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THE INFLUENCE OF MINORITY STRESS ON LEVEL OF DEPRESSION AMONG THAI LGBT ADULTS

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Abstract

In the US, lesbian, gay, bisexual, and transgender (LGBT) individuals report higher rates of depression compared with heterosexual and cisgender persons. To date, little is known about the mental health of LGBT adults in Thailand. Here, we examined rates and correlates of depression among a volunteer sample of Thai LGBTs. Data were collected as part of a larger cross-sectional survey study. Standardized measures of sexual orientation and gender identity, stress, coping style, and minority stressors were completed. Of the 411 participants, 40.3% met the criteria for depression. In multivariate analyses, the combined influences of sociodemographic factors, general stress, coping strategies, and minority-specific stress variables explained 47.2% of the variance in depression scores ($F[16,367]= 20.48$, $p<.001$). Correlates of depression included coping strategies and minority-specific stressors, including experiences of victimization, discrimination, and level of identity concealment. Study findings have implications for psychiatric nursing practice and the development of intervention research.

Keywords: depression, LGBT, minority stress, sexual and gender minority, Thailand

Abstrak

Pengaruh Stres Minoritas terhadap Tingkat Depresi pada LGBT Thailand. *Di AS, individu lesbian, gay, biseksual, dan transgender (LGBT) melaporkan tingkat depresi yang lebih tinggi dibandingkan dengan orang heteroseksual dan cisgender. Saat ini, sedikit yang diketahui tentang kesehatan mental pada orang dewasa dengan LGBT di Thailand. Di sini, kami meneliti tingkat dan korelasi depresi di antara sampel sukarelawan LGBT Thailand. Data dikumpulkan sebagai bagian dari studi survei cross-sectional yang lebih besar. Pengukuran terstandar terhadap orientasi seksual dan identitas gender, stres, koping, dan stresor minoritas telah selesai. Dari 411 peserta, 40,3% memenuhi kriteria untuk depresi. Dalam analisis multivariat, pengaruh gabungan faktor sosiodemografi, stres umum, strategi koping, dan variabel stres spesifik-minoritas menjelaskan 47,2% dari varians dalam skor depresi ($F [16,367]= 20,48$, $p< 0,001$). Korelasi depresi termasuk strategi koping dan stres spesifik-minoritas, termasuk pengalaman viktimisasi, diskriminasi, dan tingkat penyembunyian identitas. Temuan penelitian memiliki implikasi untuk praktik keperawatan psikiatris dan pengembangan penelitian intervensi.*

Kata Kunci*: depresi, LGBT, minoritas seksual dan gender, stres minoritas, Thailand*

Introduction

According to the World Health Organization (WHO), depression is a leading cause of disability and disease burden worldwide (WHO, 2017). In Thailand, the Department of Mental Health (DMH) reported that depression is one of the top five mental health disorders affecting adults (DMH, 2017). Numerous studies have demonstrated that the risk of depression varies considerably based on sociodemographic factors such as gender, age, geographical region, and income level (DMH, 2019; Kittiteerasack, 2012). In the United States and other Western countries, lesbian, gay, bisexual, and transgender (LGBT) individuals have also been identified as a sociodemographic population at elevated risk for depression (WHO, 2018; King et

al., 2008; Meyer, 2003). For example, lifetime prevalence rates of depression among LGBT individuals tend to be two to four times higher than their heterosexual and cisgender counterparts (King et al., 2008; Su et al., 2016; Reisner et al., 2015). Understanding the causes and consequences of depression in Thai populations is an important public health priority for the Thai Ministry of Health (The Excellence Center for Depression Disorder, 2019). However, to date, scant research has been conducted in Thailand to understand the rates and predictors of depression among Thai LGBT populations.

Depression results from a complex interaction of social, psychological, and biological factors. The WHO (2017) has recognized prejudice and discrimination as influential yet understudied risk factors for depression. Globally, LGBT-identified individuals experience high rates of social stigma and discrimination because of their sexual/gender identity (Meyer, 2003; Clark, 2014; Mallory, Hasenbush, & Sears, 2015). Although Thailand is viewed as an LGBT-friendly country with no legal restrictions against same-sex behaviors, anti-LGBT attitudes are still prevalent. Historically, homosexuality in Thailand was classified as a psychosocial disorder and viewed as a punishment for wrongdoing in a past life (UNDP, USAID, 2014).

Currently, more than half of Thais aged 15–24 still believe being LGBT is wrong (Kingston, 2019), and discrimination is common across numerous contexts including within families, the education system, health care organizations, and the workplace (Yadegarfard, Meinhold-Bergmann, & Ho, 2014; UNDP, USAID, 2014; Zachau & Cortez, 2017; Albuquerque et al., 2016). Preliminary evidence conducted with Thai LGBT populations proved the negative influence of discrimination on depression. Yadegarfard, Meinhold-Bergmann, and Ho (2014) found that transgender respondents report significantly higher family rejection due to discrimination, which is associated with elevated rates of depression. In a second study focused on emotional health of LGBT populations, 53% of LGBTs surveyed reported emotional problems (including depression) that were associated with experiences of discrimination (Zachau & Cortez, 2017).

The Minority Stress Model (MSM) (Meyer, 2003) was developed to guide research on the influence of social factors such as discrimination on stigmatized populations, including LGBTs. The MSM is grounded in the assumptions that minority stressors experienced by LGBT populations are unique, chronic, and socially based. Various causal domains under the MSM framework interact to increase or reduce risk associated with social stigma and discrimination, including demographic factors, level of general stress, minority-specific stressors, and coping style. The MSM has been accepted as a comprehensive conceptual framework to guide research aimed to identify contributing factors associated with depression, and it has been applied across LGBT studies worldwide (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; McCarthy, Fisher, Irwin, Coleman, & Pelster, 2014; Baams, Grossman, & Russell, 2015). To date, research on mental health among LGBT populations in Thailand is limited, and few of the existing studies have been guided by a theoretical framework. As such, the overall purpose of this study was to measure rates of depression in a sample of Thai LGBTs and examine contributing factors based on the MSM framework. Specifically, the study aimed to describe the rates of depression in a community sample of LGBT adults and determine the influences of general stress, minority-specific stress, and coping strategies on depression.

Methods

Study Design. Data from these secondary analyses were derived from a larger cross-sectional descriptive research study examining the prevalence of suicidality and its predictors among LGBT adults in Thailand. The study took place between March and August 2018. The study was approved by the Institutional Review Board of the University of Illinois at Chicago in the United States.

Study Setting. The study was conducted in collaboration with the Rainbow Sky Association of Thailand (RSAT), the first LGBT community-based organization devoted to providing resources and health services in Thailand. RSAT is supported by the Thai Ministry of Public Health and the US Centers for Disease Control and Prevention. Data collection took place at each of the seven RSAT clinics across Thailand.

Study Sample. Study eligibility criteria were as follows: 1) Thai national, 2) aged 18–60 years, and 3) ability to read and write in the Thai language. The total number of LGBT adults living in Thailand is currently unknown. As such, the sample size was calculated to estimate the rate of depression with a 5% margin of error. On the basis of Cochran's calculation (1953), 50% prevalence was used to determine the most conservative sample size. The total of 384 participants was sufficient to assess any proportion with a 5% margin of error or less at the 95% confidence level. We also added 5% to account for the non-completion rate. Therefore, 400 samples were needed. A total of 411 participants were recruited in this study.

Participant Recruitment. A volunteer sample of LGBT adults was recruited using convenience and snowball methods. Recruitment activities used included creating a dedicated Facebook (FB) page, flyers, posters, and information cards at community venues and events in collaboration with RSATs' clinics. The created FB page and materials were used for advertisement purposes only. Data collection was conducted online via a secured Qualtrics platform (Snow & Mann, 2013). Interested individuals who met the criteria as described in advertisements were provided options to participate in the study by either a link to an online survey or an in-person survey at the RSAT clinic.

Data Collection. Data collection was conducted using online and in-person surveys. The online survey was created using Qualtrics. Potential participants received a full explanation of the study information. LGBT individuals who were eligible and interested in participating provided their consent by clicking the "Agree" button to start the survey. The online data were instantly uploaded and saved to the standardized Qualtrics server by a secure password. Each data set was assigned a unique ID number and exported to a statistical software program (SPSS) for data management and analyses. In the paper–pencil survey, data recruitment and collection took place at RSAT community clinics by the first author (P.K.). Potential participants were approached in the waiting rooms and given an overview of the study. Interested and eligible individuals provided verbal consent to participate, and they completed the self-administered survey in a private location. All completed surveys were stored in a locked private cabinet, manually entered into the statistic software program daily, and destroyed after data entry.

Study Measures. The survey included standardized measures of demographic characteristics, stress, minority-specific stressors, coping strategies, and depression. Demographic characteristics measured included age, education, chronic disease, level of poverty, and sexual and gender identity. Sexual orientation was measured by the question, "Do you consider yourself to be.?" (response options= heterosexual, homosexual, and bisexual). Gender identity was measured by the question "What is your current gender identity?" (response options= male, female, transgender man, transgender woman, questioning, and others). Male and female response options were categorized as cisgender, and the rest were categorized as transgender. Sexual orientation and gender identity measures were translated into a Thai version by backward translation (Brislin, 1970) and tested among a diverse sample of Thai adults (n= 282), resulting in high content validity and linguistic comprehension/ acceptability (Kittitteerasack, Steffen, & Matthews, 2019).

Stress level was measured using the Srithanya Stress Test (ST-5), which is a 5-question inventory rated on a 4-point Likert scale, ranging from

0= never to 3= usually. Total possible scores ranged from 0 to 15, with high scores indicating a high level of stress (0–4= mild, 5–7= moderate, 8–9= severe, 10–15= very severe) (Silpakit, 2012). The Cronbach alpha of ST-5 in this study was 0.87.

Minority-specific stressors measured included negative experience due to LGBT identity, experiences of discrimination, victimization situations, level of identity outness or disclosure, and internalized sexual stigma. First, the negative experience due to LGBT identity was measured by three questions asking participants whether they have experienced discrimination based on their LGBT status. The questions asked, "Do you think discrimination you have experienced were due to your 1) sexual orientation, 2) gender identity, or 3) gender expression?," with yes/no response options. The scores were counted on the answer "yes" on each item, making the total score ranging from 0 to 3. High scores represent a great number of social identities the respondent perceived to be the cause of their discrimination experiences. Second, experiences of discrimination were measured by the nine items of Experiences of Discrimination Scale (EOD) (Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005). The EOD gauged experiences of social discrimination across various situations (e.g., work and store). Three other items of related situations in Thai contexts were added (home, religious settings, and blood donation). Twelve items were scored by counting a number of situations (range 0–12), with high scores showing high numbers of experienced discrimination situations. Third, victimization situations (VSs) were measured by the five items of Gay, Lesbian, Straight, Education Network with response options rated on a 4-point Likert-type scale (Hamburger, Basile, & Vivolo, 2011). The VS gauged experiences of victimization in public settings related to LGBT identity. Total possible mean scores ranged from 0 to 3, with high scores representing a great level of victimization experience. Fourth, LGBT identity outness was scored by the Outness Inventory (OI) used to assess levels of concealment about LGBT identities on three primary subscales (world, family, and religion) (Mohr & Fassinger, 2000). This measure includes 10 items rated on a 7-point Likert scale ranging from 1 (a person does NOT know about your sexual orientation status) to 7 (person knows about your sexual orientation status). Total possible mean scores ranged from 1 to 7, with the high score indicating a high degree of outness. Fifth, internalized sexual stigma was measured by the Revised Internalized Homophobia Scale (IHP-R), which gauged a range of negative attitudes toward oneself of being LGBT (Herek, Gillis, & Cogan 2009). This measure includes five items rated on a 5-point Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). Total possible mean scores range from 1 to 5, with high scores designating the high negative self-attitudes regarding internalized homophobia. The Cronbach alpha of EOD, VS, OI, and IHP-R in this study was 0.86, 0.81, 0.94, and 0.83, respectively.

Coping strategies used to manage stress were measured by the 25-item Coping Scale (CS) (Suphamongkhon & Kotrajaras, 2004). The CS is divided into three subscales, namely, problem-focused, avoidance, and seeking social support. Each item was rated on a 5-point Likert-type scale, ranging from 1 (none) to 5 (usually). The aggregate was calculated to estimate a total score of each subscale ranging from 12 to 60 for problem-focused coping, 9–45 for avoidance coping, and 4–40 for seeking social support coping. The possible mean score of each subscale was 1–5, indicating the level of using each type of coping mechanisms (1.00–2.49= less use, 2.50–2.99= less to moderate use, 3.00–3.49= moderate to high use, and 3.50–5.00= high use). The Cronbach alpha va-lues of the three subscales of problem-focused, avoidance, and seeking social support coping were 0.87, 0.84, and 0.77, respectively.

Depression was measured using the 21-item Beck Depression Inventory (BDI) (Beck, Steer, & Carbin,1988). Each item consists of four statements with scores ranging from 0 to 3, which

indicates different levels of severity of particular depressive symptoms. The possible scores range from 0 to 63, with high scores indicating a high level of depression (0–9= normal, 10–15 = mild depression, 16–19= mild to moderate depression, 20–29= moderate to severe depression, and 30–63= severe depression). The Cronbach alpha of BDI was 0.92.

The EOD, VS, OI, and IHP-R measures were translated into Thai language using backward translation (Brislin, 1790). All measures were translated by the PI and reviewed by a Thai-bilingual LGBT expert. On the basis of the cross-cultural translation principle, backward translation and comparison were performed by a committee approach (Harkness, Pennell, & Schoua-Glusberg, 2004). All committee members were Thai natives with extensive experience related to LGBT populations. The content validity index (CVI) was confirmed by five Thai measurement and LGBT experts. All four translated measures had CVI scores indicating acceptable content validity (EOD= 1, VS= 1, OI= 0.70, and IHP-R= 0.83). Overall Cronbach alphas of measures were also high, signifying the acceptable reliability as presented above.

Data analysis. The study data were analyzed by SPSS software. Descriptive statistics (percentages, means, standard deviations, and frequencies) were used to summarize study variables. Bivariate analyses (t-test, ANOVA, and Pearson correlation) were used to test for associations between independent variables and depression. The multiple regression model was used to test the relationship between independent variables on depression controlling for sociodemographic factors.

Results

Table 1 displays participant characteristics. A total of N= 411 individuals completed the survey. The mean age of study participants was 29.5 years old (S.D.= 7.4, range 18–53). The majority of participants reported their sexual orientation as homosexual (79.3%) and their gender identity as cisgender (76.6%). Educational attainment of the sample was high with the majority of participants (77.2%) reporting a bachelor's degree or higher. The mean score for stress was 5.48 (S.D.= 3. 42), which corresponded to moderate levels of stress. The mean number of discrimination situation was M= 1.90 (S.D.= 2.69). More than half of all participants (53.7%) reported experiences of discrimination based on their LGBT identity in at least one situation. The mean number of victimization events was.60 (S.D.= 0.51), with 49.4% of respondents reporting at least one victimization event associated with their sexual orientation or gender identity. The mean outness score was M= 4.67 (S.D.= 1.72). Approximately half of LGBT participants reported not being "out" or disclosing their sexual orientation or gender identity to their mothers (43.4%), fathers (52.4%), other family members (50.5%), or acquaintances (62.3%). Mean scores for internalized homophobia were in the average range (M= 2.40, S.D.= 1.06). In terms of depression, the mean score for study participants was 9.46 (S.D.= 8.43). About 43% of study participants reported clinically significant levels of depression; of those, 12.2% reported moderate to severe levels of depression (data not shown).

Bivariate analyses were performed to examine the relationships between depression and key predictor variables including sociodemographic factors, general stress, minority-specific stress, and coping strategies (see Table 2). Sociodemographic factors associated with high levels of depression included young age (r= -0.18, p= 0.01) and being diagnosed with a chronic disease (F [2, 406]= 4.93, p= 0.008). High levels of depression were positively associated with the high use of avoidance coping strategies (r= 0.48, p= 0.01) but negatively associated with problem-focused (r= −0.35, p= 0.01) and social support coping strategies (r= −0.20, p= 0.01). For general and minority-specific stressors, all stress factors were correlated with depression scores (levels of stress r= .56, p= .01; negative experiences due to LGBT identity F [3, 407]= 2.93, p= 0.034; experiences of discrimination

Table 1. Participant Characteristics (N= 411)

	N	%	M	S.D.
Sociodemographic Factors				
Age (year)			29.51	7.43
Education				
High school and diploma	94	22.9		
Bachelor	244	59.4		
Graduate and higher	73	17.8		
Chronic disease (number)				
None	283	69.5		
One	93	22.9		
Two or more	31	7.6		
Poverty rates			7.53	7.37
Community attainment				
Yes	39	9.5		
No	371	90.5		
Sexual orientation				
Heterosexual	23	5.6		
Homosexual	326	79.3		
Bisexual	62	15.1		
Gender identity				
Cisgender	315	76.6		
Transgender	96	23.4		
General Stress				
Levels of stress			5.48	3.42
Minority-Specific Stress				
Negative experiences due to LGBT identity				
None	189	46.3		
One	60	14.7		
Two	51	12.5		
Three	108	26.5		
Experiences of discrimination			1.90	2.69
Victimization situations			0.60	0.51
Identity outness			4.67	1.72
Internalized sexual stigma			2.40	1.06
Coping Strategies				
Problem-focused coping			3.98	0.57
Avoidance coping			2.91	0.77
Seeking social support coping			3.58	0.79
Study Outcome				
Depression			9.46	8.43

Note. M= mean score, S.D.= standard deviation

Table 2. Pearson Correlation Matrix for Key Independent Variables on Depression

	1	2	3	4	5	6	7	8
1. Levels of stress	-							
2. Experiences of discrimination	0.13**	-						
3. Victimization situations	0.22**	0.35**	-					
4. Identity outness	-0.05	0.13**	0.13**	-				
5. Internalized sexual stigma	0.12*	0.10*	0.11*	-0.39**	-			
6. Problem-focused coping	-0.23**	-0.05	-0.10*	0.15**	-0.10*	-		
7. Avoidance coping	0.43**	0.22**	0.16**	-0.02	0.17**	-0.16**	-	
8. Seeking social support coping	-0.17**	0.02	-0.03	0.12*	-0.04	0.45**	0.09	-
9. Depression	0.56**	0.24**	0.24**	-0.14**	0.18**	-0.35**	0.48**	-0.20**

*p= 0.05, **p= 01

Table 3. Summary of Multiple Regression Analyses for Variables Predicting Depression (N= 411)

	B	SE B	*β*	p
Age	−0.07	0.05	−0.06	−
Education	−0.26	0.58	−0.02	−
Chronic disease	1.20	0.54	0.09	0.026
Poverty rates	−0.07	0.05	−0.06	−
Community attainment	−0.74	1.16	−0.03	−
Sexual orientation	−0.31	0.79	−0.02	−
Gender identity	−0.96	0.79	−0.05	−
Levels of stress	0.81	0.12	0.32	0.000
Negative experiences due to LGBT identity	−0.19	0.28	−0.03	−
Experiences of discrimination	0.43	0.14	0.14	0.003
Victimization situations	1.53	0.72	0.09	0.035
Identity outness	−0.54	0.22	−0.11	0.014
Internalized sexual stigma	0.20	0.34	0.03	−
Problemfocused coping	−1.89	0.67	−0.13	0.005
Avoidance coping	2.85	0.50	0.26	0.000
Seeking social support coping	−1.12	0.48	−0.11	0.019
R^2			0.47	
F			20.48	

r= 0.24, p= 0.01; VSs r= 0. 24, p= 0.01; identity outness -0.14, p= 0.01; and internalized sexual stigma r= 0.18, p= 0.01).

Table 3 shows the results of multivariate analyses. The combined influence of demographic, stress, coping, and minority stress variables explained 47.2% of the variance in depression scores (F [16,367]= 20.48, p < 0.001). Levels of general stress (β= 0.81, p< 0.001) were independently associated with depression scores. However, minority-specific stress variables including negative experiences due to LGBT status (β= 1.53, p< 0.05), experiences of discrimination (β= 0.43, p< 0.01), and identity outness (β= −0.54, p< 0.05) were also associated with high rates of depression. Depression was associated with non-stress-related factors including having a chronic disease (β= 1.20, p <.05), low use of problem-focused coping (β= −1.88, p< 0.01), seeking social support coping (β= −1.12, p< 0.05), and high use of avoidance coping (β= 2.85, p< 0.001).

Discussion

This study is among the first to examine the influence of minority-specific stress and related factors of depression among LGBT adults living in Thailand. In the US, researchers have reported rates of depression ranging from 30% to 65% among LGBT individuals (Yarns, Abrams, Meeks, & Sewell, 2016; Hughes, Johnson, Steffen, Wilsnack, & Everett, 2014; Whitehead, Shaver, & Stephenson, 2016). Consistent with these findings, the overall rates of depression in our sample were high with 40% of participants reporting clinically significant levels of depression. Study findings were also consistent with the few existing studies reporting depression rates among Thai LGBTs. For example, one early research project that focused on Thai gays and transwomen (Kathoey) found that 52.9% of participants report mild levels of depression (Pearkoa, 2013). More recently, Zachau and Cortez (2017) reported that 53% of LGBT participants in their study sample experience an emotional problem such as depression. Study findings contribute to a growing international body of literature highlighting LGBT populations as being at elevated risk for depression.

A major objective of the study was to examine the influence of minority stressors on depression outcomes. In this study, most participants had experienced at least one discrimination

event in their lifetime, and half reported being victimized due to their sexual orientation or gender identity. Consistent with the MSM (Meyer, 2003), minority-specific stressors including experiences of discrimination and victimization were strongly associated with elevated levels of depression levels. Previous studies conducted in Thailand also reported associations between depression and social discrimination and VSs among LGBT populations (Yadegarfard, Meinhold-Bergmann, & Ho, 2014; UNDP, USAID, 2014; Zachau & Cortez, 2017). Most Thai LGBTs live in a society with intense pressure to conceal their identity to escape social disapproval (UNDP, USAID, 2014).

According to the MSM, identity concealment can have negative consequences on mental health, including reduced levels of social support and negative self-regard (Meyer, 2003). Approximately half of the sample reported disclosing their LGBT identity to important individuals in their lives. In the current study, level of concealment (not disclosing) of one's sexual orientation or gender identity was associated with elevated rates of depression. These findings were consistent with research from the US, which found high rates of depression among LGBT populations based on identity concealment (Riggle, Rostosky, Black, & Rosenkrantz, 2017). Public policy approaches such as anti-discrimination laws will be required to reduce the negative influences of social stigma on the mental health of Thai LGBT populations.

Besides minority stressors, other factors including levels of general stress, coping strategies, and diagnosis with a chronic disease also influenced levels of depression. In our sample, the majority (60%) of Thai LGBT populations reported having moderate to very severe stress. These findings were consistent with a prior study in Thailand, which reported that 70% of study participants indicates high levels of general stress (Pearkoa, 2013). Levels of stress are positively and strongly associated with depression in LGBT populations (McCarthy, Fisher, Irwin, Coleman, & Pelster, 2014). Coping strategies (e.g., problem-focused, avoidance, and seeking social support coping) are a central feature of the emotional process, and they represent an individuals' efforts to manage generated emotions (Lazarus, 2006).

By contrast, ineffective coping or using less helpful methods can create harmful consequences. We found that depression in our participants was significantly predicted by using less problem-focusing and seeking less social support as coping methods and high reliance on avoidance coping. The findings were in line with the same patterns found in recent studies that examined the influence of coping strategies on depression outcomes among LGBT populations in the United States (Toomey, Ryan, Diaz, & Russell, 2018; White Hughto, Pachankis, Willie, & Reisner, 2017). Chronic disease was the last non-minority stress factor associated with depression in LGBT participants. High rates of poor physical health from chronic disease that cannot be cured completely lead to the experience of burdensomeness (Institute of Medicine, 2011). Depression is one of the most common complications among LGBT individuals who suffer from having a chronic disease (Hoy-Ellis & Fredriksen-Goldsen, 2016).

Limitations. The study makes an important contribution to LGBT mental health research in Thailand. However, study limitations should be noted. First, the study involved a cross-sectional survey design. As such, the determination of cause and effect cannot be established. Although the sample size was relatively large, the study comprised non-probability volunteer samples. Therefore, the generalizability of study findings to the larger Thai LGBT population is unknown. In addition, study participants were primarily biological males, homosexual, and cisgender. Additional research will be needed to examine more diverse samples of LGBT populations based on sexual orientation (i.e., bisexual), gender (i.e., female), and gender identity (i.e., transgender).

Conclusions

The study findings emphasized that Thai LGBT individuals experience negative mental health outcomes associated with minority-specific stressors and other non-specific risk factors. By applying a vigorous conceptual framework and sophisticated methodologies, the outcomes provided strong fundamentals of groundwork for LGBT research in Thailand and other countries. Interventions focusing on reducing social stigma, improving coping responses in the face of minority stress, and refining the cultural competency of mental health professionals are needed and should be a priority in Thailand.

References

Albuquerque, G.A., de Lima Garcia, C., da Silva Quirino, G., Alves, M.J.H., Belém, J.M., dos Santos Figueiredo, F.W.,… & de Abreu, L.C. (2016). Access to health services by lesbian, gay, bisexual, and transgender persons: Systematic literature review. *BMC International Health and Human Rights*, 16(2), 1–10.

Baams, L., Grossman, A.H., & Russell, S.T. (2015). Minority stress and mechanisms of risk for depression and suicidal ideation among lesbian, gay, and bisexual youth. *Developmental Psychology*, 51(5), 688–696.

Beck, A.T., Steer, R.A., & Carbin, M.G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, 8(1), 77–100.

Brislin, R.W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216.

Clark, F. (2014). Discrimination against LGBT people triggers health concerns. *The Lancet*, 383(9916), 500–502.

Cochran, W.G. (1953). *Sampling techniques* (2nd Edition). New York: John Wiley and Sons. Inc.

DMH. (2017). *Thai Department of Mental Health News*. Retrieved from http://www.prdmh.com/ข่าวสาร/ข่าวแจกกรมสุขภาพจิต/860-พบ-5-กลุ่มโรคหลักก่อปัญหาสุขภาพจิตคนไทยสูงถึง-7ล้านคน-คาดแนวโน้มมากขึ้นโดยเฉพาะ“เหล้า-ยาเสพติด.”html.

DMH. (2019). *Department of Mental Health news*. Retrieved from http://www.prdmh.com/ข่าวสาร/ข่าวแจกกรมสุขภาพจิต/1384-กรมสุขภาพจิต-ห่วงวัยรุ่นเยาวชนไทยมีภาวะซึมเศร้า-แนะคนรอบข้างรับฟังอย่างเข้าใจ.html.

Hamburger, M.E., Basile, K.C., & Vivolo, A.M. (2011). *Measuring bullying victimization, perpetration, and bystander experiences: A compendium of assessment tools.* Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

Hatzenbuehler, M.L., Nolen-Hoeksema, S., & Erickson, S.J. (2008). Minority stress predictors of HIV risk behavior, substance use, and depressive symptoms: results from a prospective study of bereaved gay men. *Health Psychology*, 27(4), 455–462.

Harkness, J., Pennell, B.E., & Schoua-Glusberg, A. (2004). Survey questionnaire translation and assessment. *Methods for Testing and Evaluating Survey Questionnaires*, 546, 453–473.

Herek, G.M., Gillis, J.R., & Cogan, J.C. (2009). Internalized stigma among sexual minority adults: Insights from a social psychological perspective. *Journal of Counseling Psychology*, 56(1), 32–43.

Hoy-Ellis, C.P., & Fredriksen-Goldsen, K.I. (2016). Lesbian, gay, & bisexual older adults: Linking internal minority stressors, chronic health conditions, and depression. *Aging & Mental Health*, 20(11), 1119–1130.

Hughes, T.L., Johnson, T.P., Steffen, A.D., Wilsnack, S.C., & Everett, B. (2014). Lifetime victimization, hazardous drinking, and depression among heterosexual and sexual minority women. *LGBT Health*, 1(3), 192–203.

Institute of Medicine. (2011). *The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding.* Washington, DC: The National Academies Press.

King, M., Semlyen, J., Tai, S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008). *Mental disorders, suicide, and deliberate self-harm in lesbian, gay and bisexual people: A systematic review of the literature*. National Institute for Mental Health England, London.

Kingston, J. (2019). *The politics of religion, nationalism, and identity in Asia.* Rowman & Littlefield Publishers, Maryland.

Kittiteerasack, P. (2012). Trends and assessment of suicidal behavior. *Thai Journal of Science and Technology*, 20(5), 468–477.

Kittitteerasack, P., Steffen, A., & Matthews, A. K. (2019). The validity and linguistic testing of translated measures of sexual orientation and gender identity for research in lesbian, gay, bisexual, and transgender (LGBT) populations in Thailand. *Nursing Journal*, 46(4), 122–137.

Krieger, N., Smith, K., Naishadham, D., Hartman, C., & Barbeau, E. M. (2005). Experiences of discrimination: validity and reliability of a self-report measure for population health research on racism and health. *Social Science & Medicine*, 61(7), 1576–1596.

Lazarus, R.S. (2006). Emotions and interpersonal relationships: Toward a person centered conceptualization of emotions and coping. *Journal of Personality*, 74(1), 9–46.

Mallory, C., Hasenbush, A., & Sears, B. (2015). *Discrimination and harassment by law enforcement officers in the LGBT community.* The Williams Institute, University of California.

McCarthy, M.A., Fisher, C.M., Irwin, J.A., Coleman, J.D., & Pelster, A.D.K. (2014). Using the minority stress model to understand depression in lesbian, gay, bisexual, and transgender individuals in Nebraska. *Journal of Gay & Lesbian Mental Health*, 18(4), 346.

Meyer, I.H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychological Bulletin*, 129(5), 674–697.

Mohr, J., & Fassinger, R. (2000). Measuring dimensions of lesbian and gay male experience. *Measurement and Evaluation in Counseling and Development*, 33(2), 66.

Pearkao, P (2013). Stress and depression among Thai gay, Kathoey (Transgender). *Journal of Nursing Science & Health*, 36(2), 95–104.

Reisner, S.L., Vetters, R., Leclerc, M., Zaslow, S., Wolfrum, S., Shumer, D., & Mimiaga, M.J. (2015). Mental health of transgender youth in care at an adolescent urban community health center: a matched retrospective cohort study. *Journal of Adolescent Health,* 56 (3), 274–279.

Riggle, E.D., Rostosky, S.S., Black, W.W., & Rosenkrantz, D.E. (2017). Outness, concealment, and authenticity: Associations with LGB individuals' psychological distress and well-being. *Psychology of Sexual Orientation and Gender Diversity*, 4(1), 54–62.

Silpakit, O. (2012). Srithanya stress scale. *Journal of Mental Health of Thailand*, 16(3), 177–185.

Snow, J., & Mann, M. (2013). *Qualtrics survey software: Handbook for research professionals*. Qualtrics Labs, Inc.

Su, D., Irwin, J.A., Fisher, C., Ramos, A., Kelley, M., Mendoza, D.A.R., & Coleman, J.D. (2016). Mental health disparities within the LGBT population: A comparison between transgender and nontransgender individuals. *Transgender Health*, 1(1), 12–20.

Suphamongkhon, N., & Kotrajaras, S. (2004). *Anxiety, social support, and coping strategies*

of university students. Master thesis. Faculty of Psychology, Chulalongkorn University, Thailand.

The Excellence Center for Depression Disorder (2019). *Depression Prevention and Solution.* Retrieved from http://www.thaidepression.com/www.

Toomey, R.B., Ryan, C., Diaz, R.M., & Russell, S.T. (2018). Coping with Sexual Orientation–Related Minority Stress. *Journal of Homosexuality*, 65(4), 484–500.

UNDP, USAID (2014). *Being LGBT in Asia: Thailand Country Report*. Bangkok: UNDP, UNSAID.

Whitehead, J., Shaver, J., & Stephenson, R. (2016). Outness, stigma, and primary health care utilization among rural LGBT populations. *PloS one*, 11(1), e0146139. doi: 10.1371/journal.pone.0146139.

White Hughto, J.M., Pachankis, J.E., Willie, T.C., & Reisner, S.L. (2017). Victimization and depressive symptomology in transgender adults: The mediating role of avoidant coping. *Journal of Counseling Psychology*, 64(1), 41.

WHO. (2017). *"Depression: let's talk" says WHO, as depression tops list of causes of ill health*. Retrieved from https://www.who.int/news-room/detail/30-03-2017--depression-let-s-talk-says-who-as-depression-tops-list-of-causes-of-ill-health.

WHO. (2018). *Depression: Key facts*. Retrieved from https://www.who.int/news-room/fact-sheets/detail/depression.

Yadegarfard, M., Meinhold-Bergmann, M.E., & Ho, R. (2014). Family rejection, social isolation, and loneliness as predictors of negative health outcomes (depression, suicidal ideation, and sexual risk behavior) among Thai male-to-female transgender adolescents. *Journal of LGBT Youth,* 11(4), 347–363.

Yarns, B.C., Abrams, J.M., Meeks, T.W., & Sewell, D.D. (2016). The mental health of older LGBT adults. *Current Psychiatry Reports*, 18(6), 60.

Zachau, U., & Cortez, C. (2017). *LGBTI in Thailand: New data paves way for more inclusion*. Retrieved from https://blogs.worldbank.org/eastasiapacific/lgbti-in-thailand-new-data-paves-way-for-more-inclusion.