INSIGHTS into MENTAL HEALTH Needs and IN MENTAL HEALTH CARE WITHIN HIV CONTEXT

among gay men, bisexual men, and other men who have sex with men in Viet Nam

ViiV Healthcare

LIGHTHOUSE Hải Đăng

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ACRONYMS AND TERMINOLOGY

MSM	Men who have sex with men
AIDS	Acquired immune deficiency syndrome
LGBT+	Lesbian, Gay, Bisexual, Transgender and other sexual minority
Self stigma	Is the prejudice which people with a stigmatizing attribute turn against themselves, where they come to believe and internalize negative public stereotypes, resulting in diminished self-esteem, self-efficacy and perceived worth. In this study, self-stigma is involved with individual attitude towards his own homosexual behavior.
Mental disorders	Are various mental issues which are generally characterized by a combination of abnormal thoughts, perceptions, emotions, behaviour and relationships with others. Some common mental disorders include: depression, anxiety disorders, and stress disorder. Self-harm and suicide are serious their consequences.
Mental health services	Are all mental health-related supports (free or paid) that a person receives to prevent, improve, or treat all issues about individual psychological lives.

I. INTRODUCTION

1.1. Background

There are over 200,000 estimated men who have sex with men (MSM) in Vietnam (PEPFAR, 2019); however, there is still significant stigma and discrimination surrounding this population (UNDP & USAID, 2014). High levels of psychological stress caused by internalized homophobia and feelings of inadequacy, combined with a lack of social support and damage to educational and professional prospects, put this population at a greater risk for developing mental health disorders (Philbin et. al, 2018). The MSM population also faces other health disparities, such as the increased risk of HIV and other STIs (Colby, Cao, & Doussantousse 2004).

According to a 2017 report from the Vietnam Administration of HIV/AIDS control (VAAC, 2017), HIV prevalence among MSM was 12.2%, nearly double the corresponding rate in 2015. That report also reported that condomless sex is relatively common (13.2% respondents said they have never used condom when having sexual intercourse and 47.7% had condomless sex in the last time they had sexual intercourse), high drug use (20% of all MSM reported lifetime drug use: 14% tested positive for opiates in their urine), and have sex under the influence of drugs (14%).

The Minority Stress Model of Meyer (2003) suggested that stigma, prejudice, and discrimination generate a hostile and stressful social environment that puts sexual minorities, such as MSM, at greater risk for developing mental health conditions. In Vietnam, the WHO estimates there to be a 4% prevalence of depression and 2.2% prevalence of anxiety disorders (2017). Vu et. al (2017) also supported the presence of an association between homosexuality-related stigma and depression in Vietnamese MSM. In addition, Asian culture increases internalized heterosexualism, which can have an impact on mental health (Szymanski & Sung, 2013). A higher prevalence of mental health disorders in the LGBT population has been shown in university students from five Southeast Asian countries (Peltzer & Pengpid, 2016), and the percentage of MSM in Hanoi with significant psychological distress has been shown to be as high as 61% (Giang, Viet & Hao, 2012). However, psychological disorder prevalence in the general MSM population has never been measured in Vietnam.

Poor mental health along with other psychosocial problems among MSM populations have been shown to increase HIV transmission risk behaviors (Abayomi et. al, 2013; Collins et. al, 2000; Carey et. al, 2004; Giang, Viet & Hao, 2012; Koblin et. al, 2006; Sikkema et. al, 2011, interfere with the efficacy of HIV behavioral interventions (Safren et. al, 2010), and impact adherence to antiretroviral treatment (Mellins et. al, 2009). The relationships of mental health disorders among MSM and HIV risk suggest that mental health interventions could also reduce HIV transmission in the MSM population.

Although recent scientific literature is in favor of integrating mental health into HIV interventions (Parsons et. al, 2016; O'Cleirigh et. al, 2018; Van Luenen et. al, 2017), mental health services are lacking in Vietnam, with only one mental health practitioner per 100,000 people (Murphy et. al, 2015). Additionally, cultural barriers and limited awareness of mental health disorders prevent individuals from seeking mental health services even if providers were available (Vuong, 2011, Wynaden et. al, 2005). Both these factors may further exacerbate the mental health disparity faced by sexual minorities in Asian countries. This leaves an opening for community-based organizations and public health organizations to intervene through increasing education and accessibility of support systems, especially for populations that have higher rates of mental distress.

Social support has been shown to moderate the negative impacts of stress on psychological well-being (Thoits, 2011). Social changes such as affirming and protective school environments have been shown to positively impact the mental health of LGBT youth. Parental and peer support are also related to positive mental health (Russell & Fish, 2016), suggesting other potential avenues for mental health intervention at the social level. Addressing internalized stigma would be another option for community-based mental health intervention, as internalized stigma has been positively correlated with depression in MSM (Rosser et. al, 2008; Li et. al 2009).

An understanding of the current state of mental health within the MSM population, as well as their perceptions on mental health and mental healthcare, is necessary to comprehend the need for mental health care within the population and address the potential barriers to accessing appropriate care. Through this, comprehensive and appropriate mental health interventions can be designed and implemented to address mental health needs and reduce HIV transmission risk with the goal of minimizing the incidence of new HIV cases in a population facing significant social and health disparities.

1.2. Objective

- Describe the mental health status of the MSM community in Vietnam
- Consider the related factors (self-stigma, social support, sexual behavior) and the association between them and mental health status
- Assess the awareness about mental health and mental health care among MSM community
- Consider the availability of mental health services and identify barriers to access to this service.

1.3. Research scope

An overview of MSM's mental health research shows that the number of publications on this issue in Vietnam is limited. Meanwhile, recent international research shows that mental health and its relationship with other factors are outstanding topics that many researchers are concerned about. In the limit of time and resources, the research focuses on the specific mental health aspects and three related factors, including social support, self-stigma, and sexual behavior. On that basis, the research suggests potential psychosocial interventions to improve mental health, reduce HIV risky sexual behaviors, and increase access to health services in the Vietnamese MSM community.

1.4. Participants

The research was conducted among men who have sex with men (MSM) who meet the following criteria:

- Biologically born as male
- Age 18 or older
- Self-reported as gay, bisexual man, or heterosexual man
- Self-reported to have had sex with at least one man in the past
- Good command of spoken and written Vietnamese
- Living in Vietnam with Vietnamese nationality
- Agree to participate in the research

1.5. Methods

We developed an online questionnaire to collect quantitative data to obtain a diverse sample of living areas and sexual orientation. A survey was designed on Google Forms and the responses updated on linked online Microsoft Excel. In this way, we ensure the participants' confidentiality and promote self-reporting as accurate as possible. We widely published and communicated it through the social networks that MSM often use. Invitations and links to the survey were sent via dating apps (Blued, Grindr, Jack'D), Facebook channels, websites of organizations, and other groups that work among MSM nationwide.

Participation in the research was completely voluntary. Potentially interested participants would read a page containing an overview of the research, including the objectives, activities, inclusion criteria, benefits, and compensation for participants, voluntary and anonymous nature of the study, ethical considerations of the study, and the study's commitment to the privacy and confidentiality of the participant. MSM who were interested in participating in the study would be referred to an online consent form, where participants would consent by using an "Agree" option or choose an "Disagree" to withdraw from the survey.

We collected the data within 40 days, from October 10, 2019, to November 30, 2019. After officially closing the survey, the research team received 430 responses. Then, we

cleaned the data. The ineligible responses (lack of logical answers; the respondents did not meet the selection criteria; the information provided is incomplete) were removed. Finally, 301 eligible responses were coded and analyzed via SPSS software.

1.6. Ethics

Potential participants in the study were informed about the study's objectives, process, procedures, benefits, risks, and utilization of the findings. Participants voluntarily indicated acceptance to participate in the study on the online consent form and could stop taking part in the study at any time. Only those participants who indicated their acceptance are allowed to proceed in responding to the online survey. The consent page was available in Vietnamese.

All possible measures to ensure safety, inclusion, confidentiality, and comfort of participants were undertaken throughout the study. The study did not collect any identifying information, and all collected data remained anonymous and confidential.

The survey was collected via the Google form under the management of the research team and the data collected was kept confidential by email account. Only members of the research team directly involved in the data analysis could access this data source.

The study protocol was submitted for ethical review to the Internal Review Board in human subject research at the Institute for Social Development Studies before the commencement of the study.

II. RESULTS

2.1. Sample's characteristics

2.1.1. Socio-demographics

The research was conducted among 301 MSM, including 76.7% gay men, 22.3% bisexual men, and 10% others. The average age of participants was 23.16 (18 – 48 years old). 60.8% was living in Hanoi, the rest of the participants were sparsely distributed in different areas, popularly such as Hai Phong, Thai Nguyen, Can Tho, etc.

Table 1. Socio - demographic characteristics

	Frequency	**Percent (%)**
Sexual orientation		
Gay man	231	76.7
Bisexual man	67	22.3
Others	3	10
Age	Median (IQR): 21 (20-25)	
18 - 20	106	35.2
21 - 24	113	37.5
> 24	82	27.2
Current living area (n=301)		
Hanoi	141	46.8
Ho Chi Minh city	42	14.0
Others	118	39.2
Education level (n=301)		
Less than High school diploma	6	2
Vocational school	14	4.7
University, College	189	62.8
Postgraduate education	20	6.6
Current job		
Unemployed/ looking for a job	9	3
Students	145	48.2
Freelance	55	18.3
Employee in private sector	49	16.3
Employee in public sector	24	8
Self-employed	14	4.7
Others	5	1.7
Monthly income	Median (IQR): 5 (3-8)	
< 5 million VND	107	35.5
5 - 10 million VND	162	53.8
> 10 million VND	32	10.6

Relationship status		
Not in a romantic relationship	106	35.2
In a romantic relationship	118	39.2
In an open relationship	44	14.6
Uncertain	33	11
You currently live with...		
Alone	91	30.2
With my family (parents, siblings)	118	39.2
With others	92	30.6
The number of (sexual) partners in last 3 months		
No partners	26	8.6
One partner	163	54.2
More than one partner	112	37.2
Frequency of participating in community activities in the last 6 months		
None	75	24.9
1 - 2 time(s)	142	47.2
3 or more times	84	27.9

The participants had quite a high level of education, 62.8% had graduated from higher education, and 6.6% completed postgraduate courses. 48.2% of participants were students who rely on their family finances, some others are both supported by their family and other jobs per se. Besides, 18.3% are freelancers. 34.6% of participants self-reported that their current income is not enough to meet the basic living expenses.

Among 301 participants, 39.2% are in a relationship and 35.2% are not in a relationship, 14.6% are in an open relationship. Of these, 37.2% have had more than one partner in the last 3 months. 39.2% are living with family (parents, siblings) and the rest (60.8%) are living alone or with someone other than their family members (friends, relatives, partners).

Most of the participants had a low frequency of participating in MSM/ LGBT community activities or events in the last 6 months. Specifically, 24.9% of people did not participate in any activities or events, and the level of participation from 1-2 times accounted for 47.2%.

2.1.2. Sexual health (HIV and STIs)

In terms of sexual health, we only looked at HIV and STIs issues of this key population. Specifically, the study looks at testing, treatment, prevention of HIV and STIs in these participants.

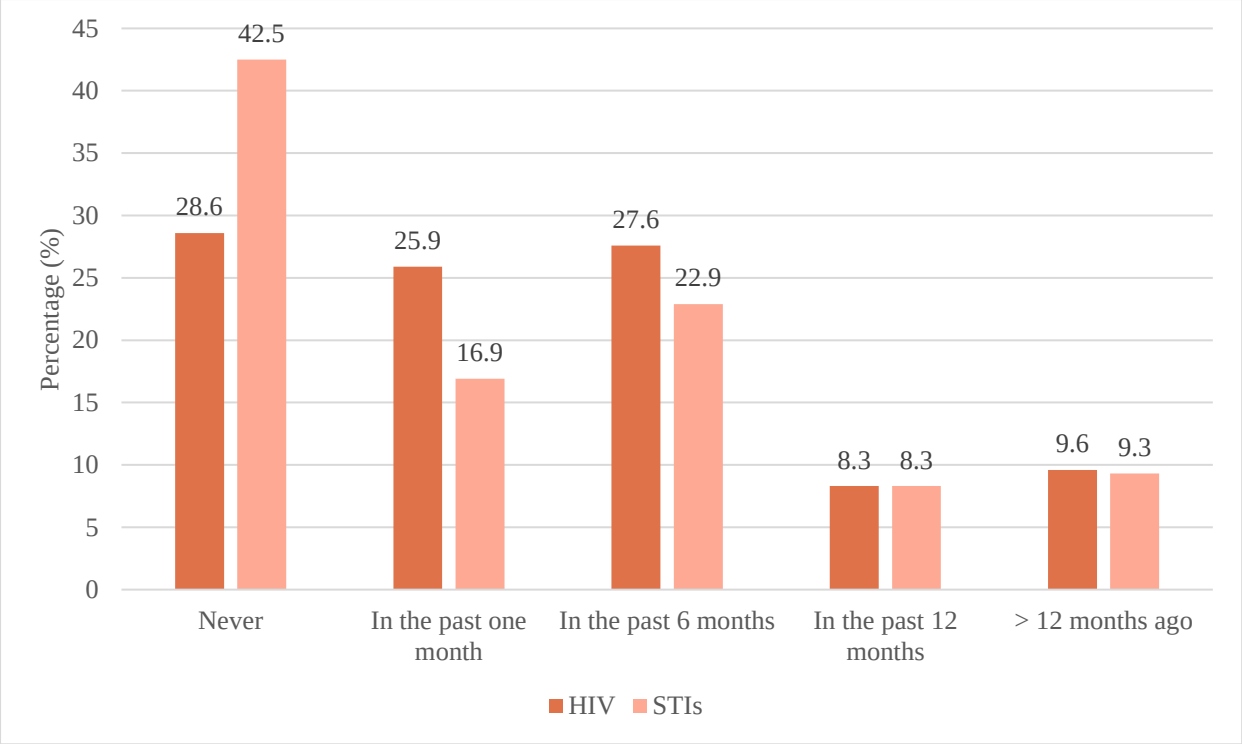


Figure 1. The last time you tested for HIV, STIs

(n=301)

The results indicate that the number of people who have never tested for HIV and STIs was still high. 42.5% of people who have never had an STI test were much higher than the figures for people who have never tested for HIV (28.6%). Among people who have ever tested for HIV/ STI, most recent tests were 6 months ago.

Table 2. The status of HIV testing, treatment and prevention

	Frequency	Percent (%)
HIV status (n=215)		
Negative	182	60.5
Positive	23	7.6
Unclear/ Don't want to answer	10	3.3
Antiretroviral therapy (n=23)		
Yes, currently	20	87.0
Used in the past but not using now	2	8.7
Never	1	4.3
Viral load status (n=32)		
Undetectable	18	78.3
Detectable	1	4.3
Don't know	4	17.4
PrEP status (n=182)		
Using PrEP	37	20.3
Not using PrEP	18	9.9
Used to using PrEP	127	69.8

Out of 215 people who have ever tested for HIV, 7.6% were positive for HIV. However, there were still 4.3% (1/23) people living with HIV but currently not maintaining ARV. When it comes to 182 people who have ever tested and had negative HIV, the use of PrEP was still limited, only 20.3% were using PrEP. Besides, 9.9% have used PrEP but are no longer using it.

In terms of STIs, 28 out of 173 people who have tested for STIs caught a type of any disease. HBV was the disease with the highest incidence rate (15 people), followed by syphilis (10 people) and gonorrhea (7 people).

2.2. Mental health

2.2.1. The status of mental health

2.2.1.1. Psychological disorders

The study measured three main types of mental disorders, including stress, depression, and anxiety. Depression, Anxiety, Stress Scales (DASS-21) (Henry & Crawford, 2011) were used in this study, with the Vietnamese version used in Tran et al. (2019) for nurses in Vietnam. In this study, the reliability scale is 0.95.

Table 3. The mean level of psychological disorders

Level	Stress		Depression		Anxiety	
	Frequency	Percent (%)	Frequency	Percent (%)	Frequency	Percent (%)
Normal	21	7	0	0	0	0
Mild	29	9.6	1	0.3	0	0
Moderate	73	24.3	81	26.9	43	14.3
Severe	100	33.2	87	28.9	50	16.6
Extremely severe	78	25.9	132	43.9	208	69.1

The result indicates that those who have one of any psychological disorders accounted for a high proportion. Specifically, the proportion of people with severe and extremely severe anxiety was the highest (85.7%), followed by depression (71.8%). The figure for severely (and extremely severe) stressed people was the lowest (59.1%) but still a significant level.

2.2.1.2. Self-harm and suicide risk

Self-harm and suicide are also discussed in this study. The participants' self-harm and suicidal status are examined through two dimensions: (1) frequency of thinking about self-harm, suicide, and (2) used to commit self-harm, suicide in the past.

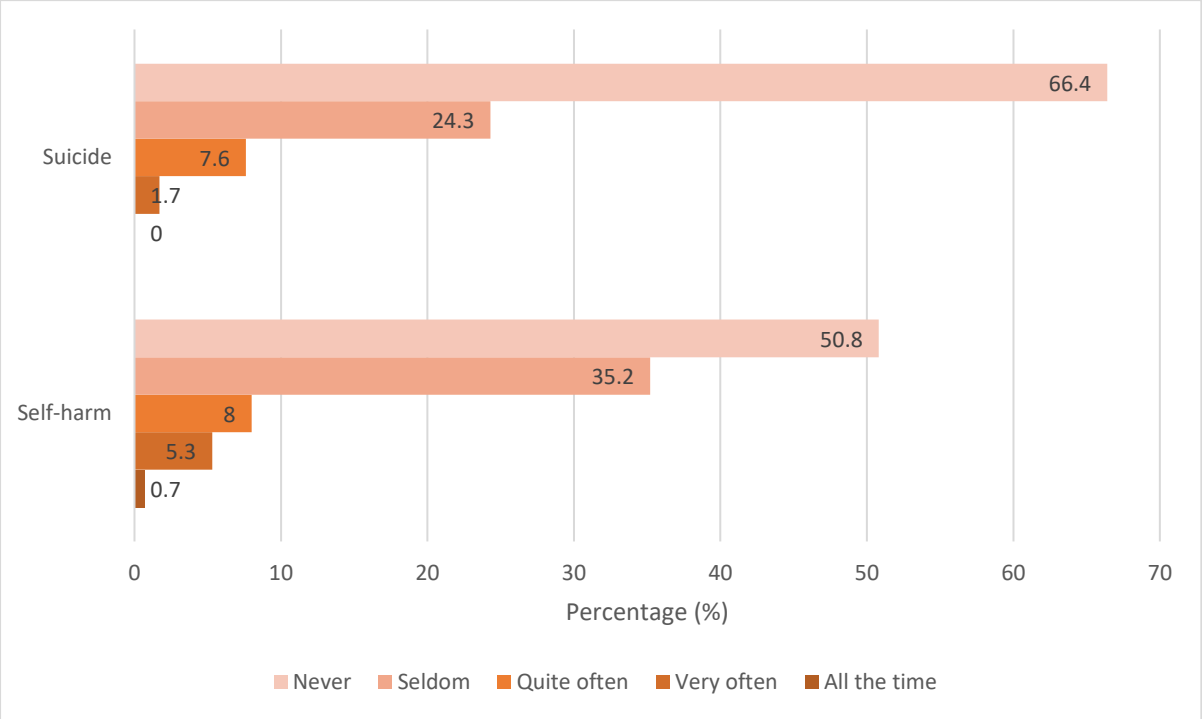


Figure 2. The frequency you thought of self- harm, suicide in last six months

(n=301)

49.2% of participants thought of self-harm and 33.6% had suicidal ideation in the last 6 months. Especially, 14% (quite) often thought of self-harm and 9.3% (quite) often had suicidal ideation.

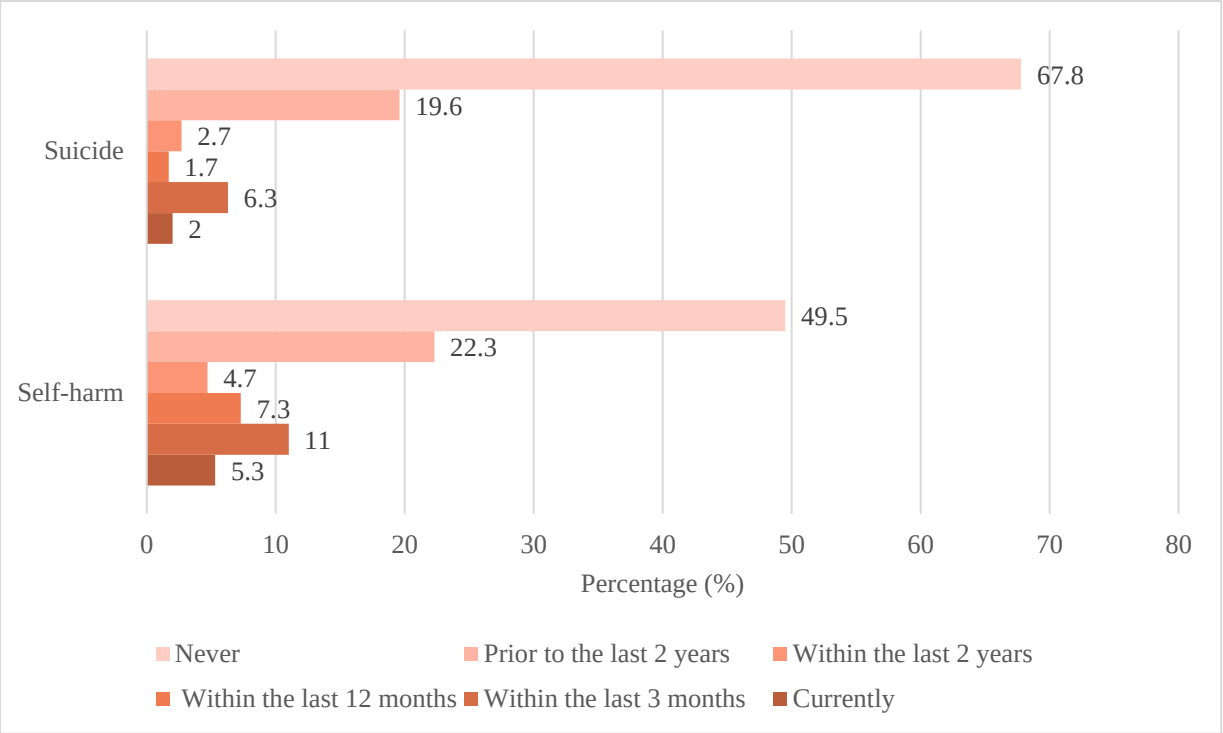


Figure 3. Self-harming behaviors and suicide risk

(n=301)

In terms of self-harming behaviors, up to 50.5% have ever tried to commit self-harm in the past. Notably, 16.3% have tried this behavior in the last three months.

Concerning the risk of suicide, 32.2% have attempted suicide in the past. Among them, 8.3% of people have tried to commit suicide within the last three months.

2.2.2. Perceptions on mental health

2.2.2.1. The knowledge about psychological disorders

Based on the results, it could be seen that most participants self-reported that there was still a lot of stigma attached to psychological disorders, 89.7% agreed and strongly agreed with this point of view. Up to 66.8% of people believed that "even if they seem OK, people with chronic psychological disorders always have the potential to commit violent acts."

They also were open-minded and had remarkable insights into psychological disorders. "Virtually anyone can have a psychological disorder" was approved by 87.7% of participants. 81.4% thought that "Most people with serious psychological disorders can, with treatment, get well and return to productive lives." The majority of

participants also agreed and strongly agreed that having a psychological disorder was no different from any other diseases (69.1%) and mental illness could be cured (68.2%).

However, some misconceptions about mental health have still existed.

42.2% of the participants believed that we could easily recognize someone who has had a severe mental disorder or 29.7% thought that having any mental illnesses was a sign of weakness.

Relevant to the prevention or treatment of mental health problems. 25.3% would not think about seeking professional supports if they had any mental disorder. Instead, they could overcome it on their own. More than one-fifth of participants had no belief that a mental illness could be cured forever (26.5%), and there was no way to prevent it (28.3%).

Table 4. The knowledge about psychological disorders

	Strongly disagree (%)	**Disagree (%)**	**Agree (%)**	**Strongly agree (%)**	**Mean (SD)**
1.Virtually anyone can have a psychological disorder	5.3	7	58.1	29.6	3.12 (0.75)
2.There is still a lot of stigma attached to psychological disorders	2.3	8	57.8	31.9	3.19 (0.68)
3.Most people with serious psychological disorders can, with treatment, get well and return to productive lives	4	14.6	59.5	21.9	2.99 (0.73)
4.Having psychological disorder is no different from having any kind of illness	7	23.9	50.5	18.6	2.81 (0.82)
5.I do not believe psychological disorders can ever really be cured	24.3	43.9	25.9	6	2.14 (0.85)
6.People with chronic psychological disorders are, by far, more dangerous than the general population	8.3	25.2	52.8	13.6	2.72 (0.80)
7.Mental health facilities should be kept out of residential neighborhoods	28.9	44.2	21.9	5	2.03 (0.84)
8.Even if they seem OK, people with chronic psychological disorders always have the potential to commit violent acts	7.3	25.9	53.2	13.6	2.73 (0.79)

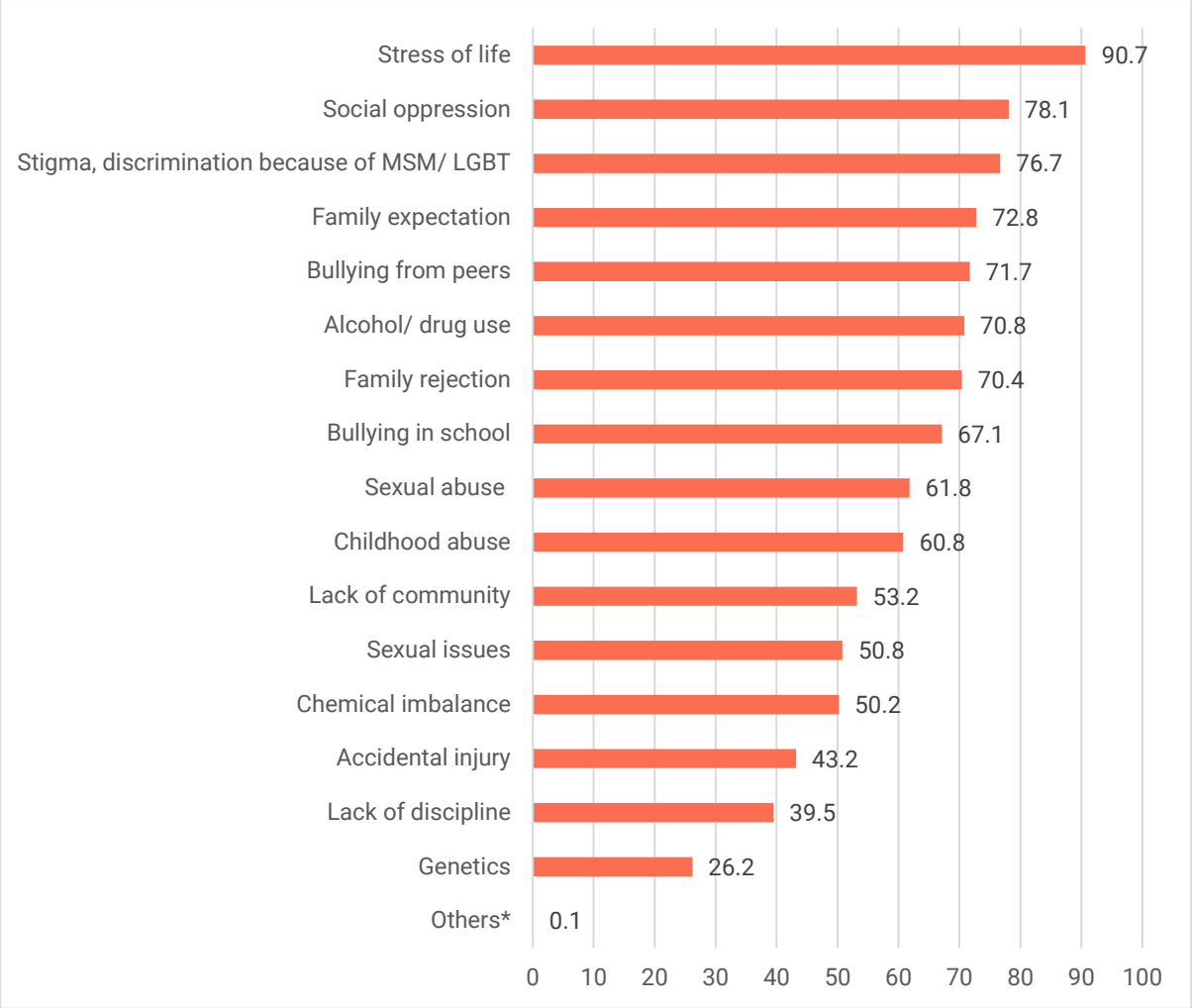
9.It is easy to recognize someone who once had a serious psychological disorder	12.6	45.2	36.2	6	2.36 (0.78)
10.The best way to handle those with psychological disorders is to keep them behind locked doors	56.1	29.6	11.6	2.7	1.61 (0.80)
11.Mental illness/ disorder is a symbol of weakness	30.6	40.2	22.3	7	2.06 (0.90)
12.Mental health is only a problem for people over the age of 25	46.8	38.5	11.6	3	1.71 (0.79)
13.Any psychological disorder can be handled on my own, without any professional support	27.6	47.2	20.6	4.7	2.02 (0.82)
14.Nothing can be done to prevent psychological disorders	28.9	42.5	24.3	4.3	2.04 (0.84)

2.2.2.2. Causes of psychological disorders

In general, the causes of psychological disorders are quite diverse, from biological factors, past experiences to external factors. According to the research results, the stress in life was the most likely factor causing psychological disorders (90.7%) and genetics had the lowest impact (26.2%).

The study also finds that social oppression (78.1%), stigma and discrimination for being MSM/LGBT (76.7%), and family expectation (72.8%) were the three factors being the most likely to cause psychological disorders among the participants.

Besides, bullying from peers (71.7%) and family rejection (70.4%) were considerably able to influence their mental health.



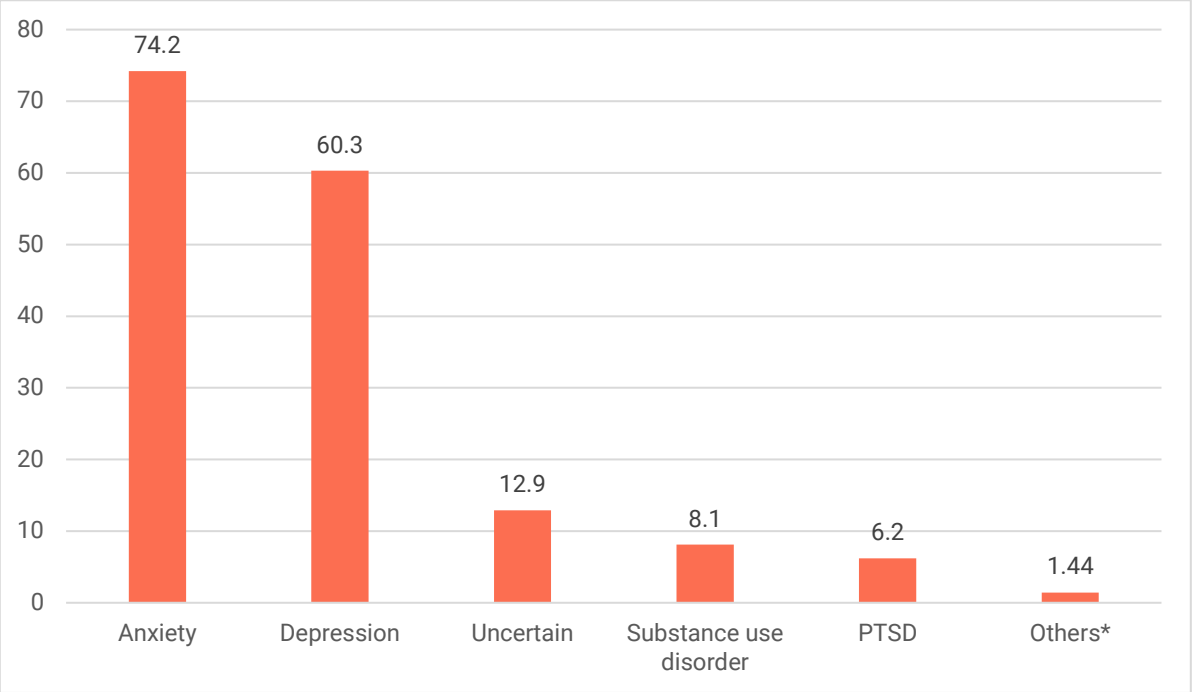
***** *being lovesick, having an incurable disease*

Figure 4. Factors that can cause mental disorders

(n=301)

2.2.2.3. Perceptions on individual mental health

209 (69.4%) participants thought that they had psychological disorders in the past. Among them, anxiety was the disorder that people most worried about (74.2%), followed by depression (60.3%). Also, 12.9% felt that they might have a psychological disorder but they could not identify what it was.



** Personality disorders, sensitive, Attention-deficit hyperactivity disorder (ADHD)*

Figure 5. Type of psychological disorder you have been concerned about

(n=209)

2.3. Other factors

2.3.1. Social support

Social support is measured through a scale of 9 statements to investigate participants' perception of support from family (3 statements), friends (3 statements) and other significant ones (3 statements) in their daily lives. The scale is adapted based on the Multidimensional Scale of Perceived Social Support of Zimet et al. (1998). The scale has a standard distribution (Skewness = -0.430, Kurtosis = 0.542) with Cronbach's Alpha of 8.87. Social support is expressed in three levels: low (<18.69), medium (from 18.69 to 29.45) and high (> 29.45).

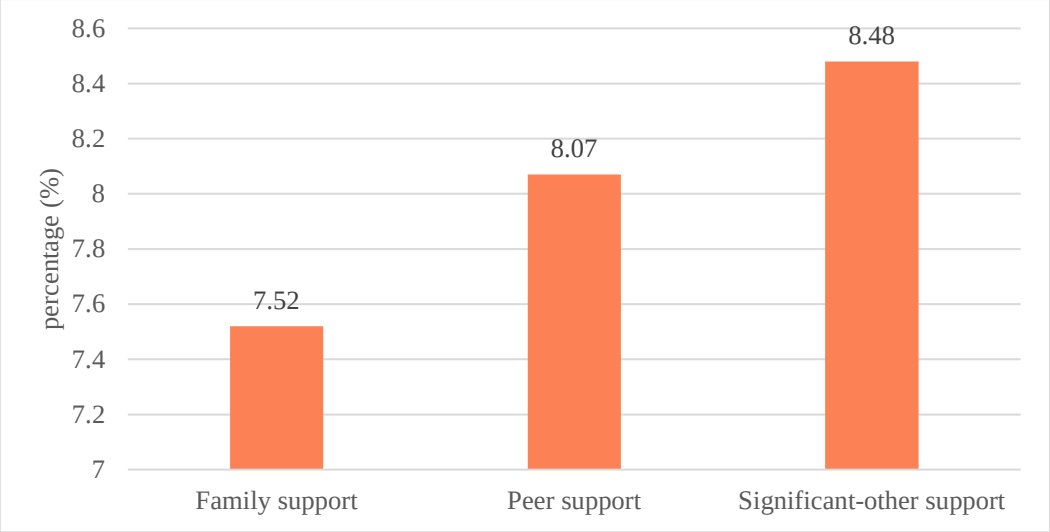


Figure 6. Mean levels of social support

(n=301)

The results showed that, out of 301 participants, only 14.3% had high levels of social support, and 85.7% received moderate and low support. The level of family support (M = 7.52, SD = 2.07) in this group is lower than that of friends (M = 8.07, SD = 2.12) or others (M = 8.48, SD = 2.38). Up to 70.4% of participants said that they could not tell their family about their own problems.

Table 5. Mean levels of social support and living characteristics

	You currently live with...	**N**	**Mean**	**SD**	**95% CI**	**F (p)**
Family support	Alone	91	7.27	1.81	6.89 - 7.65	0.927 (0.397)
	With my family (parents, siblings)	118	7.65	2.08	7.27 - 8.03	
	With others	92	7.59	2.29	7.11 - 8.06	
	Total	301	7.52	2.07	7.28 - 7.75	
Friend support	Alone	91	8.03	1.97	7.62 - 8.44	0.160 (0.852)
	With my family (parents, siblings)	118	8.02	2.12	7.63 - 8.40	
	With others	92	8.17	2.29	7.70 - 8.65	
	Total	301	8.07	2.12	7.83 - 8.31	
Someone support	Alone	91	8.22	2.28	7.75 - 8.69	**3.651 (0.027)**
	With my family (parents, siblings)	118	8.25	2.29	7.83 - 8.66	
	With others	92	9.03	2.52	8.51 - 9.55	
	Total	301	8.48	2.38	8.21 - 8.75	

Table 5 shows that there was no difference in the level of support from family and friends between people living with family and those living alone or with others. However, those who currently living with significant others had a higher level of support (M = 9.03, SD = 2.52) compared to those living alone (M = 8.22, SD = 2.28) or with family members (M = 8.25, SD = 2.29).

2.3.2. Self-stigma

The stigma in this study focuses on MSM's stigma towards their sexuality. Five statements on the Internalized Homophobia Scale (Mayfield, 2003) were made to examine participants' level of self-stigma. The scale reaches the standard distribution (Skewness = 0.40, Kurtosis = -0.132) and has a confidence level of 0.69. Based on the average score, the level of self-stigma is divided into 3 levels: low (<7.52), medium (from 7.52 to 12.56) and high (> 12.56). The results showed that 14.6% of participants had high levels of homosexual self-stigma and 67.1% had moderate levels of self-stigma.

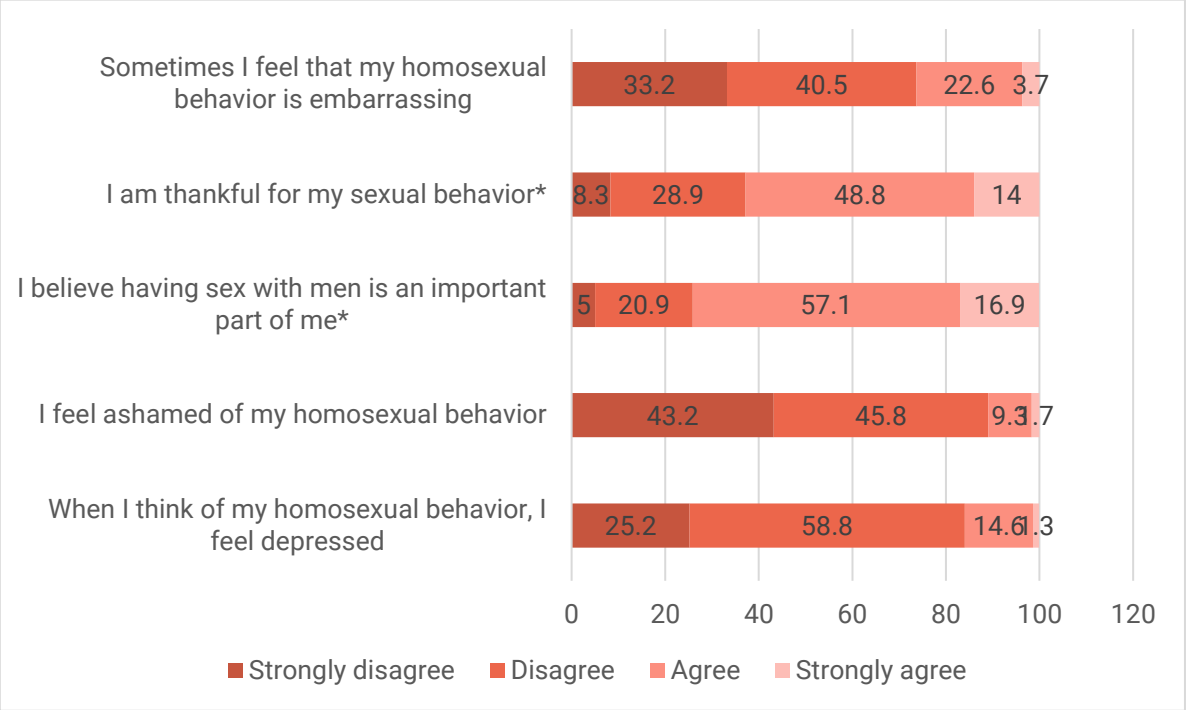


Figure 7. Self-stigma against homosexuality

(n=301)

Specifically, 26.3% of people agreed and strongly agreed that “Sometimes I feel that my homosexual behavior is embarrassing”. 15.9% feel depressed when thinking about their homosexual behavior.

2.3.3. Sexual behaviors

Sexual behavior is measured through a scale of 11 statements (including 5 statements about safe sex behaviors and 6 statements showing risky sexual behavior). The scale is based on the Safe Sex Behaviors Questionnaire (Dilorio, Dudley, Lehr & Soet, 2000) with the confidence of Conbach Alpha = 0.67 in this study. As it reaches the standard distribution (Skewness = - 0.029, Kurtosis = - 0.703), safe sex behaviors are divided into 3 levels: low (<5.06), medium (from 5.06 to 32.61), high (> 32.61). Results showed that 48.2% of participants engaged in safe sex behaviors on average level.

Table 6. Safe and risky sexual behaviors

	Never (%)	**Sometime (%)**	**Usually (%)**	**Always (%)**
I insist on condoms when I have sexual intercourse.	9	23.3	25.6	42.2
I use alcohol or other drugs prior to or during sexual intercourse*	69.1	23.6	5	2.3
I ask potential sexual partners about their sexual histories including HIV and STIs status	26.2	30.9	19.3	23.6
If I disagree with information that my partner presents on safer sex practices, I state my point of view.	11.6	24.9	38.9	24.6
If I know an encounter may lead to sexual intercourse, I have a mental plan to practice safer sex.	6	17.6	29.9	46.5
If my partner insists on sexual intercourse without a condom, I refuse to have sexual intercourse.	11.3	31.2	20.3	37.2
It is difficult for me to discuss sexual issues with my sexual partners*	27.6	38.9	21.3	12.3
When I feel upset I find it easier to have sex with someone new*	44.5	29.6	17.9	8
When I feel upset I find it easier to have sex with someone without condom*	57.5	24.9	13	4.7
Sexual interactions help me feel better when I am upset *	21.9	33.9	31.2	13
I have a hard time saying no to sex, even if I do not want to have sex*	33.2	35.5	20.9	10.3

**Risky sexual behaviors*

Most of the participants have used preventive measures and taken the factors into consideration before having intercourse to ensure a safe sex, however, the frequency of

practising was not high. Specifically, only 42.2% always used condoms when having intercourse, and 26.2% never asked their potential sexual partners about sexual history (including HIV and STI status).

A small number of people feeling depressed also searched for sex as emotional relief, in which 17.9% usually had sex with someone new easily if they felt sad/ boring.

2.4. The association among psychological disorders, social support, self-stigma and sexual behavior

The correlation among psychological disorders, social support, self-stigma and sexual behavior is shown in Table 6. There is a positive correlation between psychological disorders and self-harm risk (r = 0.505, p = 0.000), suicide (r = 0.481, p = 0.000). The analysis also indicated that social support had a negative correlation with mental health problems, psychological disorders (r = -0.226, p = 0.000), risk of self-harm (r = -0.146, p = 0.011), suicide risk (r = -0.156, p = 0.007). Meanwhile, a positive correlation was also shown between stigma and psychological disorders (r = 0.230, p = 0.000). Stigma was also positively correlated with risk of self-harm and suicide, r = 0.139, p = 0.016 and r = 0.138, p = 0.016, respectively. Safe sexual behaviors and mental disorders were statistically negatively associated with each other (r = -0.174, p = 0.002). Similarly, the risk of self-harm and suicide is negatively correlated with safe sex behaviors, respectively r = -0.159, p = 0.006; r = -0.114, p = 0.048).

Table 7. The correlation among psychological disorders, social support, self-stigma and sexual behavior

Factors		Value	(1)	(2)	(3)	(4)	(5)	(6)
Mental health	Psychological disorders (1)	r	1					
		p						
	Self-harm risk (2)	r	0.505	1				
		p	0.000					
	Suicide risk (3)	r	0.481	0.587	1			
		p	0.000	0.000				
Social support (4)		r	-0.226	-0.146	-0.156	1		
		p	0.000	0.011	0.007			
Self-stigma (5)		r	0.230	0.139	0.138	-0.239	1	
		p	0.000	0.016	0.016	0.000		
Safe sexual behavior (6)		r	-0.174	-0.159	-0.114	0.191	-0.272	1
		p	0.002	0.006	0.048	0.001	0.000	

r: Pearson Correlation; *p: Sig. (2-tailed)*

Table 7 presents the results of the regression analysis showing the correlation among social support, self-stigma and psychological disorders. In particular, multivariate

regression analysis showed social support and stigma associated with psychological disorders (β = -0.182, p = 0.002 and β = 0.186, p = 0.001).

Table 8. The correlation among social support, self-stigma and psychological disorders

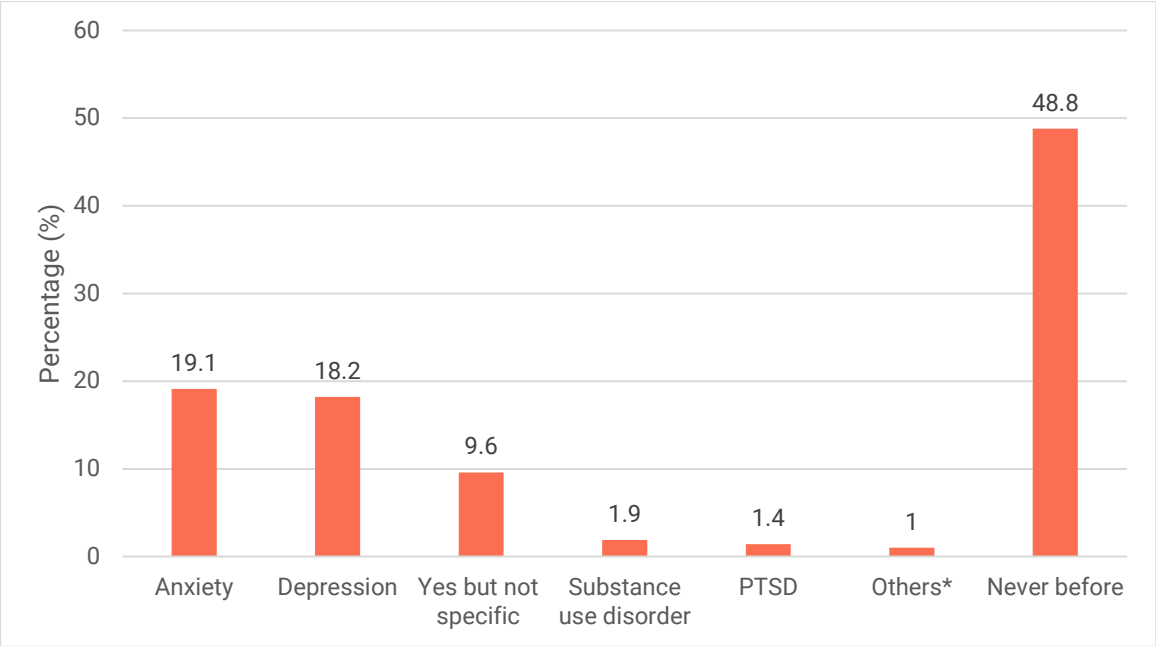
	Psychological disorders		
	β	p	VIF
Social support	-0.182	0.002	1.061
Self-stigma	0.186	0.001	1.061

Note: β: Standardized Coefficients
p: sig value
VIF: Magnification coefficient of variance

2.5. Experience and needs for mental health care

2.5.1. Mental health services/ support

209 participants were concerned that they might have a psychological disorder, howver, only 51.2% (107 people) went to a healthcare facility to diagnose their disorder. Anxiety and depression were the two types that most participants diagnosed with, 19.1% and 18.2%, respectively.



**Attention-deficit hyperactivity disorder (ADHD), Schizophrenia, Personality disorders*

Figure 8. Type of psychological disorder you have ever been diagnosed (n=209)

67 people had undergone treatment out of 107 people who have been diagnosed with a mental disorder. Community groups were the top of the list (37.3%), followed by online

counselors via websites or social networks (32.8%). Meanwhile, professional treatment services are less prevalent. 20.9% treated in the psychiatric department of a hospital, 16.4% went to an independent counselor/psychotherapist, and 14.9% went to a psychotherapy/counseling center. There were also a few people who sought other support (5%) such as private clinics, school psychologists, self-treatment.

Table 9. Where you have treated your psychological disorder(s)

n=107		**Frequency**	**Percent (%)**
Having treated (n=67)	Psychiatrist in Hospital	14	20.9
	Centre (psychological counselling or therapy)	10	14.9
	Independent Counselor/ Psychotherapist	11	16.4
	Online counselors	22	32.8
	CBOs	25	37.3
	Others*	5	7.5
Never having treated (n=40)	Do not want treatment	20	50
	Unaffordable	24	60

**Private clinic, school psychologist, self-treatment*

2.5.2. Perspectives on mental health care

In terms of support that MSM preferred when they had a psychological disorder, counseling/ psychological therapy was still the measure most people chose (30.3%). The participants also prioritized self-healing through the practice of emotional and thinking adjustment skills (27.3%). 19.3% of people also preferred support from family and friends.

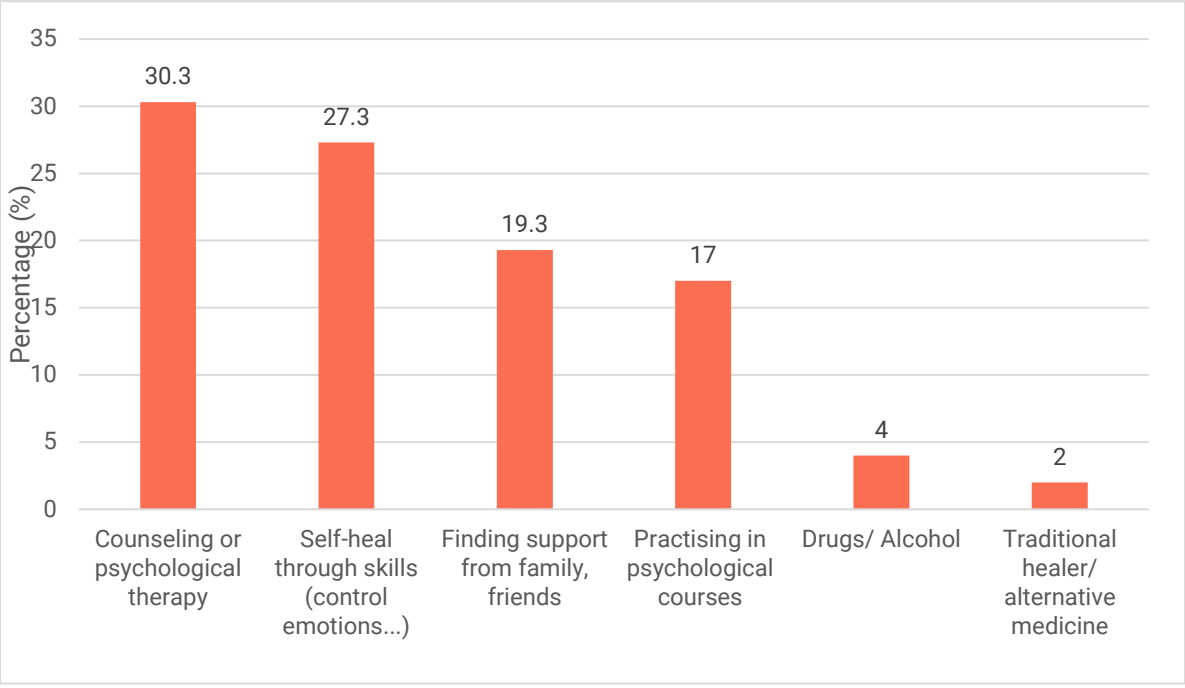
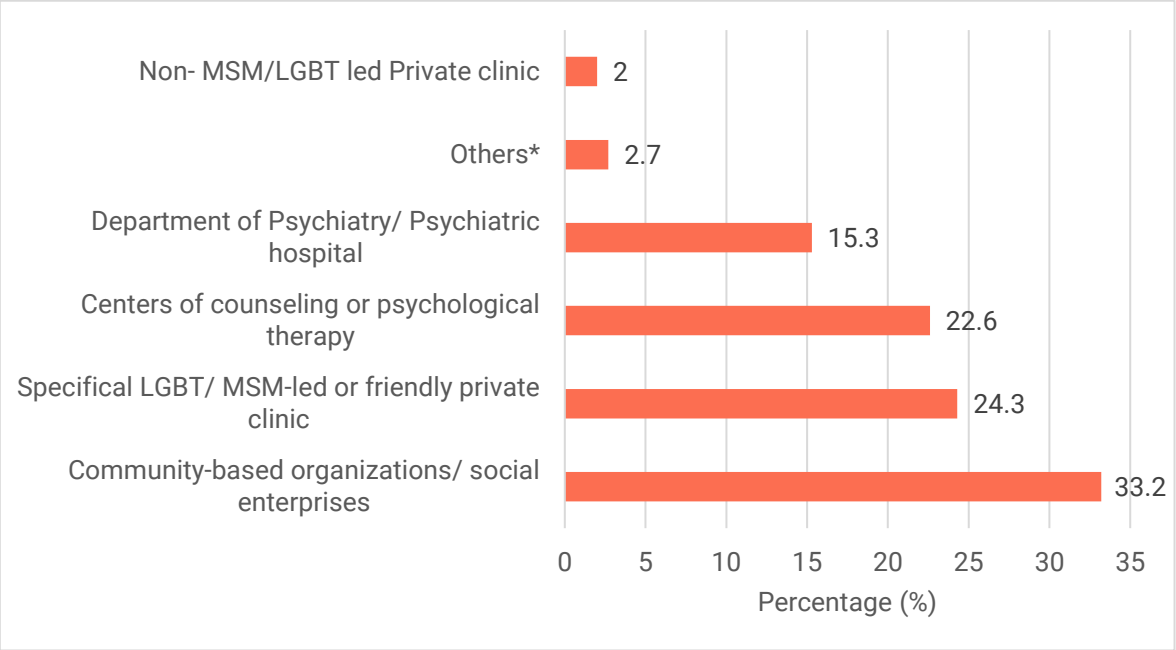


Figure 9. Preferred treatment for a mental illness (n=300)

Similar to the experience of people who have treated psychological disorders, community-based organizations/social enterprises were the most popular options (33.2%), followed by LGBT/MSM-led or friendly private clinics (24.6%). In spite of being less preferred, the counseling psychological therapy center still had 22.6% of votes.



**Pharmacies, friends, relatives, psychiatrist, not using any services*

Figure 10. Preferred addresses for mental health care (n=301)

2.5.3. Barriers in finding mental health support

Financial issues (M=3.11, SD=0.69), not knowing where could help (M=3.08, SD=0.71), and confidentiality (M=3.07, SD=0.75) were the three most widespread concerns preventing the participants from finding mental health support. Also, being labeled or discrimination made them worried (M=2.95, SD=0.74).

Table 10. Barriers in finding mental health support

Barriers	Strongly disagree (%)	Disagree (%)	Agree (%)	Strongly agree (%)	Mean (SD)
Lack of knowledge about mental health	8.3	24.9	56.1	10.6	2.69 (0.77)
Perception that professional help is not needed due to problems being minor or transient	10	32.2	48.2	9.6	2.57 (0.80)
Lack of time	9	36.9	45.5	8.6	2.54 (0.78)

Preference for self-management of problems	4.7	21.9	60.8	12.6	2.81 (0.71)
Preference for seeking help from family or friends	3	21.6	64.8	10.6	2.83 (0.64)
Long waiting period to see professionals	8.3	26.6	53.2	12	2.69 (0.79)
Financial concerns	2.7	10.6	59.5	27.2	**3.11 (0.69)**
Not knowing where to go for help	4	9.6	61.1	25.2	**3.08 (0.71)**
Concerns about stigma and discomfort related to discussing problems with professionals	5.3	14.3	56.8	23.6	2.99 (0.77)
Concerns about confidentiality	3.7	14	54.5	27.9	**3.07 (0.75)**
Doubt that professional help would be beneficial	4.3	26.6	53.8	15.3	2.8 (0.74)
Negative past experiences with professional help seeking	4.7	22.6	59.5	13.3	2.81 (0.72)
Concerns about being labeled or discrimination	4.3	16.9	57.8	20.9	2.95 (0.74)

2.5.4. Access to mental health services

Among 301 participants, 82.1% evaluated that mental health services were necessary and very necessary. However, only 26.2% of those reported that they could easily reach these services. 20.6% could access them but extremely difficult and 6% could not.

Table 11. The needs and access to mental health services

	Frequency	**Percent (%)**
Degree of necessity (n=301)		
None at all	13	4.3
Mild	41	13.6
Moderate	174	57.8
Severe	73	24.3
Accessibility (n=301)		
Easily	79	26.2
Likely with some difficulties	142	47.2
Likely but very difficult/ with a lot of difficulties	62	20.6
No	18	6

2.5.5. The needs for mental health information

In general, all participants expected to receive a variety of mental health information via different forms.

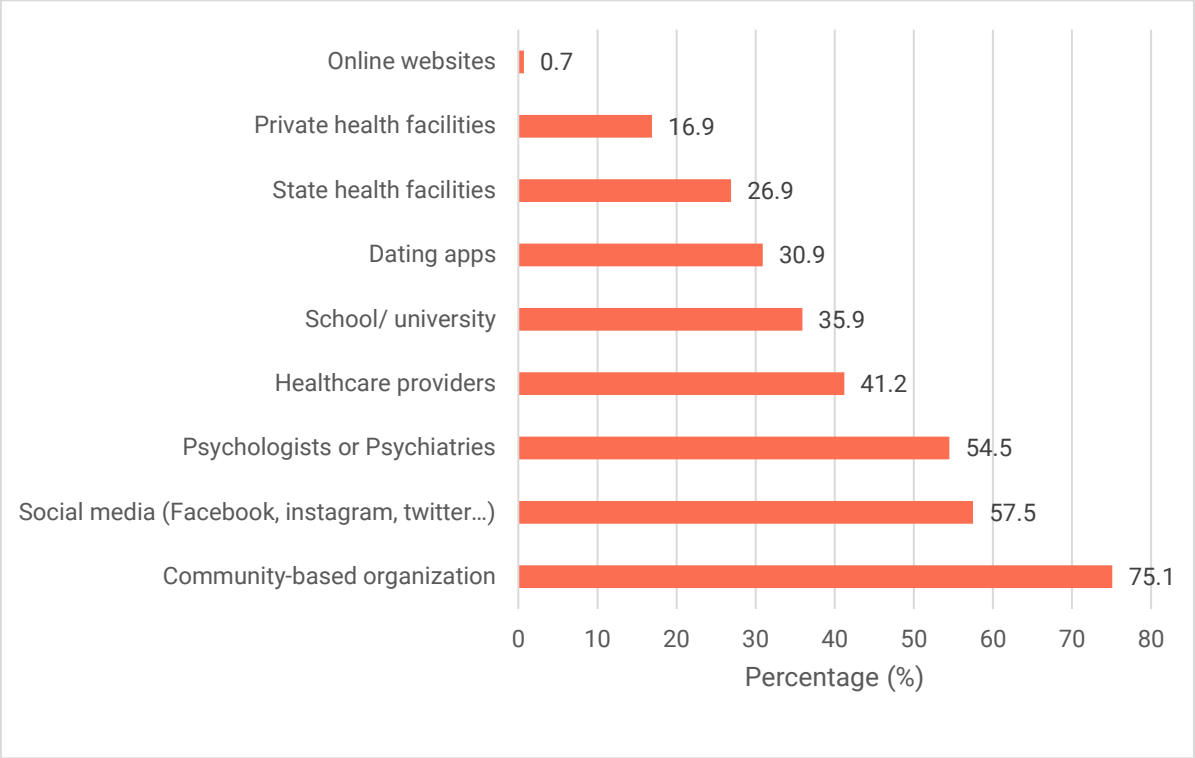


Figure 11. Channels you would like to receive mental health information (n=301)

The majority of people who prioritized information on how to have well-being health (82.4%) and to self-cope with mental health problems (72.1%).

Regarding where provided mental health information, the MSM/LGBT community organization was the most preferred channel (75.1%). 54.5% of participants also believed in taking information from mental health professionals.

Online information channels were also appreciated. While 57.5% of participants preferred to access information via social networking sites (Facebook, Instagram, Twitter, etc.), only 0.7% chose websites.

It was considered that stigma and discrimination against LGBT (81.4%) and PLMI (74.8%) reduction could be leading factors to improve MSM's mental health. 79.1% thought that connecting individuals with the general LGBT community also played an important role.

III. CONCLUSION AND DISCUSSIONS

The results indicate that MSM participating in the study had a great deal of interest in their mental health, as shown by their anxiety towards having psychological problems and their self-assessment about their mental disorder. Up to 69.4% ever worried that they had any mental disorders. The participants self-reported many symptoms exposing mental health problems, especially anxiety problems (up to 69.1% self-assessed my anxiety is very severe) via the screening scale for psychological disorders. Self-harm risk and suicidal ideation were concerned aspects, noticeably, up to 32.3% of participants who tried to suicide in the past.

In terms of related factors, analyses illustrate social support and self-stigma had a significant relationship with mental health. Those who got lower social support or had higher sexual self-stigma have higher symptoms of psychological disorders. Meanwhile, the compared analysis illustrated that those currently living alone had a lower level of support from significant others higher than those who live with someone. 81.7% of MSM still had self-stigma against their sexuality. The study indicated that self-stigma and social support correlate with mental health issues. 81.4% of the participants believed that stigma and discrimination against LGBT reduction could be leading factors to improve MSM's mental health. 79.1% thought that connecting individuals with the general LGBT community also played an important role. Those findings recommend that activities and intervention programs that aim to foster social support and reduce stigma, self-stigma play a meaningful role in improving MSM's mental health.

Mental health also had an association with safe sexual behaviors. In other words, having more mental health issues diminished their safe sexual practices which increased the risk of HIV/ STI transmission among MSM. Notably, sexual behaviors had the most significant correlation with anxiety. These results support some previous findings in the world (Abayomi et. al, 2013; Collins et. al, 2000; Carey et. al, 2004; Koblin et. al, 2006; and Sikkema et. al, 2011). Many researchers suggested integrating mental health activities into HIV intervention and prevention programs among MSM, and the initiative also has worked (Parsons et. al, 2016; O'Cleirigh et. al, 2018; Van Luenen et. al, 2017).

In general, the participants are reasonably open-minded with mental health issues, considered mental disorders as well as other illnesses, and anyone who likely experiences mental disorders in daily life.

The causes of psychosis are fairly diverse, can derive from biological factors, past experiences, or influenced by external factors. According to the results, stress in life was considered as the most likely component to cause mental disorders (90.7%), while genetics is the lowest influencer (26.2%). The research also shows that social oppression, stigma and discrimination for being MSM/LGBT, and family expectation were the three factors being the most likely to cause psychological disorders.

The numbers of MSM experiencing mental health care services are still limited, just 51.2% of people who were concerned about the status of mental health have gone to a facility to diagnose. Anxiety and depression were the two types that most participants were diagnosed with, 19.1% and 18.2%, respectively. However, mental health services which almost all participants access are un- or semi-professional (online counseling, CBOs). Nevertheless, most of MSM (30.3%) preferred psychological counseling/ therapy when they needed mental health care. Also, self – healing through different skills was preferred by a considerable number of participants (27.3%).

The participants faced many barriers when they accessed mental health care services. Notably, financial issues, lack of information about mental health services networks, and confidentiality were the three most widespread concerns. Besides, they worried about being labeled and discriminated against. It could be the reason why the participants prioritized MSM/ LGBT friendly facilities or organizations when they need to care for their mental health or seek mental health information.

In general, all participants expected to receive a variety of mental health information via different forms. The majority of people who prioritized information about methods to reach well-being (82.4%) and to self-cope with mental health problems (72.1%). Online information channels were also appreciated, 57.5% of participants preferred to access information via social networking sites (Facebook, Instagram, Twitter, etc).

IV. RECOMMENDATION

Based on the results of the study, we suggest a new model for mental health service provision among MSM according to three levels: (1) Prevention, (2) Compassion and support, and (3) Professional services

(1) Prevention via outreach & communication

Topics: general information about mental health and psychosocial issues, self-care, promotion of safe sex behavior and healthy lifestyle practices, information about the nextwork of existing reputable mental health services

Forms*:*

- Design platforms for the MSM community to exchange and share information with each other (communication campaign, facebook livestream, talk show)
- Develop a scientific and official information page (specifically for MSM) which matches with the MSM's characteristics. We also take advantage of existing platforms that are frequently accessed by the MSM community such as communication pages/ groups/ websites on HIV, sexual and reproductive health, and dating apps (Blue, Jack'D, Grindr)
- Integrate mental health communication into community events and small groups (seminar, workshop, talkshow)

(2) Compassion and support via counseling and mental health first aid

- *Develop a peer-to-peer network to suport MSM about mental health issues:* Although the participants appreciate professional services in their perspective, in reality, they will seek online counselors or community groups (non-/ semi-professional) if they have mental health issues. Therefore, the peers trained and built capacity building to counsel and support early in mental health are essential. They promptly access and counsel those other MSM who seek out mental health support when they have psychological difficulties as a result.
- *Improve the knowledge and counseling skills of health workers (especially in the HIV / AIDS field) on mental health*: MSM, a high-risk HIV group, is one of the target groups of HIV prevention & treatment programs, so health workers in HIV-related health care facilities have greater chances to reach them. Research has also shown that sexual behavior has a relationship with the MSM's mental health issues. Therefore, the mental health first aid integrated into the existing health care process is exceedingly convenient and suitable for the current health system.

(3) Professional services via connected system and referral: Professional services are intensive mental health services provided by those who are trained with a certain qualification in the mental health field, namely, psychologists, psychological counselors/ therapists. psychotherapists, psychiatrists, clinical social workers. These services are appropriated for their quality but still unfamiliar with MSM. And just like going to any healthcare facilities, they still worry about financial issues, confidentiality, and possible discrimination against MSM. Therefore, a network between peers and medical care facilities is essential to refer clients who need to see mental health services that have been assessed as reputable and MSM-friendly.

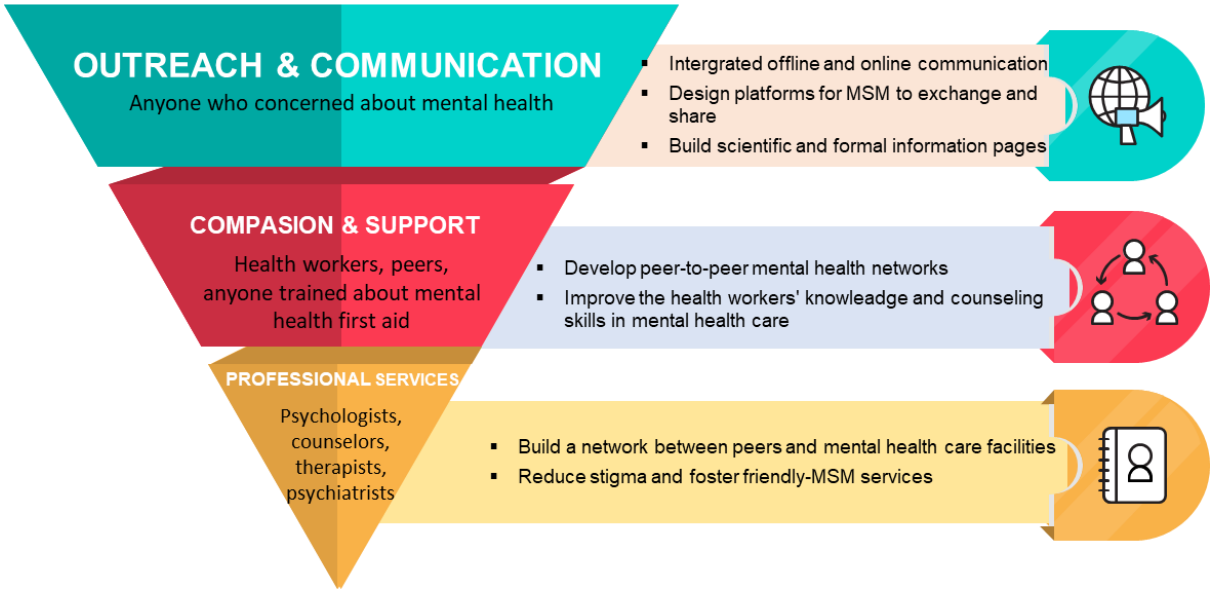


Image 1. a new model for mental health service provision among Vietnamese MSM

Relevant to promote the MSM's mental health via the three-level above, the foundational elements of law and policy about the public mental health system also need to be further developed. In the current Vietnamese context, a psychologist is approved as an official job in January 2021, which is a milestone during the development of psychology, in particular, and mental health services in general. However, the advocacy of relevant policies, in particular, criteria for professional mental health facilities, information dissemination on the existence of psychologists, providing national guidance on mental health care in other facilities (excepting for hospitals or psychiatric institutions).

V. LIMITATIONS

The objective of the research was to understand mental health issues and related factors, as well as consider the experiences and expectations of the MSM community for mental health services. On this basis, the study recommends interventions and supports to improve the mental health of MSM in Vietnam.

As one of the first researchers investigating this issue among MSM, although we obtained valuable information on mental health and related services, the research also has certain limits. Firstly, we conducted it in a short time with a limited number of samples, so the results obtained from the survey are not representative of the entire MSM community nationwide. We select quantitative research and apply the online survey, which supports the research access to more a diverse sample about sexual orientation, and living areas. However, most of the study participants were young MSM, who were more likely to access social networks and the internet. A prospective research of larger sample size and more extensive age coverage is needed to generalize the mental health issues of the whole MSM community.

MSM is now one of the key populations at high risk of HIV infection, and risky sexual behavior is its leading cause. As far as quantitative research is concerned, there is only a correlation between mental health and sexual behavior, but no more in-depth analysis of the impact inclinations and factors that influence the relationship. The results imply future research to profoundly discover the association mentioned above in the moderation of personal and social factors from which to build more comprehensive interventions to improve the mental health of the MSM community in Vietnam.

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APPENDIX

Appendix 1. Consent form

Thank you for your interest in this research survey about mental health and mental health needs of gay men, bisexual men, and other men who have sex with men (MSM) in Vietnam. The purpose is to understand the status of mental health and service needs in the MSM community, then develop appropriate programs in the context of the community's culture.

Your participation in this study is voluntary. You may decide not to participate or stop your participation at any time.

WHAT
This survey was conducted by the research team of Hai Dang Social Enterprise. It is an online survey via Google form, which takes 10-15 minutes, including questions about about psychosocial experiences, perceptions and mental health needs. You will receive a reimbursement of 50,000 VND (phone card) for your time lost from normal activities whilst completing this online survey. The card number will be sent to the email address you provided us.

WHY
Your responses will make an important contribution to understanding general information about mental health and mental health needs in the MSM community in Vietnam. It is a scientific basis for appropriate mental health intervention programs, and advocate about mental health issues in the community.

CONFIDENTIALITY
We guarantee that the information you provide will be completely confidential and only for research purposes. The anonymous survey ensures that we do not collect (and you will not need to provide) any identifying information. However, submitting survey responses will reveal your email address with us; so you can use the alias email account. Collecting this email address only serves to send your phone card number.

After you complete the survey, your anonymous response will be downloaded and saved by the research team on a password-protected computer hard drive. Files will be accessible to authorized research staff only. The computer hard drive will be stored in a locked private room. After the backup process is complete, your anonymous response will be entirely removed from the Google form, and not saved anywhere else (except for Computer hard drives are secured by passwords). The backup on the hard drive is also completely free of your identification information. All reasonable efforts will be made to ensure confidentiality is not breached.

RISKS

As explained above, with the anonymous research design, you will have no risk of being identified when taking this survey. You will also have virtually no physical, psychological, social, or legal risks in participating in this survey. However, the research's content includes information related to your mental health, social links, sexual behaviors, and other psychosocial factors. Then, answering those questions could cause uncomfortable feelings. During the survey, if you feel uncomfortable, you can withdraw at any time without any harm. Besides, you can contact us via the contact information below this consent form for assistance or transition to other necessary support services.

CONTACTS

Please feel free to contact the study investigator with any questions or comments regarding this survey: Mr. Tung | Email: thanhtung.lighthouse@gmail.com or
Ms. Oanh | Email: kieuoanh.lighthouse@gmail.com

Do you wish to participate in this survey?

□ Yes □ No

Appendix 2. Online survey

I. Demographic information

1. *Email collecting automatically*
2. *What year were you born?* Please type your response (i.e. 1995)
3. *What is your biological sex?*

a. Male
b. Female -> end survey
c. Other -> end survey

4. *Which gender do you identify yourself as?*

a. Cis gender
b. Transgender -> end survey
c. Other, please list -> end survey

5. *Have you had sex with men (clarified: Biological men) in the past?*

a. Yes
b. No -> end survey

6. *What is your sexual orientation?*

a. Gay man
b. Bisexual man
c. Heterosexual man
d. Other

7. *Where do you live now? (a provinces/ city list to choose)*
8. *What is your highest educational qualification?*

a. Did not attend school
b. Primary school degree
c. High school degree
d. Vocational school
e. Bachelor degree
f. Postgraduate degree
g. If other, please list

9. *What is your current job?*

a. Unemployed
b. Student
c. Freelance
d. Private sector
e. Public sector
f. Self-employed
g. If other, please list

10. What is your average monthly income from all sources (including money provided by your parents if you are in school)? Please type your response (i.e. 5 million VND)
11. Do you feel your income covers enough for your basic living expenses?

a. Yes

b. No

12. *What is your relationship status?*

a. Not in a romantic relationship
b. In a romantic relationship
c. In an open relationship
d. Uncertain

13. Who do you currently live with?

a. Alone
b. With my family (parents, siblings)
c. With other family
d. With a partner
e. With friends
f. Other, please list

II. Psychosocial circumstances

A. Social support

14. We are interested in how you feel about the following statements. Using the scale below, please give your honest rating about the degree to which you agree or disagree with each statement.

	Strongly disagree	Disagree	Agree	Strongly agree
1.There is a special person with whom I can share my joys and sorrows.	1	2	3	4
2.I get the emotional help and support I need from my family.	1	2	3	4
3.I have a special person who is a real source of comfort to me	1	2	3	4
4.I can count on my friends when things go wrong.	1	2	3	4
5.I can talk about my problems with my family.	1	2	3	4
6.I have friends with whom I can share my joys and sorrows.	1	2	3	4

7.There is a special person in my life who cares about my feelings	1	2	3	4
8.My family is willing to help me make decisions	1	2	3	4
9. I can talk about my problems with my friends	1	2	3	4

15. During the past 6 months, how often have you participated in **MSM/ LGBT** support group or events? (Ex. 1, 2,3…)

.....

B. Self - stigma

16. The following statements deal with emotions and thoughts related to having sex with men. Using the scale below, please give your honest rating about the degree to which you agree or disagree with each statement.

	Strongly disagree	Disagree	Agree	Strongly agree
1. When I think of my homosexual behavior, I feel depressed	1	2	3	4
2. I feel ashamed of my homosexual behavior	1	2	3	4
3. I believe having sex with men is an important part of me*	1	2	3	4
4. I am thankful for my sexual behavior*	1	2	3	4
5. Sometimes I feel that my homosexual behavior is embarrassing	1	2	3	4

*items reverse

II. Mental health screen

17. Please read each statement and circle a number which indicates how much each statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0: NEVER, did not apply to me at all

1: SOMETIMES, applied to me to some degree, or some of the time

2: OFTEN, applied to me a considerable degree, or a good part of the time

3: ALMOST ALWAYS, applied to me very much, or most of the time

		Never	Sometimes	Often	Almost always
1.	I found it hard to wind down	0	1	2	3
2.	I was aware of dryness in my mouth	0	1	2	3
3.	I couldn't seem to experience any positive feeling at all	0	1	2	3
4.	I experienced breathing difficulty (i.e. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5.	I found it difficult to work up the initiative to do things	0	1	2	3
6.	I tended to over-react to situations	0	1	2	3
7.	I experienced trembling (i.e. in the hands)	0	1	2	3
8.	I felt that I was using a lot of nervous energy	0	1	2	3
9.	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10.	I felt that I had nothing to look forward to	0	1	2	3
11.	I found myself getting agitated	0	1	2	3
12.	I found it difficult to relax	0	1	2	3
13.	I felt downhearted and blue	0	1	2	3
14.	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15.	I felt I was close to panic	0	1	2	3

16.	I was unable to become enthusiastic about anything	0	1	2	3
17.	I felt I wasn't worth much as a person	0	1	2	3
18.	I felt that I was rather touchy	0	1	2	3
19.	I was aware of the action of my heart in the absence of physical exertion (i.e. heart rate increasing, heart missing a beat)	0	1	2	3
20.	I felt scared without any good reason	0	1	2	3
21.	I felt that life was meaningless	0	1	2	3

18. In the past 6 months, how often have you thought of hurting yourself?

a. Never (1)
b. Seldom (2)
c. Quite often (3)
d. Very often (4)
e. All the time (5)

19. Have you purposefully hurt yourself?

a. Currently
b. Within the last 3 months
c. Within the last 12 months
d. Within the last 2 years
e. Prior to the last 2 years
f. Never

20. In the past 6 months, how often have you thought of suicide?
    a. Never (1)
    b. Seldom (2)
    c. Quite often (3)
    d. Very often (4)
    e. All the time (5)

21. Have you ever attempted to suicide?

1. Currently
2. Within the last 6 months
3. Within the last 12 months

4. Within the last 2 years
5. Prior to the last 2 years
6. Never

III. Perceptions on mental health and mental healthcare

A. Mental health

22. The following statements deal with mental health and mental illness. Using the scale below, please give your honest rating about the degree to which you agree or disagree with each statement.

		Strongly disagree	Disagree	Agree	Strongly agree
1.	Virtually anyone can have a psychological disorder	1	2	3	4
2.	There is still a lot of stigma attached to psychological disorders	1	2	3	4
3.	Most people with serious psychological disorders can, with treatment, get well and return to productive lives	1	2	3	4
4.	Having psychological disorder is no different from having any kind of illness	1	2	3	4
5.	I do not believe psychological disorders can ever really be cured	1	2	3	4
6.	People with chronic psychological disorders are, by far, more dangerous than the general population	1	2	3	4
7.	Mental health facilities should be kept out of residential neighborhoods	1	2	3	4
8.	Even if they seem OK, people with chronic psychological disorders always have the potential to commit violent acts	1	2	3	4
9.	It is easy to recognize someone who once had a serious psychological disorder	1	2	3	4

10.	The best way to handle those with psychological disorders is to keep them behind locked doors	1	2	3	4
11.	Mental illness/ disorder is a symbol of weakness	1	2	3	4
12.	Mental health is only a problem for people over the age of 25	1	2	3	4
13.	Any psychological disorder can be handled on my own, without any professional support	1	2	3	4
14.	Nothing can be done to prevent psychological disorders	1	2	3	4

---

23. Which of the factors listed below do you believe to be able to cause your mental illness? Please pick all that apply

a. Alcohol/ drug use
b. Chemical imbalance
c. Stress of life
d. Accidental injury
e. Genetics
f. Lack of discipline
g. Bullying in school
h. Bullying from peers
i. Family expectation
j. Family rejection
k. Sexual abuse
l. Childhood abuse
m. Being stigma and discrimination because of being MSM/ LGBT
n. Sexual issues
o. Social oppression
p. Lack of community
q. Other (please list)

B. Mental health status

24. Have you ever been concerned that you have a psychological disorder?

a. Currently
b. Within the last 3 months
c. Within the last 12 months
d. Within the last 2 years

e. Prior to the last 2 years
f. Never-> move to 28

25. What psychological disorder are/ were you concerned about having? Select all that apply

a. Depression
b. Anxiety
c. PTSD
d. Substance use disorder
e. Unsure
f. Other, please list

26. Have you ever been diagnosed with a psychological disorder? Select all that apply

a. Depression
b. Anxiety
c. PTSD
d. Substance use disorder
e. Yes but not specific
f. Other, please list
g. Never before -> move to 28

27. Have you ever been treated for a psychological disorder?

a. Yes, Psychiatrist in Hospital
b. Yes, Centre (psychological counselling or therapy)
c. Yes, independent Counsellor/ Psychotherapist
d. Yes, online counsellors
e. Yes, CBOs
f. No, I don't want treatment
g. No, because I could not afford to treatment.
h. Other, please list

C. Wish for mental health intervention and treatment

28. How would you rate your need for mental health services?

a. None at all
b. Mild
c. Moderate
d. Severe

29. Do you feel like you can access mental health services if you need them?

a. Yes, easily
b. Yes, with some difficulties
c. Yes, but very difficult/ with a lot of difficulties
d. No

30. In your opinion, what would be the preferred treatment for a mental illness? Please pick all that apply

a. Drugs/ Alcohol

b. Counseling or psychological therapy
c. Traditional healer/ alternative medicine
d. Practising in psychological courses
e. Self-heal through skills (control emotions...)
f. Finding support from family, friends
g. Other, specific

31. In your opinion, what would be the preferred addresses for a mental illness? Please pick all that apply

a. Department of Psychiatry/ Psychiatric hospital
b. Centers of counseling or psychological therapy
c. Community based organizations/ social enterprises
d. Non- MSM/LGBT led Private clinic
e. Specifical LGBT/ MSM-led or friendly private clinic
f. Pharmacies
g. Other, specific

32. To what extent do you agree or disagree with the following reasons that may prevent MSM in your country from not seeking help from professional mental healthcare services (counseling or therapy)?

		Strongly disagree	**Disagree**	**Agree**	**Strongly Agree**
1.	Lack of knowledge about mental health	1	2	3	4
2.	Perception that professional help is not needed due to problems being minor or transient	1	2	3	4
3.	Lack of time	1	2	3	4
4.	Preference for self-management of problems	1	2	3	4
5.	Preference for seeking help from family or friends	1	2	3	4
6.	Long waiting period to see professionals	1	2	3	4
7.	Financial concerns	1	2	3	4
8.	Not knowing where to go for help	1	2	3	4
9.	Concerns about stigma and discomfort related to discussing problems with professionals	1	2	3	4

10.	Concerns about confidentiality	1	2	3	4
11.	Doubt that professional help would be beneficial	1	2	3	4
12.	Negative past experiences with professional help seeking	1	2	3	4
13	Concerns about being labeled or discrimination	1	2	3	4

33. Which information about mental health would you like to receive?
a. The methods to reach a well - being mental health
b. The methods for self – coping if you have mental health issues
c. Screening mental health issues
d. General information and symptoms of mental illness
e. Assessment about mental health
f. How to find support or mental health services
g. Talk show/ conference/ events about mental health
h. Other, please list……
34. Through which channels would you like to receive information about mental health?
a. Healthcare providers
b. Psychologists or Psychiatries
c. School/ university
d. Community-based organization
e. State health facilities
f. Private health facilities
g. Online websites
h. Social media (Facebook, instagram, twitter…)
i. Dating apps
j. Other, please list
35. In your opinion, what would be most helpful for improving mental health in the MSM community?
a. Connect PLMI to LGBT community
b. Stigma and discrimination against PLMI reduction
c. Stigma and discrimination against LGBT reduction
d. Individual therapy/ Counseling
e. Friendly mental health services
f. Mental health education
g. Safe space to share
h. Group therapy/ counseling
i. Online platform
j. Community event
k. Community based organization

l. Peer support
m. Other, please list

IV. Risky sexual behaviors

36. When was the last time you were tested for HIV?
a. I have never had an HIV test
b. In the past one month
c. In the past 6 months
d. In the past 12 months
e. > 12 months ago
37. What is your HIV status?
a. Negative -> 40
b. Positive
c. Unknown/ rather not answer
38. If positive, are you on antiretroviral therapy?
a. Yes, currently
b. Used in the past but not using now
c. Never
39. What is your viral load status now?
a. Undetectable
b. Detectable
c. Don't know
40. Are you currently using PrEP?
a. Using PrEP
b. Not using PrEP
c. Used but not using now
41. When was the last time you were tested for STIs?
a. I have never tested for STIs -> move to 43
b. In the past month
c. In the past 6 months
d. In the past 12 months
e. > 12 months ago
42. What were the results of your most recent STI test? Select all that apply
a. Chlamydia
b. Gonorrhea
c. Syphilis
d. HPV
e. Herpes
f. HBV
g. HCV
h. Negative (Non above)
43. How many sexual partners have you had over the past 3 months? Please enter your best estimate.

44. Below is a list of sexual practices you may have been involved in during the last 3 months. Please read each statement and respond by indicating your degree of use of these practices

Statements	Never	Sometimes	Most of the time	Always
1. I insist on condoms when I have sexual intercourse.	1	2	3	4
2. I use alcohol or other drugs prior to or during sexual intercourse*				
3. I ask potential sexual partners about their sexual histories including HIV and STIs status	1	2	3	4
4. If I disagree with information that my partner presents on safer sex practices, I state my point of view.	1	2	3	4
5. If I know an encounter may lead to sexual intercourse, I have a mental plan to practice safer sex.	1	2	3	4
6. If my partner insists on sexual intercourse without a condom, I refuse to have sexual intercourse.	1	2	3	4
7. It is difficult for me to discuss sexual issues with my sexual partners*	1	2	3	4
8. When I feel upset I find it easier to have sex with some one new*	1	2	3	4
9. When I feel upset I find it easier to have sex with some one without condom*	1	2	3	4
10. Sexual interactions helps me feel better when I am upset *	1	2	3	4
11. I have a hard time saying no to sex, even if I do not want to have sex*	1	2	3	4

*items reverse

Appendix 3. Image

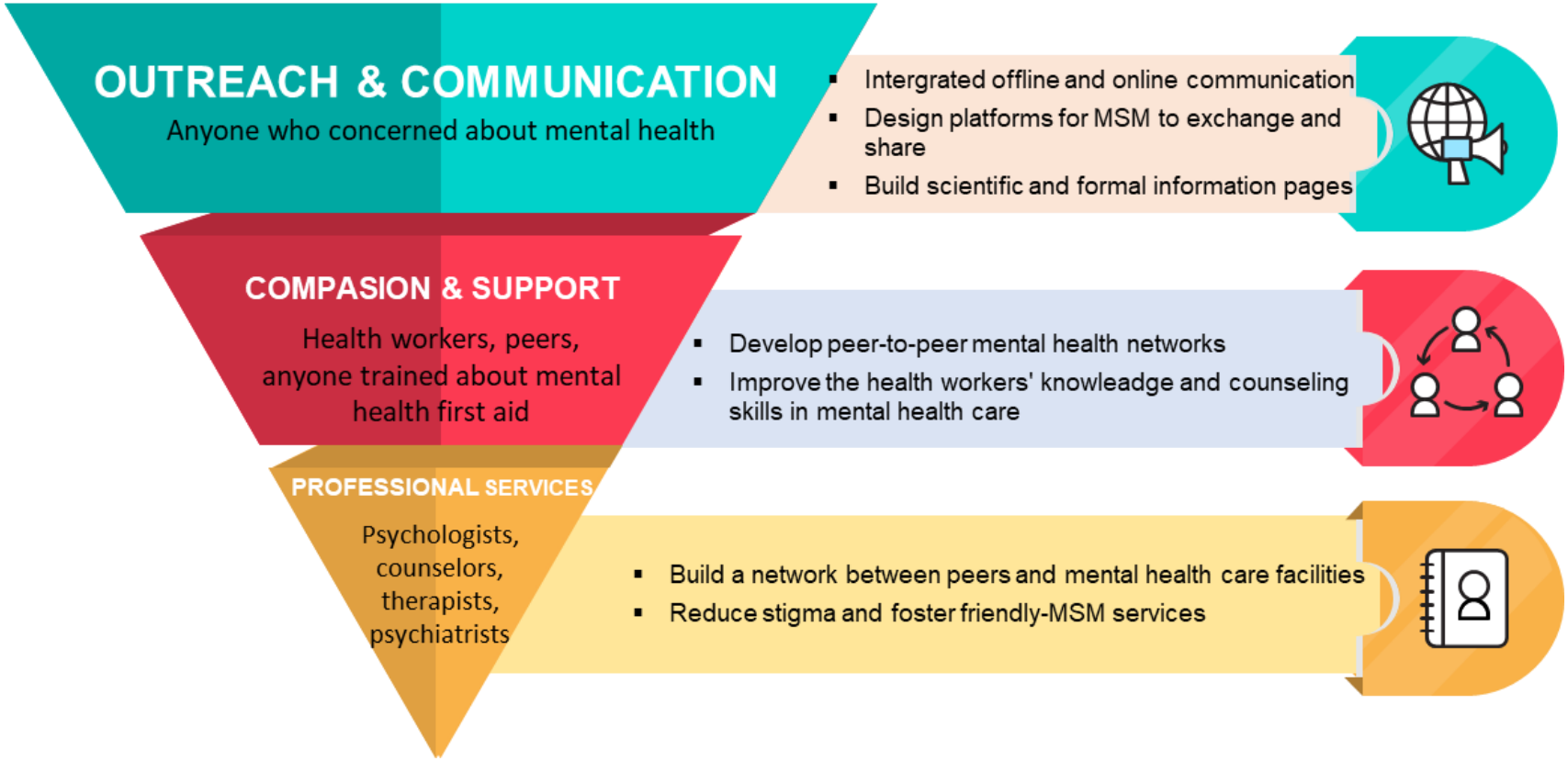

Image 1. A new model for mental health service provision among Vietnamese MSM