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Exploring the Roles of Socioeconomic Status, Discrimination, Personal Social Capital, and Psychological Distress Among Older Men Who Have Sex with Men in Hong Kong and Mainland China: A Cross-Sectional Study

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Keywords: Older men who have sex with men, Psychological distress, Discrimination, Minority stress, Socioeconomic status

Posted Date: November 9th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-11177265/v1

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Additional Declarations: No competing interests reported.

Title: Exploring the Roles of Socioeconomic Status, Discrimination, Personal Social Capital, and Psychological Distress Among Older Men Who Have Sex with Men in Hong Kong and Mainland China: A Cross-Sectional Study

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Abstract

Background: Older men who have sex with men (OMSM) remain understudied in Asian sexual minority health research. In Hong Kong and Mainland China, psychological distress among OMSM may be shaped by stigma, discrimination, and socioeconomic disadvantage within limited protective policy environments. This study examined the prevalence and determinants of psychological distress among OMSM in these two regions.

Methods: A cross-sectional online survey was conducted in 2024 among 302 OMSM aged ≥60 years, including 151 participants from Hong Kong and 151 from Mainland China. Participants were recruited through LGBT organizations, NGOs, and academic institutions using convenience, snowball, and targeted sampling. Data were analyzed using descriptive statistics, bivariate analyses, and hierarchical logistic regression to assess associations between psychological distress and socioeconomic status, personal social capital, and discrimination.

Results: Higher monthly income (>HK$18,700) was associated with increased psychological distress (OR = 2.82). Everyday discrimination emerged as the strongest predictor: each unit increase on the Everyday Discrimination Scale was associated with a 17% higher likelihood of distress (OR = 1.17), accounting for 35.9% of the explained variance. After adjusting for discrimination, education and personal social capital were no longer significant.

Conclusions: Discrimination is the primary determinant of psychological distress among OMSM, outweighing socioeconomic and social factors. Interventions addressing minority stress and discrimination are essential to improving mental health among aging sexual minority populations in diverse sociocultural contexts.

Public Significance Statement: This study shows that discrimination is the strongest contributor to psychological distress among older men who have sex with men in Hong Kong and Mainland China, outweighing socioeconomic and social factors. Reducing everyday discrimination and minority stress is essential to improving mental health and well-being among aging sexual minority populations.

Keywords: Older men who have sex with men, Psychological distress, Discrimination, Minority stress, Socioeconomic status

Background

Psychological distress among OMSM arises from the intersection of aging-related challenges and sexual minority stress. Recent cross-sectional studies demonstrate that perceived discrimination and limited social acceptance significantly predict poorer psychological well-being among older MSM, underscoring the cumulative impact of minority stress and social isolation in later life (Chan et al., 2024). Research among MSM more broadly also reports elevated distress linked to stigma, marginalization, and fatigue associated with sustained health prevention messaging, suggesting that intersecting stressors may disproportionately affect older cohorts (Klassen et al., 2019). Gerontological evidence further shows that social participation, living arrangements, and partnership status shape psychological distress in older adults, with patterns indicating that older MSM experience mental health risks distinct from those of heterosexual peers due to minority status and non-normative relationship trajectories (Viertiö et al., 2021; Gyasi et al., 2020). These findings highlight the need to address both age-related and sexual minority–specific stressors in mental health research and intervention design.

Socioeconomic Status and Life-Course Disadvantage

Socioeconomic status (SES) plays a critical role in shaping mental health trajectories among OMSM. Accumulated socioeconomic disadvantage across the life course contributes to psychological distress through prolonged exposure to stress, limited material resources, and restricted access to social and welfare supports (Cha et al., 2021; Emlet et al., 2013). For MSM, discrimination and stigma often exacerbate these disadvantages, increasing psychological distress and suicidal risk in later life, particularly when combined with age-related health concerns and HIV vulnerability (Chan et al., 2024; Chan et al., 2022). Structural exclusions from employment protections, spousal benefits, and family-based welfare systems further intensify economic insecurity and mental health disparities among older MSM (Sun et al., 2020; Chan et al., 2022). Cross-cultural studies confirm that SES disadvantage interacts with stigma and barriers to healthcare access, heightening risks of depression and anxiety among MSM populations (Santos et al., 2020; Pantalone et al., 2011). These patterns underscore the importance of examining SES as a structural and life-course determinant of psychological distress.

Discrimination and Minority Stress Processes

A robust body of literature establishes discrimination as a central driver of adverse mental health outcomes among sexual and gender minority populations. Cross-sectional and population-based studies consistently report substantially elevated odds of psychological distress and mental health disorders among individuals who experience discrimination based on sexual orientation, gender identity, and race, with adjusted odds ratios ranging from approximately 2.28 to 3.31 (Soriano-Moreno et al., 2022; Bostwick et al., 2014). Meta-analytic evidence supports minority stress models in which discrimination erodes psychosocial resources and contributes to poorer mental health outcomes (Williams et al., 2017). Research also links minority stress to increased risks of substance use and substance use disorders, although these associations vary by discrimination type and methodological approach (McCabe et al., 2010). Psychosocial mechanisms—including reduced social support, diminished self-esteem, concealment, internalized stigma, and anticipated discrimination mediate these effects and exacerbate psychological distress (Edwards & Sylaska, 2012; Williams et al., 2017). Additionally, studies associate discrimination with higher rates of dating and intimate partner violence among sexual minority individuals, further amplifying mental health risks (Rustagi et al., 2023).

The Role of Personal Social Capital

Personal social capital, defined by social networks, trust, and access to support, plays a complex role in shaping health and well-being among MSM. Prior research demonstrates that higher social capital often promotes health-protective behaviors, including engagement in HIV prevention, routine testing, and uptake of pre-exposure prophylaxis (PrEP) (Holloway et al., 2015; Schueler et al., 2019). However, social networks can also normalize or facilitate risk behaviors, indicating that social capital may exert both protective and adverse effects depending on contextual norms (Hermanstyne et al., 2018). Among OMSM, social capital may influence psychological well-being by enhancing emotional support, social integration, and coping capacity. Despite its theoretical relevance, empirical studies rarely examine how bonding and bridging social capital interact with discrimination and socioeconomic conditions to shape psychological distress in later life.

Conceptual Framework

This study is guided by minority stress theory and a social determinants of health perspective to conceptualize psychological distress among OMSM in Hong Kong and Mainland China. Minority stress theory posits that sexual minority individuals are exposed to chronic, socially produced stressors such as stigma, prejudice, and discrimination that operate in addition to general life stressors and contribute to adverse mental health outcomes across the life course. In later adulthood, these stressors may accumulate and intersect with age-related vulnerabilities, intensifying psychological distress among OMSM. Within this framework, everyday discrimination is conceptualized as a proximal minority stressor that directly increases psychological distress. SES operationalized through education, income, and economic activity, represents structural positioning that shapes exposure to discrimination, access to material resources, and opportunities for social participation, thereby influencing mental health both directly and indirectly.

Personal social capital, comprising bonding social capital (close, supportive ties) and bridging social capital (connections across broader and more diverse networks), is conceptualized as a psychosocial resource that may buffer the negative mental health effects of socioeconomic disadvantage and discrimination by enhancing emotional support, information access, and coping capacity. However, the framework also allows for the possibility that social capital may not fully offset the effects of pervasive discrimination in sociopolitical contexts with limited institutional protection for sexual minorities. Demographic characteristics including age, region of residence (Hong Kong versus Mainland China), living arrangements, and religious affiliation are treated as contextual factors shaping exposure to discrimination and access to social and economic resources. As illustrated in Figure 1, the conceptual framework posits that psychological distress is the primary outcome shaped by the combined and interacting effects of socioeconomic status, personal social capital, and everyday discrimination, with discrimination playing a central and potentially dominant role.

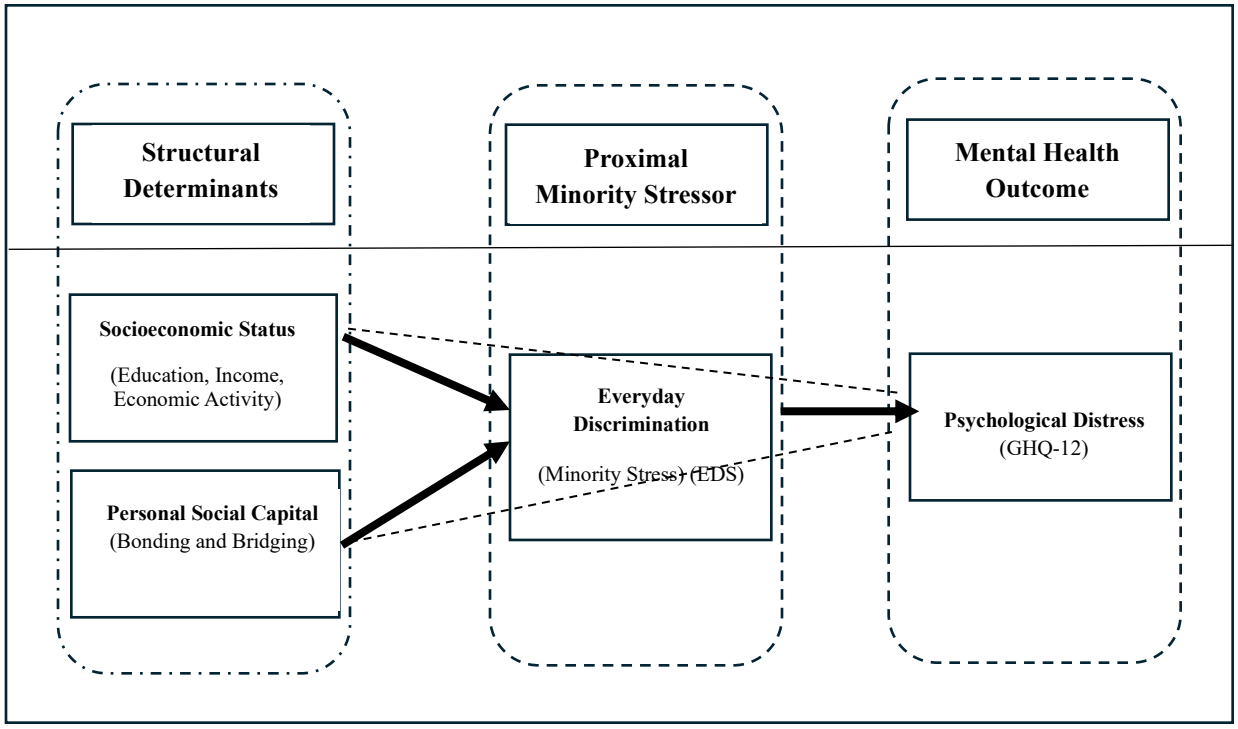


Figure 1. Conceptual Framework Linking Socioeconomic Status, Social Capital, Discrimination, and Psychological Distress Among Older Men Who Have Sex with Men

Aim and objectives

Although existing research highlights the importance of discrimination, socioeconomic status, and social resources for MSM mental health, several critical gaps remain. Most studies focus on younger populations or Western contexts, leaving OMSM in Asian settings underrepresented. Few investigations simultaneously assess socioeconomic status, personal social capital, and everyday discrimination to clarify their relative and combined effects on psychological distress. Moreover, limited research compares contexts such as Hong Kong and Mainland China, where sociopolitical environments and levels of institutional protection for sexual minorities differ substantially. The primary aim of this study was to examine the prevalence and determinants of psychological distress among OMSM in Hong Kong and Mainland China, with particular attention to the roles of socioeconomic status, personal social capital, and experiences of everyday discrimination.

The objectives of this study were to (a) estimate the prevalence of psychological distress among older men who have sex with men (OMSM) aged 60 years and older in Hong Kong and

Mainland China; (b) examine regional and socioeconomic differences in psychological distress, experiences of discrimination, and levels of personal social capital among OMSM; (c) assess the associations between socioeconomic status (education, income, and economic activity), personal social capital (bonding and bridging), and psychological distress; and (d) determine the extent to which everyday discrimination independently predicts psychological distress after accounting for demographic characteristics and personal social capital.

Research Questions

The study addressed the following research questions: (a) What is the prevalence of psychological distress among older men who have sex with men in Hong Kong and Mainland China, and how does it vary by region and socioeconomic characteristics? (b) To what extent do socioeconomic status, personal social capital, and experiences of everyday discrimination predict psychological distress among OMSM in Hong Kong and Mainland China?

Method

Study population

This cross-sectional study examined OMSM in Hong Kong and Mainland China, with 151 participants recruited from each region (N=302 total). Eligible participants had a history of male-to-male sexual intercourse, were aged 60 years or older, currently resided in one of the study regions, demonstrated Chinese language literacy, and held regional citizenship. The study excluded individuals who did not identify as male or who were unable to provide informed consent or complete interviews due to cognitive or functional impairments. Participation was entirely voluntary.

Recruitment occurred in 2024 through established partnerships with LGBT organizations, non-governmental organizations (NGOs), and academic institutions specializing in gender and sexuality studies. The research team employed a mixed sampling strategy incorporating convenience sampling through organizational referrals, snowball sampling via participant networks, and targeted outreach efforts. This multifaceted approach helped overcome population access barriers while maintaining demographic representation across both regions. Data were collected using anonymous, self-administered online questionnaires after obtaining informed

consent. Responses were submitted via a secure platform with numerical identifiers; no personally identifiable information was retained. Quality assurance measures included computerized validation checks, random telephone verification, and systematic data audits. The study received ethical approval from Hong Kong Polytechnic University (HSEARS 202101723001).

Study variables

Demographic characteristics

Participants reported demographic information including living region (Hong Kong and Mainland China), age groups (60-64, 65-69 and 70 or above), educational attainment (categorized by highest level completed), economic activity status (active and inactive), religious affiliation, monthly personal income (in HKD), and living arrangement (living alone and not).

Psychological distress

Psychological distress was assessed using the 12-item General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988). The measure evaluates distress through items addressing concentration difficulties, sleep disturbances, decision-making problems, and diminished happiness. Participants responded using a binary scoring method (0-1), yielding total scores ranging from 0 to 12, with higher scores indicating poorer psychological well-being. The Chinese version demonstrated satisfactory reliability ($\alpha = 0.75$; Hankins, 2008). Following established criteria (Comotti et al., 2023), scores >3 were classified as indicative of psychological distress.

Social capital

Social capital was measured using the 42-item Personal Social Capital Scale (PSCS; Chen et al., 2009). The instrument assesses two dimensions: bonding social capital (strong ties), referring to an individual's embeddedness within personal networks (e.g., family, friends, former colleagues), which indicates group cohesion by enhancing homogeneity and facilitating reciprocity and solidarity among members; and bridging social capital (weak ties), reflecting outward

connections across diverse social organizations that link actors between different networks. Participants responded using a 5-point Likert scale (1 = none or a few to 5 = all or a lot), with total scores ranging from 42 to 210. Higher scores indicate greater social capital, representing broader social networks and enhanced access to support/resources. The Chinese version demonstrated good reliability (α = 0.78-0.81; Chen et al., 2009).

Discrimination

Discrimination was evaluated using the 9-item Everyday Discrimination Scale (EDS; Williams et al., 1997). The measure captures experiences of disrespectful treatment, inferior service, negative assumptions, and harassment. Participants responded on a 6-point Likert scale (0 = never to 5 = almost every day), with total scores ranging from 0 to 45. Higher scores indicate greater discrimination exposure. The Chinese version demonstrated excellent reliability (α = 0.948; Wu et al., 2015).

Statistical analysis

Descriptive statistics were computed for all demographic characteristics and study variables, with categorical variables presented as frequencies (percentages). Psychological distress was dichotomized using the GHQ-12 cutoff score (>3), creating two groups: a distressed group (score >3) and a non-distressed group (score 0-3). Initial analyses included chi-square tests to examine demographic characteristics across distress status groups. For continuous measures (discrimination, bonding social capital, and bridging social capital), means and standard deviations were calculated and compared across demographic characteristics using independent t-tests or ANOVA as appropriate.

Hierarchical logistic regression analyses were conducted to identify predictors of psychological distress (GHQ-12 score >3). Three sequential models were specified: Model 1 included demographic variables only; Model 2 added personal social capital measures; and Model 3 further incorporated discrimination scores. All models were tested for multicollinearity, with variance inflation factors (VIF) below 5 indicating acceptable levels. The dataset contained no

missing values, and statistical significance was set at $p < .05$ for all analyses. All statistical procedures were performed using IBM SPSS version 27.0.

Results

Table 1 presents the sample characteristics stratified by psychological distress status. The analytic sample comprised 302 older men who have sex with men (OMSM), of whom 230 (76.2%) were classified as psychologically distressed (GHQ-12 score > 3) and 72 (23.8%) as non-distressed (GHQ-12 score 0–3). Significant regional differences were observed, with a higher proportion of distressed participants residing in Hong Kong (60.0%) compared with Mainland China (40.0%) ($p < .001$).

Socioeconomic characteristics differed significantly between the two groups. Participants in the distressed group were more likely to have attained a diploma or degree (16.5% vs. 4.2%) and less likely to have only primary-level education (19.6% vs. 36.1%) compared with their non-distressed counterparts ($p < .01$). Economic activity status also varied by distress status, with a greater proportion of economically active individuals in the distressed group than in the non-distressed group (71.7% vs. 56.9%; $p < .05$). Substantial income disparities were evident, as nearly one-third of distressed participants (30.0%) reported a monthly income exceeding HKD 18,700, compared with 9.7% among non-distressed participants ($p < .001$). Differences were also observed in living arrangements. Participants experiencing psychological distress were more likely to live alone than those without distress (53.9% vs. 38.9%; $p < .05$). In contrast, religious affiliation did not differ significantly between distressed and non-distressed participants.

Table 1 Demographic characteristics of study sample across distressed and non-distressed groups

Characteristics	**Total**	**GHQ-12**		χ^2
		Distressed (score >3)	**Non-distressed (score 0-3)**	
N (%)	302	230 (76.2%)	72 (23.8%)	
Living region				38.59***
Mainland China	151 (50.0%)	92 (40.0%)	59 (81.9%)	

Hong Kong	151 (50.0%)	138 (60.0%)	13 (18.1%)	
Age group				2.94
60-64	127 (42.1%)	102 (44.3%)	25 (34.7%)	
65-69	99 (32.8%)	75 (32.6%)	24 (33.3%)	
70+	76 (25.2%)	53 (23.0%)	23 (31.9%)	
Educational attainment				14.60**
Primary or below	71 (23.5%)	45 (19.6%)	26 (36.1%)	
Lower secondary	97 (32.1%)	71 (30.9%)	26 (36.1%)	
Upper secondary	93 (30.8%)	76 (33.0%)	17 (23.6%)	
Diploma/degree or above	41 (13.6%)	38 (16.5%)	3 (4.2%)	
Economic activity status				5.54*
Active	206 (68.2%)	165 (71.7%)	41 (56.9%)	
Inactive	96 (31.8%)	65 (28.3%)	31 (43.1%)	
Religion affiliation				2.76
With a religious belief	225 (74.5%)	166 (72.2%)	59 (81.9%)	
Without a religious belief	77 (25.5%)	64 (27.8%)	13 (18.1%)	
Monthly personal income				11.97***
$18,700 or below	226 (74.8%)	161 (70.0%)	65 (90.3%)	
Above $18,700	76 (25.2%)	69 (30.0%)	7 (9.7%)	
Living alone				4.95*
Living alone	152 (50.3%)	124 (53.9%)	28 (38.9%)	
Not living alone	150 (49.7%)	106 (46.1%)	44 (61.1%)	

* $p < .05$; ** $p < .01$; *** $p < .001$

As shown in Table 2, scores on the Everyday Discrimination Scale (EDS) varied significantly across demographic and socioeconomic characteristics. Participants residing in Hong Kong reported substantially higher levels of everyday discrimination (M = 31.2, SD = 8.2) than those residing in Mainland China (M = 20.6, SD = 4.9), a difference that was statistically significant ($p < .001$). Educational attainment was positively associated with perceived discrimination, with participants holding a diploma or degree reporting the highest EDS scores (M = 30.0, SD = 8.6), compared with those with primary-level education (M = 22.8, SD = 7.2; $p < .001$). Income-related disparities were also evident, as participants with higher monthly incomes (> HKD 18,700) reported greater levels of discrimination (M = 29.2, SD = 9.0) than lower-income participants (M = 24.8, SD = 8.1; $p < .001$). Living arrangement further differentiated EDS scores, with participants living alone reporting significantly higher discrimination (M = 28.5, SD = 9.0) than those living with others (M = 23.3, SD = 7.3; $p < .001$).

Bonding and bridging social capital also demonstrated significant regional and socioeconomic variation (Table 2). Participants from Mainland China reported lower levels of bonding social capital (M = 14.3, SD = 2.3) than participants from Hong Kong (M = 15.7, SD = 1.4; $p < .001$), whereas they reported higher levels of bridging social capital (M = 18.1, SD = 2.1 vs. M = 17.5, SD = 2.4; $p < .05$). Socioeconomic gradients were observed for bonding social capital, with higher-income participants reporting stronger bonding capital (M = 15.5, SD = 1.8) than lower-income participants (M = 14.8, SD = 2.1; $p < .05$). Participants living alone also reported slightly higher bonding social capital than those not living alone (M = 15.3, SD = 2.0 vs. M = 14.7, SD = 2.0; $p < .05$). No other demographic characteristics were significantly associated with bonding or bridging social capital.

Table 2 Mean scores for Discrimination (EDS) and Personal Social Capital (PSC) by demographic characteristics

Characteristics	**EDS**	**Personal Social Capital**	
		Bonding	**Bridging**
	M (SD)	M (SD)	M (SD)
Total (*N* = 453)	25.9 (8.6)	15.0 (2.0)	17.8 (2.3)

Living region			
Mainland China	20.6 (4.9)	14.3 (2.3)	18.1 (2.1)
Hong Kong	31.2 (8.2)	15.7 (1.4)	17.5 (2.4)
p-value	*<.001*	*<.001*	*.02*
Age group			
60-64	26.1 (8.7)	15.1 (2.0)	17.6 (2.3)
65-69	27.1 (8.6)	14.9 (1.9)	18.0 (2.4)
70+	24.1 (8.1)	15.0 (2.2)	17.9 (2.1)
p-value	*.07*	*.83*	*.36*
Educational attainment			
Primary or below	22.8 (7.2)	14.8 (2.5)	17.7 (2.5)
Lower secondary	25.5 (8.6)	15.0 (2.0)	17.7 (2.4)
Upper secondary	26.9 (8.7)	14.9 (1.8)	18.0 (2.2)
Diploma/degree or above	30.0 (8.6)	15.6 (1.4)	17.8 (2.2)
p-value	*<.001*	*.20*	*.82*
Economic activity status			
Active	26.5 (8.7)	15.0 (2.0)	17.8 (2.4)
Inactive	24.6 (8.2)	15.0 (2.1)	17.8 (2.1)
p-value	*.06*	*.77*	*.76*
Religion affiliation			
With a religious belief	25.8 (8.7)	15.0 (2.0)	17.7 (2.4)
Without a religious belief	26.2 (8.2)	14.9 (2.1)	18.0 (2.1)
p-value	*.74*	*.67*	*.28*
Monthly personal income			
$18,700 or below	24.8 (8.1)	14.8 (2.1)	17.9 (2.2)
Above $18,700	29.2 (9.0)	15.5 (1.8)	17.3 (2.6)
p-value	*<.001*	*.02*	*.08*
Living alone			
Living alone	28.5 (9.0)	15.3 (2.0)	17.6 (2.3)

Not living alone	23.3 (7.3)	14.7 (2.0)	18.0 (2.3)
p-value	*<.001*	*.01*	*.09*

Note. M = Mean, *SD* = Standard Deviation

Table 3 presents the results of the hierarchical logistic regression analyses examining factors associated with psychological distress. The baseline demographic model (Model 1) explained 14.4% of the variance in psychological distress. Educational attainment and income emerged as significant predictors. Participants holding a diploma or degree had significantly higher odds of psychological distress compared with those with primary-level education (OR = 5.23, 95% CI [1.41, 19.38], $p < .05$). Likewise, participants with a monthly income exceeding HKD 18,700 were more likely to report psychological distress than lower-income participants (OR = 2.82, 95% CI [1.17, 6.80], $p < .05$). Age, economic activity status, religious affiliation, and living arrangements were not significantly associated with psychological distress in this model.

Model 2 added measures of personal social capital and increased the explained variance to 17.7%. Bonding social capital was positively associated with psychological distress, such that each one-unit increase in bonding social capital was associated with a 22% increase in the odds of distress (OR = 1.22, 95% CI [1.06, 1.41], $p < .01$). Bridging social capital was not significantly associated with psychological distress. After inclusion of social capital, the associations for educational attainment and income remained statistically significant but were attenuated in magnitude (diploma or degree: OR = 4.71, $p < .05$; income > HKD 18,700: OR = 2.69, $p < .05$).

The fully adjusted model (Model 3), which incorporated everyday discrimination, demonstrated a substantial improvement in explanatory power, accounting for 35.9% of the variance in psychological distress and exhibiting good overall model fit ($F = 82.48$, $p < .001$). Everyday discrimination emerged as the strongest predictor of psychological distress, with each unit increase in discrimination associated with a 17% increase in the odds of distress (OR = 1.17, 95% CI [1.11, 1.24], $p < .001$). Following the inclusion of discrimination, bonding social capital was no longer statistically significant, suggesting that its association with psychological distress was largely explained by discriminatory experiences. The income effect remained significant

(OR = 2.82, p < .05), whereas the association between educational attainment and psychological distress was no longer statistically significant.

Table 3 Hierarchical logistic regression analyses predicting psychological distress

	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
Demographics			
Age			
60-64	0.73 (0.24, 2.27)	0.73 (0.23, 2.30)	0.54 (0.14, 2.05)
65-69	0.70 (0.26, 1.90)	0.72 (0.26, 1.96)	0.46 (0.14, 1.52)
70+ (Ref)	1.00	1.00	1.00
Educational attainment			
Diploma/degree or above	5.23* (1.41, 19.38)	4.71* (1.26, 17.68)	3.56 (0.84, 15.07)
Upper secondary	2.11 (0.99, 4.49)	2.10 (0.98, 4.53)	1.62 (0.72, 3.66)
Lower secondary	1.28 (0.64, 2.56)	1.26 (0.62, 2.55)	1.05 (0.49, 2.26)
Primary or below (Ref)	1.00	1.00	1.00
Economically active			
Active	1.81 (0.69, 4.79)	1.85 (0.70, 4.90)	2.37 (0.73, 7.68)
Inactive (Ref)	1.00	1.00	1.00
Religious belief			
With a religious relief	1.42 (0.70, 2.87)	1.49 (0.72, 3.05)	1.52 (0.71, 3.27)
Without a religious relief (Ref)	1.00	1.00	1.00
Income (<=$18,700)			
>$18,700)	2.82* (1.17, 6.80)	2.69* (1.10, 6.54)	2.82* (1.06, 7.50)

<=$18,700) (Ref)	1.00	1.00	1.00
Living alone			
Living alone	1.41 (0.79, 2.53)	1.33 (0.74, 2.42)	0.94 (0.49, 1.82)
Not living alone (Ref)	1.00	1.00	1.00
Personal social capital			
Bonding social capital		1.22** (1.06, 1.41)	1.05 (0.90, 1.22)
Bridging social capital		1.04 (0.92, 1.19)	1.02 (0.89, 1.18)
Discrimination			
EDS			1.17*** (1.11, 1.24)
Nagelkerke R^2	14.4%	17.7%	35.9%
Goodness of Fit (F-test)	30.42***	37.99***	82.48***

Note. *OR = odds ratio; CI = confidence interval; EDS = Everyday Discrimination Scale; GHQ-12 = General Health Questionnaire-12. The dependent variable was coded as 1 (distressed, GHQ-12 score >3) vs. 0 (non-distressed, score 0–3).*

* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

Psychological Distress as a Normative Experience Among OMSM

The prevalence of psychological distress observed in this study (76.2%) suggests that distress may be a normative rather than exceptional experience among older men who have sex with men (OMSM) in both Hong Kong and Mainland China. This rate far exceeds estimates reported for older adults in the general population and is consistent with prior studies documenting persistent mental health disparities among aging sexual minority populations (Fredriksen-Goldsen et al., 2017). Rather than reflecting individual vulnerability or maladaptation, these findings point to the cumulative and enduring effects of minority stress across the life course. OMSM in these contexts have lived through periods of intense social stigma, legal marginalization, and limited institutional protection, suggesting that psychological distress may be a structurally produced outcome rather than a transient mental health condition (Meyer, 2003; Frost & Meyer, 2023).

Regional Context, Visibility, and the Paradox of Progress

The finding that OMSM in Hong Kong reported higher levels of psychological distress and everyday discrimination than those in Mainland China challenges simplistic assumptions that more progressive legal or social environments necessarily translate into better mental health outcomes. Increased visibility in relatively liberal urban contexts may expose OMSM to more frequent interpersonal scrutiny, workplace discrimination, and social comparison, particularly in competitive and densely populated settings. In contrast, OMSM in Mainland China may adopt concealment strategies that reduce exposure to overt discrimination while potentially intensifying internalized stigma and social isolation (Chan & Yan, 2023). This paradox raises critical questions about the mental health costs of visibility in societies where legal recognition advances faster than cultural acceptance, and suggests that partial progress may create new forms of vulnerability rather than uniformly reducing minority stress.

Socioeconomic Advantage as a Source of Minority Stress

One of the most controversial findings of this study is the positive association between higher socioeconomic status and psychological distress. Contrary to dominant public health models that frame education and income as inherently protective, higher-SES OMSM exhibited greater odds of distress, even after adjusting for multiple covariates. This pattern aligns with emerging evidence that socioeconomic advantage does not uniformly buffer mental health risks among marginalized populations and may, in some contexts, intensify exposure to discrimination (Assari & Caldwell, 2017; Khalatbari-Soltani et al., 2020). For OMSM, higher education and income may increase participation in heteronormative professional and social spaces where expectations of conformity are heightened and tolerance for sexual diversity remains limited. These findings challenge deficit-based explanations of mental health disparities and call for a reconceptualization of SES as a conditional resource whose benefits are constrained by structural stigma (Meyer, 2003).

Rethinking Social Capital: When Social Ties Fail to Protect

The role of personal social capital in this study further complicates conventional resilience narratives. Bonding social capital was initially associated with increased psychological distress, and this association disappeared once everyday discrimination was included in the model. Rather than functioning as a protective buffer, close social ties may embed OMSM within networks where shared experiences of stigma and marginalization are normalized and continuously reinforced (Cyrus, 2017). This finding challenges the assumption that stronger social connections are inherently beneficial and suggests that the mental health impact of social capital depends critically on the quality, context, and structural positioning of those relationships (Kim et al., 2020). The absence of a protective effect for bridging social capital further underscores the limits of individual-level social resources in environments where discrimination remains pervasive.

Everyday Discrimination as the Central Mechanism of Distress

Across all models, everyday discrimination emerged as the most robust predictor of psychological distress, overshadowing demographic characteristics, socioeconomic indicators, and social capital. This finding provides strong empirical support for minority stress theory and reinforces the argument that systemic stigma, rather than individual deficits, is the primary driver of mental health disparities among OMSM (Meyer, 2003; Fields et al., 2013). The cumulative nature of everyday discrimination—often subtle, chronic, and normalized—may be particularly damaging for older adults, compounding ageism with sexual minority stress and contributing to sustained psychological burden over time (Denney et al., 2023; Chan & Yan, 2023). These results suggest that interventions focused solely on enhancing coping skills or social support are insufficient without parallel efforts to address structural and institutional sources of discrimination.

Future Implications

The findings of this study underscore an urgent need for age-appropriate and culturally responsive mental health interventions targeting OMSM. The exceptionally high prevalence of psychological distress observed in this population, together with the robust effects of everyday discrimination, socioeconomic factors, and regional context, highlights the inadequacy of one-size-fits-all mental health strategies. Public health responses should prioritize structural

interventions that address the root causes of distress, including the implementation and enforcement of policies that protect older sexual minorities from discrimination within healthcare, social services, and community settings. In parallel, targeted training for healthcare and social service providers is essential to improve cultural competence, reduce stigma in service delivery, and enhance early identification of psychological distress among OMSM.

The observed regional differences further suggest that interventions should be context-specific rather than uniform across settings. In Hong Kong, where OMSM reported higher levels of distress and discrimination, intervention efforts may need to focus on mitigating urban-related stressors such as social isolation, competitive social environments, and limited age-inclusive LGBTQ-affirming spaces. In Mainland China, where concealment of sexual identity may be more prevalent, programs that address the long-term psychological consequences of identity suppression and promote safe, confidential access to mental health support may be particularly beneficial. Across both contexts, community-based initiatives including OMSM-specific senior support groups, peer-led programs, and digitally mediated social networks for individuals with limited mobility have the potential to reduce isolation and foster supportive connections. However, such initiatives are likely to be most effective when embedded within broader structural efforts to reduce discrimination and promote social inclusion throughout the life course.

Future research should address these limitations through longitudinal designs that allow for the examination of causal pathways and temporal dynamics linking discrimination, social capital, and psychological distress across later life. Mixed-methods approaches, particularly qualitative studies, could provide deeper insight into the lived experiences of OMSM, elucidating how socioeconomic position, identity concealment, and social relationships shape mental health in different regional and cultural contexts. Further research should also prioritize the development and validation of culturally sensitive, age-appropriate measures of minority stress and social capital, as well as efforts to reach more marginalized and less visible subgroups of OMSM. Such advances are essential to inform more effective, equity-oriented mental health interventions and policies for aging sexual minority populations.

Limitations

Several limitations should be considered when interpreting the findings of this study. First, although the sample size of approximately 300 OMSM is substantial for a hard-to-reach population, the cross-sectional design precludes causal inference regarding the relationships among socioeconomic status, personal social capital, everyday discrimination, and psychological distress. Consequently, temporal ordering cannot be established, and reverse or bidirectional relationships particularly between discrimination and mental health cannot be ruled out. Second, all measures relied on self-reported data, which may be subject to recall bias and social desirability bias, especially in sociocultural contexts where same-sex behavior and psychological distress remain highly stigmatized. Third, psychological distress was assessed using the GHQ-12, a well-validated screening instrument that captures general distress rather than specific clinical diagnoses; this may have contributed to an overestimation of distress prevalence among individuals exposed to chronic minority stress.

Additional limitations relate to measurement and sampling. Although the Everyday Discrimination Scale and social capital measures demonstrated meaningful variation, they may not fully capture culturally specific, age-related, or structurally embedded forms of stigma and social support experienced by OMSM in Hong Kong and Mainland China. The use of non-probability sampling methods, including recruitment through non-governmental organizations and snowball sampling, further limits the generalizability of the findings, as OMSM who are more socially isolated, less connected to community organizations, or more likely to conceal their sexual identity may be underrepresented. Finally, the analyses did not account for several potentially important confounders, such as lifetime exposure to structural discrimination, internalized stigma, or access to LGBTQ-affirming healthcare, which may have influenced both exposure to discrimination and mental health outcomes.

Conclusion

This study advances understanding of psychological distress among OMSM in Hong Kong and Mainland China by examining the intersecting roles of socioeconomic status, everyday discrimination, and personal social capital within a minority stress framework. The findings reveal an alarmingly high prevalence of psychological distress, indicating that mental health

challenges are widespread and persistent among OMSM in later life. Everyday discrimination emerged as the strongest and most consistent predictor of distress across regional contexts, underscoring the central role of structural stigma in shaping mental health outcomes beyond individual characteristics or resources. Contrary to conventional assumptions, higher socioeconomic status and stronger bonding social capital did not function as protective factors and were, in some cases, associated with greater distress, suggesting that socioeconomic advantage and social connectedness may increase exposure to minority stress in heteronormative social and professional environments. Regional differences between Hong Kong and Mainland China further highlight how sociocultural and policy contexts influence the manifestation of minority stress without eliminating its detrimental effects. Together, these findings emphasize the need to move beyond individual-level mental health approaches toward comprehensive strategies that address discrimination and structural inequalities, including inclusive healthcare policies, anti-discrimination protections, and age-affirming community support. By illuminating the complex and often paradoxical relationships among socioeconomic status, social capital, and minority stress, this study provides a critical foundation for future research and intervention efforts aimed at reducing mental health disparities among aging sexual minority populations in Greater China.

Declarations

Funding Declaration: No funding.

Clinical Trial Number: Not applicable.

Consent to Publish Declaration: Not applicable.

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki, all study participants have been given written information about the study and about the opportunity to decline to participate in the survey and with this informed consent has been obtained. The survey design and online questionnaire were examined and approved by the ethics committee of the Hong Kong Polytechnic University (HSEARS 202101723001). All methods were performed in accordance with the relevant guidelines and regulations from the Hong Kong Polytechnic University, FHSS Human Subjects Ethics Sub-Committee.

Competing interests: The authors declare no competing interests.
Data availability: All data generated or analysed during this study are included in this published article.

Human Ethics and Consent to Participate declarations: not applicable

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