, which may have made it easier for participants to identify certain characters. In contrast, prior character-based measures often required unaided recall (Borzekowski & Macha, 2010; Borzekowski & Pires, 2018), potentially revealing stronger recognition of media characters. Participants who did not recognize a character may have skipped the item and received a score of zero. To enhance the rigor of the measure, during analysis, we relied on correct character recognition and level of perceived sexual portrayal to generate RECAP scores. However, assigning a score of zero to unrecognized, incorrectly identified characters may have underestimated exposure for participants who remembered the portrayal but not the character's name. This limitation is especially salient for algorithm-driven social media content, where users may be exposed to characters they do not actively follow but encounter through platform recommendations. In addition, due to the modest sample size, we retained all participants in the analysis, including those who received a score of zero for perceiving no sexual portrayal or valence for sexual characters. This decision contributed to skewed distributions for some portrayal and valence items. Future research should compare alternative scoring approaches, including separating recognition, perceived portrayal, and valence ratings, and evaluate how these decisions affect scale performance. Additionally, we relied on participants' subjective ratings of sexual portrayal and valence but provided them

standard researcher generated definitions of sexual content and positive/negative valence. We did not compare these ratings with independent character-based content analysis data or generated standard definition from an emic perspective.

4. We computed an overall RECAP score by summing the multiplied perceived portrayal and valence scores. This approach may mask differences between positive and negative sexual valence (e.g., a score of -2 and +2 will give a RECAP score of 0, i.e., no sexual exposure). We also did not analyze and differentiate RECAP scores based on character gender. Collapsing the scores could reduce precision and limit the ability to distinguish potentially positive versus negative exposure patterns. Future analyses should examine separate subscales for positive and negative portrayals, by character gender, and assess their relationships with health outcomes.
5. We assessed concurrent validity using regression models with cross-sectional data. These analyses do not establish temporal ordering or causality. Additionally, longitudinal designs are needed to evaluate predictive validity and to examine potential reciprocal relationships between media exposure and behavior.
6. This study introduces RECAP as a novel, character-based approach to measuring multi-platform sexual exposure. However, digital media environments evolve rapidly, and character salience changes over time. The stability and reliability of the measure, therefore, require additional psychometric assessments. Future studies should test RECAP with larger samples, assess test–retest reliability, and refine the character pool to ensure health-specific and timely relevance.

Future research should expand sampling and geographical contexts by validating RECAP in more diverse populations, including out-of-school, working, and peri-urban or rural

young men, to improve generalizability of the approach. RECAP character pool should be broadened by ensuring balanced representation across social media, streaming and gaming platforms. Measurement design and scoring need to be strengthened by comparing recognition with response option versus character name recall without response options approaches. Additionally, exposure metrics can be disaggregated through the development of separate subscales for positive and negative portrayals to enhance precision and interpretability. Finally, establishing psychometric robustness over time will require large-scale validation, longitudinal designs to assess predictive validity to examine relationships between media exposure and condom use behavior, assessment of test–retest reliability, and periodic updates to character sets to reflect evolving digital media environments.

Aim 3 limitations

1. Our digital media exposure measure was used from an exploratory study and has not yet undergone psychometric testing in a larger, more diverse sample. Although we established initial validity evidence, the scale requires further assessment of reliability and measurement stability. In addition, the exposure score reflects overall sexual media exposure by collapsing valence into a single score. This prevents examination of whether participants with positive or negative exposure scores relate differently to condom-related outcomes. The measure also includes an unequal number of characters across digital platforms and does not account for sexual content encountered through traditional films, websites, pornography or other media sources. As a result, the character-based digital media exposure measure may not fully capture the range of sexual content young men encounter in their media environment.

2. We recruited a quota sample of predominantly-educated undergraduate-level young men in urban Delhi. This sampling approach limits generalizability and may not reflect exposure patterns or behavioral processes among out-of-school or working young men, or those living in peri-urban or rural settings. Future studies should test the model in more socioeconomically and geographically diverse populations.
3. The tested model represents a partial application of the Integrated Model of Behavioral Prediction (IMBP). We did not include behavioral skills or environmental constraints, both of which moderate the intention-behavior relationship. For normative beliefs, we assessed descriptive norms but did not measure injunctive norms. The condom use knowledge related relationships should be interpreted with caution given the poor reliability of the measure. Additionally, we used cross-sectional data to test the theoretical pathways. Such an approach does not establish causality. Longitudinal research designs are needed to assess directionality and test IMBP postulated mediation pathways more rigorously.

Future research should differentiate positive and negative RECAP exposure, replicate findings in socioeconomically and geographically diverse populations, including out-of-school, working, and rural young men, incorporate IBMP moderating variables (e.g., behavioral skills, environmental constraints) to assess whether relationships differ between intention and use. Longitudinal designs should also be employed to examine how changes in sexual exposure within digital media environments, as measured by RECAP, contribute to mediation pathways.

Implications for policy, practice, and future research

Policy implications

1. **Promote gender-transformative, men-inclusive policies:** There is a need for policies that position young men as active contributors to advancing sexual and reproductive health (SRH). In India, sexual health remains highly stigmatized, and rigid masculine norms continue to exist. Current SRH programs rarely address masculine norms or address how these norms shape health outcomes. Our findings offer evidence about young men's exposure to negative masculine content in their digital manosphere, which can further exacerbate restrictive norms. Integrating positive masculinity-based education component into youth programs that emphasize respectful relationships, consent, and gender equality can reduce harmful behaviors such as gender-based violence and improve relationship outcomes, creating a better environment for both boys and girls.
2. **Strengthen accountability towards unregulated social media algorithms:** Participants reported that social media algorithms often expose them to sexualized content even without active searching, which may further prompt engagement with explicit material. These findings point to opportunities for collaboration with platforms such as Instagram and Facebook to improve age-appropriate content recommendations and establish sexual health credibility frameworks. Potential strategies include signaling mechanisms (e.g., labels indicating dramatized or unrealistic portrayals), in-platform nudges that link viewed content to verified SRH resources, and embedding links to credible sexual health information alongside

relevant content. Additionally, platform-supported user communities could contribute to these credibility systems through participatory, bottom-up approaches.

Practice implications

1. **Collaborating with influencers to design digital SRH interventions for young men.** Findings from this work offer public health professionals, especially community health and health communication practitioners, design recommendations for more effective digital media SRH campaigns. These campaigns can strategically employ popular online characters, influencers, and engaging formats to model young people's safe sexual intentions and behaviors. Digital media-based interventions should also promote sexual health-supportive constructions of masculinity by leveraging influencers and role-models to frame masculinity around taking responsibility, liberal gender roles, and safe sexual behaviors. By developing condom use related messaging that is consistent with these values may help shift norms without directly challenging masculine identity.
2. **Leveraging digital-media platform features to generate skill-based content:** Digital media interventions should strengthen condom use self-efficacy by incorporating skill-building components, including communication strategies delivered through short-form videos and podcasts that present realistic scenarios. Such approaches can help enhance young men's confidence in accessing, negotiating, and correctly using condoms.
3. **Leverage peer and digital ecosystems while addressing SRH misinformation:** We found that young men often learn about their body, relationships, and sexual feelings from friends, and from online sources like Google search, Reddit forums,

and AI platforms. However, both peer and online information may be inaccurate, shaped by myths and harmful social/gender norms leading to unverified or misleading information. Educators can develop peer-based sexual health education programs within national youth sexual and reproductive health programs. Promote trusted and trendy anonymous digital resources (AI platforms, moderated forums, verified websites) where young men can ask questions safely. Access to accurate information can reduce misinformation and help young men make healthier decisions about their bodies, feelings, relationships, and sexual health.

Future research

1. **Advance measurement of digital media-based sexual exposure measure:** Currently, national surveys only measure digital media access, not what young people are exposed to within media platforms. The development and validation of RECAP provide researchers and future surveys with an easy-to-use, culturally-appropriate, character-based tool to assess digital sexual media exposure in MICs, addressing a persistent gap in measurement. Future research will need to prioritize further psychometric testing of RECAP with larger and more diverse samples, including subgroups defined by age, geographic region, and urban–rural residence, to evaluate the measure's stability and reliability. Better measurement can further help program implementers and policymakers to design more targeted and effective sexual health interventions for young people.
2. **Extend RECAP to other health domains and populations:** Researchers will also be able to adapt RECAP for other health domains by replacing character types or exposure content to study related issues such as drug and alcohol use, body image,

violence, and obesity. As this work focuses on urban young men, future research must extend to rural boys, who face comparable levels of risk but remain underrepresented in SRH research.

3. **Strengthen cross-cultural and longitudinal evidence:** Comparative studies across MICs can further reveal cross-cultural patterns in how young men engage with digital sexual content, producing insights that can inform more robust media measures and young men's SRH priorities. By applying the IMBP in a non-Western MIC context, this work broadens the model's utility and tests the relative influence of behavioral determinants on condom use. Building on these foundations, future longitudinal studies should be conducted to trace causal pathways between digital media exposure and sexual health outcomes.

***

APPENDIX

Appendix A. IRB approvals
Appendix B. Recruitment materials
Appendix C. In-depth interview guide
Appendix D. Pilot-test guide – Survey instrument
Appendix E. Survey instrument
Appendix F. Consent forms
Appendix G. Positionality and qualitative research memos
Appendix H. Supplementary tables for Aims 2 and 3

Appendix A. IRB approvals

A.1. Initial approval

UNIVERSITY OF MARYLAND
INSTITUTIONAL REVIEW BOARD

1204 Marie Mount Hall
College Park, MD 20742-5125
TEL 301.405.4212
FAX 301.314.1475
irb@umd.edu
www.umresearch.umd.edu/IRB

DATE:	November 13, 2025
TO:	Angshuman Kashyap, MPH
FROM:	University of Maryland College Park (UMCP) IRB
PROJECT TITLE:	[2373338-1] Examining what digital media content young men in Delhi are exposed to and how these exposures relate to their sexual and reproductive health outcomes.
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	November 13, 2025
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category # 7.

Thank you for your submission of New Project materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Prior to final approval of this project scientific review was completed by the IRB Member reviewer.

This submission has received Expedited Review based on the applicable federal regulations.

This project has been determined to be a MINIMAL RISK project.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Unless a consent waiver or alteration has been approved, Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate Amendment forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed. All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

Please note that all research records must be retained for a minimum of seven years after the completion of the project.

A.2. Approval after amendments/modifications

UNIVERSITY OF MARYLAND
INSTITUTIONAL REVIEW BOARD

1204 Marie Mount Hall
College Park, MD 20742-5125
TEL 301.405.4212
FAX 301.314.1475
irb@umd.edu
www.umresearch.umd.edu/IRB

DATE:	January 9, 2026
TO:	Angshuman Kashyap, MPH
FROM:	University of Maryland College Park (UMCP) IRB
PROJECT TITLE:	[2373338-2] Examining what digital media content young men in Delhi are exposed to and how these exposures relate to their sexual and reproductive health outcomes.
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVED
APPROVAL DATE:	January 9, 2026
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category #7.

Thank you for your submission of Amendment/Modification materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Prior to final approval of this project scientific review was completed by the IRB Member reviewer.

This submission has received Expedited Review based on the applicable federal regulations.

This project has been determined to be a MINIMAL RISK project.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Unless a consent waiver or alteration has been approved, Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate Amendment forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed. All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

Please note that all research records must be retained for a minimum of seven years after the completion of the project.

A.3. Local (Indian) approval

monk prayogshala®

4114, Oberoi Garden Estates 'C' Wing, Next to Chandivali Studios, Powai, Mumbai – 400072, India

Monk Prayogshala Institutional Review Board (IRB)
Certificate of Approval

This is to certify that the project below was considered by the Monk Prayogshala Institutional Review Board and Ethics Review Committee. The Committee was satisfied that the proposal meets the requirements of the United States Federal Policy for the Protection of Human Subjects, the American Psychological Association, and the Indian Council of Medical Research Ethical Guidelines for Biomedical Research on Human Subjects and has indicated conditional project approval.

Project Title: Digital media and sexual health: A mixed-method exploration of young men's exposure and engagement with digital media sexual content and condom use outcomes in Delhi, India
MP Ethics Project ID Number: #202-025
Main Applicant (Principal Investigator): Angshuman K. Kashyap
Approval Date: 27th November, 2025

Please note below the terms of conditional approval. Failure to comply with the terms below is in breach of your conditional approval and the code for responsible conduct of research.

१. The Main Applicant is responsible for obtaining any permission or consent letters, if relevant, before data collection commences.
२. It is the Main Applicant's responsibility to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by the MP IRB.
३. The Main Applicant or a member of the research team should promptly notify the MP IRB of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
४. Please include your assigned project ID number on any explanatory statements, or statements of informed consent, as applicable.
५. Prior written approval from the MP IRB must be sought in case of any amendments to approved research protocol (including changes to personnel).
६. This project may be subject to an audit or any other form of monitoring by the MP IRB at any stage.
७. The Main Applicant will be responsible for data storage and retention pertaining to the project for a minimum period of five years.

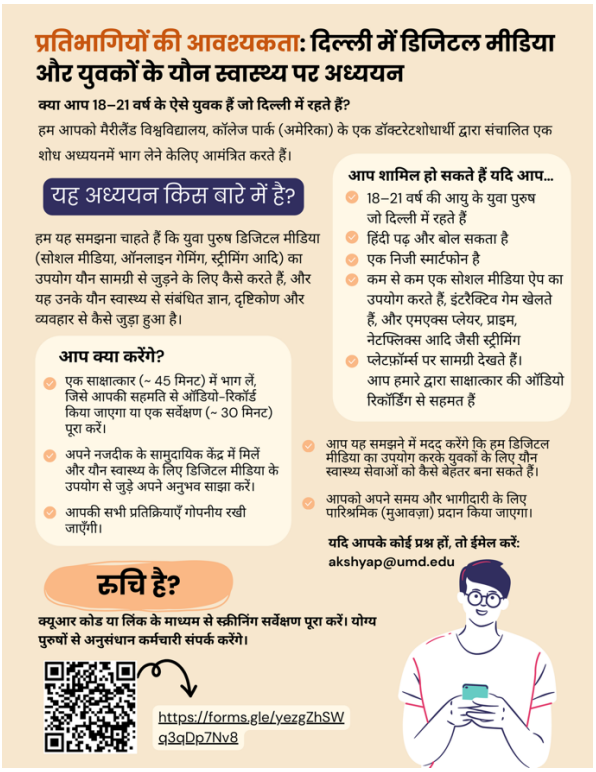
Thanks & Regards,

Muskan Soni
Acting Chairperson, Monk Prayogshala IRB

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गुप्त सूचना CONFIDENTIAL

Appendix B. Recruitment materials



Hindi version



English version

Recruitment call script

Hello, my name is [Recruitment Manager's Name]. I'm calling from the University of Maryland's research study team.

We're conducting a study here in Delhi to understand how young men use digital media like social media, online games, and streaming platforms to engage with sexual content and learn about sexual health. Our records show that you had shown interest in participating in the study. Do you have 2–3 minutes for me to share what the study involves and how you can participate?
Thank you. Could you verify this information for me: *(Confirm these based on what the individual responded in the recruitment post/flyer)*

- Are you between 18 and 21 years old?
- Do you currently live in Delhi?
- Can you read and speak Hindi or English?
- Are you active on at least one social media platform (like Instagram, YouTube, or Facebook)?
- Have you streamed content on platforms like Amazon Prime, Netflix, or others?
- Do you own a personal mobile phone?

- You indicated that you have ever engaged in vaginal or anal sex with a woman at age __ OR indicated that you have never had vaginal or anal sex with a woman (YES/NO).

If the individual answers YES to all → proceed to study description.

If any answer is NO → politely say: "Thank you for your interest in our study. Based on our eligibility criteria, you are unfortunately not eligible to participate. We are only able to include young men who meet all of our selection requirements, which are necessary to achieve the study's goals. We sincerely appreciate your time and willingness to participate. The data that you provided will be deleted from our records within 24 hours and will not be used for any research purposes."

FOR THE IN-DEPTH INTERVIEW
Great! You are eligible to participate in the study. The interview will take about 45 minutes and will be done in a quiet community center at _____[north/south/east/west/ central Delhi]. We'll ask about your experiences, how you and other young men your age use digital media, online games, and streaming platforms to engage with sexual content and learn about sexual health.

The interview will be audio-recorded only after you give consent. All the information you provide will be kept confidential.

We appreciate your time for this study, and you will receive compensation of Rs. 300 cash after completing the interview.

Would you be interested in participating in this interview?
If Yes:
Great! Please confirm a convenient day/time to schedule your interview this week.
Day:_____ Time:_____
The location of the interview will be _____.

We'll send you a short confirmation message before your scheduled time.

[If participant is unsure: No problem, let me know if I can call you in two days around this time to check if you are interested in participating.

For the in-depth interview – survey questionnaire pilot test

Great! You are eligible to participate in the study. The interview will take about 45 minutes and will be done in a quiet community center at _____[north/south/east/west/ central Delhi]. The questions will focus on how you and other young men your age use digital media, online games, and streaming platforms to engage with sexual content and learn about sexual health. We will ask you about your experience responding to the questions and seek your feedback on how we can improve their clarity and quality. The interview will be audio-recorded only after you give consent. All the information you provide will be kept confidential.

We appreciate your time for this study, and you will receive compensation of Rs. 300 cash after completing the interview.

Would you be interested in participating in this interview?
If Yes:
Great! Please confirm a convenient day/time to schedule your interview this week.
Day:_____ Time:_____
The location of the interview will be _____.
We'll send you a short confirmation message before your scheduled time.
[If participant is unsure: No problem, let me know if I can call you in two days around this time to check if you are interested in participating.

For survey

Great! You are eligible to participate in the study. The survey will take about 30 minutes and will be done in a quiet community center at _____[north/south/east/west/ central Delhi]. You will complete the survey yourself on a tablet or phone in the presence of a research staff member (but your answers will remain confidential). The questions are about the kinds of media characters you see on social media, streaming, or gaming platforms, your opinions about being a man, and your views on condom use.

We appreciate your time for this study, and you will receive compensation of Rs. 200 cash after completing the survey.

Would you be interested in participating in this survey?

If Yes:
Great! Please confirm a convenient day/time to schedule your survey this week.
Day:_____ Time:_____
The location of the survey will be _____.
We'll send you a short confirmation message before your scheduled time.

[If participant is unsure: No problem, let me know if I can call you in two days around this time to check if you are interested in participating.]

If yes, Thank you! We'll contact you shortly with a confirmation message and location details. Please save my number in case you have any questions.

In-person recruitment script

Hello, my name is [RECRUITMENT MANAGER'S NAME], and I am working with a doctoral student from the University of Maryland, College Park. We are conducting a study in Delhi about how young men use digital media, such as social media, online gaming, and streaming platforms, to engage with sexual content and learn about sexual health.

For IN-DEPTH INTERVIEWS read this part:
To be eligible to participate, you must be between the ages of 18-21, live in Delhi, read and speak Hindi, be active on at least one social media platform, and own a personal mobile phone. If you wish to participate, the entire process from seeking consent to completing the interview will take around 45 minutes. Questions will focus on being a man and how you and other men your age use social media, online games, and streaming platforms to engage with sexual content and learn about sexual health. Interviews will be audio-recorded after seeking your consent. You will receive an incentive of Rs. 300 for completing the interview.

For SURVEYS read this part:
To be eligible to participate, you must be between the ages of 18-21, live in Delhi, read and speak Hindi, be active on at least one social media platform, and own a personal mobile phone. If you wish to participate, the entire process of providing consent to completing the self-administered survey will take around 30 minutes. Questions will focus on the type of characters you, and other men your age are exposed to on social media, online games, and streaming platforms, about being a man, and your understanding and perspective about condom use. The surveys will be in-person in the presence of a research staff, but you will fill it out yourself without their interference. You will receive an incentive of Rs. 200 for completing the survey.

READ for all (Common for both interviews and surveys)
Participation is completely voluntary without any penalty. If you do not want to participate, there will be no impact on your day-to-day activities. I will also hand you this flyer if you want to go through it and fill out the information yourself.

Would you be interested in participating in this study?
If yes: Please let me know, and I will record your contact details to coordinate a time for the interview or survey.

If no: Thank you for taking the time to listen to me. If you know of anyone who would be interested in participating in this study, I will request you to pass on this flyer to them. It also has a contact email, in case they want to know more about the study.

Appendix C. In-depth interview guide for interviews with young men

Introduction

Thank you for being here this [morning/afternoon/evening]. I am so pleased you were able to come. My name is _____, and I am a _____. As you know, we are having a discussion to help me understand the ways young men like you and your friends use internet-based media platforms like social media, online gaming, and streaming platforms to engage with sexual content and learn about sexual health. During the discussion, I would also like to get your insights about the type of sexual characters and content young men your age are frequently exposed to on such digital media platforms. There are no right or wrong answers, and I want to hear about your own experiences and opinions. Everything you share will be kept confidential. You can choose not to answer any question, come back to a question at a later point during the interview, or stop the interview at any time. Your input will help us to understand how we can use digital media to make sexual health services better for young men.

Do you have any questions before we begin?

Ice breaker and general media use

1. To begin with, can you tell me a little about yourself? For example, your educational background, and what do you like to do in your free time?
2. What kinds of online platforms do you usually use in your daily life? *Probe for each: social media platforms, digital games they play, and streaming content they like watching.*
3. Which platform do you enjoy the most, and why?
4. What kind of content do you and your friends typically watch or follow on these platforms? *Probe for each: social media platforms, digital games they play, and streaming content*
5. Based on the content they share: ASK: Who introduced you to ____ [content] or how did you learn about _____[content]?

Thank you for sharing. I'd now like to understand how you use these platforms for different purposes, like learning, connecting with others, or just for fun. Especially, around sexual topics related to young men's body, relationships and sexual choices.

Section 1: Understanding goals

Self-Understanding

6. Where on the internet do you go to when you want to learn about your:
    a. own body
    b. sexual feelings, and relationships
7. Can you recall a time when something you saw online made you think differently about yourself? For example,
    a. About your body
    b. Relationship status
    c. Sexual feeling
8. Have you ever come across content related to:
    a. Body changes on social media, online games, or streaming platforms? If yes, can you tell me about the media platforms and the kind of content you saw?
    b. Sexual feelings on social media, online games, or streaming platforms? If yes, can you tell me about the media platforms and the kind of content you saw?
    c. Sexual behaviors like condom use on social media, online games, or streaming platforms? If yes, can you tell me about the media platforms and the kind of content you saw?

Social Understanding

9. Thinking about relationships, have you ever seen media content that has helped you understand how young men should talk to a partner or how to navigate a relationship? Can you give me an example?
10. What about things like safe and unsafe sexual practices? Can you give me an example of a safe and unsafe sexual practice you saw online?
11. Are there particular platforms (Instagram, YouTube, gaming chats, series/films) that help you understand what is considered normal or expected in relationships or sex?
12. Probe for each platform mentioned: E.g., You mentioned [Platform], how do you think viewing such content on [Platform] has helped you? If yes, how? If not, why do you think so?
13. Other than digital platforms, what are some other sources that help you understand what is considered normal or expected in relationships or sex? [Probe: peers, parents]
14. What type of conversations do you usually have with them?

Section 2: Orientation Goals

Action Orientation

15. Have you used the internet to look for information about sexual health, like where to buy condoms, how to use them?
16. Which online platforms have you tried for this kind of practical information.

17. Out of those which you have tried, which did you find the most useful? What are the reasons why you think [platforms] are most useful?

Interaction Orientation

18. Do you or your friends talk about what you or they see online related to sex or health? What kinds of conversations usually come up?
19. Can you think of an example where you and your friends talk about what it means to "be a man?" What type of characters on digital media or sources do you and your friends think show how men should behave?
20. What qualities make someone a "real man" among your peers?
21. According to you, what are some things that men your age are expected to do if they want to be a:
    a. Good man
    b. Good boyfriend or lover?
22. According to you, what are some things that men your age should not do if they want to be a:
    a. Good man
    b. Good boyfriend or lover?

Section 3: Play Goals

Solitary Play

23. Many young people use digital media to relax or unwind. When you are alone, what characters or content do you watch or play? Do you ever come across any sexual content? If yes, where did you see such content, can you give me an example? Probe: pornography, erotic content, or sexual storylines in shows/games

Social Play

24. Do you and your friends ever share sexual memes, reels, or jokes online? Can you tell me about a recent example? Why do you think you or your friend chose to share such content with each other?
25. What are some content you would rarely share/see, or engage with your male peers? Why?
    a. In social media
    b. Streaming platforms
    c. Gaming
26. In online gaming, have you come across sexually explicit characters or conversations? How do you and your peers usually react to such content?

Section 4: Media Characters & Influences

Sexual characters

27. When you think about online platforms you and your friends use like social media apps, online gaming, shows on streaming platforms, who are some of the characters, influencers, or personalities that often show or talk about sexual things (like relationships, flirting, or sexual feelings, kissing, or intercourse)? Probe: YouTubers, Instagram influencers, comedians, gaming avatars, actors in web series, or even meme characters?
28. From the ones you just mentioned, if you had to choose the **top five characters that you and your friends think portray sexual content the most,** who would they be? Please list them in order. *Interviewer: Write them down and confirm the ranking order.*
29. According to you,
    a. Character 1: What kinds of sexual content does this character portray? According to you, are they usually portraying positive or negative sexual content? Why did you rank this character this way?
    b. Character 2: What kinds of sexual content does this character portray? According to you, are they usually portraying positive or negative sexual content? Why did you rank this character this way?
    c. Character 3: What kinds of sexual content does this character portray? According to you, are they usually portraying positive or negative sexual content? Why did you rank this character this way?
    d. Character 4: What kinds of sexual content does this character portray? According to you, are they usually portraying positive or negative sexual content? Why did you rank this character this way?
    e. Character 5: What kinds of sexual content does this character portray? According to you, are they usually portraying positive or negative sexual content? Why did you rank this character this way?
30. According to you,
    a. Character 1: How do you think such sexual portrayals by this character affect how young men your age think about sex? What about how a man should be in a relationship?
    b. Character 2: How do you think such sexual portrayals by this character affect how young men your age think about sex? What about how a man should be in a relationship?
    c. Character 3: How do you think such sexual portrayals by this character affect how young men your age think about sex? What about how a man should be in a relationship?

d. Character 4: How do you think such sexual portrayals by this character affect how young men your age think about sex? What about how a man should be in a relationship?
e. Character 5: How do you think such sexual portrayals by this character affect how young men your age think about sex? What about how a man should be in a relationship?

General/Neutral Characters

31. Now, thinking about characters or influencers that you, your friends follow on social media apps, online gaming, or shows on streaming platforms, who would you say are the **top five general or neutral characters**, the ones who don't really portray sexual content, but are still popular, entertaining, or influential among you or your friends?

Closing Questions

32. What do you wish were available online to help young men like you better understand about your body, sex, and relationships?
33. Is there anything else you'd like to share that we haven't talked about?

Thank you very much for sharing your thoughts and experiences. Your insights are very valuable and will help us better understand how young men use digital media to learn about sexual health.

Appendix D. Pilot-test of survey instrument (Hybrid cognitive interviews)

Introduction

Thank you for being here this [morning/afternoon/evening]. I am so pleased you were able to come. My name is _____, and I am a _____. I will ask you to complete a survey, and while you do so, I will ask you some questions about how you understand and respond to the items. In some sections, I will ask you to "think aloud" which means talking me through your thought process as you choose your answers. In other sections, I will ask you follow-up questions to better understand how you interpreted the questions and seek your suggestions to improve questions. There are no right or wrong answers. What matters is your own perspective, feedback and opinions. Everything you share will remain confidential. You can skip any question, return to a question later, or stop the interview at any time if you wish. Everything you share will be kept confidential. You can choose not to answer any question, come back to a question at a later point during the interview, or stop the interview at any time. Your feedback is very important because it will help us refine the questionnaire for a larger study about young men's exposure to sexual content on digital media platforms and their sexual health behaviors. The interview will take about 45 minutes.

Do you have any questions before we begin?

Researcher will hand over a tablet/mobile phone with the online survey.

I would like you to first begin by answering a few questions about yourself and your daily life.

	Item	**Coding categories**	**Notes/Skips**
Demographics			
	What is your age	18 19 20 21	
	What educational degree are you currently pursuing?	No formal education Primary School Middle School High School Diploma/Certificate Undergraduate Postgraduate Doctoral/Ph.D Prefer not to say	
	Do you have a smart phone that you yourself use?	Yes, I have a personal phone No, I use a shared phone No, I do not have a mobile phone	If a participant selects option 3, interview ends.

	Have you ever used the internet?	Yes No	If a participant selects option 2 (No), interview ends.

Now I want to ask you some questions about this section.

a. How easy or hard was it for you to answer these questions?

b. Was any part of this section confusing or unclear? Which part? (Probe: any specific words or phrases that you did not understand?)

Okay, now we will move let's move the next section. In this section I will want you to "think aloud" which means you will be explaining to me your thought process as you choose your answer the questions. Let's do a practice round first. I will go first.

	What type of car is this?		
		Taxi Family car Racing car Don't know	Interviewer: I answered racing car. I gave this answer *of its structure. It has a sleek body with vents in the front which probably are needed for aerodynamics. This also does not seem like a family car as it has just two doors.*
	Interviewer asks participant, now can you tell me what type of bike this is?		
		Scooter or city bikes Cruisers or long-distance bikes Dirt/sports bike Don't know	Interviewer probe: *How did you go about answering this question*

Okay, shall we proceed with the next section? Please think aloud as you answer questions related to the character images.

The next section is going to show you several characters one by one that often appear on digital media platforms. Please choose the name of each character. If you do not know, you can choose "Don't know/Not Sure"

** Show the character picture to assess their name recall **

Interviewer note: For each picture probe:

"*How did you go about answering this question*"

If they quickly answered a name, ask "*How did you remember that?"*

In case you see them thinking about a character before choosing a response option ask "*I noticed you hesitated before you answered, tell me what you were thinking about*"

At the end of the first set of character questions, ask:

"*How did you feel about identifying these characters?"*

"How easy or difficult did you find identifying these characters? Why do you say that?"

"How well did you remember their name?"

Okay, how are you feeling? Let's continue with the next section. You will have to do the same here. Please think aloud as you answer questions related to the character images.

For the same characters you just saw, please rate the amount of sexual content each one portrays according to you.

Sexual content: "In this survey, sexual content is defined as talking about or showing: hooking-up/making out; sexy clothes; nudity; sex (oral, anal, or vaginal); safe sex (condoms, birth control, etc.); sexual jokes, sex crimes (rape); homosexuality (gay or lesbian); sexual slang or anything else sex related."

Select an option that best describes the amount of sexual content portrayed by each character.

** Show the character picture to assess their sexual portrayal rating **

Interviewer note: For each picture probe:

"*How did you go about answering this question*"

If they quickly answered, ask "*How did you remember that?"*

In case you see them thinking before choosing a response option ask "*I noticed you hesitated before you answered, tell me what you were thinking about*"

At the end of the first set of character questions, ask:
"*How did you feel about identifying their sexual portrayal?"*

"How easy or difficult did you find these questions to answer? Why do you say that?"

"Did you have a particular time period in mind?"

Okay, we will do the same with the next section. Please think aloud as you answer questions related to the character images.

Now for the same characters, how do you feel about how they behave or talk about sex? (positively or negatively)

Sexual content: "In this survey, sexual content is defined as talking about or showing hooking-up/making out; sexy clothes; nudity; sex (oral, anal, or vaginal); safe sex (condoms, birth control, etc.); sexual jokes, sex crimes (rape); homosexuality (gay or lesbian); sexual slang or anything else sex related."

Positively means acceptable, admirable, desirable according to you
Negatively means offensive, unrealistic, inappropriate according to you

Select an option that best describes the sexual talk or behavior by each character.

** Show the character picture to assess valence **

Interviewer note: For each picture probe:

"*Why do you feel that this is someone you talks or behaves 'sometimes negatively'"*

If they quickly answered, ask "*What does 'somewhat' negative mean to you?*"

In case you see them thinking before choosing a response option ask "*I noticed you hesitated before you answered, tell me what you were thinking about*"

At the end of the first set of character questions, ask:
"*How did you feel about identifying how they talk or behave about sex?"*

"How easy or difficult did you find these questions to answer? Why do you say that?"

Thank you, that was the end of the think-aloud section.

Overall, how easy or hard was it for you to answer these questions?

Was any part of these sections confusing or unclear? Which part? (Probe: any specific characters that were hard to identify? Will your friends be able to identify these characters?)

Let's move on to the remaining sections. Next, I will let you answer a group of questions by yourself, and at the end of each section, ask you a few questions.

For Content-based Media Exposure measure items:
a. How easy or hard was it for you to answer these questions?
b. Was there any question that was confusing or unclear? Which part?

For the Condom-use skills checklist:
a. How easy or hard was it for you to answer these questions?
b. Was there any question that was confusing or unclear? Which part?

For attitudes, norms, and self-efficacy:
a. How easy or hard was it for you to answer these questions?
b. Was there any question that was confusing or unclear? Which part?

For condom use intention and behavior:
a. How easy or hard was it for you to answer these questions?
b. Was there any question that was confusing or unclear? Which part?

For harmful masculinity
a. How easy or hard was it for you to answer these questions?
b. Was there any question that was confusing or unclear? Which part?

Demographics, including other sources of information
a. How easy or hard was it for you to answer these questions?
b. Was there any question that was confusing or unclear? Which part?

Overall experience:
a. Did you feel tired or lose focus while answering any sections?
b. How was your experience of answering the questions on a mobile phone/tablet?
c. Do you have any suggestions for making this questionnaire easier or more engaging?

Thank you very much for sharing your thoughts and experiences. Your feedback is very important because it will help us refine the questionnaire for a larger study about young men's exposure to sexual content on digital media platforms and their sexual health behaviors.

***

Appendix E. Survey instrument

See survey consent form in Appendix F

Survey administrator's name (To be selected by study staff ONLY)

- ○ Aman
- ○ Angshuman
- ○ Manish
- ○ Pritam
- ○ Yatharth

मैंने सहमति पत्र पढ़ लिया है और इस 30 मिनट के सर्वेक्षण में भाग लेने के लिए सहमत हूँ। [I have read the consent form and agree to participate in this 30-minute survey.]

- ○ हाँ [Yes]
- ○ नहीं [No]

Question 1 आपकी उम्र क्या है? [How old are you?]

- ○ अठारह [18]
- ○ उन्नीस [19]
- ○ बीस [20]
- ○ इक्कीस [21]
- ○ अन्य [0ther] _____

Question 2 आप वर्तमान में कौन-सी शैक्षिक डिग्री कर रहे हैं? [What educational degree are you currently pursuing?]

- ○ कोई औपचारिक शिक्षा नहीं [No formal education]
- ○ प्राथमिक स्कूल (कक्षा 1 से 5) [Primary School]
- ○ मिडिल स्कूल (कक्षा 6 से 8) [Middle School]
- ○ हाई स्कूल (कक्षा 9 या 10) [High School]
- ○ डिप्लोमा/सर्टिफिकेट [Diploma/Certificate]
- ○ स्नातक (जैसे BA, BSc) [Undergraduate]
- ○ स्नातकोत्तर (जैसे MA, MSc) [Postgraduate]
- ○ डॉक्टरेट/पीएच.डी. [Doctoral/Ph.D.]
- ○ बताना नहीं चाहते [Prefer not to say]
- ○ अन्य [0ther] _____

Question 3 क्या आपके पास अपना खुद का स्मार्टफोन है जिसका इस्तेमाल आप करते हैं? [Do you have a smart phone that you yourself use?]

- ○ हाँ, मेरे पास एक व्यक्तिगत फ़ोन है [Yes, I have a personal phone]
- ○ नहीं, मैं साझाफ़ोन का उपयोग करता हूँ [No, I use a shared phone]
- ○ नहीं, मेरेपास मोबाइल फ़ोन नहीं है [No, I do not have a mobile phone]

Question 4 क्या आपने कभी इंटरनेट का इस्तेमाल किया है? [Have you ever used the internet?]

- ○ हाँ [Yes]
- ○ नहीं [No]

Question 5 क्या आपने कभी किसी महिला के साथ संबंध (इंटरकोर्स) बनाए हैं? [Have you ever engaged in penetrative intercourse with a woman?]

- ○ हाँ [Yes]
- ○ नहीं [No]

अगले हिस्से में आपको स्क्रीन पर कुछ किरदार (Characters) दिखाए जाएँगे जो अक्सर डिजिटल मीडिया प्लेटफॉर्म पर नज़र आते हैं। आपको उनका नाम चुनना होगा, उनके यौन सामग्री (Sexual content) को रेट करना होगा (जैसे कम, मध्यम या ज़्यादा), और यह बताना होगा कि उनके सेक्स (यौन) से जुड़ी बातचीत या व्यवहार कैसा है (क्या वह अच्छी है या बुरी)। [The next section is going to show you several characters on the screen that often appear on digital media platforms. You will have to choose each character's name, rate the amount of sexual content each one portrays according to you, and share how you feel about how they behave or talk about sex. (positively or negatively). **यौन सामग्री (Sexual Content):** इस सर्वेक्षण में, यौन सामग्री को इस प्रकार परिभाषित किया गया है, जिसमें इन चीज़ों के बारे में बात करना या उन्हें दिखाना शामिल है: करीबी रिश्ते बनाना/किस करना; उत्तेजक कपड़े; नग्नता; किसी भी तरह का सेक्स (मुँह, गुदा, या योनि से); सुरक्षित सेक्स (कंडोम, गर्भनिरोधक, आदि); यौन मज़ाक; यौन अपराध (बलात्कार); समलैंगिकता (गे या लेस्बियन); सेक्स से जुड़ी गाली या सेक्स से जुड़ी कोई भी अन्य चीज़। एक ऐसा विकल्प चुनें जो आपके हिसाब से यह सही बताए कि हर किरदार कितनी यौन सामग्री दिखाता है। **Sexual content:** "In this survey, sexual portrayal is defined as talking about or showing: hooking-up/making out; sexy clothes; nudity; sex (oral, anal, or vaginal); safe sex (condoms, birth control, etc.); sexual jokes, sex crimes (rape); homosexuality (gay or lesbian); sexual slang (abusive words) or anything else sex related." Select an option that best describes the amount of sexual content portrayed by each character.] **Positively (सकारात्मक रूप से) का मतलब:** आपके अनुसार, स्वीकार्य (मानने लायक), सराहनीय (तारीफ के लायक), या वांछनीय (पसंद के लायक) है। **Negatively (नकारात्मक रूप से) का मतलब:** आपके अनुसार, अपमानजनक, अवास्तविक (जो सच न लगे), या अनुचित (जो ठीक न हो) है। एक विकल्प चुनें जो आपके हिसाब से यह सही बताए कि हर किरदार की सेक्स से जुड़ी बातचीत या व्यवहार कैसा है। **Positively means** acceptable, admirable, desirable according to you; **Negatively means** offensive, unrealistic, inappropriate according to you.

मैं आपको एक पुराने बॉलीवुड किरदार का इस्तेमाल करके एक उदाहरण दिखाता हूँ।। [Let me show you an example using an old Bollywood character]

कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं
[Please choose the character's name. If you do not know, you can choose "Don't know/Not Sure"]



- ○ धर्मेंद्र [Dharmendra]
- ○ अमिताभ बच्चन [Amitabh Bachchan]
- ◉ शक्ति कपूर [Shakti Kapoor]
- ○ अनिल कपूर [Anil Kapoor]
- ○ पता नहीं/निश्चित नहीं [Don't know/Not Sure]

शक्ति कपूर

Shakti Kapoor

आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है।
[For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- ○ कोई यौन सामग्री नहीं [No sexual content]
- ○ कुछ यौन सामग्री [Some sexual content]
- ◉ थोड़ी सी यौन सामग्री [A little sexual content]
- ○ बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]

वह थोड़ी यौन सामग्री दिखाते है।

He shows a little sexual content

अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- ○ बहुत नकारात्मक (बहुत बुरा) [Very negative]
- ◉ कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- ○ निष्पक्ष [Neutral]
- ○ कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- ○ बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]
- ○ किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]

सेक्स को लेकर उनका व्यवहार या बातचीत कुछ हद तक नकारात्मक थी

His behavior or talk about sex was somewhat negative.



Question 6 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- द रेबेल किड [The Rebel Kid]
- कैर्रीमिनाटी [Carryminati]
- अभिषेक त्रिपाठी [Abhishek Tripathi]
- समय रैना [Samay Raina]
- अंकित बैयनपुरिया [Ankit Baiyanpuria]
- पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 21 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he portrays according to you.]

- कोई यौन सामग्री नहीं [No sexual content]
- कुछ यौन सामग्री [Some sexual content]
- थोड़ी सी यौन सामग्री [A little sexual content]
- बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 36 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 7 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- द रेबेल किड [The Rebel Kid]
- कैर्रीमिनाटी [Carryminati]
- मुस्कान कारिया [Muskan Karia]
- कुशा कपिला [Kusha Kapila]
- पूनम पांडे [Poonam Pandey]
- पता नहीं/निश्चित नहीं [Don't know/Not Sure]

Question 22 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content she portrays according to you.]

- कोई यौन सामग्री नहीं [No sexual content]
- कुछ यौन सामग्री [Some sexual content]
- थोड़ी सी यौन सामग्री [A little sexual content]
- बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 37 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 8 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- रवीश कुमार [Ravish Kumar]
- कपिल शर्मा [Kapil Sharma]
- विकास दिव्यकीर्ति [Vikas Divyakirti]
- फैजल खान [Faizal Khan]
- अंकित बैयनपुरिया [Ankit Baiyanpuria]
- पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 23 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he portrays according to you.]

- कोई यौन सामग्री नहीं [No sexual content]
- कुछ यौन सामग्री [Some sexual content]
- थोड़ी सी यौन सामग्री [A little sexual content]
- बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 38 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 9 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- ○ गुड्डू भैया [Guddu Bhaiya]
- ○ कपिल शर्मा [Kapil Sharma]
- ○ ऋषभ पंत [Rishabh Pant]
- ○ समय रैना [Samay Raina]
- ○ अंकित बैयनपुरिया [Ankit Baiyanpuria]
- ○ पता नहीं/निश्चित नहीं [Don't know/Not Sure]

Question 24 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he portrays according to you.]

- ○ कोई यौन सामग्री नहीं [No sexual content]
- ○ कुछ यौन सामग्री [Some sexual content]
- ○ थोड़ी सी यौन सामग्री [A little sexual content]
- ○ बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 39 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- ○ बहुत नकारात्मक (बहुत बुरा) [Very negative]
- ○ कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- ○ निष्पक्ष [Neutral]
- ○ कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- ○ बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]
- ○ किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 10 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- ○ गुड्डू भैया [Guddu Bhaiya]
- ○ कपिल शर्मा [Kapil Sharma]
- ○ अभिषेक त्रिपाठी [Abhishek Tripathi]
- ○ ऋषभ पंत [Rishabh Pant]
- ○ अंकित बैयनपुरिया [Ankit Baiyanpuria]
- ○ पता नहीं/निश्चित नहीं [Don't know/Not Sure]

Question 25 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he portrays according to you.]

- ○ कोई यौन सामग्री नहीं [No sexual content]
- ○ कुछ यौन सामग्री [Some sexual content]
- ○ थोड़ी सी यौन सामग्री [A little sexual content]
- ○ बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 40 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- ○ बहुत नकारात्मक (बहुत बुरा) [Very negative]
- ○ कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- ○ निष्पक्ष [Neutral]
- ○ कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- ○ बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]
- ○ किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 11 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

Question 11 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- ○ नैन्सी त्यागी [Nancy Tyagi]
- ○ उर्फी जावेद [Urfi Javed]
- ○ मुस्कान कारिया [Muskan Karia]
- ○ कुशा कपिला [Kusha Kapila]
- ○ पूनम पांडे [Poonam Pandey]
- ○ पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 26 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- ○ कोई यौन सामग्री नहीं [No sexual content]
- ○ कुछ यौन सामग्री [Some sexual content]
- ○ थोड़ी सी यौन सामग्री [A little sexual content]
- ○ बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 41 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 12 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- गुड्डू भैया [Guddu Bhaiya]
- कपिल शर्मा [Kapil Sharma]
- अभिषेक त्रिपाठी [Abhishek Tripathi]
- भुवन बाम [Bhuvan Bam]
- ऋषभ पंत [Rishabh Pant]
- पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 27 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- ○ कोई यौन सामग्री नहीं [No sexual content]
- ○ कुछ यौन सामग्री [Some sexual content]
- ○ थोड़ी सी यौन सामग्री [A little sexual content]
- ○ बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 42 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- ○ बहुत नकारात्मक (बहुत बुरा) [Very negative]
- ○ कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- ○ निष्पक्ष [Neutral]
- ○ कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- ○ बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]
- ○ किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 13 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

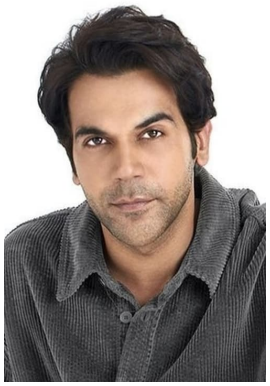
- ट्रेवर फिलिप [Trevor Phillip]
- क्रेटोस [Kratos]
- जो मिलर [Joe Miller]
- 2बी [2b]
- बायोनेटा [Bayonetta]
- पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 28 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- कोई यौन सामग्री नहीं [No sexual content]
- कुछ यौन सामग्री [Some sexual content]
- थोड़ी सी यौन सामग्री [A little sexual content]
- बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 43 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 14 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

Question 14 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- ○ विराट कोहली [Virat Kohli]
- ○ आयुष्मान खुराना [Aayushmann Khuranna]
- ○ ऋषभ पंत [Rishabh Pant]
- ○ राजकुमार राव [Rajkummar Rao]
- ○ अंकित बैयनपुरिया [Ankit Baiyanpuria]
- ○ पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 29 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- कोई यौन सामग्री नहीं [No sexual content]
- कुछ यौन सामग्री [Some sexual content]
- थोड़ी सी यौन सामग्री [A little sexual content]
- बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 44 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 15 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

Question 15 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- समीर फुड्डी [Sameer Fuddi]
- मुन्ना त्रिपाठी [Munna Tripathi]
- आशीष चंचलानी [Ashish Chanchlani]
- मनीष सिंह कट्टा [Manish Singh Katta]
- इमरान अंसारी [Imran Ansari]
- पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 30 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- कोई यौन सामग्री नहीं [No sexual content]
- कुछ यौन सामग्री [Some sexual content]
- थोड़ी सी यौन सामग्री [A little sexual content]
- बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 45 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 16 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- ○ मुन्ना त्रिपाठी [Munna Tripathi]
- ○ इमरान अंसारी [Imran Ansari]
- ○ हाथी रामचौधरी [Hathi Ram Chaudhary]
- ○ गुड्डू भैया [Guddu Bhaiya]
- ○ मनीष सिंह कट्टा [Manish Singh Katta]
- ○ पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 31 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- ○ कोई यौन सामग्री नहीं [No sexual content]
- ○ कुछ यौन सामग्री [Some sexual content]
- ○ थोड़ी सी यौन सामग्री [A little sexual content]
- ○ बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 46 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- ○ बहुत नकारात्मक (बहुत बुरा) [Very negative]
- ○ कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- ○ निष्पक्ष [Neutral]
- ○ कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- ○ बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]
- ○ किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 17 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- मैग्नेटो [Magneto]
- क्रेटोस [Kratos]
- जो मिलर [Joe Miller]
- मारियो [Mario]
- बायोनेटा [Bayonetta]
- पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 32 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- कोई यौन सामग्री नहीं [No sexual content]
- कुछ यौन सामग्री [Some sexual content]
- थोड़ी सी यौन सामग्री [A little sexual content]
- बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 47 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 18 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- अनिरुद्ध आचार्य [Anirudh Acharya]
- प्रेमानंद जी महाराज [Premananda Ji Maharaj]
- हाथी राम चौधरी [Hathi Ram Chaudhary]
- धीरेंद्र शास्त्री [Dhirendra Shastri]
- बाबा निराला [Baba Nirala]
- पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 33 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- कोई यौन सामग्री नहीं [No sexual content]
- कुछ यौन सामग्री [Some sexual content]
- थोड़ी सी यौन सामग्री [A little sexual content]
- बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 48 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- बहुत नकारात्मक (बहुत बुरा) [Very negative]
- कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- निष्पक्ष [Neutral]
- कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- मैं इस चरित्र को नहीं जानता [I do not know this character]
- किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 19 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- गुड्डू भैया [Guddu Bhaiya]
- युवराज दुआ [Yuvraj Dua]
- रवीश कुमार [Ravish Kumar]
- ध्रुव राठी [Dhruv Rathee]
- अंकित बैयनपुरिया [Ankit Baiyanpuria]
- पता नहीं/निश्चित नहीं [Don’t know/Not Sure]

Question 34 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- ○ कोई यौन सामग्री नहीं [No sexual content]
- ○ कुछ यौन सामग्री [Some sexual content]
- ○ थोड़ी सी यौन सामग्री [A little sexual content]
- ○ बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 49 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- ○ बहुत नकारात्मक (बहुत बुरा) [Very negative]
- ○ कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- ○ निष्पक्ष [Neutral]
- ○ कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- ○ बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]
- ○ किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]



Question 20 कृपया किरदार का नाम चुनें। अगर आपको नाम पता नहीं है, तो आप 'पता नहीं/निश्चित नहीं' चुन सकते हैं [Please choose the character's name. If you do not know, you can choose “Don’t know/Not Sure”]

- ○ सोफिया अंसारी [Sofia Ansari]
- ○ नैन्सी त्यागी [Nancy Tyagi]
- ○ मुस्कान कारिया [Muskan Karia]
- ○ कुशा कपिला [Kusha Kapila]
- ○ पूनम पांडे [Poonam Pandey]
- ○ पता नहीं/निश्चित नहीं [Don't know/Not Sure]

Question 35 आपने अभी जो किरदार देखा हैं, उनके बारे में आपको बताना है कि आपके हिसाब से वे कितना यौन सामग्री (सेक्शुअल कंटेंट) दिखाता है। [For the same character you just saw, rate the amount of sexual content he/she portrays according to you.]

- ○ कोई यौन सामग्री नहीं [No sexual content]
- ○ कुछ यौन सामग्री [Some sexual content]
- ○ थोड़ी सी यौन सामग्री [A little sexual content]
- ○ बहुत ज़्यादा यौन सामग्री [A lot of sexual content]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]

Question 50 अब उसी कैरेक्टर के लिए बताइए कि सेक्स को लेकर उनके बर्ताव या बातचीत के बारे में आपकी राय क्या है? (क्या वह अच्छी है या बुरी?) [Now for the same character, how do you feel about how they behave or talk about sex? (positively or negatively)]

- ○ बहुत नकारात्मक (बहुत बुरा) [Very negative]
- ○ कुछ हद तक नकारात्मक (थोड़ा बुरा) [Somewhat negative]
- ○ निष्पक्ष [Neutral]
- ○ कुछ हद तक सकारात्मक (थोड़ा अच्छा) [Somewhat positive]
- ○ बहुत सकारात्मक (बहुत अच्छा) [Very positive]
- ○ मैं इस चरित्र को नहीं जानता [I do not know this character]
- ○ किसी भी प्रकार की यौन सामग्री का चित्रण नहीं करते [Do not portray any sexual content]

Next section हर सवाल का जवाब देते समय बताइए कि आप इस तरह की चीज़ें टी.वी., इंटरनेट या फिल्में पर अक्सर कितनी बार देखते हैं या दिख जाता है। आप इसे यूट्यूब क्लिप्स, गाने के वीडियो, गेम शो, टी.वी. सीरियल, वीडियो गेम या सिनेमा में कहीं भी देख सकते हैं। तो, यह मायने नहीं रखता कि आप कहाँ देखते हैं, बल्कि यह मायने रखता है कि आप कितनी बार अक्सर देखते हैं। (हर बात के लिए एक विकल्प चुनें) [Please report for every question how often they appear, or you watch this type of content on TV/Internet/Movies. This could be clips on YouTube, music videos,

quiz shows, television shows, in video games, in the cinema, etc. So, it does not matter where you watch it, but how often you watch it. (For each statement, choose an option)]

आप निम्नलिखित चीज़ को (नीचे देखें)....(इंटरनेट/टीवी/गेम्स/मोबाइल फोन/डीवीडी पर) अक्सर कितनी बार देखते हैं? [How often do you watch the following (see below) ....(on the Internet/TV/games/ mobile phone/DVD)]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 51 ….ऐसे लोग जो लड़ते हैं? [... people who fight?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 52 …ऐसे लोग जो किसी का पक्ष लेते हैं या किसी के लिए खड़े होते हैं? [... people who support or stand up for someone?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 53 …ऐसे लोग जो चोरी करते हैं? [... people who steal?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 54 …कोई सवाल-जवाब का खेल? [... quiz game or show?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 55 …ऐसे लोग जो खुलेआम सेक्स के बारे में बात करते हैं? [... people who openly talk about sex?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 56 …ऐसे लोग जो किसी दूसरे व्यक्ति पर गोली चलाते हैं? [...people who fire a gun at another person]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 57 …ऐसे लोग जो किसी की मदद करते हैं? [... people who help someone?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 58 …ऐसे लोग जो नशीली दवाएँ (ड्रग्स) लेते हैं? [...people who use drugs?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 59 …प्रकृति या जानवरों के बारे में शो? [... shows about nature or animals?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]

Question 60 …ऐसे लोग जो किसी दूसरे का सामान खराब करते हैं? [...people who destroy someone else's belongings?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 61 सफर (यात्रा) के बारे में शो? [... shows about travelling?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 62 खाना बनाने (कुकिंग) वाले शो? [... cooking shows?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 62 ऐसे लोग जो बहुत ज़्यादा शराब पीते हैं? [... people who drink a lot of alcohol?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 63 टॉक शो (बातचीत वाले शो)? [... talk shows?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 64 ऐसे शो जहाँ घरों या गाड़ियाँ को नया रूप दिया जाता है? [... shows where houses or cars get a makeover or modified?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 65 ऐसे लोग जो सेक्स कर रहे हैं? [... people who are having sex?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]
Question 66 खबरें (न्यूज़)? [... the news?]	कभी नहीं [Never]	अनजाने में (या संयोग से) [Incidentally]	कभी-कभी [Sometimes]	अक्सर [Often]	बहुत बार [Very often]

Question 118 आप नीचे दिए गए विषयों या विचारों के बारे में कितनी बार ऑनलाइन सामग्री (content) देखते हैं? [How often do you see content online about the following topics or ideas?] कि लड़कों और पुरुषों के साथ लड़कियों और महिलाओं के मुकाबले गलत बर्ताव (या भेदभाव) किया जाता है। [That boys and men are treated unfairly compared to girls and women]	कभी नहीं [Never]	कभी कभारकभार [Rarely]	कभी कभी [Sometimes]	अक्सर [Often]	अक्सर [Very often]
Question 119 लड़कियों या महिलाओं को अपने घर और परिवार की देखभाल पर ध्यान देना चाहिए। [That girls or women should focus on taking care of their home and family.]	कभी नहीं [Never]	कभी कभारकभार [Rarely]	कभी कभी [Sometimes]	अक्सर [Often]	अक्सर [Very often]
Question 120 लड़कियाँ या महिलाएँ अपने रूप- रंग का इस्तेमाल खास सुविधाएँ पाने या अपनी मनचाही चीज़ हासिल करने के लिए करती हैं। [That girls or women use their looks to get special treatment or to get what they want]	कभी नहीं [Never]	कभी कभारकभार [Rarely]	कभी कभी [Sometimes]	अक्सर [Often]	अक्सर [Very often]
Question 121 लड़कियाँ या महिलाएँ सिर्फ कुछ खास तरह के लड़कों को ही डेट करना चाहती हैं (जैसे कि लंबे, अमीर या बहुत आकर्षक पुरुष)। [That girls or women only want to date certain types of guys (e.g. tall, rich, or very attractive men)]	कभी नहीं [Never]	कभी कभारकभार [Rarely]	कभी कभी [Sometimes]	अक्सर [Often]	अक्सर [Very often]

अब आप कंडोम के उपयोग से संबंधित 16 कथन देखेंगे, जिनमें से कुछ सही हैं और कुछ गलत। कृपया सही और गलत कथनों की पहचान करें। [Next, you will see 16 statements about using a condom, some of which are correct, and some of which are incorrect. Identify the correct and incorrect statements.]

Question 67 लेटेक्स वाला कंडोम इस्तेमाल करें (लेटेक्स मतलब रबर) [Use a latex condom] (Latex means rubber)	सही [Correct] गलत [Incorrect]
Question 68 कंडोम के पैकेट का एक किनारा इस तरह फाड़ें, ध्यान रखें कि अंदर का कंडोम न फटे [Tear along one side of the condom packet, being sure not to rip the condom inside]	सही [Correct] गलत [Incorrect]
Question 69 वीर्य निकलने (sperm release) से पहले किसी भी समय कंडोम पहन लें। [Put the condom on any time before you ejaculate (sperm release)]	सही [Correct] गलत [Incorrect]
Question 70 लिंग (penis) के खड़ा होने पर कंडोम पहनें, लिंग और आपके साथी के शरीर के बीच कोई संपर्क होने से पहले [Put the condom on when the penis is erect, before any contact between the penis and your partner's body]	सही [Correct] गलत [Incorrect]

Question 71 लिंग (penis) पर लगाने से पहले कंडोम को पूरी तरह खोलें [Unroll the condom before placing on the penis]	सही [Correct] गलत [Incorrect]
Question 72 लिंग के खड़े रहते समय, कंडोम को कसकर पकड़ते हुए लिंग को बाहर निकाल लें। फिर कंडोम हटा दें। [Pull out the penis while it is still erect by holding the condom firmly in place. Then remove the condom.]	सही [Correct] गलत [Incorrect]
Question 73 कंडोम को खोलते हुए लिंग के लगभग तीन-चौथाई हिस्से तक नीचे ले जाएँ। [Unroll the condom to approximately three-fourth of the way down the penis]	सही [Correct] गलत [Incorrect]
Question 74 पानी वाला चिकनाई लगाने वाला पदार्थ (ल्यूब्रिकेंट) लगाएँ (जेली की तरह) [Apply a water-based lubricant (like jelly)]	सही [Correct] गलत [Incorrect]
Question 75 कंडोम के बंद सिरे को अपनी तर्जनी और अंगूठे के बीच थोड़ा दबाएँ और कंडोम को खड़े लिंग के ऊपर रखें [Squeeze the closed end of the condom between your forefinger and thumb and place the condom over the erect penis]	सही [Correct] गलत [Incorrect]
Question 76 इस्तेमाल किए हुए कंडोम को अगली बार इस्तेमाल करने के लिए वापस पैकेट में लपेटकर रख दें। [Wrap the used condom back in the packet to save for the next time]	सही [Correct] गलत [Incorrect]
Question 77 कंडोम को खोलते हुए लिंग के एकदम नीचे (जहां प्यूबिक बाल होते हैं) तक उतारें [Unroll the condom to the base (where their is pubic hair) of the penis]	सही [Correct] गलत [Incorrect]
Question 78 तेल वाला चिकनाई लगाने वाला पदार्थ (ल्यूब्रिकेंट) लगाएँ (जैसे तेल, वैसलीन, लोशन) [Apply an oil-based lubricant (like oil, vaseline, lotion)]	सही [Correct] गलत [Incorrect]
Question 79 जब लिंग ढीला पड़ जाए, तो कंडोम को कसकर पकड़ें और लिंग को बाहर निकाल लें। फिर कंडोम हटा दें। [Pull out the penis after it is no longer erect by holding the condom firmly in place. Then remove the condom]	सही [Correct] गलत [Incorrect]
Question 80 लिंग के खड़ा होने से पहले कंडोम पहन लें और लिंग और आपके साथी के शरीर के बीच कोई संपर्क होने से पहले [Put the condom on before the penis is erect and before any contact between the penis and your partner's body]	सही [Correct] गलत [Incorrect]
Question 81 कंडोम के सिरे पर लगभग दो इंच खाली जगह छोड़ें, और फिर बाकी कंडोम को लिंग पर नीचे तक खोल लें। [Leave about two inches of empty space at the tip of the condom and then unroll the rest down the penis]	सही [Correct] गलत [Incorrect]
Question 82 इस्तेमाल किए हुए कंडोम को फेंक दें। [Dispose of the used condoms]	सही [Correct] गलत [Incorrect]

अगले भाग में, हर सवाल के लिए, वह जवाब चुनें जो **आपके मन के भाव को सबसे सटीक रूप से व्यक्त करता हो। ये सवाल तब भी लागू होते हैं, जब आप अभी किसी संबंध में हों या अकेले हों ।** [In the next section, please fill in the answer for each question that **best describes how you feel. These questions apply whether you are currently in a relationship or single.**

Question 83 मेरा मानना है कि अगर मेरी उम्र का कोई व्यक्ति सेक्स (यौन) करता है, तो उसे हमेशा कंडोम का इस्तेमाल करना चाहिए [I believe condoms should always be used if a person my age has sex]	बिल्कुल नहीं [Definitely no]	शायद नहीं [Probably no]	शायद हाँ [Probably yes]	बिल्कुल हाँ [Definitely yes]
Question 84 मेरा मानना है कि अगर मेरी उम्र का कोई व्यक्ति सेक्स (यौन) करता है, तो उसे हमेशा कंडोम का इस्तेमाल करना चाहिए, भले ही लड़की गर्भनिरोधक गोलियाँ (Birth Control Pills) लेती हो [I believe condoms should always be used if a person my age has sex, even if the girl uses birth control pills.]	बिल्कुल नहीं [Definitely no]	शायद नहीं [Probably no]	शायद हाँ [Probably yes]	बिल्कुल हाँ [Definitely yes]
Question 85 मेरा मानना है कि अगर मेरी उम्र का कोई व्यक्ति सेक्स (यौन) करता है, तो उसे हमेशा कंडोम का इस्तेमाल करना चाहिए, भले ही वे दोनों एक-दूसरे को बहुत अच्छे से जानते हों [I believe condoms should always be used if a person my age has sex, even if the two people know each other very well.]	बिल्कुल नहीं [Definitely no]	शायद नहीं [Probably no]	शायद हाँ [Probably yes]	बिल्कुल हाँ [Definitely yes]

Question 86 अगर मैं सेक्स करूँ और अपने दोस्तों को बताऊँ कि मैंने कंडोम इस्तेमाल नहीं किया था, तो वे गुस्सा होंगे या निराश होंगे [If I had sex and I told my friends that I did not use condoms, they would be angry or disappointed.]	लगभग कभी नहीं [Almost never]	कभी-कभी [Sometimes]	अक्सर [Often]	लगभग हमेशा [Almost always]
Question 87 मेरे दोस्त "सुरक्षित" सेक्स के बारे में बहुत बातें करते हैं [My friends talk a lot about "safer" sex.]	लगभग कभी नहीं [Almost never]	कभी-कभी [Sometimes]	अक्सर [Often]	लगभग हमेशा [Almost always]
Question 88 डेट पर जाने से पहले, मैं और मेरे दोस्त एक-दूसरे को "सुरक्षित" सेक्स करने के लिए हौसला देते हैं। (डेट का मतलब किसी लड़की के साथ रोमांटिक मुलाकात) [My friends and I encourage each other before dates to practice "safer" sex.] (Date means a romantic meeting with a girl)	लगभग कभी नहीं [Almost never]	कभी-कभी [Sometimes]	अक्सर [Often]	लगभग हमेशा [Almost always]
Question 89 अगर किसी दोस्त को पता चले कि मैंने सेक्स किया है, तो उसे इस बात से कोई फ़र्क नहीं पड़ेगा कि मैंने कंडोम इस्तेमाल किया था या नहीं [If a friend knew that I had sex, he/she wouldn't care if I had used a condom or not.]	लगभग कभी नहीं [Almost never]	कभी-कभी [Sometimes]	अक्सर [Often]	लगभग हमेशा [Almost always]
Question 90 जब मुझे लगता है कि मेरा कोई दोस्त सेक्स कर सकता है, तो मैं उससे पूछूंगा कि क्या उसके पास कंडोम है। [When I think that one of my friends might have sex, I will ask them if they have a condom.]	लगभग कभी नहीं [Almost never]	कभी-कभी [Sometimes]	अक्सर [Often]	लगभग हमेशा [Almost always]
Question 91 अगर किसी दोस्त को पता चले कि मैं सेक्स कर सकता हूँ, तो वह मुझसे पूछेगा/पूछेगी कि क्या मैंने कंडोम रखा है [If a friend knew that I might have sex, he/she would ask me if I was carrying a condom.]	लगभग कभी नहीं [Almost never]	कभी-कभी [Sometimes]	अक्सर [Often]	लगभग हमेशा [Almost always]
Question 92 अगर मुझे लगे कि मेरे किसी दोस्त ने डेट पर सेक्स किया है, तो मैं उससे पूछूंगा कि क्या उसने कंडोम का इस्तेमाल किया था। [If I thought that one of my friends had sex on a date, I would ask them if they used a condom.]	लगभग कभी नहीं [Almost never]	कभी-कभी [Sometimes]	अक्सर [Often]	लगभग हमेशा [Almost always]

Question 93 मुझे खुद या अपने साथी को कंडोम लगाते समय शर्म आएगी [I would feel embarrassed to put a condom on myself or my partner]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 94 मुझे पूरा भरोसा है कि जब मैं सेक्स करेंगे, तो मैं कंडोम को आसानी से निकाल कर फेंक सकता हूँ [I feel confident I could gracefully remove and dispose of a condom when I have intercourse]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 95 मुझे पूरा भरोसा है कि मैं कंडोम लगाने को खुद या अपने साथी के साथ फोरप्ले (संबंध बनाने से पहले की तैयारी) का हिस्सा आसानी से बना सकता हूँ [I feel confident in my ability to incorporate putting a condom on myself or my partner during foreplay]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 96 मुझे भरोसा है कि मैं अपने साथी के साथ कंडोम का इस्तेमाल कर सकता हूँ बिना माहौल (मूड) खराब किए [I feel confident that I could use a condom with a partner without breaking the mood]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 97 मुझे पूरा भरोसा है कि मैं सफलतापूर्वक कंडोम का इस्तेमाल कर सकता हूँ [I feel confident that I could use a condom successfully]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 98 मुझे पूरा भरोसा है कि मैं अपने किसी भी साथी के साथ कंडोम के इस्तेमाल पर बात कर सकता हूँ [I feel confident in my ability to discuss condom usage with any partner I might have]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 99 मुझे पूरा भरोसा है कि मैं किसी नए साथी के साथ कंडोम इस्तेमाल करने का सुझाव दे सकता हूँ [I feel confident in my ability to suggest using condoms with a new partner]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]

Question 100 मुझे पूरा भरोसा है कि मैं कंडोम इस्तेमाल करने का सुझाव इस तरह दे सकता हूँ कि मेरे साथी को यह महसूस न हो कि उसे कोई बीमारी है [I feel confident that I could suggest using a condom without my partner feeling like they have a disease.]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 101 मुझे पूरा भरोसा है कि सेक्स के दौरान मैं कंडोम का इस्तेमाल कर सकता हूँ बिना किसी यौन अनुभव या आनंद को कम किए [I feel confident I could use a condom during intercourse without reducing any sexual sensations or pleasure]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 102 मुझे पूरा भरोसा है कि शराब पीने के बाद भी मुझे कंडोम का इस्तेमाल करना याद रहेगा। [I feel confident that I would remember to use a condom even after I have been drinking]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 103 मुझे पूरा भरोसा है कि नशे में होने (high) पर भी मुझे कंडोम का इस्तेमाल करना याद रहेगा। [I feel confident that I would remember to use a condom even if I were high.]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 104 मुझे किसी नए साथी के साथ कंडोम इस्तेमाल करने का सुझाव देते हुए आत्मविश्वास महसूस नहीं होगा, क्योंकि मुझे डर होगा कि वह सोचेगी कि मैंने पहले अन्य यौन अनुभव रहा है [I would not feel confident suggesting using condoms with a new partner because I would be afraid she would think I've had other sexual experiences]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 105 मुझे किसी नए साथी के साथ कंडोम इस्तेमाल करने का सुझाव देते हुए आत्मविश्वास महसूस नहीं होगा, क्योंकि मुझे डर होगा कि वह सोचेगी कि मुझे कोई यौन संचारित रोग (STD) है [I would not feel confident suggesting using condoms with a new partner because I would be afraid she would think I **have a sexually transmitted disease (STD)]**	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]

Question 106 मुझे किसी नए साथी के साथ कंडोम इस्तेमाल करने का सुझाव देते हुए आत्मविश्वास महसूस नहीं होगा, क्योंकि मुझे डर होगा कि वह सोचेगी कि मुझे लगता है कि उसे कोई यौन संचारित रोग (STD) है [I would not feel confident suggesting using condoms with a new partner because I would be afraid she would think I thought **she has a sexually transmitted disease** (STD)]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]

अगले तीन कथन आने वाले 6 महीनों में कंडोम इस्तेमाल करने की आपकी योजना और इच्छा के बारे में हैं। **ये सवाल तब भी लागू होते हैं, जब आप अभी किसी संबंध में हों या अकेले हों** अगर आप अगले 6 महीनों में सेक्स करते हैं, तो कंडोम के इस्तेमाल के बारे में नीचे दिए गए हर कथन से आप कितना सहमत या असहमत हैं? [The next three statements are about your plans and willingness to use condoms in the next 6 months. **These questions apply whether you are currently in a relationship or single.**] [If you were to have sex in the next 6 months, how much do you agree or disagree with each statement about condom use?]

Question 107 मैं अगले 6 महीनों में कंडोम इस्तेमाल करने के लिए तैयार हूँ [I am willing to use condom in the next 6 months]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 108 मैं अगले 6 महीनों में कंडोम इस्तेमाल करूँगा [I will use condom in the next 6 months]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 109 मेरा इरादा है कि मैं अगले 6 महीनों में कंडोम इस्तेमाल करूँ [I intend to use condom in the next 6 months]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	निष्पक्ष [Neutral]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]

आगे दिए गए सवाल कंडोम के साथ आपके अनुभवों के बारे में हैं। कृपया पुरानी और अभी की दोनों स्थितियों के बारे में सोचें और वह विकल्प चुनें जो बताता हो कि हर कथन आप पर कितनी बार लागू होता है। **अगर आपने कभी भी कोई यौन गतिविधि (sexual activity) नहीं की है, तो कृपया पहला विकल्प चुनें** [The following questions are about your experiences with condoms. Please think about both past and current situations and select the option that best describes how often each statement applies to you. **If you have never engaged in any sexual activities, please select the first option**.

Question 110 आप कंडोम को कितनी बार अपने साथ रखते हैं या	मैंने कभी भी कोई यौन	कभी नहीं [Never]	शायद ही कभी (या	कभी कभी [Sometimes]	ज़्यादातर समय	हर बार (या

ऐसी जगह रखते हैं जहाँ से वह आसानी से मिल जाए? (यह सवाल आपके पहले के और अभी के दोनों समय के लिए है) [In the past or currently, how often do you carry condoms with you or keep them handy.]	गतिविधि नहीं की है। [I have never engaged in any sexual activities]		बहुत कम) [Rarely]		[Most of the time]	हमेशा) [Every time]
Question 111 आप जिस व्यक्ति के साथ सेक्स करते हैं, उससे कंडोम इस्तेमाल करने के बारे में कितनी बार बात करते हैं? [In the past or currently, how often do you talk about condom use with a person you engage sexually?]	मैंने कभी भी कोई यौन गतिविधि नहीं की है। [I have never engaged in any sexual activities]	कभी नहीं [Never]	शायद ही कभी (या बहुत कम) [Rarely]	कभी कभी [Sometimes]	ज़्यादातर समय [Most of the time]	हर बार (या हमेशा) [Every time]
Question 112 आप सेक्स करते समय कितनी बार कंडोम का इस्तेमाल करते हैं? [In the past or currently, how often do you use condom(s) during sexual activity?]	मैंने कभी भी कोई यौन गतिविधि नहीं की है। [I have never engaged in any sexual activities]	कभी नहीं [Never]	शायद ही कभी (या बहुत कम) [Rarely]	कभी कभी [Sometimes]	ज़्यादातर समय [Most of the time]	हर बार (या हमेशा) [Every time]

Question 113 मेरी राय में, एक आदमी को घर का काम (या घरेलू काम) नहीं करना चाहिए [In my opinion, a man shouldn't have to do household chores]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 114 मेरी राय में, अगर ज़रूरी हो, तो पुरुषों को इज़्ज़त पाने के लिए हिंसा (Violence) का इस्तेमाल करना चाहिए [In my opinion, men should use violence to get respect if necessary]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 115 मेरी राय में, एक असली मर्द को जितने संभव हो उतने यौन साथी (sexual partners) रखने चाहिए। [In my opinion, a real man should have as many sexual partners as he can]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 116 मेरी राय में, एक ऐसे आदमी को असल में इज़्ज़त नहीं मिलनी चाहिए जो अपनी चिंताओं, डर और समस्याओं के बारे में बहुत ज़्यादा बात करता है [In my opinion, a man who talks a lot about his worries, fears, and problems shouldn't really get respect]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]
Question 117 मेरी राय में, एक गे (Gay) लड़का असली मर्द नहीं होता है [In my opinion, a gay guy is not a "real man"]	पूरी तरह सहमत [Strongly agree]	सहमत [Agree]	असहमत [Disagree]	पूरी तरह असहमत [Strongly disagree]

आखिर में, हम चाहेंगे कि आप अपने और अपने रोज़मर्रा के जीवन के बारे में कुछ और सवालों के जवाब दें। [Finally, we would like you to answer a few more questions about yourself and your daily life.]

Question 122 किस प्रकार के मीडिया का इस्तेमाल करके आपने सबसे ज़्यादा सीखा है? [Using which type of media have you learned the MOST from about sex such as condoms, sexual intercourse?]

- ○ टेलीविजन (या टी.वी.) [Television]
- ○ फिल्में [Movies]
- ○ स्ट्रीमिंग प्लेटफॉर्म, जैसे Netflix, MX Player [Streaming platforms such as Netflix, MX Player]
- ○ इंटरनेट वेबसाइटें [Internet websites]
- ○ वीडियो गेम [Video games]
- ○ संगीत [Music]
- ○ किताबें / पत्रिकाएँ / अखबार [Books/Magazines/Newspapers]
- ○ अन्य (कृपया बताएँ) [Other (please specify)]

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Question 123 इंटरनेट या डिजिटल मीडिया (जैसे सोशल मीडिया, गेमिंग या स्ट्रीमिंग प्लेटफॉर्म) के अलावा, आप सेक्स से जुड़ी जानकारी (जैसे कंडोम, यौन संबंध) आमतौर पर कहाँ से प्राप्त करते हैं? **कृपया उन सभी को चुनें जो आप पर लागू होते हैं** [Apart from the internet or digital media (such as social media, gaming, or streaming platforms),

where do you usually get information about sex such as condoms, sexual intercourse? **Please select all that apply.]**

- ☐ माँ [Mother]
- ☐ पिता [Father]
- ☐ बहन [Sister(s)]
- ☐ भाई [Brother(s)]
- ☐ चचेरे/ममेरे भाई-बहन [Cousin(s)]
- ☐ दादा-दादी / नाना-नानी [Grandparent]
- ☐ दोस्त [Friend(s)]
- ☐ शिक्षक [Teacher(s)]
- ☐ स्वास्थ्य पेशेवर (जैसे डॉक्टर, नर्स) [Health Professionals (e.g. Doctors, Nurse)]
- ☐ टेलीविज़न / रेडियो [Television/Radio]
- ☐ किताबें / पत्रिकाएँ / समाचार पत्र [Books/Magazines/Newspapers]
- ☐ अन्य (कृपया बताएँ) [Other (please specify)]

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Question 124 आपकी वैवाहिक स्थिति (marital status) क्या है? [What is your marital status?]

- ○ शादी कभी नहीं की [Never married]
- ○ विवाहित (शादीशुदा) [Married]
- ○ अन्य [Other]
- ○ बताना नहीं चाहता/चाहती [Prefer not to say]

Question 125 पिछले 12 महीनों में आप ज़्यादातर समय क्या कर रहे थे? [What have you been doing for most of the time over the last 12 months?]

- ○ कॉलेज जाना/पढ़ाई करना [Going to college/studying]
- ○ वेतनभोगी कर्मचारी (या नौकरी करना) [Salaried employee]
- ○ स्व-रोजगार (या अपना काम करना) [Self-employed]
- ○ काम ढूँढना [Looking for work]
- ○ बताना नहीं चाहता/चाहती [Prefer not to say]

Question 126 आपके घर में कितनी बार रोज़मर्रा की ज़रूरतें पूरी करने के लिए पैसे की कमी होती है? [How often does your household not have enough money to meet daily needs?]

- ○ हर रोज़ [Everyday]
- ○ हफ्ते में कम से कम एक बार [At least once per week]
- ○ महीने में कम से कम एक बार [At least once per month]
- ○ साल में कम से कम एक बार [At least once per year]
- ○ कभी नहीं [Never]
- ○ बताना नहीं चाहता [Prefer not to say]

Question 127 आप किस जाति या जनजाति से संबंद रखते है? [To which of the following caste or tribe do you consider you belong?]

- ○ सामान्य [General]
- ○ अनुसूचित जाति (SC) [Scheduled caste]
- ○ अनुसूचित जनजाति (ST) [Scheduled tribe]
- ○ अन्य पिछड़ा वर्ग (OBC) [Other backward class]
- ○ पता नहीं [Don't know]
- ○ कोई जाति/जनजाति नहीं [No caste/tribe]
- ○ बताना नहीं चाहता [Prefer not to say]
- ○

Question 128 आपका वर्तमान धर्म क्या है? [What is your current religion?]

- ○ हिन्दू [Hindu]
- ○ मुस्लिम [Muslim]
- ○ ईसाई [Christian]
- ○ सिख [Sikh]
- ○ बौद्ध /नव बौद्ध [Buddhist/Neo-Buddhist]
- ○ जैन [Jain]
- ○ यहूदी [Jewish]
- ○ पारसी/ज़रथुष्ट्री [Parsi/Zoroastrian]
- ○ कोई धर्म नहीं [No religion]
- ○ अन्य [Other]
- ○ बताना नहीं चाहता [Prefer not to say]

Question 129 आपके लिए धर्म और धार्मिक विचार अभी कितने ज़रूरी हैं? [How important are religion and religious views to you now?]

- ○ बिल्कुल ज़रूरी नहीं [Not important at all]
- ○ बहुत ज़रूरी नहीं [Not very important]
- ○ काफ़ी ज़रूरी [Fairly important]
- ○ बहुत ज़रूरी [Very important]
- ○ बताना नहीं चाहता [Prefer not to say]

Question 130 क्या आप पिछले एक साल (12 महीनों) में, एक महीना या उससे ज़्यादा समय के लिए, घर से बाहर रहे हैं? [In the last 12 months, have you been away from home for one month or more at a time?]

- ○ हाँ [Yes]
- ○ नहीं [No]

Thank you for completing the survey. This is the end. Please return the device to the research staff.

Appendix F. Consent forms

D.1. For in-depth interviews

CONSENT TO PARTICIPATE

Project Title	Examining what digital media content young men in Delhi are exposed to and how these exposures relate to their sexual and reproductive health outcomes.
Purpose of the Study	This research is being conducted by Angshuman Kashyap, a doctoral candidate from the University of Maryland, College Park to fulfil their dissertation requirement. We are inviting you to participate in this research project because you are a young men 18 to 21 years old from Delhi. The purpose of this research project is to understand young men use digital media to engage with sexual content in Delhi, India
Procedures	The procedure involves completing an in-person interview. The interview should take between 45 minutes and will focus on your experiences of ways young men like you and your friends use internet-based media platforms like social media, online gaming, and streaming platforms to engage with sexual content and learn about sexual health. You may skip any question that you do not want to answer. We would like to audio-record the interview so we can listen to the interview again while taking detailed notes. If you do not want me to audio-record the interview, let me know. Or if at any point during the interview you want me to stop audio-recording, you can let me know. In both these cases, I will take notes on paper during our conversation.
Potential Risks and Discomforts	We do not know of any risks for participating in this project, however we recognize that this is a sensitive topic, and you do not have to answer any questions that you do not feel comfortable answering. You are not required to participate in this study. If you choose not to participate in this study, you will not be penalized in any way. Choosing to participate or not participate in this study will not affect your education, employment or personal life.
Potential Benefits	There are no direct benefits to you in this study. However, a potential benefit is your insights will help us understand how we can use digital media to make sexual health services better for young men.
Confidentiality	Interview responses, audio-only recordings, and interview notes will be kept confidential within the research team. Identifiable information will be only collected at the consenting stage and while receiving a compensation at the end of the interview. Any potential loss of such information will be minimized by storing the data separately in a locked cabinet at the doctoral candidate's office at the University of Maryland, USA and will not be linked to the analyzable data. Electronic information will be stored on a secure password-protected computer and backed up on a cloud server at the

	University of Maryland, College Park, USA. Data will be assessed at the aggregated level and when we write a report or article about this research project, your identity will not be released, and any information you provide will not be connected to you. The information you provide in the interview may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or if someone else is in danger or if we are required to do so by law. The consent forms with personal identifier records, de-identified transcripts will be retained for three years following completion of the study and will then be destroyed/deleted.
Compensation	Immediately, at the end of the interview, you will receive Rs. 300 cash from the research assistant for participating in the study.
Right to Withdraw and Questions	Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. You will not be affected based on your decision of whether you choose to participate or not participate in this study. If you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator: **Angshuman Kashyap** Department of Behavioral and Community Health, School of Public Health, University of Maryland College Park, Maryland, 20742, USA **akshyap@umd.edu** **Indian contact no.**
Participant Rights	If you have questions about your rights as a research participant or wish to report a research-related injury, please contact: **University of Maryland College Park** **Institutional Review Board Office** **1204 Marie Mount Hall** **College Park, Maryland, 20742, USA** **E-mail: irb@umd.edu** **Telephone: +1 301-405-0678** **IRB protocol number: 2373338-1** For more information regarding participant rights, please visit: https://research.umd.edu/research-resources/research-compliance/institutional-review-board-irb/research-participants This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving

	human subjects.
Statement of Consent	Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction, and you voluntarily agree to participate in this research study. You have received a copy of this consent form on your phone number via message a day before the interview. If you agree to participate, please add your name and sign below.
Signature and Date	**NAME OF PARTICIPANT**
	SIGNATURE OF PARTICIPANT
	DATE

Hindi version

भाग लेनेकी सहमति

परियोजना का शीर्षकर्ष	दिल्ली के युवा पुरुष किस प्रकार की डिजिटल मीडिया सामग्री के संपर्क में आते हैं और यह संपर्क उनके यौन एवं प्रजनन स्वास्थ्य परिणामों से किस प्रकार संबंधित है, इसका अध्ययन करना।
अध्ययन का उद्देश्य	यह शोध यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क के डॉक्टोरल उम्मीदवार अंशुमन कश्यप द्वारा उनके शोध प्रबंध (डिज़र्टेशन) की आवश्यकता पूरी करने के लिए किया जा रहा है। हम आपको इस शोध परियोजना में भाग लेने के लिए आमंत्रित कर रहे हैं क्योंकि आप दिल्ली के 18 से 21 वर्ष के युवा पुरुष हैं। इस शोध परियोजना का उद्देश्य यह समझना है कि दिल्ली, भारत में युवा पुरुष यौन सामग्री के संपर्क में आने और उसके साथ जुड़ने के लिए डिजिटल मीडिया का उपयोग कैसे करते हैं।
प्रक्रिया	इस प्रक्रिया में आमने-सामने साक्षात्कार पूरा करना शामिल है। साक्षात्कार में लगभग 45 मिनट का समय लगेगा और यह इस बात पर केंद्रित होगा कि आपके जैसे युवा पुरुष और आपके मित्र इंटरनेट-आधारित मीडिया प्लेटफ़ॉर्म जैसे सोशल मीडिया, ऑनलाइन गेमिंग और स्ट्रीमिंग प्लेटफ़ॉर्म का उपयोग यौन सामग्री से जुड़ने और यौन स्वास्थ्य के बारे में जानने के लिए कैसे करते हैं। आप किसी भी प्रश्न का उत्तर देने से इनकार कर सकते हैं यदि आप चाहें।

	हम साक्षात्कार को ऑडियो-रिकॉर्ड करना चाहेंगे ताकि हम बाद में साक्षात्कार को सुनकर विस्तृत नोट्स ले सकें। यदि आप नहीं चाहते कि साक्षात्कार ऑडियो-रिकॉर्ड किया जाए, तो कृपया हमें बताएं। या यदि साक्षात्कार के दौरान कभी भी आप ऑडियो-रिकॉर्डिंग रोकने के लिए कहें, तो हम ऐसा करेंगे। ऐसे किसी भी मामले में, हम बातचीत के दौरान कागज पर नोट्स लेंगे।
संभावित जोखिम और असुविधाएँ	हमें इस अध्ययन में भाग लेने से जुड़े किसी भी जोखिम की जानकारी नहीं है। हालांकि, हम समझते हैं कि यह एक संवेदनशील विषय है, और आप उन प्रश्नों का उत्तर देने के लिए बाध्य नहीं हैं जिनका उत्तर देने में आपको असहजता महसूस होती है। इस अध्ययन में भाग लेना पूरी तरह से आपकी इच्छा पर निर्भर है। यदि आप भाग नहीं लेना चाहते, तो आपको किसी भी प्रकार की सज़ा या हानि नहीं होगी। इस अध्ययन में भाग लेने या न लेने का निर्णय आपके शिक्षा, रोजगार या व्यक्तिगत जीवन पर किसी भी प्रकार का प्रभाव नहीं डालेगा।
संभावित लाभ	इस अध्ययन से आपको कोई प्रत्यक्ष लाभ नहीं होगा। हालांकि, एक संभावित लाभ यह है कि आपके विचार हमें यह समझने में मदद करेंगे कि युवा पुरुषों के लिए यौन स्वास्थ्य सेवाओं को बेहतर बनाने में डिजिटल मीडिया का उपयोग कैसे किया जा सकता है।
गोपनीयता	साक्षात्कार के उत्तर, केवल ऑडियो रिकॉर्डिंग और साक्षात्कार नोट्स केवल शोध टीम के भीतर गोपनीय रखे जाएंगे। पहचान योग्य जानकारी केवल सहमति लेने के चरण और साक्षात्कार पूरा होने के बाद मुआवजा प्राप्त करने के समय एकत्र की जाएगी। इस प्रकार की किसी भी जानकारी के संभावित नुकसान को कम करने के लिए, डेटा को यूनिवर्सिटी ऑफ़ मैरीलैंड, यूएसए में डॉक्टोरल उम्मीदवार के कार्यालय में लॉक की गई कैबिनेट में अलग से संग्रहित किया जाएगा और इसे विश्लेषण योग्य डेटा से नहीं जोड़ा जाएगा। इलेक्ट्रॉनिक जानकारी को सुरक्षित पासवर्ड-प्रोटेक्टेड कंप्यूटर पर संग्रहीत किया जाएगा और यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क, यूएसए में क्लाउड सर्वर पर बैकअप लिया जाएगा।

	डेटा का मूल्यांकन केवल संक्षिप्त/संग्रहित स्तर पर किया जाएगा, और जब हम इस शोध परियोजना के बारे में रिपोर्ट या लेख लिखेंगे, तो आपकी पहचान प्रकट नहीं की जाएगी और आपकी दी गई किसी भी जानकारी को आपसे जोड़ा नहीं जाएगा। यदि आप या कोई अन्य व्यक्ति खतरे में है, या यदि कानून के तहत ऐसा करना आवश्यक हो, तो साक्षात्कार में दी गई जानकारी यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क के प्रतिनिधियों या सरकारी अधिकारियों के साथ साझा की जा सकती है। सहमति फ़ॉर्म जिसमें व्यक्तिगत पहचान रिकॉर्ड शामिल हैं और पहचान रहित ट्रांस्क्रिप्ट अध्ययन पूरा होने के तीन वर्षों तक सुरक्षित रखी जाएंगी और उसके बाद नष्ट/हटा दी जाएंगी।
मुआवजा	साक्षात्कार के तुरंत बाद, इस अध्ययन में भाग लेने के लिए आपको शोध सहायक से 300 रुपये नकद प्राप्त होंगे।
भाग लेने का अधिकार और प्रश्न	इस शोध में आपका भाग लेना पूरी तरह से स्वैच्छिक है। आप पूरी तरह से भाग न लेने का विकल्प चुन सकते हैं। यदि आप इस शोध में भाग लेने का निर्णय लेते हैं, तो आप किसी भी समय भाग लेना बंद कर सकते हैं। यदि आप इस अध्ययन में भाग नहीं लेने का निर्णय लेते हैं या किसी भी समय भाग लेना बंद कर देते हैं, तो आपको किसी भी प्रकार की सजा नहीं दी जाएगी और न ही आप उन किसी भी लाभ से वंचित होंगे जिनके आप अन्यथा पात्र होते। आपके इस निर्णय से आपके शिक्षा, रोजगार या अन्य व्यक्तिगत मामलों पर कोई प्रभाव नहीं पड़ेगा। यदि आपके पास कोई प्रश्न, चिंता या शिकायत है, या यदि आपको इस शोध से संबंधित कोई चोट या समस्या रिपोर्ट करनी है, तो कृपया शोधकर्ता से संपर्क करें: **अंशुमन कश्यप** विभाग: व्यवहार और सामुदायिक स्वास्थ्य, स्कूल ऑफ़ पब्लिक हेल्थ, यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क, मैरीलैंड, 20742, यूएसए ईमेल: akshyap@umd.edu भारतीय संपर्क नंबर:

प्रतिभागियों के अधिकार	यदि आपके पास शोध प्रतिभागी के रूप में अपने अधिकारों के बारे में प्रश्न हैं या आप शोध से संबंधित किसी चोट की रिपोर्ट करना चाहते हैं, तो कृपया संपर्क करें: **University of Maryland College Park** Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742, USA ईमेल: irb@umd.edu टेलीफोन: +1 301-405-0678 IRB प्रोटोकॉल नंबर: 2373338-1 प्रतिभागियों के अधिकारों के बारे में अधिक जानकारी के लिए कृपया इस लिंक पर जाएँ: https://research.umd.edu/research-resources/research-compliance/institutional-review-board-irb/research-participants यह शोध मानव विषयों के लिए University of Maryland, College Park IRB प्रक्रियाओं के अनुसार समीक्षा किया गया है।
सहमति का विवरण	आपके हस्ताक्षर का अर्थ है कि आप कम से कम 18 वर्ष के हैं; आपने इस सहमति पत्र को पढ़ लिया है या किसी ने इसे आपके लिए पढ़कर सुनाया है; आपके सभी प्रश्नों के संतोषजनक उत्तर दिए गए हैं, और आप स्वेच्छा से इस शोध में भाग लेने के लिए सहमत हैं। आपको यह सहमति पत्र साक्षात्कार से एक दिन पहले अपने फ़ोन नंबर पर संदेश के माध्यम से प्राप्त हो चुका है। यदि आप भाग लेने के लिए सहमत हैं, तो कृपया नीचे अपना नाम जोड़ें और हस्ताक्षर करें।

हस्ताक्षर और दिनांक	प्रतिभागी का नाम
	प्रतिभागी का हस्ताक्षर
	तारीख

D.2. For pilot test

CONSENT TO PARTICIPATE

Project Title	Examining what digital media content young men in Delhi are exposed to and how these exposures relate to their sexual and reproductive health outcomes.
Purpose of the Study	This research is being conducted by Angshuman Kashyap, a doctoral candidate from the University of Maryland, College Park to fulfil their dissertation requirement. We are inviting you to participate in this research project because you are a young men 18 to 21 years old from Delhi. The purpose of this research project is to understand how young men use digital media to engage with sexual content in Delhi, India.
Procedures	The procedure involves completing an in-person interview. The interview should take between 45 minutes and will focus on seeking feedback from you about the questions that are part of the study. The questions will focus on your experiences of ways young men like you and your friends use internet-based media platforms like social media, online gaming, and streaming platforms to engage with sexual content and learn about sexual health. You may skip any question that you do not want to answer. We would like to audio-record the interview so we can listen to the interview again while taking detailed notes. If you do not want me to audio-record the interview, let me know. Or if at any point during the interview you want me to stop audio-recording, you can let me know. In both these cases, I will take notes on paper during our conversation.
Potential Risks and Discomforts	We do not know of any risks for participating in this project, however we recognize that this is a sensitive topic, and you do not have to answer any questions that you do not feel comfortable answering. You are not required to participate in this study. If you choose not to participate in this study, you will not be penalized in any way. Choosing to participate or not participate in this study will not affect your education, employment or personal life.
Potential Benefits	There are no direct benefits to you in this study. However, a potential benefit is your insights will help us understand how we can use digital media to make sexual health services better for young men.
Confidentiality	Interview responses, audio-only recordings, and interview notes will be kept confidential within the research team. Identifiable information will be only collected at the consenting stage and while receiving a compensation at the end of the interview. Any potential loss of such information will be minimized by storing the data separately in a locked cabinet at the doctoral candidate's office at the University of Maryland, USA and will not be linked to the analyzable data. Electronic information will be stored on a secure password-protected computer and backed up on a cloud server at the University of Maryland, College Park, USA. Data will be assessed at

	the aggregated level and when we write a report or article about this research project, your identity will not be released, and any information you provide will not be connected to you. The information you provide in the interview may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or if someone else is in danger or if we are required to do so by law. The consent form with personal identifier records, de-identified transcripts will be retained for three years following completion of the study and will then be destroyed/deleted.
Compensation	Immediately, at the end of the interview, you will receive Rs. 300 cash from the research assistant for participating in the study.
Right to Withdraw and Questions	Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. You will not be affected based on your decision of whether you choose to participate or not participate in this study. If you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator: **Angshuman Kashyap** Department of Behavioral and Community Health, School of Public Health, University of Maryland College Park, Maryland, 20742, USA **akshyap@umd.edu** **Indian contact no.**
Participant Rights	If you have questions about your rights as a research participant or wish to report a research-related injury, please contact: **University of Maryland College Park** **Institutional Review Board Office** **1204 Marie Mount Hall** **College Park, Maryland, 20742, USA** **E-mail: irb@umd.edu** **Telephone: +1 301-405-0678** **IRB protocol number: 2373338-1** For more information regarding participant rights, please visit: https://research.umd.edu/research-resources/research-compliance/institutional-review-board-irb/research-participants This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

Statement of Consent	Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction, and you voluntarily agree to participate in this research study. You have received a copy of this consent form on your phone number via message a day before the interview. If you agree to participate, please add your name and sign below.
Signature and Date	**NAME OF PARTICIPANT**
	SIGNATURE OF PARTICIPANT
	DATE

Hindi version

भाग लेनेकी सहमति

परियोजना का शीर्षकर्ष	दिल्ली के युवा पुरुष किस प्रकार की डिजिटल मीडिया सामग्री के संपर्क में आते हैं और यह संपर्क उनके यौन एवं प्रजनन स्वास्थ्य परिणामों से किस प्रकार संबंधित है, इसका अध्ययन करना।
अध्ययन का उद्देश्य	यह शोध यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क के डॉक्टोरल उम्मीदवार अंशुमन कश्यप द्वारा उनके शोध प्रबंध (डिज़र्टेशन) की आवश्यकता पूरी करने के लिए किया जा रहा है। हम आपको इस शोध परियोजना में भाग लेने के लिए आमंत्रित कर रहे हैं क्योंकि आप दिल्ली के 18 से 21 वर्ष के युवा पुरुष हैं। इस शोध परियोजना का उद्देश्य यह समझना है कि दिल्ली, भारत में युवा पुरुष यौन सामग्री के संपर्क में आने और उसके साथ जुड़ने के लिए डिजिटल मीडिया का उपयोग कैसे करते हैं।
प्रक्रिया	इस प्रक्रिया में आमने-सामने साक्षात्कार पूरा करना शामिल है। साक्षात्कार में लगभग 45 मिनट का समय लगेगा और यह इस बात पर केंद्रित होगा कि आपके जैसे युवा पुरुष और आपके मित्र इंटरनेट-आधारित मीडिया प्लेटफ़ॉर्म जैसे सोशल मीडिया, ऑनलाइन गेमिंग और स्ट्रीमिंग प्लेटफ़ॉर्म का उपयोग यौन सामग्री से जुड़ने और यौन स्वास्थ्य के बारे में जानने के लिए कैसे करते हैं। आप किसी भी प्रश्न का उत्तर देने से इनकार कर सकते हैं यदि आप चाहें।

	हम साक्षात्कार को ऑडियो-रिकॉर्ड करना चाहेंगे ताकि हम बाद में साक्षात्कार को सुनकर विस्तृत नोट्स ले सकें। यदि आप नहीं चाहते कि साक्षात्कार ऑडियो-रिकॉर्ड किया जाए, तो कृपया हमें बताएं। या यदि साक्षात्कार के दौरान कभी भी आप ऑडियो-रिकॉर्डिंग रोकने के लिए कहें, तो हम ऐसा करेंगे। ऐसे किसी भी मामले में, हम बातचीत के दौरान कागज पर नोट्स लेंगे।
संभावित जोखिम और असुविधाएँ	हमें इस अध्ययन में भाग लेने से जुड़े किसी भी जोखिम की जानकारी नहीं है। हालांकि, हम समझते हैं कि यह एक संवेदनशील विषय है, और आप उन प्रश्नों का उत्तर देने के लिए बाध्य नहीं हैं जिनका उत्तर देने में आपको असहजता महसूस होती है। इस अध्ययन में भाग लेना पूरी तरह से आपकी इच्छा पर निर्भर है। यदि आप भाग नहीं लेना चाहते, तो आपको किसी भी प्रकार की सज़ा या हानि नहीं होगी। इस अध्ययन में भाग लेने या न लेने का निर्णय आपके शिक्षा, रोजगार या व्यक्तिगत जीवन पर किसी भी प्रकार का प्रभाव नहीं डालेगा।
संभावित लाभ	इस अध्ययन से आपको कोई प्रत्यक्ष लाभ नहीं होगा। हालांकि, एक संभावित लाभ यह है कि आपके विचार हमें यह समझने में मदद करेंगे कि युवा पुरुषों के लिए यौन स्वास्थ्य सेवाओं को बेहतर बनाने में डिजिटल मीडिया का उपयोग कैसे किया जा सकता है।
गोपनीयता	साक्षात्कार के उत्तर, केवल ऑडियो रिकॉर्डिंग और साक्षात्कार नोट्स केवल शोध टीम के भीतर गोपनीय रखे जाएंगे। पहचान योग्य जानकारी केवल सहमति लेने के चरण और साक्षात्कार पूरा होने के बाद मुआवजा प्राप्त करने के समय एकत्र की जाएगी। इस प्रकार की किसी भी जानकारी के संभावित नुकसान को कम करने के लिए, डेटा को यूनिवर्सिटी ऑफ़ मैरीलैंड, यूएसए में डॉक्टोरल उम्मीदवार के कार्यालय में लॉक की गई कैबिनेट में अलग से संग्रहित किया जाएगा और इसे विश्लेषण योग्य डेटा से नहीं जोड़ा जाएगा। इलेक्ट्रॉनिक जानकारी को सुरक्षित पासवर्ड-प्रोटेक्टेड कंप्यूटर पर संग्रहीत किया जाएगा और यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क, यूएसए में क्लाउड सर्वर पर बैकअप लिया जाएगा।

	डेटा का मूल्यांकन केवल संक्षिप्त/संग्रहित स्तर पर किया जाएगा, और जब हम इस शोध परियोजना के बारे में रिपोर्ट या लेख लिखेंगे, तो आपकी पहचान प्रकट नहीं की जाएगी और आपकी दी गई किसी भी जानकारी को आपसे जोड़ा नहीं जाएगा। यदि आप या कोई अन्य व्यक्ति खतरे में है, या यदि कानून के तहत ऐसा करना आवश्यक हो, तो साक्षात्कार में दी गई जानकारी यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क के प्रतिनिधियों या सरकारी अधिकारियों के साथ साझा की जा सकती है। सहमति फ़ॉर्म जिसमें व्यक्तिगत पहचान रिकॉर्ड शामिल हैं और पहचान रहित ट्रांस्क्रिप्ट अध्ययन पूरा होने के तीन वर्षों तक सुरक्षित रखी जाएंगी और उसके बाद नष्ट/हटा दी जाएंगी।
मुआवजा	साक्षात्कार के तुरंत बाद, इस अध्ययन में भाग लेने के लिए आपको शोध सहायक से 300 रुपये नकद प्राप्त होंगे।
भाग लेने का अधिकार और प्रश्न	इस शोध में आपका भाग लेना पूरी तरह से स्वैच्छिक है। आप पूरी तरह से भाग न लेने का विकल्प चुन सकते हैं। यदि आप इस शोध में भाग लेने का निर्णय लेते हैं, तो आप किसी भी समय भाग लेना बंद कर सकते हैं। यदि आप इस अध्ययन में भाग नहीं लेने का निर्णय लेते हैं या किसी भी समय भाग लेना बंद कर देते हैं, तो आपको किसी भी प्रकार की सजा नहीं दी जाएगी और न ही आप उन किसी भी लाभ से वंचित होंगे जिनके आप अन्यथा पात्र होते। आपके इस निर्णय से आपके शिक्षा, रोजगार या अन्य व्यक्तिगत मामलों पर कोई प्रभाव नहीं पड़ेगा। यदि आपके पास कोई प्रश्न, चिंता या शिकायत है, या यदि आपको इस शोध से संबंधित कोई चोट या समस्या रिपोर्ट करनी है, तो कृपया शोधकर्ता से संपर्क करें: **अंशुमन कश्यप** विभाग: व्यवहार और सामुदायिक स्वास्थ्य, स्कूल ऑफ़ पब्लिक हेल्थ, यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क, मैरीलैंड, 20742, यूएसए ईमेल: akshyap@umd.edu भारतीय संपर्क नंबर:

प्रतिभागियों के अधिकार	यदि आपके पास शोध प्रतिभागी के रूप में अपने अधिकारों के बारे में प्रश्न हैं या आप शोध से संबंधित किसी चोट की रिपोर्ट करना चाहते हैं, तो कृपया संपर्क करें: **University of Maryland College Park** Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742, USA ईमेल: irb@umd.edu टेलीफोन: +1 301-405-0678 IRB प्रोटोकॉल नंबर: 2373338-1 प्रतिभागियों के अधिकारों के बारे में अधिक जानकारी के लिए कृपया इस लिंक पर जाएँ: https://research.umd.edu/research-resources/research-compliance/institutional-review-board-irb/research-participants यह शोध मानव विषयों के लिए University of Maryland, College Park IRB प्रक्रियाओं के अनुसार समीक्षा किया गया है।
सहमति का विवरण	आपके हस्ताक्षर का अर्थ है कि आप कम से कम 18 वर्ष के हैं; आपने इस सहमति पत्र को पढ़ लिया है या किसी ने इसे आपके लिए पढ़कर सुनाया है; आपके सभी प्रश्नों के संतोषजनक उत्तर दिए गए हैं, और आप स्वेच्छा से इस शोध में भाग लेने के लिए सहमत हैं। आपको यह सहमति पत्र साक्षात्कार से एक दिन पहले अपने फ़ोन नंबर पर संदेश के माध्यम से प्राप्त हो चुका है। यदि आप भाग लेने के लिए सहमत हैं, तो कृपया नीचे अपना नाम जोड़ें और हस्ताक्षर करें।

हस्ताक्षर और दिनांक	प्रतिभागी का नाम
	प्रतिभागी का हस्ताक्षर
	तारीख

D.3. For survey

CONSENT TO PARTICIPATE

Project Title	Examining what digital media content young men in Delhi are exposed to and how these exposures relate to their sexual and reproductive health outcomes.
Purpose of the Study	This research is being conducted by Angshuman Kashyap, a doctoral candidate from the University of Maryland, College Park to fulfil their dissertation requirement. We are inviting you to participate in this research project because you are a young men 18 to 21 years old from Delhi. The purpose of this research project is to understand what digital media content (such as in social media, online gaming, and streaming platforms) young men in Delhi are exposed to and how these exposures relate to their sexual and reproductive health outcomes.
Procedures	The procedure involves completing an in-person survey on a mobile phone that will be handed to you by a Research Assitant. The survey should take around 30 minutes and will focus on your opinions about digital media content you come across in social media, online gaming, and streaming platforms and your knowledge and opinions about sex. You may skip any question that you do not want to answer.
Potential Risks and Discomforts	We do not know of any risks for participating in this project, however we recognize that this is a sensitive topic, and you do not have to answer any questions that you do not feel comfortable answering. You are not required to participate in this study. If you choose not to participate in this study, you will not be penalized in any way. Choosing to participate or not participate in this study will not affect your education, employment or personal life.
Potential Benefits	There are no direct benefits to you in this study. However, a potential benefit is your insights will help us understand how we can use digital media to make sexual health services better for young men.
Confidentiality	Survey responses will be kept confidential within the research team. Identifiable information will be only collected at the consenting stage and while receiving a compensation at the end of the survey. Any potential loss of information will be minimized by storing this information in a secure, password-protected cloud-based server only accessible by the doctoral candidate and will not be linked to analyzable data. Data will be assessed at the aggregated level and when we write a report or article about this research project, your identity will not be released, and any information you provide will not be connected to you. The information you provide in the survey may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or if someone else is in danger or if we are required to do so by law. The consent section

	with personal identifier records, de-identified survey dataset will be retained for three years following completion of the study and will then be destroyed/deleted.
Compensation	On completion of the survey, you will receive Rs. 200 cash for participating in the study from the research assistant. When you complete the survey, you will see a message to collect the Rs. 200 compensation from the research assistant.
Right to Withdraw and Questions	Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. You will not be affected based on your decision of whether you choose to participate or not participate in this study. If you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator: **Angshuman Kashyap** Department of Behavioral and Community Health, School of Public Health, University of Maryland College Park, Maryland, 20742, USA **akshyap@umd.edu** **Indian contact no.**
Participant Rights	If you have questions about your rights as a research participant or wish to report a research-related injury, please contact: **University of Maryland College Park** **Institutional Review Board Office** **1204 Marie Mount Hall** **College Park, Maryland, 20742, USA** **E-mail: irb@umd.edu** **Telephone: +1 301-405-0678** **IRB protocol number: 2373338-1** For more information regarding participant rights, please visit: https://research.umd.edu/research-resources/research-compliance/institutional-review-board-irb/research-participants This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.
Statement of Consent	Adding your name indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction, and you voluntarily agree to participate in this research study. You have received a copy of this consent form on your phone number via

	message a day before the survey. If you agree to participate, please add your name below.
Name and Date	**NAME OF PARTICIPANT**
	DATE

Hindi version

भाग लेनेकी सहमति

परियोजना का शीर्षकर्ष	दिल्ली के युवा पुरुष किस प्रकार की डिजिटल मीडिया सामग्री के संपर्क में आते हैं और यह संपर्क उनके यौन एवं प्रजनन स्वास्थ्य परिणामों से किस प्रकार संबंधित है, इसका अध्ययन करना।
अध्ययन का उद्देश्य	यह शोध यूनिवर्सिटी ऑफ मैरीलैंड, कॉलेज पार्क के डॉक्टोरल उम्मीदवार अंशुमन कश्यप द्वारा उनके शोध प्रबंध (डिज़र्टेशन) की आवश्यकता पूरी करने के लिए किया जा रहा है। हम आपको इस शोध परियोजना में भाग लेने के लिए आमंत्रित कर रहे हैं क्योंकि आप दिल्ली के 18 से 21 वर्ष के युवा पुरुष हैं। इस शोध का उद्देश्य यह समझना है कि दिल्ली के युवा पुरुष किस प्रकार की डिजिटल मीडिया सामग्री (जैसे सोशल मीडिया, ऑनलाइन गेमिंग, और स्ट्रीमिंग प्लेटफ़ॉर्म) के संपर्क में आते हैं और यह संपर्क उनके यौन और प्रजनन स्वास्थ्य परिणामों से किस प्रकार संबंधित है।
प्रक्रिया	इस प्रक्रिया में आपको एक शोध सहायक द्वारा दिए गए मोबाइल फ़ोन पर आमने-सामने सर्वे पूरा करना होगा। सर्वे में लगभग 30 मिनट का समय लगेगा और यह मुख्य रूप से सोशल मीडिया, ऑनलाइन गेमिंग, और स्ट्रीमिंग प्लेटफ़ॉर्म पर दिखाई देने वाली डिजिटल मीडिया सामग्री के प्रति आपके विचारों तथा सेक्स से जुड़ी आपकी जानकारी और राय पर केंद्रित होगा। आप किसी भी प्रश्न को छोड़ सकते हैं जिसका उत्तर आप नहीं देना चाहते।

संभावित जोखिम और असुविधाएँ	हमें इस अध्ययन में भाग लेने से जुड़े किसी भी जोखिम की जानकारी नहीं है। हालांकि, हम समझते हैं कि यह एक संवेदनशील विषय है, और आप उन प्रश्नों का उत्तर देने के लिए बाध्य नहीं हैं जिनका उत्तर देने में आपको असहजता महसूस होती है। इस अध्ययन में भाग लेना पूरी तरह से आपकी इच्छा पर निर्भर है। यदि आप भाग नहीं लेना चाहते, तो आपको किसी भी प्रकार की सज़ा या हानि नहीं होगी। इस अध्ययन में भाग लेने या न लेने का निर्णय आपके शिक्षा, रोजगार या व्यक्तिगत जीवन पर किसी भी प्रकार का प्रभाव नहीं डालेगा।
संभावित लाभ	इस अध्ययन से आपको कोई प्रत्यक्ष लाभ नहीं होगा। हालांकि, एक संभावित लाभ यह है कि आपके विचार हमें यह समझने में मदद करेंगे कि युवा पुरुषों के लिए यौन स्वास्थ्य सेवाओं को बेहतर बनाने में डिजिटल मीडिया का उपयोग कैसे किया जा सकता है।
गोपनीयता	सर्वे के उत्तर केवल शोध टीम के भीतर गोपनीय रखे जाएंगे। पहचान योग्य जानकारी केवल सहमति देने के चरण और सर्वे पूरा करने के बाद मुआवजा प्राप्त करने के समय एकत्र की जाएगी। किसी भी संभावित जानकारी के नुकसान को कम करने के लिए, यह जानकारी केवल डॉक्टोरल उम्मीदवार द्वारा पहुँच योग्य, सुरक्षित, पासवर्ड-प्रोटेक्टेड क्लाउड-आधारित सर्वर में संग्रहित की जाएगी और इसे विश्लेषण योग्य डेटा से नहीं जोड़ा जाएगा। डेटा का मूल्यांकन केवल संक्षिप्त/संग्रहित स्तर पर किया जाएगा, और जब हम इस शोध परियोजना के बारे में रिपोर्ट या लेख लिखेंगे, तो आपकी पहचान प्रकट नहीं की जाएगी और आपकी दी गई किसी भी जानकारी को आपसे जोड़ा नहीं जाएगा। यदि आप या कोई अन्य व्यक्ति खतरे में है, या यदि कानून के तहत ऐसा करना आवश्यक हो, तो सर्वे में दी गई जानकारी को यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क के प्रतिनिधियों या सरकारी अधिकारियों के साथ साझा किया जा सकता है।

	सहमति अनुभाग में शामिल व्यक्तिगत पहचान रिकॉर्ड और पहचान रहित सर्वे डेटा सेट अध्ययन पूरा होने के तीन वर्षों तक सुरक्षित रखा जाएगा और उसके बाद नष्ट/हटा दिया जाएगा।
मुआवजा	सर्वे पूरा करने पर, आपको इस अध्ययन में भाग लेने के लिए शोध सहायक से 200 रुपये नकद मिलेंगे। सर्वे पूरा करने के बाद, आपको 200 रुपये मुआवजा प्राप्त करने के लिए शोध सहायक से लेने के संबंध में एक संदेश दिखाई देगा।
भाग लेने का अधिकार और प्रश्न	इस शोध में आपका भाग लेना पूरी तरह से स्वैच्छिक है। आप पूरी तरह से भाग न लेने का विकल्प चुन सकते हैं। यदि आप इस शोध में भाग लेने का निर्णय लेते हैं, तो आप किसी भी समय भाग लेना बंद कर सकते हैं। यदि आप इस अध्ययन में भाग नहीं लेने का निर्णय लेते हैं या किसी भी समय भाग लेना बंद कर देते हैं, तो आपको किसी भी प्रकार की सजा नहीं दी जाएगी और न ही आप उन किसी भी लाभ से वंचित होंगे जिनके आप अन्यथा पात्र होते। आपके इस निर्णय से आपके शिक्षा, रोजगार या अन्य व्यक्तिगत मामलों पर कोई प्रभाव नहीं पड़ेगा। यदि आपके पास कोई प्रश्न, चिंता या शिकायत है, या यदि आपको इस शोध से संबंधित कोई चोट या समस्या रिपोर्ट करनी है, तो कृपया शोधकर्ता से संपर्क करें: **अंशुमन कश्यप** विभाग: व्यवहार और सामुदायिक स्वास्थ्य, स्कूल ऑफ़ पब्लिक हेल्थ, यूनिवर्सिटी ऑफ़ मैरीलैंड, कॉलेज पार्क, मैरीलैंड, 20742, यूएसए ईमेल: akshyap@umd.edu भारतीय संपर्क नंबर:
प्रतिभागियों के अधिकार	यदि आपके पास शोध प्रतिभागी के रूप में अपने अधिकारों के बारे में प्रश्न हैं या आप शोध से संबंधित किसी चोट की रिपोर्ट करना चाहते हैं, तो कृपया संपर्क करें: **University of Maryland College Park** Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742, USA

	ईमेल: irb@umd.edu टेलीफोन: +1 301-405-0678 IRB प्रोटोकॉल नंबर: 2373338-1 प्रतिभागियों के अधिकारों के बारे में अधिक जानकारी के लिए कृपया इस लिंक पर जाएँ: https://research.umd.edu/research-resources/research-compliance/institutional-review-board-irb/research-participants यह शोध मानव विषयों के लिए University of Maryland, College Park IRB प्रक्रियाओं के अनुसार समीक्षा किया गया है।
सहमति का विवरण	आपका नाम जोड़ने का अर्थ है कि आप कम से कम 18 वर्ष के हैं; आपने इस सहमति पत्र को पढ़ लिया है या किसी ने इसे आपके लिए पढ़कर सुनाया है; आपके सभी प्रश्नों के संतोषजनक उत्तर दिए गए हैं, और आप स्वेच्छा से इस शोध में भाग लेने के लिए सहमत हैं। आपको यह सहमति पत्र सर्वे से एक दिन पहले अपने फ़ोन नंबर पर संदेश के माध्यम से प्राप्त हो चुका है। यदि आप भाग लेने के लिए सहमत हैं, तो कृपया नीचे अपना नाम जोड़ें।

नाम और दिनांक	प्रतिभागी का नाम
	तारीख

Appendix G. Positionality and qualitative research memos

My positionality

My research interest in boys' and young men's health has developed through my academic training and fieldwork across India, Kenya, and Zambia, where I observed that sexual and reproductive health programs largely prioritize girls and young women, often overlooking boys' and young men's own health needs, experiences, and informational environments. This gap motivated my focus on centering boys and young men as primary actors of inquiry rather than as peripheral participants.

As a global health communication researcher, I study how young people engage with digital media and how such exposure shapes health outcomes. My prior work on U.S. adolescents' digital media ecosystems, informal interactions about their online health seeking information with young men in Kenya has further informed this focus.

My positionality as a young Indian man facilitated rapport-building and candid discussions with young participants, particularly on sensitive topics such as sexual health and pornography. My shared cultural and developmental experiences enabled me to better interpret participants' narratives while remaining attentive to reflexivity throughout the research process.

Research memos

Memo 1: After interviews (22nd November to 25th November, 2025)

I completed interviewer training with data collectors and recruiters on November 21 at Ambedkar University South Campus. Following the training, I conducted 10 interviews with young men over four days, with each interview lasting approximately 60–75 minutes. Overall, the team completed 22 interviews.

Before data collection, a team member printed hard copies of the interview guide and consent forms. I conducted interviews at Ambedkar University South Campus and Delhi University North Campus. Prior to each interview, a team member introduced me to the participant. I identified a quiet, well-lit location on campus and confirmed with each participant that they were comfortable with the setting and the duration of the interview.

At the start of each session, I explained the study purpose and reviewed the consent form with the participant before obtaining written consent. I then started audio recording on my phone. At the end of each interview, participants received an incentive of ₹300. Interviews were conducted with minimal background distractions, and participants appeared comfortable sharing their digital media experiences.

After each interview day, I uploaded audio recordings to a secure cloud-based platform and reviewed them to ensure audio quality. I also listened to interviews conducted by the other interviewers and provided feedback, particularly on probing techniques, before their subsequent interviews. The research team maintained regular communication through a WhatsApp group and debriefed via calls or in-person discussions to reflect on interviews and address emerging challenges.

I returned to Maryland, U.S. on November 30, while I did not directly participate in the quantitative data collection that followed in December 2025 and January 2026. I was easily available via WhatsApp.

Memo 2: During transcript familiarization (January and February 2026)

I began reviewing transcripts concurrently as they were being translated and transcribed, which allowed me to provide ongoing feedback to the team member responsible for transcription. The transcription process took approximately 25 days to complete.

During this phase, I conducted a preliminary review of all transcripts and completed verification by January 25. My focus was on identifying and correcting transcription and spelling errors, ensuring consistent formatting, and clearly distinguishing between interviewer and participant responses.

After finalizing and de-identifying the transcripts, I imported them into Atlas.ti for analysis.

Memo 3: During coding (March 2026)

Before beginning coding, I met with my dissertation committee member, Dr. Stoebenau to discuss my analytic approach. We reviewed different qualitative strategies, including thematic, content, and template analysis. Based on these discussions and my intention to align coding with the study's theory, I selected template analysis, as it allows for both deductive and inductive coding of the transcripts.

Within Atlas.ti, I organized the transcripts into two document groups: interviews with young men who had ever engaged in heterosexual intercourse and those who had not. Before initiating coding, I revisited the interview guide, which was grounded in a theory and my research questions, to inform the development of initial codes.

For the initial coding phase, I coded an equal number of transcripts from both groups (n = 8). I completed this phase over three days, taking frequent breaks in between. During this stage, I generated codes closely aligned with the interview domains, resulting in an initial set of 48 codes. I then reviewed and reorganized these codes to cluster similar concepts and develop a preliminary coding template.

Using this template, I proceeded to code the remaining transcripts. As new insights emerged, I inductively added additional codes and refined the existing structure. This iterative process resulted in 23 new codes, bringing the total to 71 codes across the dataset.

Initial coding	Second layer of codes added
Bad man	Alpha male
Condom ads	Bhojpuri
Condoms	Body image
Considered normal relationship/sex	Bollywood
DG: First introduced	ChatGpt
DG: Sex exposure	Content authenticity
Digital gaming played	Dating apps
Future needs	Digital algorithm
Good lover-bf	Emotion sharing
Good Man	Friends talk about relationships
Internet	General reel
Internet first introduced	Google
Internet own body	Masculinity peer talk
Learn about sex or relationship	No sexual exposure
Masculinity	Omegle
Masturbation	Peer influence
Most useful platform	Penis size

Offline sexual exposure Parents talk Partner talk Pornography Preferred social media platform Preferred digital games Preferred streaming platform Real man character Reel/content rarely shared Relationship expectations Safe sexual practices and unsafe sexual practices Sex feelings - relationship exposure Sex reel/content sharing Sex talk w friends Sexual expectations Sexual feelings Sexual information search Sexual/relationship reels SM: Masculine exposure SM: negative sex content SM: Relationship SM: Sexual exposure SM: First introduction Social media used Solitary play SP: Content exposed SP: First introduced SP: Normal relationship SP: Sexual C exposure Streaming platform used Traditional media used	School Seeking consent Sexual health Social media influence YouTube SM content exposed

I spent approximately three hours reorganizing the codes to develop higher-order themes and sub-themes. These themes emerged through an iterative process that integrated the coded data, my interpretive insights from the interviews, and the study's theory.

I clustered related codes based on conceptual similarity and organized them into a hierarchical structure of broader themes and corresponding sub-themes. This process resulted in six overarching themes, each comprising multiple sub-themes under which all codes were systematically categorized (see figure on the next page for thematic structure).

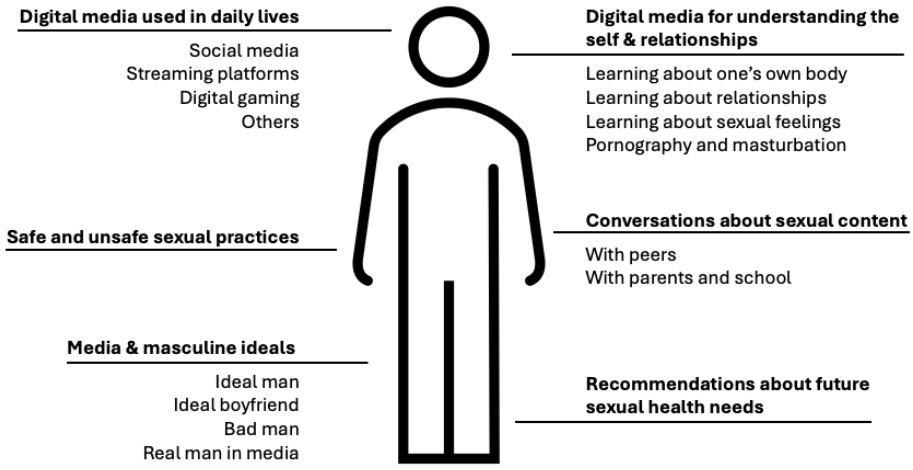


Table: Codes arranged into larger themes

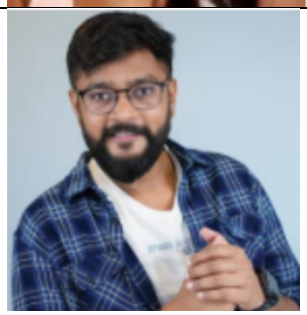
Digital media used in daily lives	**Safe and unsafe sexual practices**
Social media (SM) SM: First introduction SM content exposed Preferred social media platform Social media used **Digital gaming (DG)** DG: First introduced Digital gaming played Preferred digital games **Streaming platforms (SP)** Preferred streaming platform SP: Content exposed SP: First introduced Streaming platform used Internet Internet first introduced ChatGpt Most useful platform Google YouTube	Condom ads Condoms Safe sexual practices and unsafe sexual practices Sexual information search Sexual health **Conversations about sexual content** Parents talk Partner talk Peer influence School Seeking consent Emotion sharing Friends talk about relationships Sex reel/content sharing Sex talk w friends Masculinity peer talk Social media influence Reel/content rarely shared
Media and masculine ideals	**Recommendations about future needs**
Good lover-bf Good Man	Future needs **Solitary play**

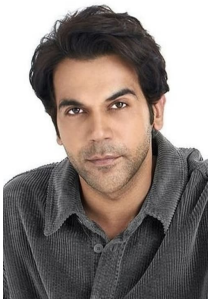
Bad man Alpha male Real man character Masculinity SM: Masculine exposure Penis size	Masturbation Pornography
Understanding the self and relationships	**Others**
Learning about one's own body Body image Internet own body **Learning about relationships** Learn about sex or relationship Relationship expectations Considered normal relationship/sex SM: Relationship SP: Normal relationship **Learning about sexual feelings** Sexual expectations DG: Sex exposure Sex feelings - relationship exposure Sexual feelings Sexual/relationship reels SM: negative sex content SM: Sexual exposure SP: Sexual C exposure	Offline sexual exposure Content authenticity Traditional media used Dating apps Digital algorithm Omegle General reel No sexual exposure Bhojpuri Bollywood

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Appendix H. Supplementary tables for Aims 2 and 3

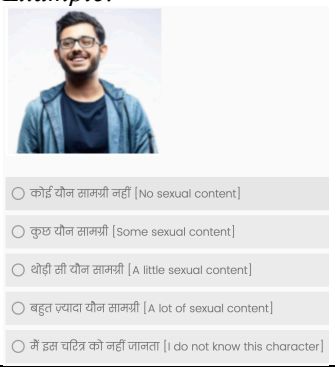
H.1. Characters that were replaced based on participant ranking

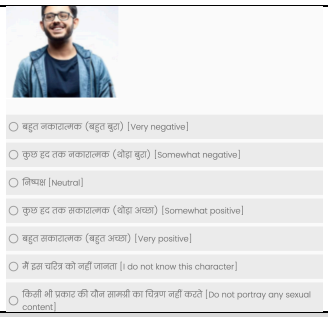
Added	Removed	Rationale
		**General character** – YouTube and Instagram Is an educator and motivator that young men often view. The character removed has played multiple streaming content roles and pilot test participants had difficulties recalling his particular character name
		**Sexual character** – social media and streaming platform Added character who specifically uses vulgar jokes and actions. The removed character plays the added character's role.
		**Sexual character** – social media Both added and removed characters were listed and identified by participants. The added character has more followers (15.5 million) while the removed character has 3.2 million followers.
		**General character** – YouTube Added character talks about national and global politics and was named by interview participants during the ranking exercise. The removed character makes videos on gadgets and pilot test participants could not identify him.

		**General character** - Gaming The new character although not suggested by participants is more common than the removed character. The removed character was not identified during the ranking exercise and was identified by one pilot test participant. They however said, this game can only be played on computers with high graphics (more expensive) or Play Station which is not owned by many young men.
		**Sexual character** – Streaming platform During the ranking exercise, two participants talked about the newly added character in terms of portraying sexual content.
		**General character** – Streaming platform The original character added is a cricket player who is on social media, but I decided to add a streaming platform character that participants listed during the ranking exercise.

H.2. Changes/Modifications made to survey items based on participant feedback

Measures/items	Modified
Demographics	
How often does your household not have enough resources to obtain what it needs to live day to day?	Participant preferred the question to be more direct. Revised: *How often does your household not have enough money to meet daily needs?*
Going to school/studying	School means class 1 – 12th in India Revised: *Going to **college**/studying*
Media character exposure	

	An example image of the character-based media exposure questions and its appearance was added after the first round of pilot test to streamline the flow of the questions. This image appeared after the section instruction/details and before the questions.
For the section on sexual content portrayed by each character and sexual content valence, participants suggested having a I do not know this character option as they could not rate the content if they were not exposed to any character.	New response option added - *I do not know this character* *Example:* 
For questions about sexual valence [*Now for the same characters, how do you feel about how they behave or talk about sex? (positively or negatively)*], a participant asked what option they should select if the general character does not portray any sexual content as the response	New response option added – *Do not portray any sexual content* *Example:*

option Neutral can be still interpreted as neutral sexual content. Suggested adding an option that the character does not portray sexual content.	
Content-based Media Exposure Measure	
Participants questioned about the content they see passively on the Internet for this sections instruction - Please report for every question how often you watch this type of content on TV/Internet/DVDs	Revisions: - *Added how often **they appear** or you watch* - ***Changed DVDs** (not common in Delhi anymore) to **Movies***
Some items under Content-based Media Exposure Measure required modifications, such as : ... people who stand up for someone?	Revision: *... people who **support** or stand up for someone?*
..a quiz?	*..... quiz **game or show**?*
... shows where houses or cars get a makeover?	*... shows where houses or cars get a makeover or **modified**?*
A participant interpreted shoot as film shooting in the statement: ...people who shoot at another person	Revision: *...people who fire a gun at another person.*
Condom-use skills checklist	
Section Instructions: There are eight steps to using a condom correctly. The following are 17 statements about using a condom, some of which are correct, and some of which are incorrect. Circle the eight correct statements.	The instructions were further simplified as participants were not clear if they ONLY have to select the eight correct statements. *Revision: Next, you will see 16 statements (deleted on item) about using a condom, some of which are correct, and some of which are incorrect. Identify the correct and incorrect statements.*
Use a latex condom	2 participants did not know the meaning of latex. Added meaning of latex: Use a latex condom (Latex means rubber)
Unroll the closed end of the condom keeping two inches between the end of the condom and the tip of the penis	Simplified statement: *Leave about two inches of empty space at the tip of the condom and then unroll the rest down the penis*
Unroll the condom to the base (hair) of the penis]	Added more detail: *Unroll the condom to the base (where there is pubic hair) of the penis]*

Withdraw the penis while it is still erected by holding the condom firmly in place. Remove the condom.	Changed the word withdraw to pull out: ***Pull out t****he penis while it is still erect by holding the condom firmly in place. Then remove the condom*
Withdraw the penis after it is no longer erected by holding the condom fully in place. Remove the condom	***Pull out*** *the penis after it is no longer erect by holding the condom firmly in place. The remove the condom*
Put the condom on any time before you ejaculate	A participant was not clear what ejaculate meant, and asked if it means sperm release. Revised: *Put the condom on any time before you ejaculate* ***(sperm release)***
Wrap used condom back in the foil to save for next time	Changed the word foil to packet: *Wrap used condom back in the* ***packet*** *to save for next time*
Unroll the condom to approximately three-quarters of the way down the penis	Three-quarters not clear to two participants. *Changed to* ***three-fourth***
Put the condom on before the penis is erected, before there is any contact between the penis and your partner's body	Added the word and: *Put the condom on before the penis is erect* ***and*** *before any contact between the penis and your partner's body*
Use of lambskin condom	Deleted this item as participants were not familiar with lambskin condom contextually.
Section on normative beliefs (peer norms towards safer sex)	
My friends and I encourage each other before dates to practice “safer” sex.	Definition of date added: *My friends and I encourage each other before dates to practice “safer” sex.* (***Date means a romantic meeting with a girl)***
Section on condom use self-efficacy	
I feel confident that I could suggest using a condom without my partner feeling "diseased."	A participant was not clear about the words “feeling diseased” *Revised: I feel confident that I could suggest using a condom without my partner feeling* ***like they have a disease.***
I feel confident I could use a condom during intercourse without reducing any sexual sensations	The phrase *sexual sensation* was not clear, added the word pleasure. *I feel confident I could use a condom during intercourse without reducing any sexual sensations* ***or pleasure***
I would not feel confident suggesting using condoms with a new partner because I would be afraid she would think I've had a homosexual experience	As all questions focus on heterosexual experiences, revised homosexual experience to other sexual experience

	Revised: *I would not feel confident suggesting using condoms with a new partner because I would be afraid she would think I've had **other sexual experiences.***

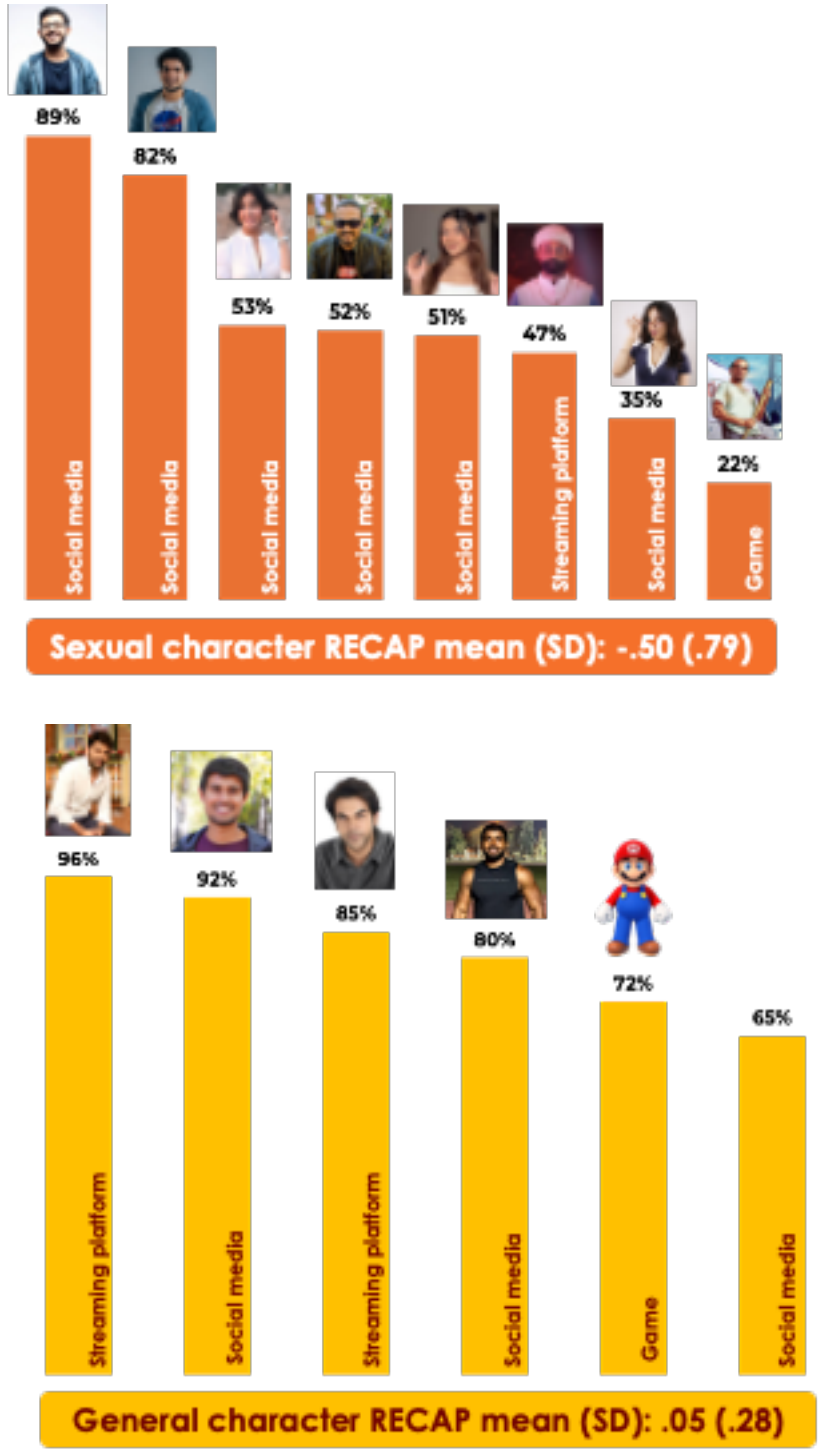
H.3. Participant demographic characteristics	
Age	
18	44 (21.5)
19	29 (14.1)
20	43 (21)
21	89 (43)
Education	
High School (9-12)	12 (6)
Undergraduate	139 (68)
Postgraduate	35 (17)
Others	19 (9)
Caste/tribe	
General	146 (71)
Scheduled caste/Scheduled tribe	30 (15)
Other backward class	23 (11)
Missing	6 (3)
Religion	
Hindu	145 (71)
Muslim	25 (12)
Christian/Sikh/Buddhist/Jain/Jewish	13 (6)
No religion/Other	17 (8)
Missing	5 (2)
Household funds insufficiency to meet daily needs	
Everyday	23 (11)
At least once per week	27 (13)
At least once per month	27 (13)
At least once per year	16 (8)
Never	66 (32)
Prefer not to say	40 (20)
Missing	6 (3)
Ever engaged in penetrative intercourse with a woman	
Yes	102 (50)
No	103 (50)

H.4. Aim 2: Character recognition, participants reporting no sexual portrayal and those who reported not knowing character(s)

Supplementary Table 1.

	Perceived sexual portrayal responses					Perceived sexual valence responses			
	Correct recognition	No sexual portrayal (a)	Don't know character (b)	Total (a + b)	Missing	Neutral portrayal (a)	Don't know character (b)	Total (a+b)	Missing
Sexual characters									
SM_Male_SC1	182 (88.8%)	45 (24.7%)	8 (4.4%)	53 (29.1%)	0	68 (37.4%)	5 (2.7%)	73 (40.1%)	1 (0.5%)
SM_Female_SC2	104 (50.7%)	18 (17.3%)	8 (7.7%)	26 (25.0%)	0	26 (25%)	3 (2.9%)	29 (27.9%)	0
SM_Male_SC4	167 (81.5%)	15 (9%)	5 (3%)	20 (12.0%)	1 (0.6%)	40 (24%)	3 (1.8%)	43 (25.7%)	2 (1.2%)
SM_Female_SC6	71 (34.6%)	7 (9.9%)	0	7 (9.9%)	0	19 (26.8%)	1 (1.4%)	20 (28.2%)	0
G_Male_SC8	46 (22.4%)	10 (21.7%)	0	10 (21.7%)	1 (2.2%)	15 (32.6%)	0 (0%)	15 (32.6%)	1 (2.2%)
SM_Male_SC10	106 (51.7%)	11 (10.4%)	1 (0.9%)	12 (11.3%)	0	28 (26.4%)	1 (0.9%)	29 (27.3%)	0
SP_Male_SC13	97 (47.3%)	2 (2.1%)	10 (10.3%)	12 (12.4%)	1 (1%)	15 (15.5%)	7 (7.2%)	22 (22.7%)	1 (1%)
SM_Female_SC15	108 (52.7%)	6 (5.6%)	2 (1.9%)	8 (7.4%)	0	16 (14.8%)	4 (3.7%)	20 (18.5%)	0
General Characters									
SM_Male_GC3	133 (64.9%)	98 (73.7%)	9 (6.8%)	107 (80.5%)	3 (2.3%)	54 (40.6%)	5 (3.8%)	59 (44.4%)	2 (1.5%)
SM_Male_GC5	164 (80%)	126 (76.8%)	8 (4.9%)	134 (81.7%)	4 (2.4%)	88 (53.7%)	6 (3.7%)	94 (57.4%)	2 (1.2%)
SP_Male_GC7	196 (95.6%)	98 (50%)	8 (4.1%)	106 (54.1%)	2 (1%)	103 (52.6%)	3 (1.5%)	106 (54.1%)	3 (1.5%)
SP_Male_GC9	174 (84.9%)	69 (39.7%)	12 (6.9%)	81 (46.6%)	5 (2.9%)	90 (51.7%)	6 (3.4%)	96 (55.2%)	4 (2.3%)
G_Male_GC12	147 (71.7%)	115 (78.2%)	16 (10.9%)	131 (89.1%)	2 (1.4%)	96 (65.3%)	9 (6.1%)	105 (71.4%)	6 (4.1%)
SM_Male_GC14	188 (91.7%)	124 (66%)	15 (8%)	139 (73.9%)	1 (0.5%)	90 (47.9%)	10 (5.3%)	100 (53.2%)	0

H. 5. Participant's correct recognition of sexual and general characters



H.6. Aim 3: Correlation matrix between all IMBP study measures by sexual status.

Young men who never engaged in penetrative heterosexual intercourse (n=103) (see below diagonal)	Young men who ever engaged in penetrative heterosexual intercourse (n=102) (see above diagonal)							
Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1. Digital media sexual exposure	-	-.23*	-.04	.01	.22*	-.26*	-.10	-.17
2. Condom use knowledge	-.15	-	.31**	.01	-.28**	.53**	.11	.28**
3. Condom use attitude	-.41**	.26*	-	.34**	-.31**	.29**	.15	.32**
4. Peer normative beliefs	-.13	.06	.29**	-	-.24*	.09	.11	.16
5. Masculine normative beliefs	.28**	-.34**	-.20	.04	-	-.31**	.07	-.35**
6. Condom use self-efficacy	-.26*	.14	.22*	.03	-.25*	-	.24*	.43**
7. Condom use intention	.02	.15	.04	.13	.20*	.25*	-	.06
8. Condom use behavior	.	.	.	.	.	.	.	-

*p < .05; ** p < .01 (two-tailed).

H.7. Aim 3: Correlations between behavioral determinant error terms.

Behavioral determinants	**1**	**2**	**3**	**4**	**5**
1. Condom use knowledge	-				
2. Condom use attitude	.23** (.28**)	-			
3. Peer normative beliefs	-.03 (-.05)	.31*** (.33**)	-		
4. Masculine normative beliefs	-.19** (-.14)	-.20* (-.30)**	-.05 (-.19)	-	
5. Condom use self-efficacy	.31*** (.49***)	.20** (.30**)	.04 (-.11)	-.25** (-.25)**	-

*Note: Values represent the standardized residual covariances (correlations). Numbers within parentheses are correlations when condom use behavior was added to the model in H3. * p < .05, ** p < .01, *** p < .001.*

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