



The Sexual Health Myth-Conceptions Scale: Development and Psychometric Evaluation of the Scale with Emerging Adults in the USA

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Abstract

Sexually transmitted infections (STIs) are most prevalent among emerging adults (ages 18–29) in the USA. Heightened risk of STIs is partly due to increased self-exploration and experimentation during this developmental period, compounded by sexual health misinformation that spreads through peer interactions and online media. Despite a well-documented impact of (false) beliefs on behavior, very little is known about sexual myths among emerging adults in the USA and the structure of these myths. In the current study, we introduce the Sexual Health Myth-Conceptions Scale (SHMCS) with two primary goals: (1) to identify common sexual health myth-conceptions (i.e., a fusion of myths and misconceptions) among US emerging adults and (2) to evaluate the scale's psychometric properties. A sample of 1,162 US-based emerging adults were recruited through Prolific, an online crowdsourcing platform, and completed the 34-item SHMCS. Item-level characteristics, exploratory factor analysis, exploratory structural equation modeling, and bifactor analysis were used to establish factorial validity. Item response theory (IRT) was used to examine item and scale performance. Results of factor analyses reinforce three persistent factors, including multi-topic or general, pornography use, and STIs/pregnancy. Results of a 2-PL IRT model reinforce good discrimination and moderate item difficulty across the spectrum of myth-conceptions. Although the SHMCS would benefit from further psychometric refinement, it shows promise as a tool for assessing general and domain-specific sexual health myth-conceptions and for advancing understanding their roles in sexual health among emerging adults.

Keywords Sexual health · Myth-conceptions · Emerging adults · Sexually transmitted infections

Introduction

Emerging adulthood (ages 18–29) is a pivotal time for self-exploration and identity formation (Arnett, 2015). Numerous facets of development continue to come under personal scrutiny including vocational aspirations, education, romantic relationships, and sexuality (Schwartz et al., 2013). For some individuals, this period of development involves high levels

of risky sexual behaviors (Lam & Lefkowitz, 2013), which heighten vulnerability to sexually transmitted infections (STIs). Despite recent evidence of a delay in sexual debut and a decline in hookup culture in this age group (CDC, 2024), STI rates remain disproportionately high among US adolescents and emerging adults (CDC, 2025). Risky sexual behaviors can be fueled by persistent “myth-conceptions”—a term that we coin to capture a blend of both “myths” and “misconceptions.” The concept of myth-conceptions is a broad nomenclature that encompasses multiple sexual health topics involving beliefs about sexual pleasure, sexual anatomy, pregnancy, protection, and STIs. Various health behavior theories, such as theory of planned behavior (Ajzen, 1991) and health belief model (Becker, 1974), suggest that beliefs are often powerful guides to behavior. Therefore, focusing on sexual health myth-conceptions is logical as it would support developing a better understanding of potential contributing factors for risky sexual behavior among emerging adults.

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Research on relationships and sexuality has adopted the concept of “myths” (e.g., rape myths, romantic myths). This line of work has led to the development of several reliable and valid scales, including the Illinois Rape Myth Acceptance Scale (Payne et al., 1999), the Scale of Myths of Romantic Love (Bonilla-Algovia et al., 2024), and the Love Myths Scale (Picón et al., 2024). Only a few scales, however, have been developed to specifically assess sexual myths, including the Scale for the Assessment of Sexual Standards among Youth (SASSY; Emmerink et al., 2017) and the Sexual Myths Scale (SMS; Gölbasi et al., 2016). Not only are scales for sexual myths scarce, they also have some shortcomings, including conceptual differences in how myths are defined, the different psychometric approaches to ascertain scale integrity, and in some cases, the different cultures used to validate the scales. To fill this gap in sexuality research and sexual health promotion, the current study introduces the Sexual Health Myth-Conceptions Scale (SHMCS), a research instrument developed to assess sexual health myth-conceptions in a sample of emerging adults in the USA.

What Are Sexual Health Myth-Conceptions?

Central to our work is the concept of sexual health “myth-conceptions”—a term that we are introducing to capture a variety of false beliefs that circulate through in-person and online communication. The phrase “sex myths” is part of today’s popular culture, including magazines, social media, or websites dedicated to debunking them. The scientific community, on the other hand, frames “myths” as “misconceptions” indicating faulty beliefs that are not well founded in facts or scientific evidence. The lack of a clear definition of “myths” and how they differ from “misconceptions” leads to considerable conceptual ambiguity.

In cultural anthropology, myths play a role in preserving and perpetuating cultural and religious beliefs and rituals that can be used to explain human experiences including sexuality (Kluckhohn, 1942; Wiederman, 2001). For example, rape myths perpetuate male sexual dominance and aggression (e.g., Payne et al., 1999). Gender stereotypes that stigmatize female sexuality are often embedded in myths such as “Vaginas become too loose from too much sex” and “Women have less sexual desire than men.” By contrast, misconceptions such as “Women can’t get pregnant during their period” or “You can tell if someone has an STI” often result from inadequate sexual knowledge rather than cultural ideology. We propose “myth-conceptions” to create a more inclusive term encompassing false sexual-related beliefs that stem from peers, online/social media, and cultural ideologies. Myth-conceptions capture both ideologically or culturally rooted myths and factually inaccurate beliefs that can influence sexual behavior among emerging adults in the USA.

Identifying the precise origins of sexual health myth-conceptions can be challenging. However, one factor that may play a central etiologic role is limited or inaccurate sexual knowledge, which can be explained by the absence of school-based comprehensive sex education. Such programs are not federally mandated in US secondary schools (Goldfarb & Lieberman, 2021; Guttmacher Institute, 2025). Coupled with this noted gap in education is the strong emphasis on abstinence-only curricula across the US despite evidence of their limited effectiveness (Goldfarb & Lieberman, 2021). Similarly, college-based sexual health promotion programs remain limited in breadth and scope compared to sexual violence prevention programs (Shigeto & Scheier, 2023).

Despite the cognitive and behavioral benefits of sexual socialization and education at home and school (Barriuso-Ortega et al., 2024; Lee et al., 2018; Shigeto & Scheier, 2024), emerging adults primarily rely on peers for sexual information (Pariera & Abraham, 2020; Shigeto & Scheier, 2024). This most likely occurs because they view information provided by peers as relevant and trustworthy (Fraser et al., 2021). The problem, however, is that peers often place less emphasis on factual information necessary for healthy sexual decision-making, while promoting sex-positive messages about pleasure and desire (Astle et al., 2022, 2023; Rogers, 2017). Compounding this emphasis is the prevalence of sexual health misinformation in online media (e.g., websites, social media), where false information spreads faster and further than accurate information (Fraser et al., 2021; Suarez-Lledo & Alvarez-Galvez, 2021). In addition, repeated exposure to misinformation from multiple individuals across various platforms can increase perceived accuracy (i.e., the illusory truth effect), which in turn facilitates the further spread of misinformation (Vellani et al., 2023).

Other Existing Scales of Sexual Myths

There have been some, albeit limited, efforts to investigate myths about sexuality and sexual health. The 35-item SASSY (Emmerink et al., 2017), for example, assesses sexual double standards that highlight differences between “boys” and “girls.” Although the authors never used the concept of “myths” per se, some of the items reflect myths or false beliefs, such as “Girls like boys who take the lead in sex” and “Sexually active girls create problems in relationships.” However, a majority of items reflect personal attitudes and values rather than myths, with many items containing “should,” “I admire,” “disgust me,” “appropriate,” “important,” or “acceptable.” In addition, the scale was validated in Dutch samples of adolescents and young adults ages 16–25, limiting its generalizability to young adult populations in other countries including the USA.

The SMS (Golbasi et al., 2016), was developed and psychometrically refined with Turkish university students and has been validated in several recent studies conducted mostly in Türkiye (e.g., Akalin, 2022; Evcili & Golbasi, 2017; Gül & Çetinkaya, 2024). One major limitation of the SMS is that it was developed in a country where a majority of the population adheres to the Islamic faith, a religion associated with more conservative beliefs particularly regarding sexual orientation, women's sexuality, and gender roles in the family (Dialmy, 2010). As a result, the SMS includes items that are not necessarily relevant to or culturally appropriate for emerging adults in the USA. For example, items on the SMS include "Homosexual men act like women," "While having sexual intercourse, a woman should comply with her husband's wishes," "It is the woman's duty to give pleasure to her husband during sexual intercourse," and "Housework is a women's task." Another limitation of the SMS, which is shared by the SASSY, is that some of the items are not accurate representations of beliefs, such as "Older people's having sexual intercourse is not acceptable," and "Homosexuals are harmful to society." These items are more aligned with assessing a person's attitudes or values. The SMS also includes rape myths (e.g., "Boys would not be rape victims," "Nonconsensual sexual intercourse between husbands and wives cannot be regarded a rape"), which tap into a different domain of sexuality and sex education (i.e., sexual violence and its prevention) as opposed to sexual health and its promotion. Therefore, developing a scale to measure sexual health myth-conceptions among emerging adults in the USA is warranted to advance research in this area.

The Current Study

In the current study, we combined two psychometric approaches to ascertain the utility of a newly developed instrument to assess sexual myth-conceptions. On the one hand, we used classical test theory (CTT) to indicate the functional scale properties of the 34-item SHMCS. This included establishing the scale's item endorsement patterns, corrected item-total (or item-rest) correlations, scale reliability, and coherence. In addition, we assessed the scale's dimensional structure (i.e., factorial validity) using a sequence of integrated analyses including: (1) exploratory factor analysis (EFA), (2) exploratory structural equation model (ESEM) within a confirmatory factor analysis (CFA) framework, and (3) bifactor EFA using ESEM. Once we obtained sufficient evidence for scale unidimensionality (with a complete or partial set of items), we used item response theory (IRT) to establish item performance characteristics (i.e., discrimination and difficulty).

The use of IRT overcomes several limitations present in CTT. In CTT, item statistics depend on the sample, the total

score assumes equal contribution of each item, and only a single reliability estimate is provided. These limitations make it difficult to compare different samples, to differentiate individuals of different levels of the underlying trait (i.e., myth-conception endorsement), and to gain insight into how well an item functions to assess the underlying trait. IRT addresses these limitations by placing both items and the underlying latent trait on a common logit scale, enabling sample-independent comparisons. IRT also distinguishes item difficulty from trait level, provides information functions that show where items best discriminate between individuals, and demonstrates how measurement precision varies across the trait continuum, making it a powerful tool for test development and evaluation.

Method

Participants and Procedure

We conducted three integrated steps in the development of the SHMCS: (1) item development, (2) pilot testing, and (3) psychometric evaluation.

Phase 1 (item development) During the summer and early fall of 2024, the first author generated an initial list of sexual health myth-conceptions based on various journal articles, books, and internet searches. She also used generative AIs (e.g., ChatGPT, Gemini) to obtain initial ideas regarding commonly held sexual health myth-conceptions. The second author provided ideas for sexual health myth-conceptions and also provided feedback on the list generated by the first author. The first author's research assistants (undergraduate and graduate students) also provided ideas for additional myth-conceptions and gave feedback on the initial list generated by the first author.

Phase 2 (pilot testing) Once the list was finalized with 22 myth-conceptions, the first author asked 30 undergraduate students taking an introductory psychology course in early Fall 2024 and 40 undergraduate students taking a life-span human development course in early Winter 2025 to rate each myth-conception statement as true or false. They were also asked to provide any additional myth-conceptions they could think of that were not on the list. Their true-false responses on the list and written feedback were shared and discussed in the first author's lab, which helped to revise the original items and generate additional items, resulting in the list of 34 myth-conceptions in total. The list covered seven different topics of sexual health: pleasure/orgasm (PO; 6 items), STIs (ST; 6 items), pregnancy (PR; 5 items), female genitalia (FG; 4 items), peer behavior (PB; 4 items), gender differences (GD; 5 items), and pornography (or porn) use (PU; 4 items). These areas were specifically chosen as some of them are factual (e.g., STIs, pregnancy), while others are closely related to

what emerging adults in the USA discuss with peers (e.g., sexual pleasure, own behaviors).

To avoid making all items “myth-conceptions,” we reworded 11 myth-conceptions to make them true statements (e.g., “A person can get an STI from oral sex,” “Female masturbation has nothing to do with infertility”). Although we classified each myth-conception into one of the topic areas, not all statements exclusively capture only one topic area. For example, we classified the statement, “Men use porn for masturbation, while women just watch it because their male partner does,” as belonging to the topic of gender differences. However, it can easily be construed as belonging to the topic area of porn use. Another example, “Removal of all pubic hair means better sex,” was developed to capture sexual pleasure but can also cover the topic of female genitalia. An STI item, “Douching, or washing inside the vagina, lowers the chance of pregnancy and STIs,” can also be interpreted as a myth-conception about female genitalia.

Phase 3 (psychometric evaluation) Following IRB approval at the first author’s institution, a study was initiated on Prolific, a crowdsourcing platform commonly used by researchers. The study was made available only to individuals who met the following criteria: ages 18–29 (emerging adults), living in the USA, not married or engaged, and reporting sexual activity in the past 12 months. We also set the gender quota (male and female) at 50/50. These three criteria were already available through Prolific’s preexisting filters, avoiding the need for a “screener.” In addition to the 34 myth-conceptions, a few other measures (e.g., sexual knowledge) were included in the survey, which are not the focus of the current study and thus will not be discussed here. The survey took ~ 14 min on average, and each participant received \$1.7 for financial compensation (determined by the survey length).

Over 6,000 individuals met the inclusion criteria on the Prolific platform, and 1,207 of the qualifying individuals completed the survey. There were five attention checks spaced evenly throughout the survey, and 45 respondents failed at least one attention check: 40 failed only one, three failed two, and two failed all five. To eliminate bias associated with careless responding (e.g., Kung et al., 2018), we decided to not include these 45 respondents, making 1,162 the final analysis sample for the current study.

The average age of the sample was 24.61 years ($SD = 2.99$), ranging from 18 to 29. Slightly less than half of the participants identified as a man (46.21%) and about the same number of individuals as a woman (47.93%), with the rest of the participants identifying as non-binary (3.53%), transgender (2.15%), or some other way (0.17%). The sample was racially ethnically diverse: 56.88% of the participants identified as White or European American, 14.72% as Black, African, Afro-Caribbean, or African-American, 12.05% as multiple races, 8.26% as Latino/Latina/Latinx/Hispanic or Spanish origin, 7.14% as Asian, 0.34% as Middle Eastern or North

African, 0.26% as American Indian or Alaska Native, 0.26% as Native Hawaiian or Pacific Islander, and 0.09% not listed. More than 70% (70.83%) identified as straight/heterosexual, while the remaining participants identified as bisexual (18.85%), queer (3.36%), gay (3.27%), lesbian (2.24%), or not listed (1.46%; e.g., asexual, demisexual, pansexual). Nearly 40% of the participants (38.04%) were attending college at the time of the study, including 69.96% undergraduate students and 30.77% graduate students. Among those who were not students (61.96%), 44.58% of them had a college degree, 21.11% a graduate or professional degree, 18.61% a high school diploma, 12.92% some college education, 1.67% less than high school education, and 1.11% a vocational degree.

Analytic Strategy

Before performing any analysis, we recoded the true/false responses to the SHMCS items. Specifically, a code of “0” was given when participants determined true statements to be true (i.e., correct acceptance) or false statements or myth-conceptions as false (i.e., correct rejection). A code of “1” was given when participants chose “false” for true statements (i.e., incorrect rejection) and indicated myth-conceptions to be true (i.e., incorrect acceptance). With this recoding of responses, the mean of items with true statements represents the percentage of participants who incorrectly rejected the true statements, whereas the mean of items with myth-conceptions represents the percentage of participants who endorsed the myth-conceptions.

After recoding the SHMCS data, we performed analyses to address the dual purpose of the current study. First, to identify myth-conceptions that received high, low, and split endorsement, we used CTT to examine the following for each item: a mean score (representing the percentage of participants who rejected the true statement or endorsed the myth-conception), a standard deviation, a corrected item-total correlation, and McDonald’s (1999), Hayes and Coutts (2020) omega (ω ; with the item removed).

Second, we conducted a series of factor analyses using Mplus 8 (Muthén & Muthén, 1998–2017). We began with EFA to examine the underlying dimensional structure of the SHMCS. Once a satisfactory EFA model was obtained, we then used CFA to ascertain the fit of a model against the sample data. Given the conceptual overlap among some items and the potential for cross-loadings, we conducted exploratory structural equation modeling (ESEM) within a CFA framework, which allows for a more flexible representation of multidimensional constructs than CFA alone (Marsh et al., 2011). Several studies have shown that ESEM provides more accurate estimates of factor correlations, which are often inflated in CFA due to its restrictive assumption of simple structure (Asparouhov & Muthén, 2009). ESEM also provides robust model fit indices that are sample-size independent, and it is

well suited for evaluating psychometric properties of complex scales like the SHMCS (Morin et al., 2016).

To test the presence of a general latent factor assessing sexual health myth-conceptions, we conducted an orthogonal bifactor EFA using ESEM (e.g., Alamer, 2022). In this specification, all 34 items load on a general factor (i.e., general tendency to endorse myth-conceptions), and then, specific factors are extracted from the residual covariances across all items. As all factors (i.e., general and specific factors) are uncorrelated in an orthogonal rotation, we would be able to determine explained common variance (ECV), the proportion of the total variance explained by all factors that is attributable to the general factor, and make an appropriate determination about the presence of unidimensionality in the scale (Morin et al., 2016). The bifactor model would be run based on the items that show significant and meaningful ($\geq |.40|$) loadings on any factors identified in the best factor solution from EFA.

Third, in the event that the analyses supported unidimensionality of the SHMCS (whether it be based on a complete or partial list of the items), we then tested a 2-parameter logistic (2-PL) IRT model specifying all of the items that comprised the general factor. IRT would allow us to estimate item parameters (i.e., a = discrimination; b = difficulty) and assess how well each item functions across different levels of the latent trait (theta or θ). Although IRT is often used in the context of ability testing, the “latent trait” in our study reflects participants’ propensity to endorse sexual health myth-conceptions, not accuracy of their sexual knowledge. Relatedly, the discrimination parameter (a) or slope of the item characteristic curve (ICC) reflects how sharply an item differentiates among individuals with different levels of the underlying trait—endorsement of sexual health myth-conceptions (typically ranging from 0.5 to 2.5). The difficulty parameter (b) indicates the point on the latent trait continuum (θ) at which a respondent has a 50% probability of endorsing an item, showing how strongly someone must believe myth-conceptions in general in order to endorse the myth-conception reflected in the item (typically ranging from -3 to 3). In the current study, a higher b value means that an item is more likely to be endorsed only by individuals with stronger endorsement of sexual health myth-conceptions. Conversely, items with lower b values are more likely to be endorsed by individuals with lower levels of myth-conception endorsement.

Results

Classical Test Theory (CTT)

Table 1 contains the following for each item: mean, standard deviation, corrected item-total correlation, and McDonald’s

omega (ω) with the item removed. The mean of each item indicates the percentage of individuals who either endorsed a myth-conception (false statement) or rejected a true statement. A low corrected item-total correlation indicates the item is not an efficient indicator of the underlying trait (i.e., endorsing myth-conceptions). Internal consistency with all items was acceptable with $\omega = .73$. Three items had negative corrected item-total correlations (#s 12, 17, 30), and removal of each of them one at a time improved ω to .74 or .75. Removal of all three items resulted in overall reliability estimate of $\omega = .77$. Several items (#s 6, 23, 24, 33) had item-total correlations that are positive but low ($\leq .10$), indicating their limited ability to assess the underlying trait of myth-conception endorsement.

Based on the item means, we identified only one myth-conception that was highly endorsed (i.e., $\geq .80$): #2 (porn use; endorsed by 80% of the sample). On the other hand, a total of 12 items received low ($\leq .20$) endorsement: #3 (STIs; 17%), #4 (pregnancy; 10%), #11 (pleasure/orgasm; 20%), #13 (gender differences; 13%), #16 (pregnancy; 14%), #18 (STIs; 13%), #21 (pregnancy; 7%), #22 (pregnancy; 14%), #25 (STIs; 8%), #27 (STIs; 7%), #33 (female genitalia; 15%), and #34 (STIs; 14%). These 12 items include four of the five items about pregnancy and five of the six items about STIs, meaning that nine out of the 12 items (75%) of weakly endorsed myth-conceptions are about pregnancy/STIs. A total of eight items received split endorsement (the means between $\sim .40$ and $\sim .60$): #6 (pleasure/orgasm; 59%), #7 (peer behavior; 45%), #10 (porn use; 57%), #24 (pleasure/orgasm; 44%), #28 (female genitalia; 42%), and #31 (pleasure/orgasm; 53%). Two additional items were endorsed by more than 60% of the sample but still fairly evenly divided: #12 (peer behavior; 63%) and #32 (peer behavior; 61%).

The Kaiser–Meyer–Olkin (KMO) test was .84 indicating that based on the magnitude of correlations the sample data were adequate for factor analysis. The Bartlett sphericity test, $\chi^2(561) = 4,382, p < .001$ indicated the observed correlation matrix is significantly different from an identity matrix and the data structure was suitable for factor analysis.

Exploratory Factor Analysis

Given that we developed the scale with seven areas of sexual health topics in mind, we conducted EFA to identify up to seven factors using a Geomin oblique rotation and weighted least squares means and variance adjusted (WLSMV) as an estimator (ideal for categorical data). Supplemental Table 1 shows fit indices for 1- to 7-factor models. To determine a more parsimonious and theoretically sensible factor solution, we used a visual scree plot analysis, but not the Kaiser criterion (Zoski & Jurs, 1996). The Kaiser criterion, “eigenvalues greater than 1,” was not used as it tends to overestimate the number of

Table 1 Descriptive item characteristics based on classical test theory

Item #	Topic areas	^a Statements	^b <i>M</i>	<i>SD</i>	^c Corrl	^d ω
1	PO	The inability to achieve orgasm suggests sexual dysfunction	.36	.48	.24	.73
2	PU	High consumption of porn indicates addiction	.80	.40	.20	.73
3	ST	Birth control can reduce the risk of sexually transmitted infections (STIs)	.17	.37	.13	.73
4	PR	(T) If a woman has sexual intercourse while standing up, she can still get pregnant	.10	.30	.11	.73
5	FG	Vaginas can become "loose" from too much sex	.27	.45	.45	.71
6	PO	(T) Penis size plays little to no role in sexual pleasure for all partners involved	.59	.49	.06	.74
7	PB	Young adults have little to no expectations for an emotional connection in hookups	.43	.50	.20	.73
8	PU	(T) Some young adults incorporate porn into their sex lives in a positive way	.23	.42	.21	.73
9	GD	Men reach their sexual peak in their late teens, while women reach their sexual peak in their 30s	.35	.48	.21	.72
10	PU	Porn use ruins relationships	.57	.50	.36	.72
11	PO	Removal of all pubic hair means better sex	.20	.40	.43	.71
12	PB	(T) Fewer young adults today are hooking up compared to previous generations	.63	.48	-.09	.74
13	GD	Men use porn for masturbation, while women just watch it because their male partner does	.13	.33	.39	.72
14	FG	A "neater" shape of the vulva (the outside part of female genitalia) is associated with health and sex appeal	.34	.47	.35	.72
15	PR	(T) A woman on her period can get pregnant as a result of sexual intercourse	.28	.45	.20	.73
16	PR	Emergency contraception (aka "morning after" pill or Plan B) is the same as an abortion pill	.14	.34	.30	.72
17	GD	(T) Both young adult men and women equally emphasize pleasure when engaging in sex	.32	.47	-.19	.75
18	ST	Doubling condoms means double protection	.13	.33	.34	.72
19	PU	People who watch porn have unhealthy sex lives	.29	.45	.38	.72
20	GD	Women are naturally monogamous (staying with one partner), while men are wired to be promiscuous (having multiple partners)	.22	.41	.41	.72
21	PR	Having sexual intercourse in a pool or hot tub reduces the chance of getting pregnant	.07	.26	.26	.72
22	PR	(T) Female masturbation has nothing to do with infertility	.14	.34	.22	.73
23	ST	(T) It is quite difficult to recognize whether someone has an STI	.26	.44	.09	.73
24	PO	It is safe to choke a partner during sex to help them achieve orgasm	.44	.50	.03	.74
25	ST	All STIs (including HIV) can be cured	.08	.27	.27	.72
26	PO	Alcohol increases pleasure during sex	.33	.47	.27	.72
27	ST	(T) A person can get an STI from oral sex	.07	.25	.23	.73
28	FG	The hymen breaking (aka popping the "cherry") indicates that a woman is no longer a virgin	.42	.49	.43	.71
29	GD	Men are always ready for sexual intercourse, while women have less sexual desire	.23	.42	.44	.71
30	PB	(T) Young adults are more likely to be under the influence of a substance (e.g., alcohol, marijuana) when hooking up	.33	.47	-.20	.75
31	PO	Condoms make sex less pleasurable	.53	.50	.23	.73
32	PB	More than 80% of young adults have had sexual intercourse when entering college	.61	.49	.31	.72
33	FG	(T) There may be some negative health consequences in using "whole-body" deodorants to make your private area smell nice	.15	.36	.08	.73
34	ST	Douching, or washing inside the vagina, lowers the chance of pregnancy and STIs	.14	.34	.27	.72

PO pleasure/orgasm, *ST* STIs, *PR* pregnancy, *FG* female genitalia, *PB* peer behavior, *GD* gender differences, *PU*=porn use. ^a(T) indicates that the statement is true (rather than a myth-conception). ^b*M*×100 represents the percentage of participants who endorsed the myth-conception by either accepting a false statement as true or a true statement as false. ^cItem-rest correlation—correlation of each item with the total score without the item itself. Correlations in bold indicate inordinately low classical test theory-based item discrimination. ^dFor McDonald's omega (ω) with the item removed

factors to retain and has been largely rejected as a reliable method (Howard, 2016; Patil et al., 2008). Conceptual and theoretical interpretability was also considered as it is particularly important as a factor retention method in scale construction, data reduction (to eliminate "superfluous" factors), and theory development (Patil et al., 2008). Although parallel analysis (based on randomly generated

data sets) has been recommended as a factor retention criterion (Howard, 2016), it could not be used for categorical data in the current study.

The clear "elbow" in the scree plot, a point where the eigenvalues level off, was observed with extraction of a second factor (see Supplemental Fig. 1), suggesting that a unidimensional solution would be appropriate.

To obtain more conceptual interpretations of the factors, we closely examined items that showed $\geq .40$ loadings, which offers interpretability and provides a means to name factors (Pituch & Stevens, 2015). The 2-factor solution revealed one factor that covers multiple topics with 15 items, whereas the second factor reflects porn use myth-conceptions with all four porn items loading on it. The 3-factor solution revealed more conceptually sound factors, including the “multi-topic” factor (11 items), “porn” factor (four items), and the “pregnancy/STIs” factor (five items). In the 4-factor solution, the fourth factor was based on only two items (both about pleasure/orgasm) with a loading $\geq .40$. The 5-factor solution included a factor based on only one item (about pleasure/orgasm) with a $\geq .40$ loading. The 6-factor solution had a factor with no item having a high enough loading. In the 7-factor solution, some factors consisted of item loadings that could not paint a meaningful and coherent picture of discrete factors.

Based on careful examination of the factors and their implied meanings, we determined that the 3-factor model would provide the most meaningful interpretation of the underlying dimensional structure. As shown in Supplemental Table 1, benchmark model fit statistics provide adequate support for the 3-factor model (Hu & Bentler, 1999; Marsh et al., 2005): $\chi^2(462) = 811.13$, $p < .0001$, RMSEA = 0.03 (90% CI [.02, .03]), CFI = .94, TLI = .93, SRMR = 0.06. Table 2 shows the factor loadings of the 3-factor solution where 20 out of 34 items showed $\geq .40$ loadings. Specifically, the largest “multi-topic” factor consisted of 11 items, capturing various areas of sexual health topics, while the other two factors capture more specific topic areas. The “porn” factor consisted of all four items reflecting myth-conceptions about porn use. The “pregnancy/STIs” factor consisted of one of the five pregnancy items and four of the six STIs items (with the two remaining STI items not loading on any factor). Factor loadings (absolute value) of the non-target items (i.e., items with less than .40 loadings) ranged from .02 to .27, with an average of .11.

Exploratory Structural Equation Model

To assess the internal validity of the SHMCS, we performed confirmatory factor analysis (CFA) positing simple structure with the 20 items that showed $\geq .40$ loadings. Not surprisingly, the model failed to converge, most likely due to model misspecification positing simple structure when there are numerous cross-loadings (average of cross-loadings $\geq .10$, see Table 2). Items with significant cross-loadings included #32 (peer behavior), #30 (peer behavior), #29 (gender differences), #20 (gender differences), #13 (gender differences), #8 (porn use), #2 (porn use), #21 (pregnancy), and #18 (STIs).

To accommodate the cross-loadings, we conducted ESEM within a CFA framework using the 20 items from the 3-factor

Table 2 Standardized factor loadings from exploratory factor analysis: 3-factor model with all 34 items

Item #	Topic areas	^a Factors			^b Average cross-loadings
		Multi-topic	Porn	Pregnancy/STIs	
11	PO	.69	-.02	.16	.09
5	FG	.67	.00	.17	.09
28	FG	.62	.13	.02	.08
14	FG	.61	.02	.01	.02
32	PB	.56	.15	-.13	.14
26	PO	.55	-.09	-.02	.06
30	PB	-. .55	.00	.26	.13
29	GD	.54	.11	.22	.17
20	GD	.47	.18	.18	.18
31	PO	.44	-.02	-.10	.06
13	GD	.42	.17	.31	.24
10	PU	.01	.91	-.11	.06
19	PU	.09	.77	.00	.05
8	PU	-.20	.69	.05	.13
2	PU	.21	.54	-.32	.27
21	PR	.20	-.12	.64	.16
25	ST	.05	.09	.62	.07
34	ST	.14	-.04	.58	.09
3	ST	-.01	-.03	.49	.02
18	ST	.31	-.02	.44	.17
1	PO	.26	.15	.03	—
4	PR	-.10	.15	.31	—
6	PO	.28	-.06	-.23	—
7	PB	.26	.09	.02	—
9	GD	.30	.05	.10	—
12	PB	-.10	.08	-.22	—
15	PR	.20	.07	.20	—
16	PR	.28	.03	.36	—
17	GD	-.36	.03	.02	—
22	PR	.00	.18	.38	—
23	ST	-.15	.16	.20	—
24	PO	.13	-.24	.10	—
27	ST	.27	.02	.35	—
33	FG	-.18	.09	.37	—

^aThe bold numbers show the factor loading greater than .40. ^bThe average of factor loadings (in absolute value) of the non-target items (i.e., items with less than .40 loadings), excluding the loadings of the target items. The bold numbers show the average greater than .10

EFA solution and specifying a target rotation. In this analysis, cross-loadings are “targeted” to be close to zero (mimicking simple structure) while allowing main loadings on primary factors to be freely estimated. This analysis takes on a confirmatory nature but does not introduce the parameter bias that comes from fully specifying an independent cluster model with all non-target loadings restricted to zero.

The model provided an acceptable degree of fit to the data, $\chi^2(133) = 215.95$, $p < .0001$, RMSEA = 0.02 (90% CI [.02, .03]), CFI = .98, TLI = .98, SRMR = 0.04. Table 3 shows the standardized factor loadings of all 20 items across all three factors. One item (i.e., #31, pleasure/orgasm), which loaded on the multi-topic factor in EFA, failed to show a $\geq .40$ loading on any factor in ESEM, resulting in the multi-topic factor consisting of 10 items. The other two factors, reflecting myth-conceptions about porn use and pregnancy/STIs, retained all the items with $\geq .40$ loadings (4 items for porn, 5 items for pregnancy/STIs). The multi-topic factor was significantly correlated with both the porn and pregnancy/STIs factors (correlations, $r = .21$, $p < .000$; $r = .26$, $p < .000$, respectively), and the correlation between the latter two factors was also significant ($r = -.11$, $p < .05$). McDonald's ω for internal consistency was less than adequate for all the factors: .69 for multi-topic, .63 for porn, and .51 for pregnancy/STIs.

Exploratory Bifactor Analysis with Orthogonal Rotation

Based on the EFA results (and further confirmation from ESEM), we determined that in addition to two smaller factors

Table 3 Standardized factor loadings from exploratory structural equation model within a confirmatory factor analysis framework: 3-factor model with 20 selected items

Item #	Topic areas	Factors		
		Multi-topic	Porn	Pregnancy/STIs
5	FG	.75	-.07	.08
28	FG	.72	.05	-.07
11	PO	.70	-.05	.15
32	PB	.65	.05	-.24
14	FG	.60	-.02	.07
29	GD	.59	.06	.17
30	PB	-. .58	.05	.26
20	GD	.51	.14	.13
26	PO	.50	-.08	.02
13	GD	.46	.13	.27
10	PU	.02	.88	-.04
19	PU	.09	.76	.06
8	PU	-.22	.70	.13
2	PU	.19	.53	-.25
21	PR	.10	-.07	.72
34	ST	.06	.01	.63
25	ST	.03	.12	.60
18	ST	.25	.01	.50
3	ST	-.02	-.03	.48
31	PO	.34	.03	.01

The bold numbers show the factor loading greater than .40

(i.e., porn, pregnancy/STIs), there was one large “multi-topic” factor, which raised the possibility that this multi-topic factor reflects general endorsement of myth-conceptions. To test this possibility using the same 20 items from the ESEM model, we performed an exploratory bifactor analysis (via ESEM) in which a general factor was extracted from all 20 items, and two specific factors were identified based on the residual covariances among subsets of items after accounting for the general factor. Even though the ESEM within a CFA framework provided some insight into what items would comprise the general factor, we started with exploratory bifactor analysis, allowing all items to load freely on both the general and multiple specific factors, while limiting the number of specific factors to two.

We used orthogonal (as opposed to default oblique) Geomin rotation to keep all three factors uncorrelated so that all items are fully residualized, and the items on specific factors do not share variance with the general factor as well as with each other. Even though factors (representing different topics of sexual health) are likely correlated with each other (as different aspects of sexual health often interact and influence each other), we determined that orthogonal rotation would be essential for a clearer and accurate interpretation of global explained common variance (ECV), which is the proportion of the total variance explained by all factors (i.e., the general and specific factors) that is attributable to the general factor (Reise et al., 2010).

Table 4 shows standardized factor loadings for all three factors with orthogonal Geomin rotation. Factor loadings from the bifactor model with oblique Geomin rotation are found in Supplemental Table 2. Rotations in EFA do not affect model fit (Gorsuch, 2014); therefore, the model fit matched precisely the fit of the ESEM model reported above. Results of the orthogonal bifactor EFA provide evidence for the general factor, which comprises 14 of the 20 items. Based on the residualized items, the porn factor emerged again as a specific factor with all four porn use myth-conception items. Also consistent with the results from EFA and ESEM (using CFA), the second specific factor emerged with strong loadings from the same five items (one item about pregnancy, four items about STIs), representing myth-conceptions about pregnancy/STIs. There were no correlations among the factors for the orthogonal rotation. Per recommendations by Rodriguez et al. (2016a), we used the following fit indices for the bifactor model: omega hierarchical (omegaH), omega hierarchical subscale (omegaHS), percent uncontaminated correlations (PUC), item explained common variance (I-ECV), and global ECV. Factor determinacy was not used as a fit index as it is deemed not appropriate for categorical data and therefore not provided in Mplus. OmegaH was .77, while omegaHS was .06 for the porn factor and .07 for the pregnancy/STIs factor, suggesting that 77% of the reliable variance in the total (aggregate) score (based on all 20 items)

Table 4 Standardized factor loadings from bifactor exploratory factor analysis with orthogonal rotation: 3-factor model with 20 selected items

Item #	Topic areas	Factors			^a I-ECV
		General	Porn	Pregnancy/ STIs	
5	FG	.76	-.10	.05	.98
11	PO	.75	-.07	.11	.97
28	FG	.71	.01	-.09	.98
29	GD	.70	.02	.12	.97
13	GD	.66	.09	.21	.90
20	GD	.65	.10	.09	.96
14	FG	.62	-.05	.04	.99
32	PB	.57	.02	-.23	.86
19	PU	.50	.65	.00	.38
18	ST	.49	-.01	.43	.57
26	PO	.47	-.09	.01	.97
10	PU	.45	.76	-.09	.25
30	PB	-.43	.07	.24	.75
21	PR	.42	-.07	.63	.30
8	PU	.20	.61	.08	.10
2	PU	.34	.46	-.26	.30
34	ST	.36	-.01	.55	.34
25	ST	.38	.09	.52	.31
3	ST	.20	-.03	.43	.18
31	PO	.36	.01	-.01	.99

^aI-ECV = item explained common variance. Following Stucky and Edelen (2014) and Stucky et al. (2013), items with I-ECVs greater than .85 (excluding #31), which are emphasized in bold, were used in IRT for greater unidimensionality

was attributable to the general factor, leaving very little common variance for the specific factors. PUC was .92, indicating that 92% of item correlations are influenced only by the general factor, supporting unidimensionality of the scale with the 20 selected items.

Table 4 also shows item explained common variance (I-ECV), which represents the proportion of each item's variance (i.e., squared standardized loading) explained by all factors (i.e., the general and specific factors) that is attributable to the general factor. I-ECVs ranged from .10 to .99 across 20 items. Among the 14 items that loaded on the general factor with $\geq |.40|$ loadings, their I-ECVs ranged from .25 to .99, with the lowest I-ECV (.25) for #10 (porn use) also loading highly ($\lambda = .76$) on the porn factor. Global ECV was .63, indicating that 63% of the total shared variance among all 20 items is attributable to the general factor. This moderate global ECV (lower than .70) alone may not fully support "essential unidimensionality" (Rodriguez et al., 2016b). However, as Reise et al. (2010) recommended, we

Table 5 Item response theory model parameters

Item #	Topic areas	a	b
		Discrimination	Difficulty
5	FG	1.00	1.18
11	PO	1.90	1.18
28	FG	1.69	0.31
29	GD	1.77	1.06
13	GD	1.74	1.64
20	GD	1.54	1.18
14	FG	1.23	0.72
32	PB	1.07	-0.53
26	PO	0.82	0.97

considered ECV (.63), omegaH (.77), and PUC (.92) together and concluded that there was sufficient evidence for the presence of unidimensionality in the partial item set (20 items), while also supporting multidimensionality among a subset of the items.

To formally test and validate the structure that was discovered in the exploratory bifactor analysis, we conducted confirmatory bifactor analysis where all 20 items load freely on the general factor, while specifying certain items to load on one or the other specific factor (based on the exploratory bifactor analysis). The model fit was within the acceptable range, $\chi^2(161) = 304.44$, $p < .0001$, RMSEA = 0.03 (90% CI [.02, .03]), CFI = .97, TLI = .97, SRMR = 0.06, providing support for the foundation to conduct an IRT model assessing item performance.

Item Response Theory

Following recommendations by Stucky et al. (2014) and Stucky and Edelen (2015), items with I-ECV values greater than .85 (emphasized in bold in Table 4) were selected for the IRT analysis, which resulted in nine out of 14 items that loaded on the general factor in the bifactor analysis. Table 5 shows the IRT model parameters (i.e., a = discrimination; b = difficulty) for all nine items. All items had a normal range of the discrimination parameter (a) ranging from ~0.5 to 3.0 as well as a difficulty (b) parameter ranging from ~-3.0 to ~3.0. Only one item (#32; peer behavior) had a negative difficulty parameter (-.53), meaning that even individuals with relatively low levels of myth-conception endorsement (low theta) were likely to endorse the myth-conception. Supplemental Fig. 2 shows item characteristic curves for all nine items, most of which exhibit a sigmoid (S-shape) relatively well, except for #5, #26, and #32, where the ICC was relatively flat, reflecting a low discrimination (a) parameter (1.00, 0.82, and 1.07, respectively).

Discussion

In the current study, we introduced a new scale, the SHMCS, with two goals: (1) to identify common sexual health myth-conceptions and (2) to evaluate the psychometric properties of the SHMCS. To address the first goal, we examined patterns of endorsement across all 34 items in a sample of emerging adults. This approach allowed us to identify sexual health myth-conceptions that are widely accepted, widely rejected, or characterized by divided responses. For the second goal, we used multiple factor-analytic approaches to evaluate the dimensional structure of the scale and applied item response theory to assess item functioning and measurement precision. To provide context for the potential relevance of the myth-conception endorsement patterns for sexual health promotion, we first discuss items with high, low, or divided endorsement. We then turn to the psychometric findings, focusing on the factor structure and item performance.

Myth-Conceptions with High versus Low Endorsement

The CTT findings revealed only one highly endorsed myth-conception, which is about pornography (porn) use: “High consumption of porn indicates addiction.” Pornography addiction is not an official clinical diagnosis, and its legitimacy and clinical implications have been controversial and empirically challenged (Ley et al., 2014). However, the belief that an individual can become “addicted” to pornography is quite common among US adults. For example, in a nationally representative sample of US adults, Grubbs et al. (2019) reported that 11% of men and 3% of women felt that they were addicted to pornography. Given the current sentiment toward pornography addiction, the high endorsement of the myth-conception about the addictive nature of pornography use is not very surprising. However, believing this myth-conception may pose some psychological harm as perceived pornography addiction does not always stem from actual excessive use of pornography. In fact, Grubbs et al. (2018) found that moral incongruence—the feeling that their pornography use violates their deeply held personal values—was associated with self-perceived pornography addiction concurrently and one year later even when daily pornography use itself was moderate. Sexual health promotion programs that target emerging adults can benefit from addressing the common myth-conception of pornography addiction as a means of reducing any negative implications of perceived pornography addiction, including moral incongruence.

Compared to only one myth-conception with high endorsement, there were 12 myth-conceptions that received relatively low endorsement, including four of the five items about pregnancy and five of the six items about STIs. This is

not surprising given that the content areas of sexual education programs in secondary schools nationwide mostly cover the negative consequences of unprotected sex, namely pregnancy and STIs, as a means of pregnancy and disease prevention (Guttmacher Institute, 2025; Silvério Marques et al., 2017). In addition, Astle et al. (2021) found that many emerging adults expressed the desire that school-based sex education prior to college covered more than protections (e.g., condoms) and STIs, including emotional and relational aspects of sex. Therefore, sexual health promotion programs may want to consider underemphasizing content that already has wide exposure and streamlining their efforts to focus more on topics that are in need of reinforcement to minimize the effects of sexual health myth-conceptions.

Myth-Conceptions with Split Endorsement

Eight items were characterized by roughly evenly split endorsement. Three of them relate to pleasure and orgasm, specifically myth-conceptions about how penis size, sexual choking, and condom use contribute to pleasure. Given that sexual pleasure is highly subjective, beliefs about what enhances or ensures sexual pleasure can have serious consequences for sexual well-being. For example, men who believe that penis size determines pleasure may develop excessive preoccupation with their own penis size. This can lead to “small penis anxiety” (also known as “small penis syndrome”), a condition marked by emotional distress over perceived inadequacy despite a normal-sized penis (Wylie & Eardley, 2007). Moreover, this condition has been shown as a contributing factor to sexual difficulties, such as erectile dysfunction (Pastoor & Gregory, 2020).

The myth-conception about sexual choking (also known as “sexual strangulation”) being safe is also highly problematic. Popularized in media and music (e.g., HBO’s *Euphoria*, Jack Harlow’s *Lovin’ on Me*), it is particularly prevalent among young adults (Herbenick et al., 2021). Although sexual choking is wanted, requested, and/or consensual for a majority of the time among young adults (Herbenick et al., 2021), it carries risks ranging from bruising and headaches to neurological damage and even death (Herbenick et al., 2023). Finally, the myth-conception that condoms reduce sexual pleasure remains one of the main reasons for nonuse among college students (Fehr et al., 2017). In some cases, this belief can motivate individuals (particularly men) to commit stealthing, a non-consensual removal of a condom before or during sexual intercourse (Davis et al., 2024). Yet research shows no significant gender difference in arousal and pleasure with or without condoms (Herbenick et al., 2013).

Another three items with split endorsement involved peer behavior, specifically related to emotional connections in hookups, hookup culture today vs. previous generations, and sexual debut prior to college. Social norms theory (Perkins

& Berkowitz, 1986) suggests that misperceptions of peers' behaviors can shape one's own behavior. For example, the belief that most individuals do not expect an emotional connection from hookups can make genuine feelings toward a hookup partner seem "wrong." This can foster gendered miscommunication as men tend to emphasize excitement and pleasure, whereas women more often value intimacy or potential for relationships (Anders et al., 2020; McKeen et al., 2022). Similarly, although evidence suggests that hookup culture among emerging adults has declined in recent years (CDC, 2024), overestimating its prevalence may pressure individuals to engage in hookups that are misaligned with their desires, sometimes resulting in regret (Reese-Weber et al., 2022). Finally, recent epidemiological data show that nearly 70% of high school students (grades 9–12) report no sexual experience, and the average age of sexual debut has been rising in recent years (CDC, 2024). The IRT results also revealed that this particular myth-conception was likely to be endorsed even among emerging adults with low levels of general myth-conception endorsement. Believing otherwise can leave sexually inexperienced students feeling left out or isolated (Leroux & Boislard, 2023).

The Factor Structure of the Sexual Health Myth-Conceptions Scale

The factor analysis results offer insight into the dimensional structure of myth-conceptions, with evidence supporting both uni- and multidimensional models. Turning first to unidimensionality, there were 10 items that were consistently present in both the multi-topic factor in EFA and ESEM-CFA and the general factor in the bifactor model, including three items on female genitalia (#s 5, 14, 28), three on gender differences (#s 13, 20, 29), two on pleasure and orgasm (#s 11, 26), and two on peer behavior (#s 30, 32). These items together reflect longstanding cultural ideologies, often reinforced by religion and media, and remain largely unchallenged partly due to limited comprehensive sex education. Specifically, the three myth-conceptions about female genitalia reflect the ideas of bleeding during the first vaginal intercourse ("cherry popping") as a sign of virginity loss, the vagina becoming too "loose" from frequent sex, and a "neater" vulva being more sexually appealing. Similarly, the three myth-conceptions about gender differences reflect negative views of women's sexuality: Women, compared to men, have less sexual desire, prefer monogamy, and are less likely to use pornography for their own pleasure. These beliefs stem from cultural expectations for female sexual purity, chastity, and modesty.

Challenging these gendered expectations is not about labeling them as simply wrong but about encouraging appreciation for individual and situational differences in sexual attitudes and behaviors. For example, some women engage

in pubic hair grooming to enhance feelings of femininity (Enzlin et al., 2019). Labiaplasty (i.e., cosmetic reshaping of the labia), which has grown in popularity since the early 2000s, can be driven partly by a woman's physical discomfort but is often rooted in insecurity and feeling unattractive to their partner (Sorice et al., 2017). When choices such as genital grooming or surgical modification stem from internalized shame or appearance-based insecurity, it becomes particularly important to empower emerging adults, especially women, to make informed sexual choices grounded in their own beliefs and values rather than misperceptions of peer norms or societal expectations.

While the general factor captures broader cultural narratives about female sexuality and bodily expectations, the analyses also supported a multidimensional structure of the scale with two domain-specific factors: pornography (or porn) and pregnancy/STIs. What distinguishes these two factors is not only the topic areas but also the nature of the myth-conceptions involved. Myth-conceptions about porn use, as discussed earlier, appear to be shaped by moral- and value-based cultural narratives (Grubbs et al., 2018), whereas myth-conceptions about pregnancy/STIs are more factual in nature. As reported earlier, these items received low levels of endorsement, suggesting that US emerging adults possess relatively accurate knowledge about biologically verifiable facts. Therefore, sexual health promotion programs that focus solely on these content areas may have limited impact. Instead, addressing broader cultural narratives that stigmatize female sexuality and pathologize porn use may offer more meaningful opportunities for promoting sexual health in this population.

To complement the factor-analytic approaches, we incorporated IRT to examine the performance of individual items on the SHMCS. Results indicated that most items had acceptable discrimination and covered a broad range of the latent trait continuum, supporting the scale's utility in assessing both low and high levels of general myth-conception endorsement. A few items with relatively flat (nondiscriminatory) item characteristic curves were identified and reflected the need for future item refinement. However, the overall findings support the psychometric validity and diagnostic potential of the SHMCS.

Limitations and Future Research

Several limitations should be noted when interpreting the current findings. First, we did not include any items about LGBTQ+ or sexual orientation in general in the scale. We made this decision intentionally as this was our first effort to establish a baseline knowledge about myth-conceptions among emerging adults. However, there is currently no scale assessing myth-conceptions associated with the

LBGTQ+ population. For example, sexual positioning (e.g., “top,” “bottom,” “versatile”), which matters a great deal for men who have sex with men (Dangerfield et al., 2017), can be added in future research. This would provide a means to examine whether strong endorsement of myth-conceptions related to sexual positioning (e.g., “Tops are always dominant; bottoms are always submissive”) has any bearing on their sexual well-being and behavior.

Second, the current study did not examine group differences due to gender, race/ethnicity, and sexual orientation. ESEM in particular is ideal for examining invariance of factor loadings and intercepts between groups using multiple group equality constraints. There are good reasons to consider positing these constraints in multiple group models. Some myths are perhaps more factual than others (e.g., pregnancy, STIs), while others are more psychological and subjective (e.g., pleasure/orgasm, porn use). It would be particularly interesting to examine whether there are gender or age differences in psychologically based items as they reflect myth-conceptions that cannot easily be proven right or wrong but may reflect socialization above all. These types of myth-conceptions may be more likely to have a greater influence on individuals’ decision-making process once they are endorsed. Insight from such studies will facilitate development of additional items for the current scale and test the generalizability of scale items across meaningful subgroups.

The third limitation of the current study is that we did not include existing measures of sexual myths or closely related constructs. This omission precluded us from direct tests of convergent and incremental predictive validity. This decision was intentional to maintain the current study’s focus on initial scale development and internal structure; however, it limits conclusions regarding the SHMCS’s comparative and real-world utility. Future research should incorporate established measures of sexual myths and related belief systems to examine the different forms of validity and especially the scale’s predictive utility when it comes to sexual knowledge and behavior.

Conclusion

This study contributes to the growing efforts to understand and measure sexual health myth-conceptions among emerging adults in the USA. Findings revealed the myth-conceptions that garnered high endorsement, low endorsement, or divided responses, highlighting areas of sexual health topics that need further or less attention in efforts to promote sexual health. Psychometric analyses supported evidence for both unidimensional and multidimensional structures, suggesting that while there is a general tendency to endorse sexual health myth-conceptions, some cluster around specific domains. In particular, domain-specific myth-conceptions related to porn use and pregnancy/STIs emerged, underscoring the

importance of addressing both general and topic-specific myth-conceptions in sexual health education. Overall, this work provides a foundational tool for assessing the prevalence and patterns of sexual health myth-conceptions and offers valuable insight for developing targeted educational and intervention strategies that support informed, autonomous, and evidence-based sexual decision-making among emerging adults in the USA.

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Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethics Approval This study was approved by the IRB at the first author’s affiliated institution, and the study was performed in line with the principles of the 1964 Declaration of Helsinki.

Informed Consent A detailed description of the study and participants’ rights was provided at the beginning of the survey, and choosing to proceed was considered informed consent.

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