

Body Image Research among Sexual Minority Men in the Mekong Region: A Scoping Review

Abstract:

Body image among sexual minority men (SMM) has received increasing attention. However, the current literature has primarily focused on white SMM and body image and physical appearance concerns among SMM. In response to a call for more nuance in understanding how SMM perceive and make sense of their body image in a broader sociocultural context, we conducted a scoping review to examine the extent and nature of body image research among SMM in the Mekong region. We searched CINAHL, MEDLINE, Scopus, PsycInfo-1806 (Ovid), ProQuest Central, Social Science Premium Collection, and Web of Science and identified 25 studies that met the inclusion criteria. Overall, the findings suggest that body image research in the Mekong region is limited in the range of topics, study populations, and methods, with quantitative studies on preferences for masculine physical traits among young and well-educated Chinese SMM dominating. Furthermore, the current literature is primarily influenced by Western scholarship, which predominantly uses Western measurement and theories. We encourage scholars from other countries in the region, including Vietnam, Laos, Cambodia, Myanmar, and Thailand, to engage sociocultural approaches in research on the body image of SMM.

Keywords: body image, sexual minority men, Mekong region, scoping review

1. Introduction

Body image is a multidimensional construct with perceptual, cognitive, affective, and behavioral dimensions focusing on an individual body's appearance and functions (Cash & Smolak, 2011). This concept implies the way an individual perceives, thinks, and feels about their own body (Grogan, 2016). In 1953, Australian psychiatrist Paul Schilder emphasised the need for further research on body image's neurological, psychological, and sociocultural elements (Schilder, 1953/1950). In the 1990s and early 2000s, body image scholarship made significant conceptual, theoretical, and practical progress with the emergence of research on heterosexual men, masculinities, and body modification practices (Bordo, 1999; Bryan, 2019; Gill et al., 2016; Lefkowich et al., 2017; McCabe & McGreevy, 2010; Reeser, 2010). Scholars have also explored the relationship between body dissatisfaction and adverse health outcomes, such as eating disorders, depression, anabolic steroids abuse, and exercise dependence (Bryan, 2019; Duggan & McCreary, 2004; McCreary et al., 2007; Pope & Katz, 1994).

Body image among SMM has also received increasing attention. Studies discuss different body image ideals and attractiveness among SMM as distinct from their heterosexual male counterparts (Duncan, 2010; Manley et al., 2007; Monaghan, 2016; Quidley-Rodriguez & De Santis, 2016). Evidence also shows higher body dissatisfaction among SMM, which has been associated with higher levels of sexual objectification, eating disorder diagnoses and disordered eating practices, weight concerns, and HIV sexual risk behaviours among SMM (Basabas et al., 2019; Bhambhani et al., 2019; Brady et al., 2019; Brewster et al., 2017; Goedel et al., 2017; Martins et al., 2007; Morrison et al., 2004; Rice et al., 2015). SMM who report body dissatisfaction are more likely to use anabolic steroids to be more muscular and strong (Blashill & Safren, 2014), to get cosmetic surgery (such as calf implants) and to use diet pills than heterosexual men (Frederick & Essayli, 2016). Furthermore, muscularity disturbance is significantly associated with methamphetamine use among HIV-infected MSM (Jampel et al., 2015).

Several scholars have stressed that the current literature has primarily focused on white SMM to the detriment of other ethnic groups (Brewster et al., 2017; Calzo et al., 2013) and overstated the

concerns about body image and physical appearance among SMM (Kane, 2010). A bibliometric review of publications in the *Body Image* journal between 2004 and 2020 also highlights that most of these articles originate from the United States, England, Australia, and Canada (Andersen & Swami, 2021). This Western dominance in exploring body image among SMM may mask nuanced and multifaceted ways in which SMM from non-Western cultures may engage with their bodies. Moreover, there is a call for more nuance in understanding how SMM perceive and make sense of their body image in broader sociocultural contexts (Duncan, 2007). Some efforts have been made in this regard, but their findings have not yet been subject to review and critique. Examining existing literature to identify what work has thus far been undertaken on non-white SMM's body image might contribute to new understandings of SMM's body image from non-Western cultural perspectives.

Given the call for a more diverse understanding of SMM's body image, this scoping review examined the extent and nature of body image research among this population in the Mekong region, which includes Vietnam, China, Laos, Cambodia, Thailand, and Myanmar (Mekong River Commission, 2022). Our rationale for this focus is threefold. Firstly, a regional-level analysis is more likely to elicit a diversity of relevant than selecting a single country. Secondly, China, Malaysia, the countries with the emergent and well-embedded network of body image researchers (Andersen & Swami, 2021), and four other countries in the Mekong region share geographic borders and cultural and social similarities, thus body image research among SMM in these countries lends itself to comparison. Furthermore, findings from research conducted in these non-Western sociocultural contexts might diverge from those in Western contexts, contributing to a nuanced understanding of body image among SMM. Lastly, the Mekong region is a relatively common grouping for reviews, given the reasons above, e.g. (Newman et al., 2022); which makes policymakers and health promotion practitioners in the region more likely to find these reviews relevant to their work. Furthermore, it is crucial to understand body image in the broader context of the Mekong region, within which SMM frequently experience stigma and discrimination related to homosexuality and its relation to body image. For instance, Chinese SMM are at higher risk of suicide attempt (Huang et al., 2018); and are more likely to engage in self-harm associated with body dissatisfaction and psychological distress (Tie et al., 2022).

2. Method

This paper reports on a scoping review to map out the field of body image in the Mekong region (Arksey & O'Malley, 2005). Scoping reviews are usually used to examine the extent, range and nature of a study field and identify research gaps in the existing studies. The five-step framework Arksey and O'Malley (2005) developed has been adopted and used as a guideline to standardise the report. These five steps are identifying the research question, identifying relevant studies, study selection, charting the data, and collating, summarizing, collating, and reporting the results.

2.1 Identifying the research question

This review asks, 'What is the scope and nature of research relating to the body image of SMM in the countries of the Mekong region?' For this review, body image is defined as a multidimensional construct, which includes perceptions, attitudes, feelings and behaviours focused on the body's physical appearance and function (Cash & Smolak, 2011). SMM include gay, bisexual, and queer men and men who have sex with men (MSM). We acknowledge that the term MSM is a clinical term used in public health programs that has received criticism for its failure to address the nuances of sexual diversities and social identities, and for rendering invisible the cultural aspects of gay life that can shape risk practices and responses (Boellstorff, 2011; Young & Meyer, 2005). However, the focus of research on MSM has shifted from quantifying risk patterns to positive aspects, such as identifying protective and resilience factors unique to queer communities. This review still includes the term "MSM" because of its widespread use in health research, policies, interventions, and global health projects in many regions, including the Mekong region (Asthana & Oostvogels, 2001; Beyrer et al., 2012). In this article, "MSM" will be used when referencing existing studies employing the term for accuracy purposes.

2.2 Identifying relevant studies

To identify relevant studies, seven electronic databases (CINAHL, MEDLINE, Scopus, PsycInfo-1806 (Ovid), ProQuest Central, Social Science Premium Collection, and Web of Science) were searched from August to October 2022. First, an online search was conducted on these seven databases. Three

groups of key terms relating to three essential concepts of the research question, including body image, SMM, and the Mekong region, were used as follows:

- Body image: “body image”, “body dissatisfaction”, “body satisfaction”, “body dysmorphia”, “bodybuilding”, “body composition”, “appearance”, “beauty”, “muscular dysmorphia”, “body identity”, “body schema”, “body representation”, “attractive”, “self-esteem”, “body identity”, “body appreciation”, “muscularity”, “muscular ideal”, “mesomorphic ideal”, “shape concern”, or “weight concern”.
- Sexual minority men (SMM): “MSM”, “men who have sex with men”, “gay”, “homosexuality”, “homosexual men”, “homosexual male”, “bisexual”, “pansexual”, “queer”, and “sexual minorities”.
- The Mekong region: “Vietnam”, “Viet Nam”, “China”, “Laos”, “Cambodia”, “Thailand”, “Siam”, “Myanmar”, and “Burma”.

The OR operator was used to combine all key terms of each group. Then, the AND operator combined the results of these three searches. The last search was conducted in May 2024. There was no limitation for the timespan. One author executed the search with the guidance of a university librarian. The screening process included two phases. First, titles and abstracts were initially screened by one author to exclude articles that were irrelevant to body image or not conducted in the Mekong region. Non-English and non-Vietnamese articles were screened based on their English-translated titles and abstracts. Notably, no articles written in any language of the Mekong region were found in the search results. The potential articles were listed for the second screening. The full texts of the listed studies were screened for eligibility in the second screening. Then, all the authors discussed the eligible articles until reaching an agreement on the final list of articles included in this review. Reference sections of selected articles and any related literature review that emerged in the search were reviewed for further literature.

2.3 Study selection

Peer-reviewed articles describing the results of studies among SMM in the Mekong region with accessible full texts were sought. Studies were included if they: (a) were published in peer-reviewed

journals; (b) were empirical studies; (c) conducted in Vietnam, China, Laos, Cambodia, Thailand or Myanmar; (d) mentioned body image (or related terms such as appearance, face, body traits, body transformation, physical appearance, body dissatisfaction, body satisfaction, body modification, cosmetic surgery) in the aims, objectives, or research questions of an article, or be a significant focus of data described in the result section; and (e) focused on SMM, MSM, gay, homosexual, queer or bisexual men.

During the selection process, studies were excluded if they were books, theses, or dissertations; not empirical (e.g., review, opinion, conceptual or theoretical pieces); not written in English or Vietnamese; or full texts were unavailable. A cross-country survey on body weight and shape concerns in eight countries, including China, was excluded because it focused on adults in general (Sicilia et al., 2020). Other studies were excluded because of their focus on transgender women, their lack of information about the participants' sexual orientations, or study locations outside the Mekong region. This resulted in a total of 25 articles for the final review (see Figure 1)

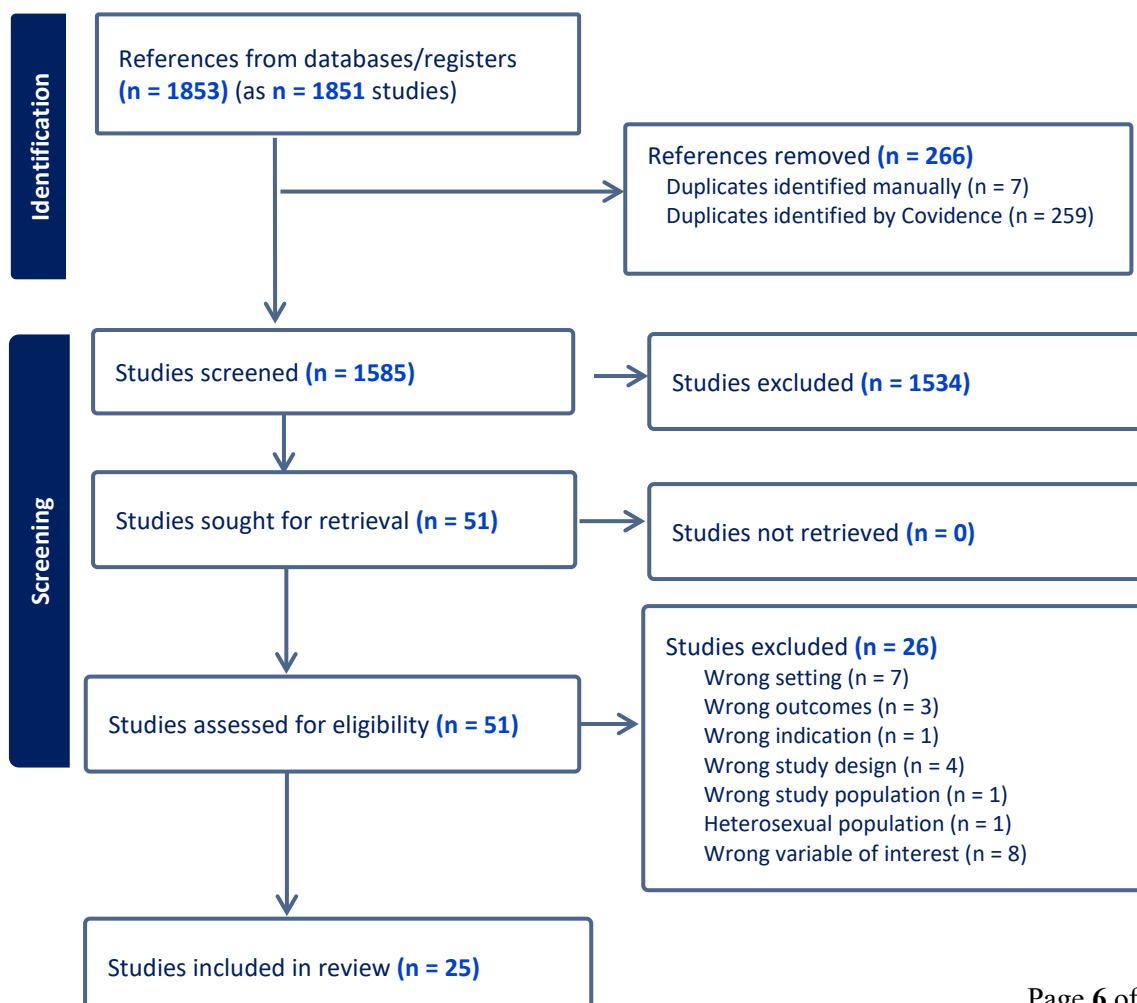


Figure 1. Article screening process (PRISMA)

2.4 Charting the data

A data charting form was developed and refined to summarise characteristics of the selected articles, including authors' names, year of publication, journals, study aims, study location, methodology, sample characteristics, recruitment method, outcome measurements, theoretical framework, primary findings, and limitations. The characteristics available in these identified studies were charted and entered into an Excel file.

2.5 Summarizing, collating and reporting the results

The collected data from the identified studies were descriptively analysed and reported as frequency counts. Then, the literature was thematically organised according to the methodological approach of identified studies. Aligned with the scoping review guideline, this review discussed the findings of identified studies to review the scope and nature of the existing literature and suggest implications for future research, not to evaluate the quality of evidence, study design, and implementation (Arksey & O'Malley, 2005).

3. Results

3.1 Extent and location of literature

Only articles published in peer-reviewed journals were included in this review ($n = 25$). A fifth were located in a single journal, *Archives of Sexual Behaviors* ($n = 5$), and nearly a fifth were located in another journal, *Personality and Individual Differences* ($n = 4$). *Sexuality Research and Social Policy* and *Journal of Homosexuality* each contained two articles. The other journals contained one article, each included in the analysis. In sum, 16 peer-reviewed journals contained 25 articles analysed in this review. A total of 70 authors were identified. One author, Lijun Zheng from the Faculty of Psychology at Southwest University, China, played a prominent role in the field. He was the first author of 9 articles (36%) and the second author of two other articles (8%) included in this review. Chichun Lin from the

University of British Columbia, Canada, and Bijie Tie from the Center for Studies of Education and Psychology of Ethnic Minorities in Southwest China, Southwest University, China, were the first authors of two articles (8%) each included in this review. Other authors were responsible for one article only. Most of the first authors were from a psychological institution (9/16).

3.2 Study settings and sample composition

Most studies included in this review were conducted in China (22/25). Among those 22 studies, two were conducted in Hong Kong (Leung et al., 2014; Ching et al., 2021), one in Hong Kong and Taiwan (Chan & Wu-Ouyang, 2023), and another in multiple countries including China, Taiwan, Singapore, Hong Kong and Malaysia (Lin & Moore, 2022). The remaining studies were conducted in Thailand and Vietnam, respectively. Fifteen out of 25 studies concentrated on gay men or MSM only, including seven on gay men in general, two specifically on gay bear men, two on young gay men, two on MSM, one on migrant male sex workers, and one on gay men who used Blued (a dating app for gay men exclusively). Five studies included gay men and bisexual men. Four studies included both men and women in their samples; two included gay/bisexual men and lesbians, one included gay men and transwomen, and one included male adults and heterosexual women. The last paper was based on a sample of college students. One quantitative study examined a combination of four published datasets by the same authors, which were also included in this review (Zhang et al., 2018; Zheng et al., 2013; Zheng et al., 2016; Zheng & Zheng, 2016), and one unpublished dataset. These quantitative studies' samples were young, with a mean age range from 20.06 (SD = 1.47) to 27.32 (SD = 7.65) and highly educated, with at least 47.9% of participants having a college education. None of the articles included data about the racial or ethnic identity of participants.

3.3 Methodological design

Eleven of 20 quantitative studies utilised experimental designs, six utilised cross-sectional surveys, three utilised secondary data, two utilised ethnography, two utilised interviews, and one utilised mixed method. The mixed-method study employed cross-sectional survey and interviews to explore Chinese gay bear identities (a subcultural identity referring to gay men who are more likely to be hairier, heavier, shorter, and with more normatively masculine traits) (Lin, 2014; Manley et al., 2007; Moskowitz et al.,

2013). Eighteen of these quantitative studies applied an online recruitment strategy, one employed online and snowball strategies, and one applied location-based convenience sampling. Two qualitative studies employed ethnographic design, which included long-term fieldwork and interviews. Another study utilised digital ethnography and in-depth interviews. The last two qualitative studies employed semi-structured interviews. No intervention or longitudinal studies were identified in the review.

3.4 Measures used

A variety of measures relating to body image were used in the quantitative studies. Nine studies focused on masculinity preference used masculinised and feminised dimorphic images and recordings to measure the preference for facial, body and/or voice masculinity among gay men (Zhang, 2018; Zheng, 2019a, 2019b, 2021; Zheng et al., 2013, 2015, 2016, 2018, 2021). Hou and colleagues (2019) used manipulated images to assess facial attractiveness. However, instead of relying on participants' self-report answers, the authors used the eye-tracking movement technique to record their responses. Ching (2021), Barnhart and colleagues (2022), and Tie and colleagues (2022; 2023) used the Drive for Muscularity (DMS) (McCreary & Sasse, 2000) comprised two subscales: attitudes and behaviour scales. These studies conducted by Ching (2021), Barnhart and colleagues (2022) also utilised selective questions from broader surveys, such as muscularity and dissatisfaction with body fat subscales (18 items) of the Male Body Attitude Scale (MBAS) (Tylka et al., 2005), the Upward Physical Appearance Comparison Scale (UPACS) and the Downward Appearance Comparison Scale (DACS) (O'Brien et al., 2009), the Sociocultural Attitudes Toward Appearance Questionnaire 4-Revised (SATAQ-4R) (Schaefer et al., 2017). The subscales from the Body Influence Assessment Inventory (BIAI) (Osman et al., 2006) and the Deliberate Self-Harm Inventory (DSHI) (Gratz, 2001) were used by Ying and colleagues (2022); meanwhile, Liu and Zheng used the Body Appreciation Scale-2 (BAS-2) (Tylka & Wood-Barcalow, 2015) and the Objectified Body Consciousness Scale (OBCS) (McKinley & Hyde, 1996) to measure body perception. The Chinese version of the Body Image Acceptance and Action Questionnaire (BI-AQQ-5) (Basarkod et al., 2018; He et al., 2021) was employed by Tie and colleagues (2023). Notably, most identified quantitative studies adopted available Western scales to measure perceptions of body images and muscularity. Only a few studies developed new scales to measure

attitudes toward body hair, self-rated masculinity, and confidence levels in gay male and heterosexual worlds (Lin, 2014), or attitudes toward male masculinity (Zheng & Zheng, 2016); but one of them was based on the Western ideals (Moskowitz & Hart, 2011; Rieger et al., 2008). Verified Chinese versions of Western measurements were also used in this review to measure mental health, such as the Anxiety Subscale of the Short Depression Anxiety Stress Scale (DASS-21) and Rosenberg's Self-Esteem Scale (Rosenberg, 1965). Zheng (2021) also looked at the moderating effect of requirements for partners' sexual position on the relationship between sexual self-labels and facial masculinity preferences.

3.5 Summary of main areas of focus and findings

Analysis of the findings contained within papers that met the inclusion criteria indicates the existence of five key themes, some of which are interrelated. These key themes, which are preferences for male-gendered characteristics, body objectification, mental health, body modification practices, gay bear culture, and sexting, are identified based on the main findings of each identified article. A study was categorised into multiple themes if its main findings were aligned with varied themes.

3.5.1 Preferences for male-gendered characteristics

This theme was a significant focus of the literature, with the most significant number of identified articles (13/25), and was mainly contributed by one Chinese scholar, Zheng Lijun. Studies were classified within this theme if one of the main findings was related to SMM's preferences for male-gendered physical characteristics in their romantic or sexual partners. There has been a particular focus in research on how face preference aligns with sex role preference in the context of anal intercourse. These studies' findings indicate that SMM have preferences for partners' physical traits and their associations with other factors, such as preference for partner health.

Nine studies examined Chinese gay and bisexual men's preferences for masculine physical traits in their partners' appearances and socio-demographic factors associated with these preferences. Pairs of prototype-based images, each pair consisting of a masculinised and a feminised version of a male face and/or body image, were used to measure these preferences. These studies found that Chinese gay men preferred faces that were considered normatively masculine than was the case for bisexual and heterosexual men (Hou et al., 2019; Zheng & Zhang, 2021). Facial masculinity preferences were also

associated with sex position preferences (i.e. insertive or receptive), sociosexual orientation (defined as individual's openness to short-term sexual relationship with sociosexual restriction referring to less openness), requirement for partners' sexual positions in the relationship (i.e. prefer a partner who is receptive or insertive) (Zheng, 2021; Zheng et al., 2013; Zheng & Zhang, 2021), preference for partners' health and status (described by the authors in terms of prosperity and social status) (Zheng & Y. Zheng, 2015), sexism (including hostile and benevolent sexism) (Lijun Zheng & Yong Zheng, 2015), pathogen disgust (defined as a defense mechanism that motives individuals to avoid potential source of pathogens or several trait-like individual differences to avoid disease infection) (Tybur et al., 2009; Zheng et al., 2016), mental rotation ability (defined as a masculine cognitive ability) (Zheng, 2019), age groups and geographic characteristics (Zheng & Zhang, 2021). Masculine faces were significantly more attractive to homosexual college male students compared to heterosexual ones, especially those whose sex role was coded as a 'feminine type' (individuals who received low scores of the Masculine Positive Category (M) and high scores of Feminine Positive category (F) of the Sex Role Inventory for CollegeTies students) and 'androgynous type' (defined as individuals who received high M and high F) (Hou et al., 2019). Moreover, masculinised faces were preferred by those who preferred the receptive role during anal intercourse (colloquially known as a 'bottom') (Zheng, 2021; Zheng et al., 2013), gay men who were not in a relationship (Zheng, 2019), and gay men aged 20 – 29 years (Zheng & Zhang, 2021). A study published in 2013 found those who identified as versatile (i.e. like both the insertive and receptive role during anal intercourse) did not have a preference for face type or shape (Zheng et al., 2013); meanwhile, another study showed that those identifying as versatile preferred masculinised faces over feminised faces (Zheng, 2021). Two studies found a consistent masculine preference in faces, voices, bodies, and personality traits (Zhang et al., 2018; Zheng & Zheng, 2016). Other identified studies within this theme indicated a hierarchical pattern in Chinese SMM's preference for sex partners by body type, with muscular, fit and lean-toned bodies being more preferable (Leung et al., 2014; Zhou, 2023).

3.5.2 *Body objectification*

Objectification theory, a Western framework, illustrates how Western cultures socialise girls and women, and objectify their bodies as subjects for the gazes and evaluation of others (Fredrickson & Roberts, 1997). Subjects of such attention then internalise this, resulting in the development of self-objectification, increasing self-consciousness, appearance monitoring, body shame, eating disorders and depression (Fredrickson et al., 1998; Jones & Griffiths, 2015; Schaefer & Thompson, 2018). Scholars have extended this theory to include not only women and girls but also SMM, as they also aim to attract male partners and are subject to the male gaze as well (Wiseman & Moradi, 2010). Identified articles were categorised into this theme based on whether the theory was mentioned as a theoretical approach or where exposure to or internalisation of others' evaluations of their appearance was measured.

Five studies examined the associations among sociocultural factors, minority stress, social comparison, sexually explicit material consumption (SEMC), and gay dating app usage on variance in body image and eating disorders among Chinese SMM and women. Barnhart and colleagues (2022) found the replication of the tripartite influence model relating to body image and eating disorders among Chinese SMM. Perceived pressure regarding appearance was related to a drive for muscularity, while sexual orientation concealment and internalised homophobia were significantly positively associated with thinness-oriented disordered eating among Chinese gay men (Barnhart et al., 2022). Another study examining a dual pathway model (concerns over body fat and muscularity are pathways to body dissatisfaction) of appearance-related commentary in Chinese gay men pointed out that the association between appearance-related commentary and body dissatisfaction depended on the nature of the comments and was mediated by appearance-contingent self-worth (Ching et al., 2021). Tie and colleagues (2023) found that body fat dissatisfaction, muscularity dissatisfaction, and body image inflexibility were positively associated with the use of gay dating apps among Chinese young SMM (Tie et al., 2023). The fourth study indicated a positive association between SEMC with a drive for muscularity and objectified body consciousness as a mediator of the relationship between SEMC and body appreciation in Chinese gay and bisexual men (Liu & Zheng, 2021). The last study found that

negative body image was related to anxiety in gay men only, not in lesbian and bisexual women, which could be interpreted by the objectification theory (Ying et al., 2022). Findings from these studies show the replication of body objectification theory in samples of Chinese SMM. However, these findings slightly differ from Western studies. For instance, Tie and colleagues (2023) found gay dating app usage was positively associated with both thinness and muscularity-oriented disordered eating among Chinese gay men; meanwhile, Western studies found no or weak correlations between disordered eating and gay dating app usage (Griffiths et al., 2018; Nowicki et al., 2022). Similarly, both body fat and muscularity dissatisfaction predicted muscularity enhancement practices among Chinese gay men (Ching et al., 2021), but Western studies showed muscularity enhancement practices were predicted by either muscularity or body fat dissatisfaction (Tylka, 2011; Girard et al., 2018). These differences are potentially caused by minority stress among Chinese SMM, which may be exacerbated by cultural differences and unique stressors shaped by collectivism and traditional Confucian values (Tie et al., 2023). Therefore, future research on dating app use and body image among SMM in non-Western contexts should include culture-specific variables to build culturally tailored and testable objectification models.

3.5.3 *Mental health*

Body image can have a significant bearing on mental health. For instance, research from a range of countries has documented how body dissatisfaction is a predictor of low self-esteem, psychological distress, eating disorders, and risks of suicidal behaviours (Blashill, 2010; Blashill et al., 2016; Kim et al., 2011; Wang et al., 2019; Wrench & Knapp, 2008).

Four studies (all from China) discussed mental health issues relating to body image, including eating disorders, suicidal attempts, and non-suicidal self-injuries. Among the two studies on eating disorders, one found that restrained eating behaviour was associated with higher levels of appearance-related commentary, appearance-contingent self-worth, and body fat dissatisfaction (Ching et al., 2021); meanwhile the other pointed out that higher thinness-oriented disordered eating was related to higher appearance pressures and downward body image comparison (defined by the authors as a physical appearance comparison with individuals who were considered less physically attractive) among

Chinese SMM (Barnhart et al., 2022). A survey of 682 Chinese lesbian, gay, and bisexual (LGB) found that maladaptive perfectionism (defined as a cognitive vulnerability characterised by the tendency to be overly critical of a person's performance) was directly related to non-suicidal self-injuries through anxiety and negative body image among Chinese LGB (Ying et al., 2022). Meanwhile, Tie and colleagues (2022) found that body fat dissatisfaction and muscle dissatisfaction mediated the positive association between non-suicidal self-injuries and internalised homophobia among young SMM.

3.5.4 Body perceptions and modifications

Three identified articles, which are qualitative, sought to understand beauty practices and cosmetic surgeries (Tsang, 2021; Kang, 2021) and body image perceptions (An et al., 2023). Kang (2021) utilised the concept of cultural and embodied capital (Bourdieu, 1986) to discuss Thai gay men's and trans women's perception of beauty concerns and practices as a duty to transform their bodies to live up to social and cultural norms/standards in a regionalised and racialised context. Meanwhile, Tsang (2021) explored Chinese migrant male sex workers' cosmetic surgeries and transformative emotional labour as technologies of embodiment. The author argued that the migrant male workers used cosmetic surgeries and emotional labour as a strategy to increase their survivability in the urban commercial sex industry in China. Both of these articles highlighted the social and cultural dimensions of beauty concerns and cosmetic surgeries among gay men in China and Thailand.

An and colleagues (2023) demonstrated nuanced and dynamic body image perceptions among Vietnamese MSM. This study found that participants adopted and pursued various idealised bodies. According to the authors, this may be facilitated by traditional notions of Vietnamese masculinity, emphasising the male body's function to perform their roles and responsibilities in family and kinship rather than body aesthetics. Vietnamese MSM could achieve masculinity by being a family's pillar and fulfilling filial piety and responsibilities with their kinship rather than conforming to a dominant masculinity body. Therefore, they could pursue different idealised bodies (An et al., 2023).

3.5.5 Gay Bear Culture

Gay bear, a Western term describing a subculture comprised of gay and bisexual men with heavier and hairier physical traits and more pronounced normatively masculine psychological traits (Moskowitz

et al., 2013), has been adopted by some in Asia. A mixed-method study explored the Chinese bear gay community by comparing the Western and Chinese definitions of gay bear and exploring personal needs and cultural aspects informing the Chinese gay bear identity (Lin, 2014). The study found a similarity between the Western and Chinese definitions, which is that gay bears were heavier, hairier, more likely to be more confident in the gay bear community than in heterosexual ones, and had more masculine traits. However, height was not an essential attribute for Chinese gay bear identity, and their self-esteem was moderately higher than reported among non-gay-bear men. Chinese gay bears also reported the feeling of being isolated in the mainstream gay communities and discriminated against based on their sexual identity and bigger body in heterosexual society; thus, they valued popularity, high social status, and a strong emotional attachment to their gay bear community. These participants reported that Chinese collectivism and exam-oriented education, which emphasised conformity with a community's rules and goals rather than individual stakes, placed pressure on them to conform, and the Chinese gay bears' idealised norms to strengthen their identity and emotional attachment to bear communities (Lin, 2014). Another quantitative study on Chinese SMM's networking of casual sex partners in Hong Kong also found that SMM who self-identified as a bear or chubby were less likely to seek or have a partner with a slender, lean-toned or muscular body (Leung et al., 2014). Chinese gay bear men were also conscious of obesity health risks relating to maintaining a bear body; thus, they employed different strategies to manage those risks, such as healthy diets, regular physical exercises, and exams or getting a bear 'look' by having a bear-style haircut, wearing bear-style clothes, and growing facial and body hair (Lin & Moore, 2022).

3.5.6 Sexting

Sexting refers to "sending or receiving a sexually suggestive or sexually explicit message, a partially nude photo or video, or a fully nude photo or video" (Currin & Hubach, 2017, p.413). Sexting has been found to be more common among SMM than heterosexual men (Morelli et al., 2016). A study examining sexting among SMM in Hong Kong and Taiwan found that the muscularity ideal was correlated to sexting under pressure and predicted the number of sexting partners (Chan & Wu-Ouyang,

2023). These authors argued that SMM would send sexts to receive compliments and validation about their masculine bodies.

4. Discussion

This review identifies and synthesises the existing literature, comprising 25 articles relating to body image among SMM in the Mekong region. A primary observation of this review was the dominant focus of empirical articles on masculinity preferences and negative aspects of body image and the stark absence of studies focussed on positive body image. Second, the empirical studies consistently use experimental or cross-sectional data, indicating a lack of longitudinal and qualitative studies to explore how body image-related issues might change over time and how SMM perceive and engage with their body image in different sociocultural contexts. Moreover, studies routinely highlighted negative influences of body image among SMM, but no prevention and intervention studies were identified in this review. Other gaps are the limited sample populations, with 23 out of 25 identified studies focused on Chinese SMM and the prevalence of Western theoretical framing of body image and associated measurements.

The current literature on body image among SMM in the Mekong region comprises six themes. The first, dominant theme represents a psychological topic in body image research that is widely examined among heterosexual women, gay and bisexual men in Western societies, namely preferences for male-gendered characteristics (Chen et al., 2018; Shiramizu et al., 2020; Valentova et al., 2013). Two other themes, namely body objectification and mental health, represent a traditional core of body image knowledge, which focuses on negative aspects of body image. The fourth theme focuses on body perceptions and modification practices. In contrast, the fifth theme was mainly focused on a subcultural identity and community in gay communities, namely gay bears adopted from Western gay bear communities. The last theme emphasised the influence of the muscularity ideal on sexting among SMM. Many components of body image research, such as positive body image, effects of media, and body satisfaction, are silent in the current literature.

Several studies identified in this review focus on male-gendered preferences and behavioral outcomes. This emphasis is likely linked to the HIV response, where research and programs prioritise behavioural outcomes relating to sex partners and risks (Beyrer, 2021; Beyrer et al., 2013; van Griensven & van Wijngaarden, 2010). Since the 1990s, when HIV/AIDS emerged as a significant issue, SMM have received increasing attention from scholars and organisations, resulting in a research landscape heavily dominated by HIV/AIDS topics (Chantavanich, 2000; POLICY Project, 2003; de Lind van Wijngaarden et al., 2021; Mahmud et al., 2023). Consequently, most studies on SMM in Vietnam concentrate on sexual behavioural and HIV-related risks, leaving a gap in understanding other critical issues, such as body image (An et al., 2022; Colby et al., 2004). This focus on HIV/AIDS might contribute to the limited studies on body image among SMM in the region. Furthermore, body image research originates in Western countries and is intertwined with heterosexism, white supremacy and racism (Landor et al., 2024). As a result, many body image studies focus on White/European SMM, with fewer studies addressing non-White SMM, including those from the Mekong region.

A broad range of populations were missing or only briefly reflected in this review. For example, the majority of identified studies focused on Chinese populations. Except for one identified study that examined Thai gay men, no other studies focused on the gay populations of the other three Mekong countries, including Vietnam, Laos, and Cambodia. Most identified studies focused on gay men in general, but the participants were young and well-educated. A potential reason for the skewed samples is online recruitment strategies and location-based convenient sampling. These strategies are effective in reaching hidden and stigmatised communities such as SMM. However, online recruitment can only reach SMM with the capacity and accessibility to use the internet, who, in many Mekong countries, tend to be young and well-educated. This strategy is less likely to reach non-gay-identifying SMM, given the concern they may hold about their sexuality being exposed. Older SMM and other subcultural groups, such as leather or bear, do not seem to have been thoroughly examined in the existing literature due to limited available studies. This indicates a need for further research on the body image of SMM subgroups in the Mekong region as their body image issues, such as an aging body, reflecting (or resisting) a body image to align with sociocultural norms of masculinity or their idealised body type.

Besides, body image might be perceived more closely to mental health, which is stigmatised and less socially accepted in Asian countries (Zhang et al., 2019). SMM in the Mekong region, who are already experiencing stigma associated with homosexuality (UNDP & USAID, 2014; Sreyleak, 2018; UNDP, 2019), might not be willing to participate in body image research to avoid being exposed to other stigma impacts on mental health.

The identified studies in this review are heavily influenced by Western theories and approaches relating to body image and most used instruments adopted from Western-derived measurement scales. Moreover, in this review, SMM's body image was mainly explored as a risk factor associated with various adverse health outcomes such as eating disorders, suicidal attempts, and self-harm behaviors, as presented in Western literature on the body image of gay men (Blashill et al., 2016; Bosley, 2011; Marmara et al., 2018). Research exploring SMM's body image from social and cultural perspectives, which has been investigated and highly valued in Western literature, has rarely emerged from this review due to a limited number of identified studies (4 studies). This finding aligns with a Western scholar's call for a more nuanced understanding of how SMM perceive and engage with their body image in broader sociocultural contexts (Duncan, 2007). Future research on body image among SMM in the Mekong region should employ a postcolonial approach (Gandhi, 1998; Meghani & Saeed, 2019; Pilario, 2007) to achieve a nuanced understanding of body image within specific local sociocultural contexts. Future research should focus more on cultural and social contexts, and how these factors influence body image. Additionally, Western theories or frameworks on body image should be applied critically in non-Western contexts, with sufficient consideration given to their appropriateness for specific cultural settings.

5. Conclusion

The current literature on SMM's body image in the Mekong region is limited in the range of topics, study populations, and methods, with the dominance of studies on preferences for male-gendered characteristics among young and well-educated Chinese sexual minority men via the use of quantitative methods. Moreover, identified articles are influenced mainly by Western scholarship with the predominant use of Western measurements and theories. In thinking about future research on the body

image of SMM in the Mekong region, we encourage scholars to engage sociocultural approaches in research on the body image of SMM from other countries in the region, including Vietnam, Laos, Cambodia, Myanmar, and Thailand. Such research can attend to how sexual minority men engage with their body image, negotiate various sociocultural ideas of body image, and give attention to particular social and cultural contexts. Moreover, it might also provide opportunities to better understand the body image of those who belong to subcultural groups within SMM communities, and how these SMM negotiate the difference in body image perceptions of their own or their sub-groups and the general SMM community.

Appendix: Summary of included studies

Table 1: Summary of included studies

| Authors, year of publication | Journal | Purpose/ objective | Study location | Study design | Recruitment | Sample size and characteristics | Measurement | Study outcomes |
|--------------------------------|--|--|----------------|--------------|-------------|--|--|---|
| 1. Zheng et al., 2013 | Archives of Sexual Behaviour | Identify the relationship between intercourse position preferences and facial masculinity preference | China | Experimental | Online | 447 gay men Mean of age: 24.7 (SD=5.7) Age range: 18 – 60 | - ten masculinised and feminised dimorphic images of male faces to measure preferences for male facial masculinity Revised Sociosexual Orientation Inventory (SOI-R) (Penke & Asendorf, 2008) | Male facial masculinity preferences were related to sexual self-label and sociosexual orientation. Tops preferred the feminised male face over the masculinised face, bottoms preferred the masculinised male face over the feminised face, and versatiles had no preference. Tops preferred more feminised male faces than bottoms and versatiles—tops who were less restricted preferred more feminine male faces than tops who were more restricted. Bottoms who were less restricted preferred more masculine male faces than bottoms who were more restricted. There is no association between preferences for male facial masculinity and sociosexual orientation among versatiles. |
| 2. Zheng L. & Zheng Y., 2015 | Archives of Sexual Behaviour | Examined the association between male trait preferences and male facial preference in gay men | China | Experimental | Online | 556 gay and bisexual men Mean of age: 24.2 (SD=6.1 years) Age range: 16 – 60 | - ten masculinised and feminised dimorphic images of male faces to measure preferences for male facial masculinity One item with listed 23 partner traits was used to measure preferred traits in relationship partners | Preference for male facial masculinity is correlated to preferences for health and status-related traits among Chinese gay and bisexual men (GBM). GBM who were more health-oriented or status-oriented in choosing a romantic partner preferred more masculine male faces than individuals who were less oriented to these traits. |
| 3. Zheng L., & Zheng, Y., 2015 | Personality and Individual Differences | Explore the relationship between sexism and preference for male facial masculinity among gay men | China | Experimental | Online | 185 gay men Mean of age: 22.0 (SD=2.9) Age range: 18– 30 | - ten masculinised and feminised dimorphic images of male faces to measure preferences for male facial masculinity - Ambivalent sexism inventory (ASI) with 22 items rated on a 6-point Linkert scale (Glick & Fiske, 1996) | Sexism was related to preferences for male facial masculinity in gay men. Hostile sexism was passively associated with preferences for male facial masculinity in gay men. Protective paternalism was negatively correlated with preference for face masculinity. |
| 4. Zheng L., & Zheng, Y., 2016 | Archives of Sexual Behaviour | Examined: (i) preferences for masculinity across | China | Experimental | Online | 484 gay and bisexual men Mean of age: 23 | - Sex Role Inventory in China (CSRI-50) to measure preference for masculinity traits | The consistent preference for masculinity between physical features (faces and bodies) and personality traits |

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| | | faces, bodies, and personality traits; (ii) the impact of sexual self-labels and attitude toward male masculinity on masculinity preferences | | | | (SD=5.7) Age range: 16 – 50 | (Liu et al., 2011) - ten masculinised and feminised dimorphic images of male faces and bodies to measure preferences for male facial and body masculinity - Four newly developed items to measure attitude toward male masculinity | (instrumentality) might be affected by observer perception according to the significant correlation between attitude toward masculinity and the preference for facial, body and trait masculinity. Bottoms and versatile preferred more masculine faces, bodies, and personality traits than tops. |
| 5. Zheng et al., 2016 | Personality and Individual Differences | Examined the relationship between pathogen disgust and individual male facial masculinity among gay men in China | China | Experimental | Online | 295 gay men Mean of age: 21.31 (SD=5.48) Age range: 16 - 56 | - ten masculinised and feminised dimorphic images of male faces to measure preferences for male facial masculinity - Three domains of the Disgust Scale (TDDS) with 21 items (Tybur et al., 2009) | Preference for male facial masculinity was negatively correlated with pathogen disgust but not with moral or sexual disgust domain, regardless of sexual orientation. Chinese gay men with high pathogen disgust reported a stronger preference for facial femininity in male faces. |
| 6. Zhang et al., 2018 | Personality and Individual Differences | Examined the consistency of homosexual males' preferences for masculinity across face, body, voice, and personality characteristics | China | Experimental | Online | 344 gay men Mean of age: 24.99 (SD=6.37) Age range: 16– 51 | - ten masculinised and feminised dimorphic images of male faces and bodies to measure preferences for male facial and body masculinity - ten masculinised and feminised recordings of Chinese male voices to measure preferences for voice masculinity - Sex Role Inventory in China (CSRI-50) (Liu et al., 2011) | Masculinity preferences were consistent across the modalities of vision, audition, and personality characteristics. Gay men who preferred masculine faces tended to prefer masculine bodies, voices and personality traits. |
| 7. Zheng L., 2019 | Personality and Individual Differences | Examined the effects of relationship status on facial masculinity preference among gay and bisexual men | China | Experimental | Online | 563 gay and bisexual men Mean of age: 23.1 (SD=5.6) Age range: 17– 50 | - ten masculinised and feminised dimorphic images of male faces and bodies to measure preferences for male facial and body masculinity - the Sociosexual Orientation Inventory-Revised (SOIR) (Penke & Asendorpf, 2008) to measure sociosexual orientation - one multiple-choice question to assess relationship status | GBM in same-sex relationships more often preferred masculinised faces compared to single individuals or in opposite-sex relationships. Those who were in same-sex and without relationships preferred masculinised faces, while those in opposite-sex relationships preferred feminine faces. Relationship status moderated the effects of sociosexual orientation on masculinity preference. Participants of unrestricted sociosexual orientation and those without relationships more often preferred masculinised faces. |
| 8. (Zheng, L., 2019) | Frontiers in Psychology | Examined the association between mental rotation ability and facial masculinity | China | Experimental | Online | 649 gay/ bisexual and heterosexual men and heterosexual women - GBM: Mean | - 10 masculinised and feminised dimorphic images of male faces to measure preferences for male facial masculinity - A short 6-item three-dimensional mental rotation test | Mental rotation ability was significantly associated with facial masculinity preference in GBM but not in heterosexual men or women. |

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| | | preference in gay and bisexual men in China | | | | age = 23.4 (SD =5.6); Age range: 16 – 50 - Heterosexual men & women: Mean age = 27.1 (SD=5.9); Age range: 17 - 49 | (Zheng & Zheng, 2017) | |
| 9. (Zheng, L., 2021) | The Journal of Sex Research | Examined the moderating effect of requirements for partners' sexual positions on the relationship between facial masculinity preferences and sexual self-labels | China | Experimental | Online | 1,628 gay and bisexual men Mean of age: 23.7 (SD = 6.3) Age range: 16 – 60 | <ul style="list-style-type: none"> - ten masculinised and feminised dimorphic images of male faces to measure preferences for male facial masculinity - One question with six options to assess the requirements for romantic partners' sexual position - One question with three options to assess individual sexual self-label | Sexual self-labels significantly interacted with requirements for partners' positions. Individuals requiring a complementary partner had a specific preference, whereas individuals not required for their partners' positions didn't. |
| 10. Zheng & Zhang, 2021 | Archives of Sexual Behaviour | Examined demographic and geographic differences in facial masculinity preferences among gay and bisexual men | China | Secondary data analysis: combined 5 data sets (4 published + 1 unpublished) | Online | 2,595 gay and bisexual Men Mean of age: 23.4 (SD = 6.2) Age range: 16+ | <ul style="list-style-type: none"> - ten masculinised and feminised dimorphic images of male faces to measure preferences for male facial masculinity - Demographic questions - Using IP addresses to assess the geographic locations of participants | Gay men preferred more masculinised faces than bisexual men. Tops preferred feminised faces, whereas bottoms and versatile preferred masculinised faces. Participants aged 20–29 years preferred more masculinised faces than those aged 16–19 years and older than 30. Facial masculinity preferences were significantly different on geographic variables. Participants living in South and North China and in first-tier cities (Beijing, Shanghai, Guangzhou, and Shenzhen) preferred more masculinised faces than those living in other areas/regions. |
| 11. Leung et al., 2014 | PLOS One | Constructed a mixing matrix by body image types in an MSM network | Hong Kong | Secondary data analysis: Used data from a study on sexual networking among MSM sauna clients (Lee et al., 2012) | Location-based convenient sampling | 326 MSM No mention of age | <ul style="list-style-type: none"> - A multiple-choice question to assess participants' rating of their body type and their five most recent sex partners. | There was a hierarchical pattern in the preference of MSM for casual sex partners by the latter's body type. Overall, Muscular men were most preferred, followed by lean-toned men, while Slender were the least preferred. Marked avoidance was found between men who self-identified as Chubby and men of another body type (within-group-LOD: 1.25–2.89; between-group-LOD: 21). None of the respondents reported having networked a man who self-identified as Average for casual sex. |

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| 12. Lin, 2014 | Culture, Society & Masculinities | Tested the Western gay bear definition; explored Chinese gay bears' physical and psychological characteristics and personal needs related to and cultural perspectives on Chinese gay bear identity | China | Mixed method | Online Snowball sampling | Survey: 646 gay men; : mean=27.48 (SD=6.73); Age range: 18 - 54 Interview: 12 gay men, mean =29.27 (SD: 5.32); Age range: 22 - 40 | <ul style="list-style-type: none"> - Body Mass Index (BMI) - Two newly developed questions to assess attitude toward body hair - Self-rated masculinity scale was developed based on the ideas of Rieger, Linsenmeier, Gygas, and Bailey (2008) and Moskowitz & Hart (2011) - Rosenberg's Self-Esteem Scale (Rosenberg, 1965) translated into a Chinese version - Newly developed differences between Confidence Levels in Gay Male and Heterosexual Worlds Scale with six items related to body image and interpersonal relationship perspectives rated on a 7-point Likert reflecting contextual confidence levels | Chinese gay-bear-identified men, as compared to non-gay-bear-identified gay men, are heavier, hairier, and more masculine traits, and have a higher likelihood of feeling more confident in gay bear community life than in the heterosexual world. Chinese gay bears desired to become popular, achieve higher status, and gain emotional attachment in the gay bear community. Cultural aspects included collectivism, binarism and exam-orientation education. |
| 13. Hou et al., 2019 | Frontiers in Human Neuroscience | Explored the different facial attractiveness of individuals with different sexual orientations and sexual roles. | China | Experimental | Online | 95 college students Mean = 20.06 (SD = 1.47) Age range: 18 - 24 | <ul style="list-style-type: none"> - Sex Role Inventory for College Students (CSRI) to assess sexual orientations and sexual roles. - The eye-tracking movement technique: record the eye movement paths while looking at face images were manipulated by sexual dimorphism clues. | Compared to heterosexual men, homosexual men were significantly more likely to choose masculine faces as more attractive faces in paired faces and have the feminisation bias. Masculine faces are more attractive than feminine faces to participants whose sex role is feminine type and androgynous type. |
| 14. Liu & Zheng, 2021 | Sexuality Research and Social Policy | Explored the influence of Sexually Explicit Material Consumption (SEMC) on body appreciation and drive for muscularity via objectified body consciousness among Chinese male sexual minorities. | China | Cross-sectional survey | Online | 616 gay men Mean = 21.68 (SD = 3.81) Age range: 18 - 53 | <ul style="list-style-type: none"> - two items to measure the frequency of SEMC - The Body Appreciation Scale-2 (BAS-2) developed by Tylka & Wood-Barcalow (2015) to assess body appreciation - The Objectified Body Consciousness Scale (OBCS) developed by McKinley & Hyde (1996) | Objectified body consciousness fully mediated the relationship between SEMC and body appreciation. SEMC was positively associated with the drive for muscularity, and the indirect effect was not significant. |
| 15. Ching et al., 2021 | Current Psychology | <ul style="list-style-type: none"> - Test a dual pathway model, muscularity, and body fat pathway, among gay man - Examined the relations of different types of appearance- | Hong Kong | Cross-sectional survey | Online | 326 gay men Mean of age: 27.32 (SD = 7.65) Age range: 18 - 52 | <ul style="list-style-type: none"> - 21-item Verbal Commentary on Appearance Scale (Herbozo & Thompson, 2006) - The 5-item appearance subscale of the Contingencies of Self-Worth Scale (Crocker et al., 2003) | Muscularity dissatisfaction did not predict restrained eating. Body fat dissatisfaction predicted muscularity enhancement behaviour. The association between appearance-related commentary and dissatisfaction depended on the nature of comments. |

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| | | related commentaries to body dissatisfaction - Explored the moderating effect of appearance-contingent self-worth (CSW) on the relationship between appearance-related commentaries and body dissatisfaction | | | | | <ul style="list-style-type: none"> - The 10-item muscularity subscale of the Male Body Attitudes Scale (Tylka et al., 2005) - The 8-item muscularity behaviour subscale of the Drive for Muscularity Scale (DMS; McCreary & Sasse, 2000) - The 8-item body fat subscale of the Male Body Attitudes Scale (Tylka et al., 2005). - The 21-item Cognitive Restraint subscale of the Three Factor Eating Questionnaire (Stunkard & Messick, 1985) | Negative commentaries were related to more dissatisfaction with muscularity and body fat, whereas positive commentaries were linked to less dissatisfaction. These relations were stronger for individuals who had higher levels of appearance contingent self-worth. People with higher body dissatisfaction may pay more attention to negative comments, whereas people who are more satisfied with their bodies may be more attracted to positive comments. |
| 16. Ying et al., 2022 | Sexuality Research and Social Policy | Tested a chain mediating model to examine the roles of negative body image and anxiety in the relationship between maladaptive perfectionism and non-suicidal self-injuries (NSSI). Tested the potential gender differences in these associations | China | Cross-sectional survey | Online | 682 lesbian, gay and bisexual men and women Mean=24.4 (SD=6.5) Age range: 12 - 59 | <ul style="list-style-type: none"> - The Negative Affect Subscale of the Body Influence Assessment Inventory (BIAI) developed by Osman et al. (2006) - The Chinese version of the Anxiety Subscale of the short Depression Anxiety Stress Scale (DASS-21) - Two items with six options each to assess the gender and sexual orientation - The subscales of concern over mistakes and doubts about actions of the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990) - 12 NSSI behaviours were selected from the Deliberate Self-Harm Inventory (DSHI; Gratz, 2001) | Maladaptive perfectionism was related to NSSI through negative body image and anxiety. Positive correlations among maladaptive perfectionism, negative body image, anxiety, and NSSI in Chinese LGB populations were found. Negative body image was related to anxiety only in gay males but not in sexual minority females. Anxiety was related to NSSI more strongly in sexual minority females than in gay males. |
| 17. Barnhart et al., 2022 | Body image | Integrated the tripartite influence, minority stress, and social comparison models to explain variance in body image and disordered eating in Chinese SM men and women. | China | Experimental | Online | 1501 sexual minority men (SMM) and women (SMW): SMM: Mean = 23.71 (Sd=4.79); Age range: 18 - 49 SMW: Mean = 23.80 (SD=4.81); Age range: 18 - 48 | <ul style="list-style-type: none"> - Self-reported sexual identity - The appearance pressures subscales of the Sociocultural Attitudes Towards Appearance Questionnaire 4-Revised (SATAQ-4R; Schaefer et al., 2017) - The thin/low body fat internalisation subscale of the gender-specific SATAQ-4R (Schaefer et al., 2017) - The muscularity internalisation | Higher appearance pressures were related to higher thinness-oriented disordered eating and drive for muscularity in Chinese SM men and women. Upward body image comparisons were unrelated to both thinness-oriented disordered eating and the drive for muscularity in Chinese SM men. Minority stressors (e.g., sexual orientation concealment, internalised homophobia) were uniquely related to |

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| | | | | | | | <p>subscale of the gender-specific SATAQ-4R (Schaefer et al., 2017).</p> <ul style="list-style-type: none"> - The Drive for Muscularity Scale (DMS; McCreary & Sasse, 2000) - The Female Muscularity Scale (FMS; Rodgers et al., 2018) - The Upward Physical Appearance Comparison Scale (UPACS) and the Downward Appearance Comparison Scale (DACS) developed by O'Brien et al., (2009) - 12-item Eating Disorder Examination Questionnaire-Short (EDE-QS) - The Revised Internalised Homophobia Scale (IHP-R) developed by Pyun et al., (2014) - The Self-Concealment Scale developed by Wen & Zheng (2020) | outcomes in men, not women. |
| 18. Kang, 2021 | Asian Studies Review | Examined beauty practices and their meaning among Thai gay men and kathoey | Thailand | Ethnographic: Fieldwork and interviews | No mention | <p>≥ 300 interviews with gay men and trans women (Kathoey)</p> <p>No mention of the participants' age</p> | - N/A | Gay men and kathoey in Thailand share a common concern about being riap-ro (neat, orderly, completed and properly groomed). It is about being "cosmetic" and addressing moral concerns about face, appropriated expression of social status, and managing social interactions. These key body practices are in alignment with Korean and Japanese beauty ideals. The desire to look 'white Asian' is a way to perform the self and the Thai nation in the context of a newly regionalised and racialised developed East Asia. |
| 19. Tsang, 2021 | Singapore Journal of Tropical Geography | Explored the way rural migrant gay men make sense of their body transforming and beauty practices to survive in urban China | North China | Ethnographic: Fieldwork and interviews | No mention | <p>101 migrant gay sex workers</p> <p>No mention of the participants' age</p> | - N/A | Migrant gay sex workers are stigmatised and marginalised by the discourse that presents them as "tropical beings". They have adopted embodiments of emotional labour and undertaken cosmetic surgery to conform to the soft-masculine urban standards to increase their survivability in the urban gay commercial sex industry in China. |
| 20. (Tie et al., 2022) | LGBT Health | 1) Examine the relationship between | China | Cross-sectional survey | Online | <p>264 young SMM</p> <p>Mean of age:</p> | - The revised internalised homophobia (IHP-P) scale to | Internalised homophobia was positively associated with NSSI ($r=0.24$, $p<.001$) |

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| | | NSSI and internalised homophobia; 2) Identify whether body dissatisfaction and psychological distress are a mediator of this relationship | | | | 22.0 (SD=2.86) Average participants' BMI: 21.23, (SD=3.08) | measure internalised homophobia - Body dissatisfaction sub-scale of The Eating Disorder Inventory (EDI-BD) to measure body fat dissatisfaction - The seven-item Drive for Muscularity Scale of Muscularity Body Image Subscale (DMS-MBI) to measure muscle dissatisfaction - Ottawa Self-Injury Inventory (OSI) to measure NSSI - The Short Kessler Psychological Distress Scale (K6) to measure psychological distress | among young MSM in China. Body fat dissatisfaction, muscle dissatisfaction and psychological distress partly mediated this relationship. |
| 21. (An et al., 2023) | Journal of Homosexuality | Explore 1) Vietnamese MSM's perceptions of body image, including their current bodies, idealised bodies and sexually desired bodies; and 2) its impact on motivation to pursue their desired bodies | Vietnam | Qualitative: Semi-structured interviews | Online Snowball sampling Health educator referrals | 30 MSM Mean of age: 26.6 Age range: 19 – 51 | - N/A | Vietnamese MSM's perceptions of their current bodies, idealised bodies and sexually desired bodies were complex and diverse. These perceptions were often situated within specific relationships or social contexts, reflecting cultural and social expectations in these settings. These MSM did experience the pressure of physical appearance; however, conformity to dominant body ideals and body dissatisfaction are not homogeneous among participants. Not all participants pursued their desired bodies. |
| 22.(Chan & Wu-Ouyang, 2023) | Archives of Sexual Behavior | Explore the association between sensation-seeking, gay identity confusion and muscularity ideal with sexting behaviors among MSM in Hong Kong and Taiwan | Hong Kong and Taiwan | Cross-sectional survey | Online | 803 MSM aged 18 – 34 years (355 in Hong Kong and 448 in Taiwan) | - Number of sexting partners in the last 3 months - Subsections of the Sexting Behavior and Motives Questionnaire (Del Rey et al., 2021) to measure the frequency of receiving and sending sexts, and the frequency of sexting under pressure - 3-item-sensation-seeking subscale of the Impulsivity and Sensation Seeking Scale (Hardent & Tucker-Drob, 2011) - 3-item identity confusion subscale of the Lesbian and Gay Identity Scale (Mohr & Fassinger, 2000) to evaluate | The study found that in both regions: i) sexting was common among participants, ii) muscularity ideals predicted the number of sexting partners, and associated with sexting under pressure. |

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| | | | | | | | participants' gay identity - Control variables: age, relationship status, number of physical sexual activities, and social media use | |
| 23. (Lin & Moore, 2022) | The qualitative report | Explore how Chinese gay bear men negotiate the conflict between health issues and bear identity | China, Taiwan, Singapore, Hong Kong, Malaysia | Qualitative | Online | 11 Chinese gay bear men aged 21 - 40 | N/A | There were three strategies that Chinese bear gay men employed to address health risks relating to obesity while maintaining their bear bodies: eating a healthy diet and focusing on having a bear look (having a bear-style haircut, growing facial and body hair, wearing bear-style clothing, etc.); going to the gym and taking regular health checkups; and redefining the term of a bear gay man or their wish to maintain a bear identity. |
| 24. (Tie et al., 2023) | Journal of Homosexuality | Examine the relationship between gay dating app usage, body image disturbances and disordered eating, including both thinness-oriented and muscularity-oriented disordered eating among Chinese young gay men | China | Cross-sectional survey | Online | 247 Chinese young gay men, mean age: 21.92 ± 2.74 years | <ul style="list-style-type: none"> - two items to assess social media usage (Fardouly & Vartanian, 2015) - the Chinese version of the Eating Disorder Inventory-Body Dissatisfaction Subscale (EDI-BD; Garner et al., 1983; Lee et al., 1997)." - The 7-item Muscularity Body Image Subscale of the Chinese version of the Drive for Muscularity Scale (DMS-MBI) " - The Chinese version of the 5-item Body Image-Acceptance and Action Questionnaire (BI-AAQ-5) (Basarkod et al., 2018; He et al., 2021)" - The Chinese version of the 12-item self-reporting Eating Disorder Examination Questionnaire (EDE-QS) (Gideon et al., 2016; He et al., 2021) - The Chinese version of the muscularity-oriented eating test (MOET) (He et al., 2021; Murray et al., 2019). | Gay dating app usage was positively associated with body fat dissatisfaction and muscularity dissatisfaction, thinness and muscularity-oriented disordered eating. The relationship between gay dating app usage and thinness-oriented and muscularity-oriented disordered eating was mediated by body dissatisfaction and body image inflexibility. |
| 25. (Zhou, 2023) | Deviant Behavior | Explore the perception and utilisation of the "youzhi" (good- | China | Qualitative: digital ethnography and in-depth interviews | -Convenience-based snowball sampling | | | The Youzhi connotation, meaning good quality, included various physical attractiveness, cis-gender performance, monogamy, education attainment, and |

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| | | quality) connotation among Chinese users on Blued, a gay dating platform | | | <p>-Public advertising on both queer-oriented and generic social media</p> <p>-"Guanxi" (關係) (no further explanation provided on this strategy)</p> | | <p>cultural and economic capital. However, in the context of Blued – a gay dating app, youzhi mostly implied physical attractiveness, emphasising well-built gym bodies.</p> <p>Many participants perceived and experienced the discriminatory nature of youth; however, this connotation was still widely used on Blued as it enabled users to find the “right person,” promote their image and attract targeted persons who met their beauty standards.</p> |
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Declaration of interest

None

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work the first author used Grammarly in order to check grammar and typos. After using this tool/service, the author reviewed and edited the content as needed and take full responsibility for the content of the publication.

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