

An Online Survey on the Mental Health of Lesbian and Bisexual Women in Japan

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Abstract

This study was a survey to clarify the mechanisms of mental health deterioration among lesbian and bisexual women in Japan, focusing on the relationships among factors and the changes in their influence over time. The participants were lesbian, bisexual, and heterosexual women, between 20 and 69 years old, living in Japan (excluding students and foreign nationals). The survey was conducted online through a private research company. Respondents included 1,952 lesbian and bisexual women and 927 heterosexual women. The final sample, after data cleaning, included 1,936 lesbian and bisexual women and 927 heterosexual women. Mean age was 32.19 and 38.96 years for lesbian and bisexual women and heterosexual women, respectively. Mental health was assessed with the Kessler Psychological Distress Scale. Mean score on the Kessler Psychological Distress Scale of lesbian and bisexual women was higher than that of heterosexual women, and mental health among lesbian and bisexual women was poorer compared with heterosexual women. The percentage of lesbian and bisexual women who experienced bullying and harassment, which is assumed to be one of the factors affecting mental health, was higher than that of heterosexual women, and the cross-tabulation results suggested a relationship between the two variables.

Keywords

sexual minorities, lesbian and bisexual women, mental health, online survey

The purpose of this study was to clarify the mechanisms of mental health deterioration among sexual minorities (lesbian and bisexual women) in Japan, focusing on the relationships among factors and the changes in their influence over time.

Studies, conducted mainly in Europe and the United States, have indicated that sexual minorities have higher rates of suicide risk and mental health problems than heterosexuals (Sandfort et al. 2001; Bolton and Sareen 2011; Plöderl and Tremblay 2015). In Japan, studies on the mental health status of sexual minorities and factors that worsen their mental health have been conducted by analyzing data from online and postal

surveys (Hidaka and Operario 2006; Kamano et al. 2019; NPO Nijjiro Diversity 2020). Dentsu (2021) conducted an online survey on sexual minorities, with 60,000 Japanese men and women, aged 20-59 years, and found that the percentage of lesbian women was 1.33 percent, which is not particularly low compared with the percentage of gay men (1.94 percent) (Dentsu 2021).

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Therefore, in this study, the author conducted an online survey of lesbian and bisexual women in Japan. This survey was a continuation of the online survey conducted by the author in 2020 (hereafter, the previous survey). While the target population of the previous survey was gay and bisexual men, the present survey was conducted among lesbian and bisexual women using a survey framework (survey method and questions) that was largely similar to that of the previous survey.

The significance of this study is as follows: First, in terms of social significance, as mentioned above, the mental health of sexual minorities tends to be worse than that of heterosexuals. However, it has been pointed out that there are differences among sexual minorities, and that the mental health of lesbian and bisexual women tends to be even worse than that of gay and bisexual men (Stonewall 2018; NPO Nijiuro Diversity 2020; LGBTIQ+ Health Australia 2021). However, research on sexual minorities in Japan has mainly focused on gay and bisexual men and sexual minorities as a whole, and there has been very little research conducted specifically on lesbian and bisexual women. If the factors and mechanisms of mental health deterioration in lesbian and bisexual women are clarified through this study, it will be possible to propose methods and timing of appropriate intervention (support) for lesbian and bisexual women.

From an academic point of view, collecting data on the mental health of lesbian and bisexual women in Japan would make it possible to conduct comparative research with the data on gay and bisexual men collected in the previous survey. In light of the above, the author believes that this research has high social and academic significance.

SUMMARY OF THE SURVEY

Study Participants

The participants in the survey were lesbian and bisexual women between the ages of 20 and 69 living in Japan, and same-age

and heterosexual women who served as comparison participants (excluding students and foreign nationals).

In this study, lesbian or bisexual women were defined as those whose biological sex (sex on birth certificate) was female, who were comfortable with their current gender identity, and whose sexual orientation (sex of the person they have sexual feelings for) was either female or both male and female.

As described above, this survey was conducted using the same survey framework as the previous survey, and therefore many of the descriptions in the following sections, from “Implementation method” to “Main survey,” are duplicated from the previous survey report (Komorida 2021). In addition, the contents after “Main survey” are intentionally structured in the same manner for comparison with the previous survey report (Komorida 2021), so there are some duplicated descriptions.

Implementation Method

The survey was conducted as an online survey targeting questionnaire survey takers registered with a private research company (hereinafter referred to as “monitors”). The survey was conducted in two stages: a pre-survey for the main purpose of selecting the target respondents and a main survey. Although the results are not representative because the survey was not conducted using the probability sampling method, the author attempted to obtain data to analyze the relationship and structure between variables.

Two advantages of online surveys are high level of anonymity and explanation and consent for sensitive questions.

High Level of Anonymity. The main target population of this study (sexual minorities) is generally considered socially vulnerable. The questionnaire included questions about sexual orientation, and it is expected that the response rate will be low in mail surveys and interview surveys, which require respondents’ names and addresses to be identified, due to the fear of identification and resistance.

On the other hand, in online surveys, although the survey company knows the names and addresses of the monitors, this information is not disclosed to the survey taker, so the resistance to answering is expected to be relatively low.

Explanation and Consent for Sensitive Questions. In addition to questions related to sexuality, this survey included very sensitive questions, such as whether the respondent had been a victim of bullying or had suicidal thoughts or attempted suicide. Therefore, if the survey questionnaires are sent out by random sampling, there is a concern that the respondents will read through the questions before making up their minds to answer, and as a result, the survey will impose a mental burden on them.

On the other hand, online surveys target people who intend to respond to the questionnaire in advance, and it is possible to obtain explanation and consent twice, once for the pre-survey and once for the main survey. Therefore, the respondents can guess the contents of the questions to some extent before they start to answer (read the specific questions), and they can make a clear decision before answering. The fact that multiple explanations and consents are obtained in advance is also considered to be advantageous from the viewpoint of invasiveness.

Survey Company

Macromill, Inc. obtained the “Privacy Mark” as of January 9, 2004.

Ethical Considerations

Both the pre-survey and the main survey were conducted with the approval of the Ethics Committee for “Research with Human Subjects” of Sophia University.

In both the pre-survey and the main survey, an explanation of the study was presented at the beginning of the web-based questionnaire response screen created by Macromill, Inc., and the subsequent questions were presented

only to those who gave their consent. In the pre-survey, the author explained (1) the purpose of the survey, (2) the time required to answer the questions (approximate), and (3) the inclusion of sensitive questions. In this survey, in addition to the above three explanations, the author presented the following explanations: (4) protection of personal information and data management, (5) use and disclosure of questionnaire results, (6) questions that may cause a heavy mental burden, (7) interruption and discontinuation of responses, and (8) survey implementation system and contact information (Macromill, Inc. monitor support desk). At the end of the survey, the respondents were asked to indicate whether they agreed to the above survey objectives and points to be noted, and whether they wished to answer or decline to answer the questionnaire.

Preliminary Survey (Method of Selecting Survey Targets)

The purpose of the pre-survey was to select the participants of this study from the monitors registered with Macromill, Inc. The pre-survey consisted of five questions, including explanations of the purpose and content of the questions, and confirmation of intention to answer (consent), and was started on December 15, 2021. The items for selecting the participants (selection criteria) were as follows:

- (1) Respondents who answered “I was able to answer” considering his/her current mental state after receiving an explanation that this survey included questions that were considered to be a heavy mental burden with examples of specific items.
- (2) Respondents whose biological sex (sex on birth certificate) were female.
- (3) Respondents who answered that their current gender identity was the same as their gender at birth or felt uncomfortable with it. Those who answered “another gender” than their gender at birth were excluded from the survey (because they were considered to be transgender).

- (4) Respondents who answered “homosexual (lesbian),” “bisexual,” or “heterosexual” as their sexual orientation. Those who answered “asexual,” “don’t want to or can’t decide,” or “can’t understand the meaning of the question” were excluded from the survey.

These questionnaires and options were used with reference to Kamano et al. (2019), with additions and modifications to select only lesbian and bisexual women and heterosexual women. In addition, the author asked the survey company to limit the age, nationality, and place of residence (whether they lived in Japan or not) in advance based on the monitoring registration information.

Main Survey

The survey period was from December 21, 2021 to December 24, 2021. The survey consisted of 54 (including 1 question for informed consent). The main questionnaire items were used to collect data on age, marital status, employment status, current employment status (employee position), existence/non-existence of a bullying or harassment victimization experience (by time period), type of bullying or harassment victimization, current K6 score, Rosenberg self-esteem scale, time of becoming aware of sexual orientation, who the person came out to, time of coming out, sexual outing experience of sexual orientation and gender identity, whether or not they had had unwanted sexual intercourse, whether or not they had suicidal thoughts, when they had suicidal thoughts, whether or not they had attempted suicide, and when they had attempted suicide. Two questions from the previous study were not included in the present study’s questionnaire: “Response of those who you come out to” and “Household income (annual income).” This decision was made to reduce the burden on respondents to answer these questions.

The respondents included 1,952 lesbian and bisexual women and 927 heterosexual women. In the previous survey, the target

number of respondents was set at 1,800 gay and bisexual men and 1,800 heterosexual men, but in this survey, the target number of respondents was set at 1,900 lesbian and bisexual women and 900 heterosexual women. This change was due to financial constraints.

The number of samples collected was the number of samples delivered after Macromill, Inc. had mechanically excluded cases in which there was a significant bias in the response results (i.e., responses that appeared to be insincere). After delivery, the data were cleaned further and participants with input errors or items that appeared to be outliers were removed. Sixteen lesbian and bisexual female participants and 0 heterosexual female participants were excluded. After cleaning the data, the sample included 1,936 lesbian and bisexual female participants and 927 heterosexual female participants.

Six lesbian and bisexual female participants were excluded due to an extremely large number of people in the household, such as 15 or 20 people.

Ten cases in which the participant was a lesbian or bisexual woman were excluded due to inconsistencies such as “current age” being younger than “age when graduated last attended school,” “age when first started work,” or “age when first started current job.”

SIMPLE AGGREGATES

The simple tabulation results for the attributes and key questions among the collected data are presented below. As mentioned above, this survey is an online survey of monitors, and the results (percentages) are not representative. The intention here is to give the basic information of the collected data.

Aggregate Results of Questions on Attributes

The mean age of the respondents was 32.19 years for lesbian and bisexual women and 38.96 years for heterosexual women (Table 1).

In terms of marital status, 58.1 percent of

lesbian and bisexual women answered that they were not married and had not received a certificate based on the partnership system. However, 38.4 percent of the respondents answered that they were married to a spouse of the opposite sex (including de facto marriage), indicating that about 40 percent of the respondents were married (Table 2). Among the heterosexual women, 64.3 percent were “married (including de facto marriage)” (Table 3).

Table 4 presents the data on the “Coming out experience” of the lesbian and bisexual female participants. Among the lesbian and bisexual women, 54.7 percent had come out, and 45.3 percent had not. Looking at the percentages of people who have come out in other surveys for reference, the Japan lesbian, gay, bisexual, and transgender (LGBT) Research Institute (2019) found that 78.8 percent of respondents said that they had not come out to anyone. In addition, in a survey conducted by NHK (Japan Broadcasting Corporation) and the Japan Alliance for LGBT Legislation (2015), 6.2 percent of respondents said that they had not come out to anyone. Although the percentage varies from survey to survey, this is likely to be largely due to the demographics of the target population and the method of conducting the survey. However, this survey only targeted lesbian and bisexual women among sexual minorities, whereas the Japan LGBT Research Institute (2019), NHK and the Japan Alliance for LGBT Legislation (2015) surveys included other sexualities. In addition, there were differences in the method of recruiting the target population.

Next, looking at the educational background (last school graduated/completed), the most common among lesbian and bisexual women was “University” at 30.8 percent (Table 5). Compared with 33.9 percent of heterosexual women, there was a 3 percent difference. It has been pointed out that online surveys generally show a higher level of education, and the results of this survey also showed a higher percentage of university graduates or above compared with the census and other surveys (Hanibuchi, Muranaka, and Ando

2015). In addition, 5.4 percent of the lesbian and bisexual female participants had a final education of “junior high school,” which was slightly higher than that of the heterosexual female participants (2.5 percent), although the difference was slight. The largest difference between the lesbian and bisexual women and heterosexual women was for “junior college,” which was about 7 percent more common among heterosexual women.

Tables 6 and 7 show the results of the questionnaire on job status. Of all the participants, 75.2 percent of lesbian and bisexual women and 65.2 percent of heterosexual women were employed. With regard to the type of employment, “regular and full-time employee” was the most common answer in both cases.

Looking at personal income (annual income) in relation to occupation, the most frequent value was between 1 yen and less than 1 million yen for both groups (Table 8). However, 53.1 percent of lesbian and bisexual women and 64.1 percent of heterosexual women fell under the category of less than 2 million yen, and the percentage of heterosexual women with lower income was higher.

Aggregate Results of Key Questions

The main purpose of this study was to examine the mechanism of mental health deterioration among sexual minorities. In this study, as in the previous study, we used the Japanese version of the Kessler Psychological Distress Scale (K6) (Kessler et al. 2002; Kawakami et al. 2005; Kawakami 2007) to measure the mental health status of the survey participants. The K6 is a scale developed for the purpose of screening for depression and anxiety disorders, which asks participants to answer six questions on a scale of 0 to 4 (including reversed items); the closer the total score is to 24, the higher the possibility of mental health problems.

Aggregate results showed a significant difference between lesbian and bisexual women and heterosexual women, with a mean of 9.23 and 5.98, respectively (Table 9,

Table 1. Ages of the Participants

	Lesbian and Bisexual Women	Heterosexual Women
Mean	32.19	38.96
Median	32.00	37.00
<i>SD</i>	7.300	10.177
<i>N</i>	1,936	927

Table 2. Marital Status among Lesbian and Bisexual Women

	Lesbian and Bisexual Women
Married to a spouse of the opposite sex (including de facto marriage)	38.4% (743)
Has received (including pending application for) a certificate based on a partnership system in Japan or overseas	3.0% (59)
Married to a spouse of the same sex under a foreign system	0.5% (9)
Not married and have not received a certificate under a partnership system	58.1% (1,125)
<i>N</i>	1,936

Table 3. Marital Status among Heterosexual Women

	Heterosexual Women
Married (including de facto marriage)	64.3% (596)
Not married	35.7% (331)
<i>N</i>	927

Table 4. Experience of Coming Out

	Lesbian and Bisexual Women
I've been coming out	54.7% (1,059)
No coming out experience	45.3% (877)
<i>N</i>	1,936

Figure 1, Figure 2); a K6 score of 5 or higher (5-9) is a suspected level of “psychological stress equivalent” (Kawakami 2007). Similar to previous studies (Kerr, Santurri, and Peters 2013; Gonzales, Przedworski, and Henning-Smith 2016), the present study found that the mental health status of lesbian and bisexual women tended to be worse than that of heterosexual women. The average

K6 score of women aged 20-59 years in the Comprehensive Survey of Living Conditions conducted in 2019 (Ministry of Health, Labour and Welfare 2020) was calculated to be 3.94. Compared with this value, the K6 score in this survey was high for both lesbian and bisexual women.

With regard to self-esteem (Rosenberg 1965; Yamamoto, Matsui, and Yamanari

Table 5. Educational Background (Last School Completed) of the Participants

	Lesbian and Bisexual Women	Heterosexual Women
Junior high school	5.4% (105)	2.5% (23)
High school	30.5% (591)	25.1% (233)
Technical school	1.2% (23)	1.0% (9)
Vocational school	20.0% (388)	19.6% (182)
Two year-junior college	7.6% (147)	14.9% (138)
University	30.8% (596)	33.9% (314)
Graduate school	3.9% (75)	2.0% (19)
Other	0.6% (11)	1.0% (9)
<i>N</i>	1,936	927

Table 6. Employment Status

	Lesbian and Bisexual Women	Heterosexual Women
Employed	75.2% (1,456)	65.2% (604)
Without an occupation	24.8% (480)	34.8% (323)
<i>N</i>	1,936	927

Table 7. Types of Current Employment

	Lesbian and Bisexual Women	Heterosexual Women
Regular and full-time employees (including regular government employees)	40.1% (777)	30.6% (284)
Temporary and part-time employment	20.3% (393)	23.0% (213)
Temporary and contract employees, commissioned employees	9.3% (180)	8.3% (77)
Management and Directors	0.3% (6)	0.1% (1)
Self-employed and freelancers	3.8% (74)	1.9% (18)
Self-employed family employees	0.9% (18)	0.8% (7)
Homeworker	0.4% (8)	0.4% (4)
<i>N</i>	1,936	927

Table 8. Personal Income (Annual)

	Lesbian and Bisexual Women	Heterosexual Women
None	11.2% (216)	19.6% (182)
1 yen to less than 1 million yen	22.8% (441)	26.5% (246)
1 million yen to less than 2 million yen	19.1% (369)	18.0% (167)
2 million yen to less than 3 million yen	19.6% (380)	12.0% (111)
3 million yen to less than 4 million yen	12.4% (241)	11.2% (104)
4 million yen to less than 5 million yen	7.2% (140)	6.1% (57)
5 million yen to less than 6 million yen	2.9% (56)	3.0% (28)
6 million yen to less than 7 million yen	2.5% (48)	0.9% (8)
7 million yen to less than 8 million yen	0.8% (16)	1.0% (9)
8 million yen to less than 9 million yen	0.5% (9)	0.5% (5)
9 million yen to less than 10 million yen	0.4% (8)	0.2% (2)
10 million yen to less than 15 million yen	0.3% (6)	0.3% (3)
15 million yen or more	0.3% (6)	0.5% (5)
<i>N</i>	1,936	927

1982), it was found that lesbian and bisexual women tend to have lower levels of self-esteem than heterosexual women (Table 10, Figures 3 and 4).

Similar to gay and bisexual men, bullying victimization has been identified as one of the factors that worsen mental health in lesbian and bisexual women (Morris and Balsam 2003; Hall 2018). In this study, we asked about the experience of bullying and harassment by time period (from before entering elementary school to the past 3 months) using a 4-point scale (“Never,” “Almost never,” “Sometimes,” and “Often”). Although this survey also asked about the types of bullying and harassment (mental, physical, and related to sexual orientation), we present only the results for existence or non-existence of the victimization experience and briefly confirm the relationship with the K6 score.

Table 11 presents the data on the existence or nonexistence of bullying and harassment among the participants. The answers “Sometimes” and “Often” were recategorized as “They have experienced victimization,” and the answer “Never” and “Almost never” were recategorized as “They have not experienced victimization.” Participants were included in the “experienced” group if they had been victimized at least once during the entire period, and in the “never experienced” group if they had never been victimized. It was found that 73.0 percent of lesbian and bisexual women answered that they had been victimized, which was much higher than the 52.5 percent of heterosexual women.

Table 12 shows a cross tabulation of lesbian and bisexual women’s K6 scores (9 points or less, 10 points or more) and their experiences of bullying and harassment victimization. Although the time of experience and the type

Table 9. Kessler Psychological Distress Scale Scores

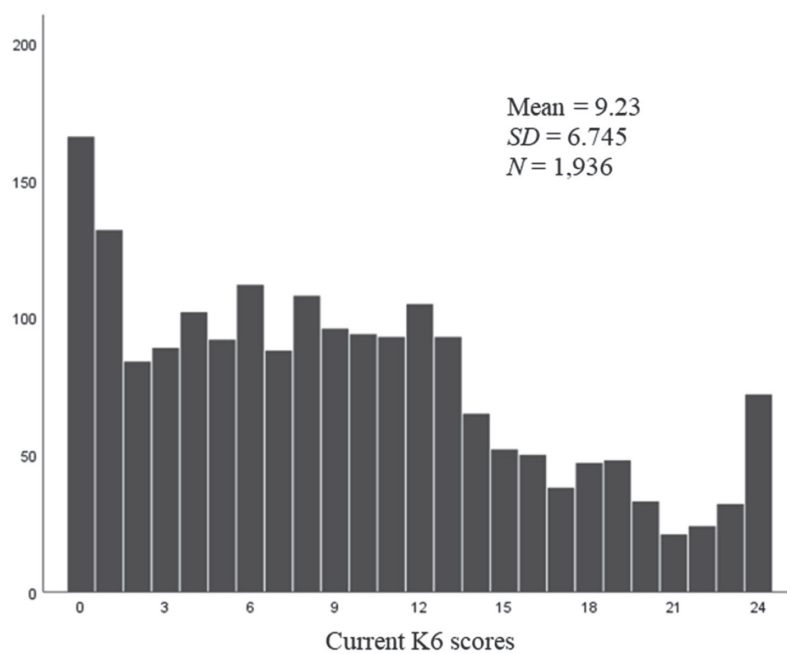
	Lesbian and Bisexual Women	Heterosexual Women
Mean	9.23	5.98
Median	8.00	4.00
<i>SD</i>	6.745	6.047
<i>N</i>	1,936	927

Note: $t(2015.653) = 12.966, p < .001$.

Table 10. Rosenberg Self-Esteem Scale Scores

	Lesbian and Bisexual Women	Heterosexual Women
Mean	27.12	30.04
Median	27.00	30.00
<i>SD</i>	8.388	7.766
<i>N</i>	1,936	927

Note: $t(1957.232) = -9.174, p < .001$.

**Figure 1.** Distribution of Kessler Psychological Distress Scale Scores Among Lesbian and Bisexual Women

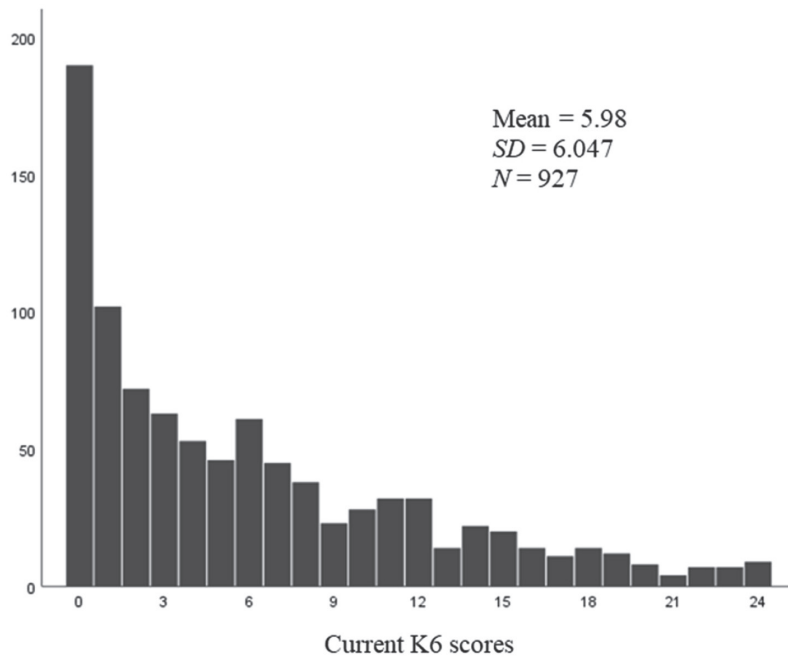


Figure 2. Distribution of Kessler Psychological Distress Scale Scores Among Heterosexual Women

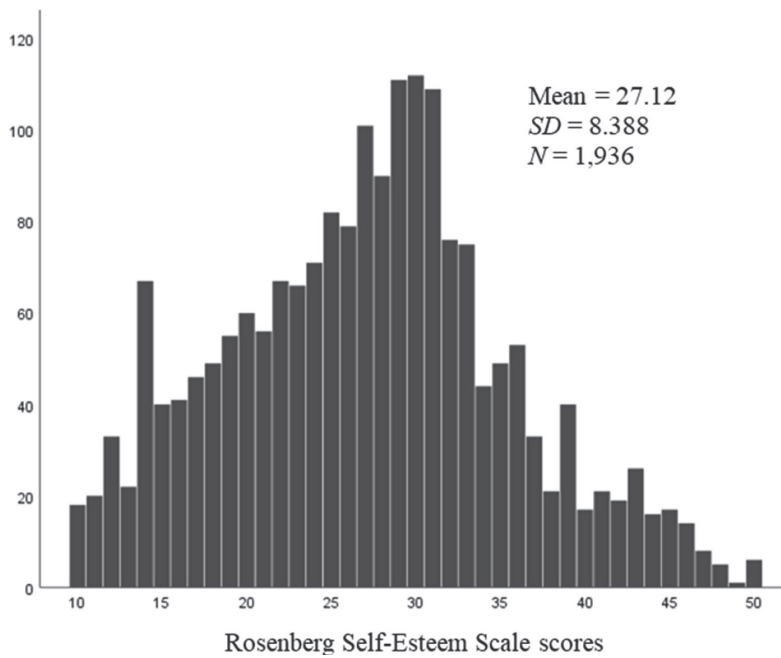


Figure 3. Distribution of Self-Esteem Scale Scores Among Lesbian and Bisexual Women

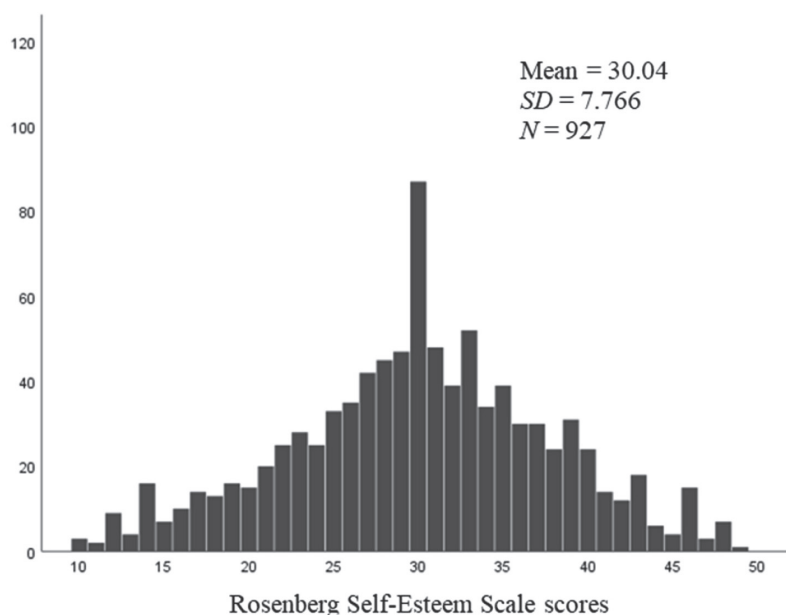


Figure 4. Distribution of Self-Esteem Scale Scores Among Heterosexual Women

Table 11. Bullying and Harassment Victimization Experience

	Lesbian and Bisexual Women	Heterosexual Women
Experienced victimization	73.0% (1,413)	52.5% (487)
Never experienced victimization	27.0% (523)	47.5% (440)
<i>N</i>	1,936	927

Note: $\chi^2(1) = 117.445, p < .001$

of bullying/harassment victimization were not taken into account, there was a marked difference in the K6 scores of 10 points or more, with 50.1 percent of respondents had experienced victimization and 30.4 percent of respondents had not. Such an association was also confirmed for heterosexual women, but the difference was somewhat smaller than that for lesbian and bisexual women (Table 13).

CONCLUSIONS

This paper reports on an online survey of lesbian and bisexual women (and heterosexual women) in Japan conducted

in December 2021 and their responses to demographic information and key questions.

In the analysis of the data on the mental health of sexual minorities (lesbian and bisexual women), which is the main concern of this study, using the K6, the mean value was higher than that of heterosexual women, and it was confirmed that their mental health tended to be worse.

In addition, the percentage of lesbian and bisexual women who experienced bullying and harassment, which is assumed to be one of the factors affecting mental health, was higher, and the results of the cross tabulation suggested an association between the two variables.

Table 12. Bullying and Harassment Victimization Experience and K6 Scores among Lesbian and Bisexual Women

	K6 Score (9 Points or Less)	K6 Score (10 or More Points)	Total Amount
Experienced victimization	49.9% (705)	50.1% (708)	100% (1,413)
Never experienced victimization	69.6% (364)	30.4% (159)	100% (523)

Note: $\chi^2(1) = 59.936, p < .001$. K6 = Kessler Psychological Distress Scale.

Table 13. Bullying and Harassment Victimization Experience and K6 Scores among Heterosexual Women.

	K6 score (9 Points or Less)	K6 Score (10 or More Points)	Total Amount
Experienced victimization	66.9% (326)	33.1% (161)	100% (487)
Never experienced victimization	83.4% (367)	16.6% (73)	100% (440)

Note: $\chi^2(1) = 33.222, p < .001$. K6 = Kessler Psychological Distress Scale.

Although the survey was expected to be burdensome in terms of both the number of questions and the content of the questions, the results of the responses to these major questions are generally consistent with previous studies, and we believe that we have obtained data with a certain degree of accuracy. In this paper, we presented only the simple aggregate results as a report on the implementation of the survey. In the future, we will conduct a more detailed analysis by considering the relationships with other variables.

Similarly, this paper did not make specific comparisons with the author's previous survey (of gay and bisexual men) because the main theme was to report the results of the survey of lesbian and bisexual women. However, for example, K6 values were higher in lesbian and bisexual women than in gay and bisexual men, suggesting that their mental health tended to be worse. Income is also different. Gay and bisexual men tended to have lower income than heterosexual men, whereas lesbian and bisexual women tended

to have higher income than heterosexual women. These differences may provide clues to clarify the differences and characteristics of the social conditions and life courses of sexual minorities in Japan. The author would like to compare and discuss them in detail in the future. The information obtained through this survey on lesbian and bisexual women in Japan will be of great help in advancing research in this field.

As in the previous survey, it was expected that the survey would place a heavy burden on the respondents, but the author received many more responses than expected to the last question, which was an open-ended question. In the previous survey, the author also received an unexpectedly large number of responses, but this time, the number of responses and the number of descriptions from lesbian and bisexual women greatly exceeded the previous survey. In the previous survey, one complaint was received about the number of questions and the content of the questions, but in this survey, there were no complaints.

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