Sexuality Research and Social Policy
https://doi.org/10.1007/s13178-021-00669-5

Experiences, Motivations, and Impacts of Sexual Orientation Change Efforts: Effects on Sexual Identity Distress and Mental Health Among Sexual Minorities

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Accepted: 12 November 2021

Abstract

Introduction While accumulating evidence shows that sexual orientation change efforts (SOCE) are harmful and ineffective, SOCE is still highly prevalent in some regions where homosexuality is heavily stigmatized. This study investigated the experiences, motivations, and impacts of SOCE among sexual minorities in Hong Kong and examined the mediating role of sexual identity distress in the relationship between SOCE and mental health.

Methods A total of 219 sexual minority individuals completed a questionnaire on SOCE in 2020–2021. They were asked to report their experiences, motivations, perceived effectiveness, benefits, and harms of SOCE. They were also assessed on sexual identity distress, depressive and anxiety symptoms, and suicidality.

Results Religious beliefs and interpersonal concerns were the primary motivations for SOCE. Participants who had experienced SOCE showed significantly higher levels of internalized homonegativity, identity uncertainty, and difficult process than their counterparts who had not experienced SOCE. They were also at a greater risk of developing depressive symptoms and suicidal ideation. Such discrepancy in mental health could be explained by heightened levels of sexual identity distress experienced by individuals who had experienced SOCE.

Conclusions This study was the first to characterize the experiences and impacts of SOCE in Hong Kong and provided empirical evidence for the role of sexual identity distress as a key mechanism mediating the relationship between SOCE and mental health.

Policy Implications The study concludes with recommendations for legislation, psychological interventions, and public education in Hong Kong to reduce the prevalence and negative impacts of SOCE.

Keywords Sexual orientation change efforts · Sexual identity distress · Depressive symptoms · Anxiety symptoms · Suicidal ideation

Introduction

Sexual orientation change efforts (SOCE) are practices that aim to manage, suppress, or eliminate same-sex attraction, as well as foster other-sex attraction (American Psychological Association, 2009). While common forms of SOCE include psychotherapeutic techniques, medical interventions, and religious approaches, specific variants of SOCE are wide-ranging, such as conversion therapy, reparative therapy, aversion therapy, medication, pastoral counseling, and personal righteousness (Dehlin et al., 2015). Although SOCE have been widely discredited by professional organizations (e.g., the American Medical Association, the American Psychological Association) (Fish & Russell, 2020), recent studies estimated that there were still around 7% of sexual minorities that experienced SOCE in the USA (Higbee et al., 2020; Mallory et al., 2019). However, the prevalence of SOCE may be higher in other regions where homosexuality is seen as abnormal, as another study indicated that around 20% of sexual minorities in Colombia had undergone SOCE (Del Río-González et al., 2021).

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Published online: 08 January 2022

Prior research has examined the motivations for undergoing SOCE (Dehlin et al., 2015), and distinguished between self-initiated (Beckstead & Morrow, 2004) and other-initiated SOCE (Ryan et al., 2020; Shidlo & Schroeder, 2002). These studies suggested that lesbian, gay, and bisexual (LGB) individuals with stronger religious beliefs, higher internalized homonegativity, and less familial support were more likely to undergo SOCE (Maccio, 2010; Tozer & Hayes, 2004). Qualitative reports also indicated that desire for social acceptance, sexual minority stigma, and desire to keep one's heterosexual marriage or family intact serve as motivations for SOCE (Flentje et al., 2014; Weiss et al., 2010).

Perceived and Actual Impacts of SOCE

Existing research has investigated the perceived benefits and harms associated with SOCE (Flentje et al., 2014). Some studies have reported that LGB individuals who had undergone SOCE perceived various benefits of SOCE, including acceptance of same-sex attraction, feelings of hope and relief, increased religious feelings, sense of personal success from managing sexuality, and improved social relationships (Beckstead & Morrow, 2004; Dehlin et al., 2015; Shidlo & Schroeder, 2002).

Nevertheless, a substantial body of literature has provided empirical evidence for the low efficacy of SOCE (American Psychological Association, 2000; Bradshaw et al., 2015; Maccio, 2010). A recent systematic review by Przeworski and colleagues (2021) clearly showed that SOCE are not efficacious in altering sexual orientation. Moreover, previous studies reported numerous harms of SOCE perceived by LGB individuals, such as feelings of shame, internalized homonegativity, sexual dysfunction, and impaired interpersonal relationships (Beckstead & Morrow, 2004; Jacobsen & Wright, 2014; Shidlo & Schroeder, 2002). A study of 1612 sexual minority individuals who are current or former members of the Church of Jesus Christ of Latter-day Saints (LDS) found that most participants indicated little to no sexual orientation change after undergoing SOCE but reported considerable harms, including lower self-esteem, wasting of time and money, and worsening of family relationships (Dehlin et al., 2015). Recent research has also highlighted the deleterious impacts of SOCE on mental health, indicating that SOCE was associated with heightened levels of depressive symptoms (Lee et al., 2021; Meanley et al., 2020a; Ryan et al., 2020), loneliness and drug use (Ryan et al., 2020; Salway et al., 2020), and suicidality (Blosnich et al., 2020; Green et al., 2020; Jones et al., 2021; Lee et al., 2021).

SOCE and Sexual Identity Development

The process of sexual identity development among sexual minority individuals can be conceptually understood through McCarn and Fassinger's (1996) model of gay and lesbian identity development. The model posits that sexual identity development consists of two distinct, reciprocal processes, i.e., individual sexual identity development and group membership identity development. The development process can be divided into four sequential phases: awareness, exploration, deepening/commitment, and internalization/synthesis (Fassinger & Miller, 1996). Altogether, these four phases map the developmental trajectory of sexual identity, culminating in the adaptive, positive integration of sexual identity into one's overall identity (McCarn & Fassinger, 1996).

Prior studies have provided initial evidence for the adverse influence of SOCE on sexual identity development, suggesting that SOCE may interfere with the adaptive integration theorized by McCarn and Fassinger (1996) and cause sexual identity distress to LGB individuals (Dehlin et al., 2015). Sexual identity distress refers to an emotional state where people experience negative feelings such as shame, guilt, worry, self-loathing, and denial that arise from their sexual identity (Herek, 2004; Wright & Perry, 2006). Internalized homonegativity (i.e., negative perception of one's sexual identity as a result of internalizing society's prejudicial views about nonheterosexuality), identity uncertainty (i.e., sense of confusion, doubt, and uncertainty about one's sexual identity), and difficult process (i.e., feelings of difficulty with the sexual identity development process) are common manifestations of sexual identity distress (Mohr & Kendra, 2011). It is plausible that sexual minority individuals who have undergone SOCE may internalize negative beliefs about homosexuality, experience uncertainty about their sexual orientation identity, and perceive their sexual identity development process as difficult (Dehlin et al., 2015). Among religious sexual minorities, previous studies found that SOCE was associated with increased conflict between religious and sexual identities (Beckstead & Morrow, 2004) and higher levels of sexual identity distress (Dehlin et al., 2015). Other studies also reported that SOCE contributed to internalized homophobia (Meanley et al., 2020a) and negative, distorted perceptions of same-sex orientation (Shidlo & Schroeder, 2002). In a qualitative study of gay men and lesbians who went through SOCE, Fjelstrom (2013) noted that SOCE often involve suppression and denial of important parts of oneself and indicated identity foreclosure as the possible outcome of identity confusion and incongruity resulting from SOCE.

It is important to note that the existing studies that have examined the effects of SOCE on sexual identity development and mental health have several methodological and sampling limitations. First, the majority of research conducted thus far has been qualitative in nature, limiting our understanding of how SOCE may interrupt sexual identity development (Beckstead & Morrow, 2004; Fjelstrom, 2013; Flentje et al., 2014; Shidlo & Schroeder, 2002). Second, samples used in previous studies have been predominantly

religious (Beckstead & Morrow, 2004; Dehlin et al., 2015; Jacobsen & Wright, 2014). The use of such samples may restrict the generalizability of the findings to nonreligious sexual minorities who have undergone SOCE. Third, most of the available studies on the effects of SOCE have investigated the experiences of white LGB individuals in North American contexts (Dehlin et al., 2015; Green et al., 2020; Meanley et al., 2020b; Ryan et al., 2020; Salway et al., 2020). Results from such studies may have limited relevance and generalizability to culturally and racially diverse sexual minority populations. For instance, LGB individuals in Hong Kong are influenced by contextually specific cultural and religious factors. The interplay of Confucian and Christian values not only contributes to intolerant attitudes and systemic prejudice against sexual minorities but also shapes their experiences of SOCE (Chan, 2021; Kwok & Wu, 2015; Suen et al., 2016). However, due to the limitations in sample demographics of prior studies, little is known about SOCE in Hong Kong and other non-Western contexts.

In addition to these highlighted methodological and sampling limitations, it is also noteworthy that no studies to date have examined the specific pathways underlying the relationship between SOCE and mental health. Although previous research has demonstrated the harmful effects of SOCE on sexual identity development (Dehlin et al., 2015; Gibbs & Goldbach, 2015; Santos & VanDaalen, 2016), no empirical attention has been paid to the potential mediating role of sexual identity distress in the relationship between SOCE and mental health. It is essential to understand the mechanism underlying the impacts of SOCE, so that appropriate actions and interventions can be taken to remedy the psychological harms caused by SOCE.

Context and Aims of the Present Study

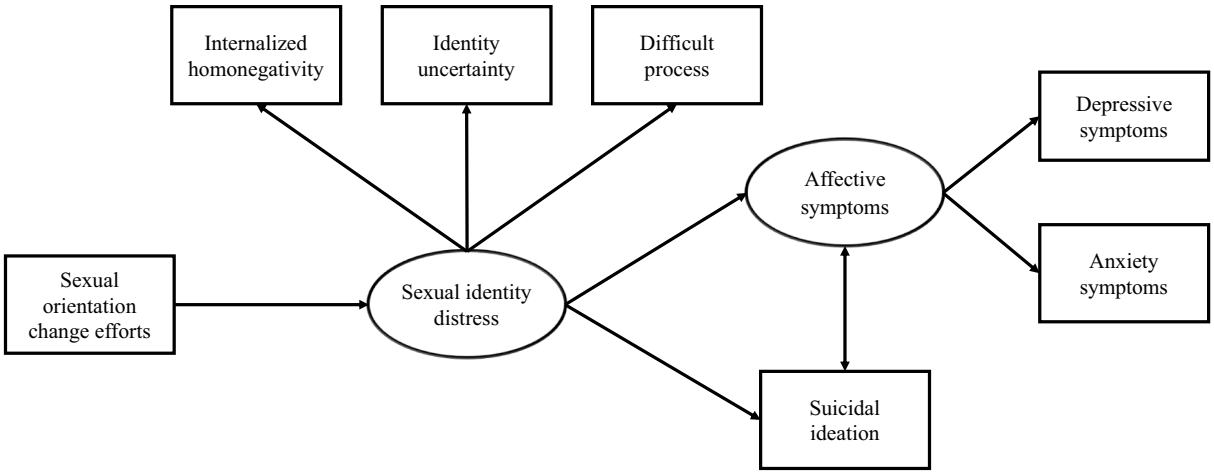
To our knowledge, this was the first empirical study investigating the experiences, motivations, and impacts of SOCE in Hong Kong. Although homosexuality has been decriminalized for 3 decades, sexual orientation conversion therapy is still not legally prohibited in Hong Kong. The continuing use of SOCE can be attributed to the intersection of traditional cultural values and Christianity's influence in Hong Kong, resulting in the pathologization and stigmatization of sexual minorities (Ho & Hu, 2016; Kwok & Wu, 2015). The Hong Kong College of Psychiatrists (2011) has clearly indicated that "homosexuality is not a psychiatric disorder.… There is, at present, no sound scientific and clinical evidence supporting the benefits of attempts to alter sexual orientation." The Hong Kong Psychological Society (2012) has also declared that "homosexuality and bisexuality are not mental illnesses.… efforts to change sexual orientation are not proven to be effective or harmless." Despite professional organizations recommending against SOCE, there continue to be reports of SOCE being discreetly offered by conservative Christian groups and other organizations in the form of religious practices, pastoral counseling, and conversion therapy (Ho & Hu, 2016). The government has also been criticized for funding Christian groups such as the New Creation Association and the Post Gay Alliance to provide SOCE training to social workers in the public sector (Bishop, 2019). Due to the pervasive stigma against homosexuality and the lack of professional training on sexual diversity, teachers, school counselors, and social workers still refer young people to organizations offering SOCE or even practice SOCE themselves (Kwok, 2012; Suen et al., 2016).

The present study aimed to (1) investigate the experiences and motivations of undergoing SOCE among sexual minority individuals in Hong Kong, (2) examine the perceived effectiveness, benefits, and harms associated with SOCE, and (3) determine the effects of SOCE on sexual identity distress and mental health. Grounded in McCarn and Fassinger's (1996) model of gay and lesbian identity development, we put forth three hypotheses. First, we hypothesized that sexual minority individuals who had undergone SOCE would show higher levels of internalized homonegativity, identity uncertainty, and difficult process than those who had not undergone SOCE (hypothesis 1). Second, we hypothesized that such individuals who had experienced SOCE would also show higher levels of depressive symptoms, anxiety symptoms, and suicidal ideation than their counterparts (hypothesis 2). Third, we hypothesized that the associations between SOCE and mental health would be mediated by sexual identity distress (i.e., internalized homonegativity, identity uncertainty, and difficult processes) (hypothesis 3), as shown in Fig. 1.

Methods

Sampling and Procedures

The present study investigated the experiences, motivations, and impacts of SOCE among sexual minorities in Hong Kong. The inclusion criteria were individuals who (1) were 16 years of age or above, (2) identified or had identified as lesbian, gay, bisexual, or otherwise not heterosexual, and (3) lived in Hong Kong. The study was approved by the research ethics committee of the corresponding author's institution before data collection. Participant recruitment messages were disseminated through lesbian, gay, bisexual, and transgender (LGBT) social media and community organizations. Sexual minority individuals who were eligible for the study and expressed interest in the study were directed to a secure online survey hosted by Qualtrics. They were presented with the background and purposes of the study and were then required to provide informed



Note. The direct effects of sexual orientation change efforts on affective symptoms and suicidal ideation were estimated but omitted in the figure for simplicity.

Fig. 1 Hypothesized model of the impact of sexual orientation change efforts on mental health

consent prior to study enrollment. Study participation was on a voluntary basis, and participants could withdraw from the study at any time. The anonymity and confidentiality of the participants were assured. It took approximately 15 min to complete the questionnaire. Participants with valid responses were invited to enter a lucky draw for a HK$100 (US$12.80) gift coupon as compensation for their time spent in the survey. Among 259 participants who met the inclusion criteria and provided informed consent, 29 did not complete the questionnaire, resulting in 230 completed responses. Of those who completed the study, 11 were considered invalid responses (e.g., duplicate responses, lack of variability in responses, and not completing the response within a reasonable time) and excluded from all analyses, yielding a final sample of 219 participants.

A total of 219 sexual minority individuals were included in the study. About 77.6% were male and 22.4% were female. They had a mean age of 29.74 years (SD = 8.37; range = 17–63). Most identified as lesbian or gay (72.6%), followed by bisexual or pansexual (21.0%), and questioning, queer, asexual, or other (6.4%). Around 65.3% of the participants did not have religious beliefs, whereas 34.7% had religious beliefs. Around half of them were single (51.1%) and another half were in a relationship (48.9%). About 63.9% reported community college or university as their highest level of education, followed by secondary school or below (19.2%) and master's degree or above (16.9%). The majority of the participants were in employment (73.5%), 17.4% were students, and 9.1% were not in employment. While 57.1% of them had a monthly income of HK$20,000 (US$2560) or below, followed by HK$20,001–HK$40,000 (US$2561–US$5120) (33.8%), and HK$40,001 (US$5120) or above (9.1%). Table 1 describes the demographic characteristics of the analyzed sample as a whole and by experiences of SOCE.

Measures

Sexual Orientation Change Efforts

Questions were developed to understand the experiences, motivations, and impacts of SOCE (Flentje et al., 2014). Participants were first asked whether they had ever been involved in self-initiated and/or other-initiated SOCE. For those who had been engaged in other-initiated SOCE, they were asked by whom they were advised to seek SOCE (e.g., "family members," "relatives," "religious leader"). Participants who had experienced SOCE were asked about the age and duration of undergoing SOCE. They were also required to indicate the reasons for having SOCE from a list of 18 possible options (e.g., "religiosity," "acceptance/less rejection by religious community," "homosexuality is evil"). In addition, they were asked to indicate the methods of SOCE that they had involved in themselves and/or had been advised by others (e.g., "participate in sexual orientation change course," "seek medication," "seek psychological counseling"). Participants who had been engaged in SOCE were asked to assess the effectiveness of SOCE on changing their sexual orientation on a 5-point Likert scale from 1 (not effective at all) to 5 (very effective), with higher scores indicating greater perceived effectiveness of SOCE. They were also asked whether having SOCE has caused any changes in their sexual orientation and indicated the reasons for not having actual sexual orientation change on a list of nine possible options. Lastly, participants were asked whether SOCE has brought any benefits and harms during the process, in the short term (i.e., less than a year), and in the long term (i.e., more than a year). Thirteen options were provided for benefits (e.g., "feel accepted by others," "feel socially connected," "bring hope to life") and thirteen options were listed for harms (e.g., "being given false hope," "impair mental

Table 1 Demographic characteristics of the sample as a whole and by experiences of SOCE

	Entire sample ($n=219$)	Had experienced SOCE ($n=48$)	No experiences of SOCE($n=171$)	Group difference
	n (%)/*M* (SD)	*n* (%)/*M* (SD)	*n* (%)/*M* (SD)	χ^2
Sex assigned at birth				1.63
Male	170 (77.6%)	34 (70.8%)	136 (79.5%)	
Female	49 (22.4%)	14 (29.2%)	35 (20.5%)	
Sexual orientation				1.57
Lesbian and gay	159 (72.6%)	38 (79.2%)	121 (70.8%)	
Bisexual and pansexual	46 (21.0%)	7 (14.6%)	39 (22.8%)	
Questioning, queer, asexual, or others	14 (6.4%)	3 (6.3%)	11 (6.4%)	
Age				4.79
17–24	53 (24.2%)	7 (14.6%)	46 (26.9%)	
25–34	118 (53.9%)	26 (54.2%)	92 (53.8%)	
35 or above	48 (21.9%)	15 (31.3%)	33 (19.3%)	
Religion				39.62***
Had religious beliefs	76 (34.7%)	35 (72.9%)	41 (24.0%)	
No religious beliefs	143 (65.3%)	13 (27.1%)	130 (76.0%)	
Relationship status				0.69
Single	112 (51.1%)	22 (45.8%)	90 (52.6%)	
In relationship	107 (48.9%)	26 (54.2%)	81 (47.4%)	
Education level				1.63
Secondary school or below	42 (19.2%)	9 (18.8%)	33 (19.3%)	
Community college/university	140 (63.9%)	28 (58.3%)	112 (65.5%)	
Master's degree or above	37 (16.9%)	11 (22.9%)	26 (15.2%)	
Employment status				0.40
Student	38 (17.4%)	7 (14.6%)	31 (18.1%)	
In employment	161 (73.5%)	36 (75.0%)	125 (73.1%)	
Not in employment	20 (9.1%)	5 (10.4%)	15 (8.8%)	
Monthly income				4.48
HK$20,000 (US$2560) or below	125 (57.1%)	21 (43.8%)	104 (60.8%)	
HK$20,001–HK$40,000 (US$2561–US$5120)	74 (33.8%)	21 (43.8%)	53 (31.0%)	
HK$40,001 (US$5120) or above	20 (9.1%)	6 (12.5%)	14 (8.2%)	

***$p<0.001$

health," "develop shame, guilt, and self-hatred") (Flentje et al., 2014).

Sexual Identity Distress

The internalized homonegativity, identity uncertainty, and difficult process subscales of the Lesbian, Gay, Bisexual Identity Scale (Mohr & Kendra, 2011) were used to assess the extent to which participants feel negative, uncertain, and difficult toward their sexual orientation, respectively. The internalized homonegativity subscale consists of three items measuring the degree to which participants reject their sexual identity: (1) "If it were possible, I would choose to be straight," (2) "I wish I were heterosexual," and (3) "I believe it is unfair that I am attracted to people of the same sex." The identity uncertainty subscale consists of four items assessing how uncertain participants feel about their sexual identity: (1) "I'm not totally sure what my sexual orientation is," (2) "I keep changing my mind about my sexual orientation," (3) "I can't decide whether I am bisexual or homosexual," and (4) "I get very confused when I try to figure out my sexual orientation." The difficult process subscale consists of three items measuring how difficult participants perceive their sexual identity development process to be: (1) "Admitting to myself that I'm an LGB person has been a very painful process," (2) "Admitting to myself that I'm an LGB person has been a very slow process," and (3) "I have felt comfortable with my sexual identity just about from the start" (reverse-scored). Items were rated on a 6-point Likert scale from 1 (strongly disagree) to 6 (strongly agree), with higher scores indicating greater levels of internalized

homonegativity, identity uncertainty, and difficult process. The items were translated into Chinese and used in Hong Kong sexual minorities in a previous study (Chan et al., 2020). The internal consistency (Cronbach's alpha) of the internalized homonegativity, identity uncertainty, and difficult process subscales was 0.83, 0.76, and 0.74, respectively, in the present study.

Depressive Symptoms

The 9-item Patient Health Questionnaire (Kroenke et al., 2001) was used to assess the level of depressive symptoms over the past 2 weeks. Sample items include "little interest or pleasure in doing things" and "feeling down, depressed, or hopeless." Items were rated on a 4-point Likert scale from 0 (not at all) to 3 (nearly every day). Higher scores indicate more severe levels of depressive symptoms. The scale was translated into Chinese and showed good psychometric properties in Chinese populations (Wang et al., 2014). The Cronbach's alpha of the scale was 0.89 in the present study. A sum score of 10 or greater indicates probable clinical depression. The PHQ-9 has a sensitivity of 88% and a specificity of 88% for the diagnosis of major depressive disorder at this cutoff score (Kroenke et al., 2001).

Anxiety Symptoms

The 7-item Generalized Anxiety Disorder (GAD-7) (Spitzer et al., 2006) questionnaire was used to measure the severity of anxiety symptoms over the past 2 weeks. Sample items include "feeling nervous, anxious, or on edge" and "not being able to stop or control worrying." Items were rated on a 4-point Likert scale from 0 (not at all) to 3 (nearly every day). Higher scores indicate more severe levels of anxiety symptoms. The scale was translated into Chinese and validated in Chinese samples (Wang et al., 2018). The internal consistency (Cronbach's alpha) of the scale was 0.93 in the present study. A cutoff score of 10 or above on the total score indicates probable generalized anxiety disorder. The GAD-7 has a sensitivity of 89% and a specificity of 82% for the diagnosis of generalized anxiety disorder at the cutoff score of 10 (Swinson, 2006).

Suicidality

A single-item question was used to assess the prevalence of lifetime suicidal ideation, plans, and attempts (Millner et al., 2015). The participants were asked to indicate whether they had ever had suicidal ideation, plans, and attempts in their entire life by selecting from one of the four options provided, including "I have never had suicidal thoughts," "I have had suicidal thoughts, but have no suicide plan," "I have had suicidal thoughts, and have suicide plan," and "I have had suicidal thoughts and suicide plan, and I have attempted suicide" (Suen et al., 2018). Responses were recoded into three dichotomous variables, namely suicidal ideation, suicidal plans, and suicidal attempts.

Data Analysis

Descriptive statistics were used to understand the experiences of SOCE (i.e., age, length, reasons, and methods) as well as perceived effectiveness and impacts of SOCE. Also, descriptive statistics were conducted to characterize the demographic and main study variables (i.e., sexual identity distress, affective symptoms, and suicidality) for the entire sample and by the experiences of SOCE. Chi-square tests were used to compare the differences in demographics, suicidality, and probable affective disorders between participants who had experienced SOCE and those who had not experienced SOCE. Independent-sample *t*-tests were conducted to examine the differences in sexual identity distress (i.e., internalized homonegativity, identity uncertainty, and difficult process) and affective symptoms (i.e., depressive symptoms and anxiety symptoms) between participants who had and had not undergone SOCE. Prior to the main analysis, chi-square tests, independent-sample *t*-tests, and one-way between-group analyses of variance (ANOVA) were used to explore the differences in affective symptoms and suicidal ideation among various demographic variables. Demographic variables that showed significant differences with affective symptoms and suicidal ideation were considered covariates in the structural equation modeling. The above analyses were conducted using SPSS version 27.0.

Structural equation modeling (SEM) was conducted to examine whether sexual identity distress would mediate the experiences of SOCE (i.e., having experienced SOCE relative to no experiences of SOCE) with affective symptoms and suicidal ideation, after controlling for demographics. SOCE was coded as a dichotomous variable, with having experienced SOCE coded as 1 and no experiences of SOCE coded as 0. Similarly, suicidal ideation was coded as a dichotomous variable, with having suicidal ideation coded as 1 and no prior suicidal ideation coded as 0. The latent construct of sexual identity distress was manifested by the mean score of the three subscales of the LGBIS (i.e., internalized homonegativity, identity uncertainty, and difficult process). The mean score of PHQ-9 (i.e., depressive symptoms) and GAD-7 (i.e., anxiety symptoms) were used to indicate the latent construct of affective symptoms. A measurement model was tested first to estimate how well the scales represented the latent constructs. After confirming the appropriateness of the measurement model, a structural model was estimated to examine the structural relationships

between the latent constructs, controlling for demographic variables. Mplus Version 8.0 was used to test the measurement and structural models using full maximum likelihood estimation. To evaluate the goodness-of-fit of the hypothesized model to the data, we examined χ^2 statistic and four other fit indices, including comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) (Hu & Bentler, 1999). Criteria for acceptable model fit were as follows: CFI value of 0.90 or above, RMSEA value of 0.08 or below, and SRMR value of 0.08 or below (Tabachnick & Fidell, 2007). A bootstrapping analysis was performed to estimate the indirect effects of SOCE on affective symptoms and suicidal ideation via sexual identity distress. The bias-corrected 95% confidence intervals (CI) for the indirect effects were estimated using 1000 bootstrap samples. The indirect effects were considered significant if the 95% CI did not include zero (Preacher & Hayes, 2008).

Results

Experiences and Motivations of SOCE

Among 219 sexual minority individuals who completed the study, 21.9% ($n=48$) had experienced SOCE and 78.1% ($n=171$) had not experienced SOCE. Specifically, 19.6% ($n=43$) initiated SOCE themselves, and 11.9% ($n=26$) were advised by others to have SOCE.

Of 43 participants who initiated SOCE themselves, 54.2% reported having had their first SOCE engagement at or before the age of 18 years, and 37.2% spent more than 12 months for SOCE. They indicated family acceptance (or less family rejection) (48.8%), avoidance of discrimination (48.8%), religiosity (46.5%), and desire to have a normal heterosexual life (46.5%) as the most common reasons for initiating SOCE. Most of them engaged in self-initiated SOCE through religious methods (e.g., prayer, fasting, and exorcism) (48.8%), and suppression of individual temperament and gender expression (41.9%).

For sexual minority individuals who were advised to undergo SOCE, 46.2% had their first SOCE at or before the age of 18 years. More than half of them indicated that the duration of SOCE lasted for 6–12 months (26.9%) or more than 12 months (26.9%). They were mostly advised by family members (50.0%), followed by religious leaders (42.3%), members of their religious community (34.6%), and counselors (34.6%). They were mainly motivated by the desire for a normal heterosexual life (69.2%), religiosity (53.8%), and the belief that homosexuality violates laws of nature (50.0%). Most of them engaged in SOCE through religious methods (e.g., prayer, fasting, and exorcism) (50.0%), sought psychological counseling (42.3%), and developed heterosexual relationships (42.3%). Table 2 describes the experiences of self-initiated and other initiated SOCE.

The results also showed a significant difference in religion ($\chi^2=39.62, p<0.001$) between sexual minority individuals who had experienced SOCE and those who had not experienced SOCE. There was a significantly higher proportion of people with religious beliefs among individuals who had experienced SOCE (72.9%) than their counterparts who had not experienced SOCE (24.0%). There were no other demographic differences between the two groups of individuals (see Table 1).

Perceived Effectiveness, Benefits, and Harms of SOCE

Most of the sexual minority individuals who had experienced SOCE perceived that SOCE was not effective at all (56.3%) or somewhat ineffective (35.4%). The majority did not have actual sexual orientation change and remained non-heterosexual all along (72.9%). For the reasons of not having sexual orientation change, 68.8% believed that sexual orientation is shaped at an early age and cannot be changed at will, 56.3% stated that they attempted SOCE only for fulfilling others' expectations and did not expect to make an actual change, and 52.1% believed that sexual orientation is inborn and cannot be changed in nurture. Table 3 presents the perceived effectiveness of SOCE.

Some participants identified benefits brought by the experiences of SOCE. They indicated that finding a safe place to share about themselves (27.1%) and bringing hope to life (22.9%) were the most common benefits during the process of SOCE. For short-term benefits, they mainly felt accepted by others (20.8%), felt socially connected (14.6%), and showed improved interpersonal relationships (14.6%). For long-term benefits, they indicated that SOCE solidified their sexual identity (47.9%) and facilitated the coming-out process (12.5%).

As to the harms of SOCE, the majority of the participants perceived that their time was being wasted (41.7%), developed shame, guilt, and self-hatred (35.4%), and felt disappointed in themselves (31.3%) during the process of SOCE. For short-term harms, the individuals mostly felt disappointed in themselves (33.3%) and were given false hope (27.1%). For long-term harms, most of them developed shame, guilt, and self-hatred (29.2%), suffered from impaired mental health (29.2%), and felt disappointed in themselves (27.1%). Table 4 describes the perceived benefits and harms of SOCE.

Effects of SOCE on Sexual Identity Distress, Affective Symptoms, and Suicidal Ideation

As shown in Table 5, the results of independent samples *t*-tests indicated that compared with sexual minority individuals who

Table 2 Descriptive statistics on the experience of SOCE

	Self-initiated SOCE ($n=43$) *n* (%)	Other-initiated SOCE ($n=26$) *n* (%)
Age at first SOCE		
10–14	11 (25.6%)	5 (19.2%)
15–18	15 (34.9%)	7 (26.9%)
19–22	6 (14.0%)	6 (23.1%)
23 or above	11 (25.6%)	8 (30.8%)
Length of self-initiated/other-initiated SOCE		
Less than 1 week	2 (4.7%)	3 (11.5%)
1–4 weeks	3 (7.0%)	5 (19.2%)
1–3 months	5 (11.6%)	3 (11.5%)
3–6 months	6 (14.0%)	1 (3.8%)
6–12 months	11 (25.6%)	7 (26.9%)
More than 12 months	16 (37.2%)	7 (26.9%)
Motivations of self-initiated/other-initiated SOCE		
(1) Religion		
Religious beliefs	20 (46.5%)	14 (53.8%)
Acceptance/rejection by the religious community	12 (27.9%)	7 (26.9%)
Homosexuality is evil	10 (23.3%)	12 (46.2%)
(2) Family		
Acceptance/rejection by the family	21 (48.8%)	5 (19.2%)
People need to have a family after all	8 (18.6%)	10 (38.5%)
Homosexuality is against traditional family values	5 (11.6%)	12 (46.2%)
Carry on the family name	10 (23.3%)	10 (38.5%)
Worry about life in old age	8 (18.6%)	9 (34.6%)
(3) Romantic relationship		
Being in a heterosexual relationship or family	4 (9.3%)	1 (3.8%)
Desire for a "normal" heterosexual life	20 (46.5%)	18 (69.2%)
(4) Stigma and health		
Avoid discrimination	21 (48.8%)	8 (30.8%)
Worry about mental health	6 (14.0%)	6 (23.1%)
Worry about physical health	1 (2.3%)	5 (19.2%)
(5) Beliefs about sexual orientation		
Being confused about one's sexual orientation	19 (44.2%)	10 (38.5%)
Violate the laws of nature	5 (11.6%)	13 (50.0%)
Homosexuality is pathological and abnormal	3 (7.0%)	10 (38.5%)
(6) Others	2 (4.7%)	2 (7.7%)
Methods of self-initiated/other-initiated SOCE		
Religious methods (e.g., prayer, fasting, exorcism)	21 (48.8%)	13 (50.0%)
Seek psychotherapy and/or counseling services	12 (27.9%)	11 (42.3%)
Participate in sexual orientation change courses	6 (14.0%)	7 (26.9%)
Seek medication	3 (7.0%)	3 (11.5%)
Suppress or alter one's gender expression	18 (41.9%)	9 (34.6%)
Abstinence or attempt abstinence	15 (34.9%)	7 (26.9%)
Develop a heterosexual relationship	15 (34.9%)	11 (42.3%)
Have sex with the opposite sex	1 (2.3%)	2 (7.7%)
Others	1 (2.3%)	3 (11.5%)
People who advised SOCE		
Family members	–	13 (50.0%)
Relatives	–	6 (23.1%)
Doctors	–	1 (3.8%)

Table 2 (continued)

	Self-initiated SOCE ($n=43$) n (%)	Other-initiated SOCE ($n=26$) n (%)
Counselors	–	9 (34.6%)
Leaders of the religious community	–	11 (42.3%)
Members of the religious community	–	9 (34.6%)
People from other social circles (e.g., colleagues)	–	7 (26.9%)
Heterosexual friends	–	7 (26.9%)
LGBT + friends	–	0 (0.0%)
Others	–	2 (7.7%)

had not experienced SOCE, those who had experienced SOCE showed significantly higher levels of internalized homonegativity ($t=-2.50$, $p=0.01$), identity uncertainty ($t=-3.43$, $p=0.001$), and difficult process ($t=-4.34$, $p<0.001$). The findings provided support for hypothesis 1.

Approximately one-fifth of the sexual minority individuals met the criteria for probable clinical depression (22.4%) and generalized anxiety disorder (17.4%). As presented in Table 5, there was a significantly higher proportion of sexual minority individuals who had undergone SOCE (39.6%) met the criteria for probable clinical depression, compared with those who had not undergone SOCE (17.5%) ($\chi^2=10.19$, $p=0.001$). Similarly, sexual minority individuals who had experienced SOCE (27.1%) were more likely than those who had not experienced SOCE (14.6%) to meet the criteria for probable generalized anxiety disorder ($\chi^2=3.98$, $p=0.046$). The results of the independent samples t-test indicated that sexual minority individuals who had undergone SOCE showed more severe levels of depressive symptoms than those who had not undergone SOCE ($t=-2.74$, $p=0.01$). However, no significant differences in anxiety symptoms were found between sexual minority individuals who had experienced SOCE and those who had not experienced SOCE ($t=-1.70$, $p=0.09$).

Table 3 Perceived effectiveness of sexual orientation change efforts

	Having experienced SOCE ($n=48$) n (%)
Perceived effectiveness	
Not effective at all	27 (56.3%)
Somewhat ineffective	17 (35.4%)
Neutral	4 (8.3%)
Somewhat effective	0 (0.0%)
Very effective	0 (0.0%)
Any actual sexual orientation change	
Remain nonheterosexual	35 (72.9%)
Once became heterosexual, but remain nonheterosexual now	6 (12.5%)
Change from nonheterosexual to heterosexual	1 (2.1%)
Unable to answer	4 (8.3%)
Others	2 (4.2%)
Reasons for no actual sexual orientation change	
Lack of determination to change	10 (20.8%)
The duration of the attempt is not long enough	6 (12.5%)
Not using proper method to change	6 (12.5%)
No effective way to change sexual orientation for now	17 (35.4%)
Sexual orientation is inborn and cannot be changed	25 (52.1%)
Sexual orientation is shaped at an early age and cannot be changed at will	33 (68.8%)
Attempt to change only for fulfilling others' expectations and do not expect to make actual change	27 (56.3%)
Attempt to change only for giving account to oneself and have tried hard to integrate into society	16 (33.3%)
Others	5 (10.4%)

Table 4 Perceived benefits and harms of sexual orientation change efforts

	No impact	Impact during the SOCE process	Short-term impact	Long-term impact
	n (%)	*n* (%)	*n* (%)	*n* (%)
Perceived benefits of SOCE				
Feel accepted by others	31 (64.6%)	8 (16.7%)	10 (20.8%)	1 (2.1%)
Feel socially connected	34 (70.8%)	8 (16.7%)	7 (14.6%)	1 (2.1%)
Find a safe place to share about oneself	31 (64.6%)	13 (27.1%)	3 (6.3%)	2 (4.2%)
Bring hope to life	34 (70.8%)	11 (22.9%)	4 (8.3%)	1 (2.1%)
Improve family relationships	37 (77.1%)	7 (14.6%)	5 (10.4%)	0 (0.0%)
Improve interpersonal relationships	34 (70.8%)	8 (16.7%)	7 (14.6%)	1 (2.1%)
Improve mental health	37 (77.1%)	7 (14.6%)	3 (6.3%)	3 (6.3%)
Cope with traumatic experiences	43 (89.6%)	1 (2.1%)	2 (4.2%)	2 (4.2%)
Facilitate the coming out process	32 (66.7%)	7 (14.6%)	4 (8.3%)	6 (12.5%)
Solidify sexual identity	15 (31.3%)	8 (16.7%)	4 (8.3%)	23 (47.9%)
Strengthen faith	34 (70.8%)	7 (14.6%)	4 (8.3%)	5 (10.4%)
Meet a partner	37 (77.1%)	3 (6.3%)	5 (10.4%)	3 (6.3%)
Others	46 (95.8%)	0 (0.0%)	0 (0.0%)	2 (4.2%)
Perceived harms of SOCE				
Being given false hope	14 (29.2%)	12 (25.0%)	13 (27.1%)	10 (20.8%)
Develop shame, guilt, and self-hatred	12 (25.0%)	17 (35.4%)	8 (16.7%)	14 (29.2%)
Feel disappointed in oneself	8 (16.7%)	15 (31.3%)	16 (33.3%)	13 (27.1%)
Distrust others	28 (58.3%)	6 (12.5%)	11 (22.9%)	4 (8.3%)
Harm family relationships (e.g., hate/blame family members)	31 (64.6%)	6 (12.5%)	7 (14.6%)	4 (8.3%)
Disrupt interpersonal relationships (e.g., stay away from friends)	26 (54.2%)	7 (14.6%)	9 (18.8%)	7 (14.6%)
Impair mental health	15 (31.3%)	10 (20.8%)	12 (25.0%)	14 (29.2%)
Trigger suicidal thoughts	29 (60.4%)	4 (8.3%)	14 (29.2%)	1 (2.1%)
Lose faith	23 (47.9%)	5 (10.4%)	11 (22.9%)	10 (20.8%)
Fear of religious consequences (e.g., go to hell)	27 (56.3%)	7 (14.6%)	11 (22.9%)	5 (10.4%)
Create financial burden	39 (81.3%)	4 (8.3%)	4 (8.3%)	1 (2.1%)
Waste of time	17 (35.4%)	20 (41.7%)	9 (18.8%)	6 (12.5%)
Others	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

There was a significantly higher proportion of sexual minority individuals who had undergone SOCE (83.3%) had suicidal ideation than those who had not undergone SOCE (59.6%) ($\chi^2 = 9.22$, $p = 0.002$). Similarly, sexual minority individuals who had experienced SOCE (27.1%) reported a higher prevalence of suicidal plans, compared with those who had not experienced SOCE (14.0%) ($\chi^2 = 4.55$, $p = 0.03$). No significant differences in the suicidal attempts were found between the two groups ($\chi^2 = 0.63$, $p = 0.43$). The results partly supported hypothesis 2.

In addition, the results found that sex assigned at birth, age, and employment status were significantly associated with affective symptoms and therefore included as covariates in the main analysis. Independent samples *t*-tests indicated a significant difference between male and female participants on depressive symptoms ($t = 2.77$, $p = 0.006$), in which female participants reported higher levels of depressive symptoms than male participants. The results of one-way ANOVA showed that the differences in depressive symptoms ($F_{2, 216} = 4.95$, $p = 0.008$) and anxiety symptoms ($F_{2, 216} = 4.38$, $p = 0.01$) were statistically significant across age groups, with participants aged 17–24 years having higher levels of depressive and anxiety symptoms than their older counterparts. Moreover, the results revealed a significant difference in depressive symptoms by employment status ($F_{2, 216} = 3.43$, $p = 0.03$), with participants who were in employment showing lower levels of depressive symptoms than students and those who were not in employment. No significant demographic differences in suicidal ideation were found ($p > 0.05$).

A Mediation Model of SOCE on Affective Symptoms and Suicidal Ideation

The results indicated that the measurement model provided a good fit to the data: $\chi^2 = 21.79$ ($df = 11$, $p = 0.03$), CFI = 0.95,

Table 5 Differences in sexual identity distress and mental health by experiences of SOCE

	Entire sample ($n=219$)	Experienced SOCE ($n=48$)	No experiences of SOCE ($n=171$)	Group difference
	n (%)/M (SD)	n (%)/M (SD)	n (%)/M (SD)	χ^2/t-value
Sexual identity distress				
Internalized homonegativity (1–6)	2.64 (1.29)	3.06 (1.35)	2.52 (1.25)	−2.50*
Identity uncertainty (1–6)	2.53 (1.07)	3.01 (1.17)	2.40 (1.00)	−3.43**
Difficult process (1–6)	3.57 (1.22)	4.24 (1.07)	3.38 (1.19)	−4.34***
Probable affective disorder				
Clinical depression (PHQ-9 ≥ 10)	49 (22.4%)	19 (39.6%)	30 (17.5%)	10.19**
Generalized anxiety disorder (GAD-7 ≥ 10)	38 (17.4%)	13 (27.1%)	25 (14.6%)	3.98*
Affective symptoms				
Depressive symptoms (0–3)	0.69 (0.63)	0.63 (0.57)	0.90 (0.78)	−2.74**
Anxiety symptoms (0–3)	0.76 (0.73)	0.72 (0.69)	0.92 (0.85)	−1.70
Suicidal ideations				9.22**
Yes	142 (64.8%)	40 (83.3%)	102 (59.6%)	
No	77 (35.2%)	8 (16.7%)	69 (40.4%)	
Suicide plans				4.55*
Yes	37 (16.9%)	13 (27.1%)	24 (14.0%)	
No	182 (83.1%)	35 (72.9%)	147 (86.0%)	
Suicide attempts				0.63
Yes	13 (5.9%)	4 (8.3%)	9 (5.3%)	
No	206 (94.1%)	44 (91.7%)	162 (94.7%)	

*$p<0.05$; **$p<0.01$; ***$p<0.001$

RMSEA = 0.07, SRMR = 0.04. All loadings of the scales on sexual identity distress and affective symptoms were statistically significant ($p<0.001$). All constructs were significantly related to each other ($p<0.05$).

The results revealed that the structural model showed a good model fit: $\chi^2=38.71$ ($df=26$, $p=0.05$), CFI = 0.97, RMSEA = 0.05, SRMR = 0.05. Relative to not having SOCE, having experienced SOCE was positively associated to sexual identity distress ($\beta=0.83$, $p<0.001$), but was not directly related to affective symptoms ($\beta=0.24$, $p=0.20$) and suicidal ideation ($\beta=0.31$, $p=0.06$). Sexual identity distress was positively associated with affective symptoms ($\beta=0.25$, $p=0.003$) and suicidal ideation ($\beta=0.22$, $p=0.02$). The model explained 17.0% of the variance in affective symptoms and 11.8% of the variance in suicidal ideation. Table 6 presents the unstandardized and standardized parameter estimates for the hypothesized model.

The indirect effects of SOCE (i.e., having experienced SOCE versus not having experienced SOCE) on affective symptoms and suicidal ideation were examined using bootstrapping analysis. The results indicated that sexual identity distress ($\beta=0.21$, 95% CI = 0.08, 0.41) significantly mediated the association of SOCE with affective symptoms. Furthermore, a significant indirect effect was observed for sexual orientation on suicidal ideation via sexual identity distress ($\beta=0.18$, 95% CI = 0.03, 0.36). These results lent support to hypothesis 3.

Discussion

The present study is the first to examine SOCE among sexual minority individuals in Hong Kong. We found that one-fifth of participants reported having undergone SOCE in their lifetime, thus constituting double the prevalence rate of SOCE in North American contexts (Mallory et al., 2019; Salway et al., 2020), a figure which may be attributed to greater sexual minority stigma due to cultural and religious factors in Hong Kong (Kwok & Wu, 2015; Suen et al., 2016). Additionally, our results revealed distinct patterns characterizing sexual minorities' exposure to SOCE in Hong Kong. More specifically, while more than 10% of participants had been advised by others to engage in SOCE, typically family members, leaders and members of religious communities, and counselors, nearly twice the proportion of sexual minorities engaged in self-initiated SOCE.

It is also important to note that a substantial proportion of sexual minorities who had undergone SOCE reported first being exposed to SOCE during adolescence at or before the age of 18 years, participating in SOCE for a relatively long

Table 6 Unstandardized and standardized parameter estimates of the hypothesized mediation model

Parameter estimates	Unstandardized B (SE)	Standardized β
Direct effect		
Sexual orientation change efforts → sexual identity distress	0.43 (0.13)**	0.83***
Sexual orientation change efforts → affective symptoms	0.15 (0.12)	0.24
Sexual orientation change efforts → suicidal ideation	0.15 (0.08)	0.31
Sexual identity distress → affective symptoms	0.30 (0.12)*	0.25**
Sexual identity distress → suicidal ideation	0.20 (0.09)*	0.22*
Affective symptoms ↔ suicidal ideation	0.06 (0.02)***	0.24***
	Standardized(β)	95% CI (lower, upper)
Indirect effect		
Sexual orientation change efforts → sexual identity distress → Affective symptoms	0.21*	0.08, 0.41
Sexual orientation change efforts → sexual identity distress → Suicidal ideation	0.18*	0.03, 0.36

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

duration of at least 6 months. They commonly used religious, psychotherapeutic, and personal suppression methods to alter their sexual orientation. Consistent with previous studies on SOCE (Dehlin et al., 2015; Flentje et al., 2014; Maccio, 2010; Tozer & Hayes, 2004; Weiss et al., 2010), religious beliefs appeared to be a primary motivation for undertaking SOCE in Hong Kong. Interpersonal concerns (e.g., family acceptance and avoiding discrimination) were also commonly reported as another main reason for seeking SOCE.

The results regarding the low perceived efficacy of SOCE (Bradshaw et al., 2015; Maccio, 2010; Przeworski et al., 2021), perceived affective and interpersonal-related benefits (Beckstead & Morrow, 2004; Dehlin et al., 2015; Shidlo & Schroeder, 2002), as well as perceived harms on mental health and self-perception (Beckstead & Morrow, 2004; Jacobsen & Wright, 2014; Shidlo & Schroeder, 2002) of undergoing SOCE in Hong Kong, were in accordance with previous findings. As shown in our study, an overwhelming majority of participants who went through SOCE (91.7%) indicated that SOCE was completely or somewhat ineffective. More than one-third of them reported feelings of shame, guilt, and self-hatred, and expressed disappointment in themselves.

The present study also found that SOCE had deleterious mental health consequences, as sexual minority individuals who had been exposed to SOCE demonstrated a greater risk of developing depressive symptoms and suicidal ideation. Such results parallel findings from previous literature showing the association between SOCE and negative mental health outcomes (Blosnich et al., 2020; Green et al., 2020; Lee et al., 2021; Meanley et al., 2020a; Ryan et al., 2020; Salway et al., 2020). Prior studies (Blosnich et al., 2020; Lee et al., 2021) have used the minority stress framework (Meyer, 2003) to interpret the adverse mental health impact of SOCE, suggesting that SOCE may be considered a minority stressor contributing to the hostile social environment uniquely experienced by sexual minorities, therefore leading to negative mental health implications.

Furthermore, as hypothesized, we found that the discrepancy in the mental health status between sexual minority individuals who had and had not undergone SOCE could be explained by higher levels of sexual identity distress experienced by those who had undergone SOCE. They were more likely to internalize negative attitudes toward homosexuality, feel uncertain about the sexual orientation identity, and find it difficult to accept their same-sex attraction than their counterparts who had not experienced SOCE. Although prior studies have shown that SOCE was associated with identity conflict (Beckstead & Morrow, 2004; Dehlin et al., 2015; Meanley et al., 2020a; Shidlo & Schroeder, 2002), no studies to date have paid empirical attention to the role of sexual identity distress as a mediating mechanism underlying the adverse mental health impact of SOCE. Thus, our study may be considered the first attempt to provide initial evidence indicating that sexual identity distress is a significant mediator in the relationship between SOCE and its associated mental health consequences. The impact of SOCE on sexual identity distress may be understood via McCarn and Fassinger's (1996) model of gay and lesbian identity development, which maps out a healthy developmental trajectory of identity formation that culminates in the integration of sexual identity into one's sense of self (Fassinger & Miller, 1996). Although McCarn and Fassinger's (1996) model does not theorize about the relationship between identity development and mental health, consideration of the model suggests that sexual identity distress resulting from SOCE may be conceptualized as a negative developmental interference disrupting the process of healthy sexual minority identity formation and ultimate identity integration. Moreover, previous studies have offered empirical evidence to show that sexual identity distress leads to adverse mental health outcomes among sexual

minorities (Gibbs & Goldbach, 2015; Santos & VanDaalen, 2016; Wright & Perry, 2006). Extending prior research, our findings suggested that SOCE was associated with heightened levels of sexual identity distress, and this interference with healthy sexual minority identity development might subsequently give rise to affective symptoms and suicidal ideation.

Implications for Policy and Practice

Several important practical implications may be drawn from the current study. Our findings are highly relevant to the formulation and enforcement of legislation banning conversion therapy in Hong Kong. Despite the harmful mental health and sexual-identity-related consequences of SOCE, our study indicated that a substantial proportion of sexual minorities who had engaged in other-initiated SOCE were advised by counselors. Also, it was common for LGB individuals to engage in either self-initiated and other-initiated SOCE by seeking psychotherapeutic or counseling services. These findings call for advancements of legislative efforts to protect sexual minorities from the harms of conversion therapy, which have been made in certain states and countries (Mallory et al., 2019; United Nations, 2020), but many areas, including Hong Kong, continue to lack legislation prohibiting conversion therapy.

Moreover, the findings may inform psychological interventions which serve sexual minorities. As the present study not only indicated that SOCE was perceived by sexual minority individuals to have low perceived efficacy and a myriad of perceived harms but also showed that experiences of SOCE were associated with sexual identity distress and negative mental health outcomes; there is empirical support to suggest that within clinical and therapeutic settings, LGBT-affirming interventions should be used to support sexual minorities who struggle to accept their sexual identity and cope with minority stressors (Davies, 1996; Pachankis & Goldfried, 2013). Specifically, psychological interventions targeting individuals who have experienced SOCE should address internalized homonegativity and help them navigate their sexual identity development process. In addition, our findings call for the dissemination of public education initiatives that teach the general public about the existence and normalcy of diverse sexual orientations, as such initiatives may help reduce the promotion and undertaking of SOCE.

Study Limitations

Notwithstanding the empirical significance and practical implications of the present study, a few limitations should be noted. First, as the study involved the retrospective recall of SOCE experiences and cross-sectional survey data, we were unable to infer causal, temporally sequential relationships between SOCE, sexual identity distress, and mental health. Future research may seek to employ longitudinal designs to test whether sexual identity distress precedes mental health. Second, a nonprobability sampling method was used to recruit participants, and thus we cannot determine the representativeness of the current study's sample for the entire sexual minority population in Hong Kong. It is possible that individuals who had undergone SOCE were more likely to volunteer to participate in the study, and this might lead to an overestimation of the prevalence of SOCE in this sample (Meyer & Wilson, 2009). Third, we relied on self-reports of sexual identity distress and mental health, which might be subject to common method bias (Podsakoff et al., 2003). Future work should combine subjective reports and clinician ratings of depressive and anxiety symptoms and suicidality in order to provide a more holistic overview of the effects of SOCE on mental health.

Conclusions

Despite detrimental psychological outcomes associated with SOCE exposure, SOCE continues to persist in Hong Kong, often affecting sexual minorities for lengthy periods of time during adolescence. Such exposure was found to be negatively associated with the mental health of sexual minorities via the exacerbation of sexual identity distress. This study not only acts as the first attempt to uncover the characteristics and impact of SOCE in Hong Kong but also provides solid evidence for the role of sexual identity distress as a key mechanism mediating the relationships between SOCE and negative mental health outcomes. Taken together, such findings call for greater efforts to prevent SOCE and remedy its deleterious effects through legislation, LGBT-affirming psychological interventions, and public education.

Author Contribution RC was primarily responsible for study conceptualization, data collection, data analysis, and the writing of the manuscript. JL was responsible for the writing and editing of the manuscript. DW was responsible for study design and data acquisition and supported the editing of the manuscript.

Funding The research was supported by the Early Career Scheme of the Research Grants Council of Hong Kong (Ref. No.: 28609019).

Availability of Data and Material The original dataset is available upon written request to the corresponding author.

Declarations

Competing Interests The authors declare no competing interests.

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