Original Paper

The Association Between Platform-Specific Social Media Use and Suicidal Ideation in Japan: Cross-Sectional Web-Based Survey Study

Yusei Taniguchi[1]; Mizuki Hino[1], PhD; Yumiko Hamaie[1], PhD; Hiroaki Tomita[1,2,3], MD, PhD; Takahiro Tabuchi[4], MD, PhD; Yasuto Kunii[1,2,3], MD, PhD

[1]Department of Disaster Psychiatry, International Research Institute of Disaster Science, Tohoku University, Sendai, Miyagi, Japan
[2]Department of Psychiatry, Graduate School of Medicine, Tohoku University, Sendai, Miyagi, Japan
[3]Department of Psychiatry, Tohoku University Hospital, Sendai, Miyagi, Japan
[4]Division of Epidemiology, School of Public Health, Graduate School of Medicine, Tohoku University, Sendai, Miyagi, Japan

Corresponding Author:

Yasuto Kunii, MD, PhD
Department of Disaster Psychiatry
International Research Institute of Disaster Science, Tohoku University
2-1 Seiryo-machi, Aoba-ku
Sendai, Miyagi 980-8573
Japan
Phone: 81 22-717-7897
Fax: 81 22-273-6285
Email: yasuto.kunii.d8@tohoku.ac.jp

Abstract

Background: In Japan, suicides among young women have recently increased; however, this trend's specific causes remain unclear. Concurrently, rising social media use has sparked concerns regarding its potential impact. However, findings on the association between social media use and mental health have been mixed, and platform-specific differences remain unclear.

Objective: This study investigated the cross-sectional association between current platform-specific social media use and retrospectively reported past-year suicidal ideation in Japan, as well as age- and sex-based differences.

Methods: This cross-sectional study analyzed 2 linked nationwide internet surveys: the Japan COVID-19 and Society Internet Survey (December 2024-January 2025) and the Japan Society and New Tobacco Internet Survey (February 2025-March 2025). The analysis included 19,542 individuals aged 15 to 84 years who responded to both surveys. Multivariable logistic regression assessed the associations between the use of specific social media platforms (Facebook, X [formerly known as Twitter], Instagram, YouTube, and TikTok) and suicidal ideation, adjusting for covariates.

Results: Suicidal ideation was reported by 10.8% (2118/19,542) of the participants. In the adjusted models, suicidal ideation was associated with the use of X (adjusted odds ratio [aOR] 1.44, 95% CI 1.27-1.63), Facebook (aOR 1.33, 95% CI 1.18-1.49), and TikTok (aOR 1.33, 95% CI 1.19-1.50; *P*<.001 in all cases) but not Instagram (aOR 0.93, 95% CI 0.82-1.06) or YouTube (aOR 1.09, 95% CI 0.94-1.27). Exploratory stratified analyses (interpreted with caution given multiple comparisons) suggested that the association with X use was consistent across participants younger than 45 years.

Conclusions: The association between social media use and suicidal ideation varied across platforms and demographic groups. After adjusting for confounders, only instances of the use of X, Facebook, and TikTok were associated with higher odds of suicidal ideation. Thus, the relationship between social media use and suicidal ideation depends on platform characteristics and user attributes, thereby underscoring the need for platform-specific suicide prevention strategies. These cross-sectional findings do not permit directional inference and should be regarded as hypothesis generating.

J Med Internet Res 2026;28:e103235; doi: 10.2196/103235

Keywords: Japan; online social networking; social media; suicidal ideation; suicide

Introduction

Suicides among young women in Japan have been increasing in recent years both before and after the COVID-19 pandemic. This increase has been particularly notable among women under 20 years of age and those in their 20s [1-3], suggesting that this trend is not a transient pandemic-specific phenomenon but an indicator of a broader, ongoing shift in suicide epidemiology among younger generations. Suicide mortality rates in individuals aged 15 to 29 years in Japan are among the highest in G7 countries [4]. This underscores the need to understand the age- and gender-specific vulnerabilities to suicide in contemporary Japanese society, as well as the need for more accurate, timely, and population-sensitive suicide prevention strategies. Moreover, identifying modifiable psychosocial factors may contribute to early detection and tailored interventions. In particular, understanding changes in young women's context [5]—for example, increasing academic and occupational pressures [6,7], changing patterns of peer relationships and digital communication, and exposure to gender-specific stressors—is necessary to clarify why suicide risk has increased in this demographic.

Concurrently, Japan has seen a substantial increase in social media platform (SMP) use. Governmental reports [8] have documented largely consistent increases in the use of X (formerly known as Twitter), Instagram, YouTube, and TikTok in Japan between 2018 and 2024. Social media now plays a central role in communication and identity formation, which potentially magnifies its influence on mental health. Studies have identified social media use's diverse effects. For instance, systematic reviews have reported its associations with depression [9,10] and anxiety [9]. Potential association with suicide-related outcomes has also received growing attention. Previous studies have reported associations between social media use and suicidal ideation (SI) and suicidal behavior [11,12]. However, findings have been inconsistent, with some studies reporting positive associations and others reporting none. This variation appears to reflect differences in how social media is used and experienced: suicide-related social media use, exposure to harmful or self-harm–related content, and cyberbullying have been associated with suicide-related outcomes [13-16], whereas social media may also provide opportunities for social connectedness, emotional expression, and help seeking [11,14,15,17].

Although how social media is used depends largely on which platform is used, an important limitation of the existing literature is that SMPs have often been examined in broad terms or with a focus on only a limited number of major platforms. Macrynikola et al [11], for example, noted that most previous studies have assessed SMP use broadly or focused primarily on leading platforms such as Facebook and emphasized the importance of considering heterogeneity across platforms and populations. This is important because different platforms vary widely in their functions, user demographics, algorithmic structures, and communication styles, which may lead to different psychological experiences. For example, image-based platforms may amplify appearance-related comparisons [18], whereas microblogging platforms may facilitate the disclosure of negative emotions, exposure to others' suicidal expressions, or hostile interpersonal interactions. Thus, failure to differentiate between platforms may obscure platform-specific risks or protective factors [19]. Nevertheless, few studies have examined platform-specific associations with suicide-related outcomes [11], particularly whether such associations vary by age or gender.

Furthermore, although several Japanese studies have explored the relationship between social media use and psychological distress [20], loneliness [20], and depressive symptoms [21,22], evidence regarding suicide-related outcomes remains limited. Although one project report in Japan examined the association between social media use and suicidal thoughts [23], robust population-based studies focusing on suicide-related outcomes using contemporary data are lacking. As SI is a crucial predictor of suicide attempts and deaths [24,25], identifying its associated factors is essential to understanding the background of recent changes in suicide trends in Japan.

Therefore, we investigated the cross-sectional association between the use of specific SMPs and retrospectively reported past-year SI in Japan, analyzing data from a large nationwide web-based survey. Owing to the temporal ordering of measurement, our findings should be interpreted as associational rather than causal. Furthermore, we examined potential age- and sex-based differences to explore whether particular demographic groups, including young women, showed different association patterns. By clarifying the platform- and demographic-specific association between social media use and SI, this study seeks to contribute to the scholarly understanding of social media's potential role in the recent rise in youth suicide in Japan, as well as inform considerations for targeted suicide prevention strategies.

Methods

Participants

This study analyzed cross-sectional data from the 2024 to 2025 Japan COVID-19 and Society Internet Survey (JACSIS; conducted between December 2024 and January 2025) and the 2025 Japan Society and New Tobacco Internet Survey (JASTIS; conducted between February 2025 and March 2025) [26,27]. Both surveys targeted the general population of Japan aged 15 to 84 years. The participants were recruited from an online panel managed by the Rakuten Insight research agency using simple random sampling stratified by sex, age, and prefecture. For each wave, individuals who had participated in a previous JACSIS or JASTIS survey were invited via email to complete a follow-up questionnaire, and additional panel members were subsequently recruited until the target sample size of 28,000 respondents was reached. Detailed recruitment procedures are provided in Multimedia Appendix 1.

To ensure data quality, we excluded invalid responses based on the following criteria established by the JACSIS and JASTIS study group: (1) survey completion time below 10

minutes, (2) report of more than 15 cohabitants, (3) failure of the attention check ("Please select the second-to-last option"), and (4) report of having all 11 preexisting conditions. Of the 23,337 individuals who responded to both the JACSIS 2024 to 2025 and the JASTIS 2025 surveys, 19,542 (83.7%) provided valid responses to both surveys and constituted the analytic sample. We used JACSIS 2024 to 2025 data to measure SI and covariates, and we used JASTIS 2025 data to measure social media use across different platforms. SI and social media use were not assessed simultaneously as these variables were measured in separate surveys, with a minimum interval of approximately 1 month between both measurements. We treated the data as cross-sectional under the assumption that platform-specific social media use is reasonably stable over such a short interval. The sample had no missing values.

Ethical Considerations

All procedures complied with the Declaration of Helsinki and the Ethical Guidelines for Medical and Health Research Involving Human Subjects. The study protocol was reviewed and approved by the ethics committee of the Tohoku University Graduate School of Medicine (approval number 2024-1-231).

All participants provided web-based informed consent before responding to the questionnaire and were informed that they could withdraw from the survey at any time and that their anonymized data might be used in future research. Rakuten Insight research agency conducted the surveys in accordance with the Act on the Protection of Personal Information in Japan. Data were provided to the investigators in anonymized form: directly identifying information was removed and replaced with identification codes. Participants received credit points ("Epoints") as an incentive from the research agency, which can be used for internet shopping or converted into cash.

This cross-sectional study followed the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) reporting guidelines [28]. We additionally report the study in accordance with the CHERRIES (Checklist for Reporting Results of Internet E-Surveys) checklist [29]; the completed checklist is provided in Checklist 1.

Exposures

The participants reported how frequently they used 5 SMPs (Facebook, X, Instagram, YouTube, and TikTok) on a 6-point scale: "never or rarely," "1-3 times a month," "about 1 day a week," "2-3 days a week," "4-5 days a week," and "almost every day." Respondents who selected "never or rarely" were classified as nonusers, whereas those who selected any other option were classified as users. We adopted this binary classification to focus on the characteristics of populations using each platform rather than on problematic or excessive use, which could not be adequately captured using the available response options. In a supplementary analysis, the 6 categories were collapsed into nonuse ("never or rarely"), nondaily use (the 4 intermediate options), and daily use ("almost every day").

Outcome Measures

SI was measured using the following question: "Have you ever felt that you wanted to die?" The response options were "Experienced it for the first time within the last 2 months," "Experienced it for the first time within the last year," "Experienced it within the last year, though not for the first time," "Did not experience it within the last year, but experienced it before the last year," and "Never experienced it." Those who selected any of the first 3 options were classified as having experienced SI in the previous year. For a supplementary analysis, the first 2 options were classified as first-onset SI, and the third option was classified as recurrent SI.

Covariates

We selected covariates that comprised basic sociodemographic characteristics or factors associated with both social media use and SI. Basic sociodemographic characteristics included age (categorized as 15-29, 30-44, 45-59, and 60-84 years) [30], sex [30], marital status (married, unmarried, and divorced or widowed) [30-32], and employment status (regularly employed, nonregularly employed, self-employed or freelancer, and not employed) [33]. Additionally, we included neuroticism [34,35] and adverse childhood experiences (ACEs) [36-38] as potential confounding factors. Neuroticism was assessed using the *neuroticism* dimension of the Japanese version of the Ten-Item Personality Inventory [39,40], a brief measure of the Big Five personality traits. The *neuroticism* dimension was indexed using 2 items, yielding a possible score of 2 to 14, with higher scores indicating greater neuroticism. The score was treated as a continuous variable per each 1-point increase in all analyses. We assessed ACEs using the ACE scale for the Japanese context (ACE-J) [41], a 15-item measure adapted for the Japanese context. ACEs were categorized into 4 levels: 0, 1, 2, and 3 or more.

Statistical Analysis

We summarized participants' characteristics and examined crude associations between SI and each SMP using chi-square tests. Logistic regression models were used to estimate crude and adjusted associations between SI and SMP use. The multivariable model included all 5 SMPs and covariates (age group, sex, marital status, employment status, neuroticism, and ACEs). Multicollinearity was assessed using variance inflation factors.

Exploratory stratified logistic regression analyses by age group (15-29, 30-44, 45-59, and 60-84 years) and sex were conducted, whereas the interaction terms between each SMP and age, sex, or a binary indicator variable identifying female participants aged 15 to 29 years were also evaluated (Multimedia Appendix 1). No corrections for multiple comparisons were initially applied given these analyses' exploratory nature.

We conducted 2 supplementary analyses, both adjusted for the same covariates as the main analysis. First, we constructed a 3-category outcome (no SI, first-onset SI within the previous year, and recurrent SI within the previous year) and

conducted multinomial logistic regression models with no SI as the reference category. Second, we classified the use of each platform as nonuse, nondaily use, or daily use and fitted logistic regression models with nonuse as the reference category.

All analyses were unweighted, and statistical significance was defined as a 2-sided *P* value of .05. Statistical analyses were performed in Python (version 3.13.4; Python Software Foundation) using statsmodels (version 0.14.5) and SciPy (version 1.16.1). The results are presented as odds ratios with 95% CIs.

Results

Overview

Of the 28,000 respondents in each survey, 25,424 (90.8%) and 25,082 (89.6%) provided valid responses to the JASTIS and JACSIS surveys, respectively. After linking these datasets and excluding single-survey participants, the final analysis included 19,542 individuals. The participants' characteristics are shown in Table 1. Platform use differed markedly across age groups (Table S1 in Multimedia Appendix 1). Use of X, Instagram, and TikTok declined with age, whereas Facebook use was similar across age groups.

Table 1. Sociodemographic and psychological characteristics of the participants (N=19,542).

Characteristics	Overall	Female participants (n=9541)	Male participants (n=10,001)
Age group (y), n (%)			
15-29	2716 (13.9)	1404 (14.7)	1312 (13.1)
30-44	5037 (25.8)	2457 (25.8)	2580 (25.8)
45-59	5254 (26.9)	2588 (27.1)	2666 (26.7)
60-84	6535 (33.4)	3092 (32.4)	3443 (34.4)
Suicidal ideation, n (%)			
Yes	2118 (10.8)	1164 (12.2)	954 (9.5)
No	17,424 (89.2)	8377 (87.8)	9047 (90.5)
Social media use, n (%)			
Facebook	5381 (27.5)	2146 (22.5)	3235 (32.3)
X	9008 (46.1)	4263 (44.7)	4745 (47.4)
Instagram	9357 (47.9)	5273 (55.3)	4084 (40.8)
YouTube	15,676 (80.2)	7448 (78.1)	8228 (82.3)
TikTok	4598 (23.5)	2287 (24.0)	2311 (23.1)
Marital status, n (%)			
Married	11,484 (58.8)	5540 (58.1)	5944 (59.4)
Unmarried	6087 (31.1)	2684 (28.1)	3403 (34.0)
Divorced or widowed	1971 (10.1)	1317 (13.8)	654 (6.5)
Employment status, n (%)			
Regularly employed	8257 (42.3)	2759 (28.9)	5498 (55.0)
Nonregularly employed	3879 (19.8)	2610 (27.4)	1269 (12.7)
Self-employed or freelancer	1383 (7.1)	479 (5.0)	904 (9.0)
Not employed	6023 (30.8)	3693 (38.7)	2330 (23.3)
Neuroticism (2-14), mean (SD)	7.82 (2.33)	8.01 (2.42)	7.64 (2.23)
ACEs[a], n (%)			
0	5479 (28.0)	2838 (29.7)	2641 (26.4)
1	7332 (37.5)	3214 (33.7)	4118 (41.2)
2	2752 (14.1)	1306 (13.7)	1446 (14.5)
3 or more	3979 (20.4)	2183 (22.9)	1796 (18.0)

[a]ACE: adverse childhood experience.

Social Media Use and SI

In the unadjusted analyses, all 5 SMPs were significantly associated with SI (Tables 2 and 3). In this unweighted sample, the prevalence of past-year SI was higher among Facebook, X, Instagram, YouTube, and TikTok users than among nonusers (Figure 1).

Table 2. Past-year suicidal ideation among users and nonusers of each social media platform, with chi-square test results.

Social media use	Yes, n (%)	No, n (%)	*P* value[a]	Effect size[b]
Facebook			<.001	0.046
Users (n=5381)	708 (13.2)	4673 (86.8)		
Nonusers (n=14,161)	1410 (10.0)	12,751 (90.0)		
X			<.001	0.143
Users (n=9008)	1411 (15.7)	7597 (84.3)		
Nonusers (n=10,534)	707 (6.7)	9827 (93.3)		
Instagram			<.001	0.104
Users (n=9357)	1329 (14.2)	8028 (85.8)		
Nonusers (n=10,185)	789 (7.7)	9396 (92.3)		
YouTube			<.001	0.069
Users (n=15,676)	1866 (11.9)	13,810 (88.1)		
Nonusers (n=3866)	252 (6.5)	3614 (93.5)		
TikTok			<.001	0.100
Users (n=4598)	756 (16.4)	3842 (83.6)		
Nonusers (n=14,944)	1362 (9.1)	13,582 (90.9)		

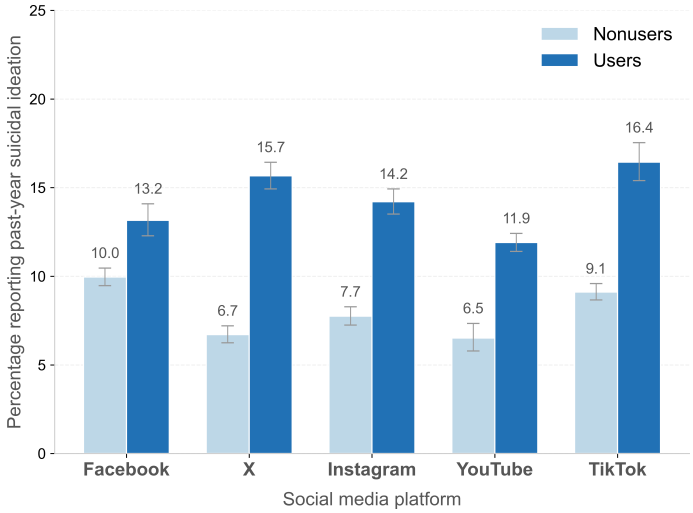
[a]Chi-square tests were conducted between the use of each social media platform and suicidal ideation.
[b]Effect sizes are ϕ coefficients derived from the chi-square statistics.

Table 3. Unadjusted and adjusted odds ratios (ORs) for the association between suicidal ideation and social media use in logistic regression analysis (N=19,542).

Variables	Unadjusted[a]		Adjusted[b]	
	OR (95% CI)	*P* value	OR (95% CI)	*P* value
Social media use				
Facebook	1.37 (1.24-1.51)	<.001	1.33 (1.18-1.49)	<.001
X	2.58 (2.35-2.84)	<.001	1.44 (1.27-1.63)	<.001
Instagram	1.97 (1.80-2.16)	<.001	0.93 (0.82-1.06)	.27
YouTube	1.94 (1.69-2.22)	<.001	1.09 (0.94-1.27)	.26
TikTok	1.96 (1.78-2.16)	<.001	1.33 (1.19-1.50)	<.001

[a]The unadjusted model included only each social media use as an explanatory variable.
[b]The adjusted model included 5 platforms simultaneously and covariates (age group, sex, marital status, employment status, neuroticism, and adverse childhood experiences).

Figure 1. Prevalence of past-year suicidal ideation among users and nonusers of each social media platform (N=19,542). Error bars indicate 95% CIs.



After adjustment, the associations remained statistically significant for the use of X (adjusted odds ratio [aOR] 1.44, 95% CI 1.27-1.63; *P*<.001), Facebook (aOR 1.33, 95% CI 1.18-1.49; *P*<.001), and TikTok (aOR 1.33, 95% CI 1.19-1.50; *P*<.001; Table 3). However, the associations for both Instagram and YouTube were no longer statistically significant after controlling for several covariates and other forms of social media use (*P*=.27 and *P*=.26, respectively).

As shown in Table S2 in Multimedia Appendix 1, other factors were significantly associated with SI in the adjusted model. Factors most strongly associated with SI included experiencing 3 or more ACEs and being in the 15- to 29-year age group compared with the 60- to 84-year age group. Neuroticism, female sex, being nonregularly employed, unmarried status, and divorced or widowed status were also identified as factors significantly associated with SI.

Stratified and Interaction Analyses

The results of the exploratory stratified logistic regression analyses are shown in Table 4. The association between X use and SI was consistent in the younger age groups. Higher odds of SI were observed for participants aged 15 to 29 and 30 to 44 years. Other associations appeared specific to certain subgroups. For instance, Facebook and TikTok use were associated with higher odds of SI, especially among men. Meanwhile, no significant associations were observed for Instagram or YouTube use in any of the strata. In contrast, use of any specific SMPs showed no significant association with SI among participants aged 60 years or older.

Table 4. Adjusted odds ratios (ORs) for the association between past-year suicidal ideation and use of each social media platform in exploratory logistic regression analyses stratified by age group and sex.[a]

	15-29 y			30-44 y			45-59 y			60-84 y		
	All (n=2716)	Female (n=1404)	Male (n=1312)	All (n=5037)	Female (n=2457)	Male (n=2580)	All (n=5254)	Female (n=2588)	Male (n=2666)	All (n=6535)	Female (n=3092)	Male (n=3443)
Suicidal ideation, n (%)	530 (19.5)	314 (22.4)	216 (16.5)	763 (15.1)	381 (15.5)	382 (14.8)	578 (11.0)	326 (12.6)	252 (9.5)	247 (3.8)	143 (4.6)	104 (3.0)
Facebook												
OR (95% CI)	1.96 (1.52-2.53)	1.44 (1.00-2.07)	2.40 (1.65-3.50)	1.25 (1.03-1.51)	1.16 (0.89-1.52)	1.28 (0.96-1.71)	1.12 (0.90-1.40)	1.13 (0.84-1.54)	1.12 (0.80-1.58)	1.19 (0.85-1.65)	1.04 (0.65-1.66)	1.35 (0.82-2.22)
P value	<.001	.05	<.001	.03	.27	.10	.32	.42	.50	.31	.88	.24
X												
OR (95% CI)	1.76 (1.28-2.42)	1.64 (1.09-2.47)	2.13 (1.27-3.58)	1.60 (1.31-1.95)	2.00 (1.52-2.63)	1.28 (0.94-1.73)	1.20 (0.96-1.50)	1.19 (0.89-1.59)	1.19 (0.85-1.67)	1.30 (0.92-1.83)	1.30 (0.83-2.04)	1.17 (0.67-2.02)
P value	<.001	.02	.004	<.001	<.001	.12	.10	.25	.32	.14	.26	.59
Instagram												
OR (95% CI)	0.80 (0.59-1.09)	0.68 (0.42-1.08)	0.75 (0.48-1.16)	0.92 (0.75-1.14)	0.81 (0.60-1.09)	0.95 (0.70-1.29)	1.06 (0.84-1.33)	1.07 (0.79-1.44)	1.05 (0.73-1.51)	1.14 (0.81-1.62)	0.98 (0.63-1.53)	1.47 (0.84-2.56)
P value	.16	.10	.20	.45	.17	.76	.62	.66	.80	.44	.93	.18
YouTube												
OR (95% CI)	1.03 (0.66-1.60)	1.09 (0.61-1.94)	1.16 (0.55-2.44)	1.12 (0.84-1.49)	1.46 (0.99-2.15)	0.84 (0.55-1.29)	0.95 (0.74-1.22)	1.09 (0.78-1.51)	0.79 (0.54-1.16)	1.38 (0.97-1.98)	1.49 (0.95-2.35)	1.27 (0.71-2.28)
P value	.89	.77	.70	.44	.05	.42	.68	.63	.23	.07	.08	.42
TikTok												
OR (95% CI)	1.17 (0.92-1.47)	1.08 (0.80-1.45)	1.32 (0.90-1.94)	1.33 (1.10-1.60)	0.89 (0.68-1.17)	1.97 (1.49-2.61)	1.33 (1.05-1.67)	1.25 (0.92-1.71)	1.45 (1.02-2.05)	1.43 (1.00-2.04)	1.31 (0.78-2.20)	1.54 (0.92-2.56)
P value	.20	.63	.16	.004	.41	<.001	.02	.16	.04	.05	.31	.10

[a]All models simultaneously included 5 platforms adjusting for marital status, employment status, neuroticism, and adverse childhood experiences; sex was additionally included as a covariate only in the models for the combined strata.

Exploratory interaction analyses (Table S3 in Multimedia Appendix 1) showed nominally significant interactions for sex with Facebook and TikTok (weaker associations among female participants), as well as for age with Facebook (lower odds ratios in older individuals) and Instagram (lower odds ratios in younger individuals). No interaction was statistically significant between any platform and being female and aged 15 to 29 years, although the CIs for Instagram and TikTok suggested a possible tendency toward a weaker association in this group.

Supplementary Analyses

In multinomial logistic regression analysis distinguishing first-onset from recurrent SI (317 (1.6%) and 1801 (9.2%) participants, respectively), the associations differed by platform (Table S4 in Multimedia Appendix 1). Facebook and TikTok use showed stronger associations with first-onset SI than with recurrent SI. In contrast, X use was associated with recurrent SI but not with first-onset SI. In a sensitivity analysis using frequency of use, the associations were not concentrated among daily users (Table S5 in Multimedia Appendix 1). For X, the estimates were similar for nondaily and daily use. For Facebook and TikTok, associations were observed for nondaily use but not for daily use.

Discussion

Principal Findings

Associations between social media use and SI were statistically significant but varied across SMPs and demographic groups. After adjusting for covariates, instances of Facebook, X, and TikTok use were found to be associated with higher odds of SI, whereas instances of Instagram and YouTube use were not. These findings suggest that specific SMPs may be associated with mental health outcomes or that individuals experiencing SI may be more likely to use specific SMPs to connect with others, seek empathy, or distract themselves from emotional distress [42]. The causal direction could not be determined because of the cross-sectional design, whereas the association may also be bidirectional.

Japan is one of the few countries where suicide rates increased during the COVID-19 pandemic [43]. Previous reports have attributed this increase to multiple complex factors [44-46], including economic instability affecting nonregular workers [47-49]. However, the associations observed in our study held even after adjusting for multiple covariates, suggesting that specific social media use may be independently associated with SI, distinct from employment status, personality traits, or other adjusted factors.

In exploratory stratified analyses, the association between X use and SI was consistent across participants younger than 45 years. The association was observed among young women, a demographic experiencing a concerning rise in suicide rates in Japan, but was not exclusive to this group—it was also observed among young men. Moreover, distinct SMP-specific patterns emerged, such as the association between both Facebook and TikTok and SI primarily among men. In contrast, the use of any specific SMP was not associated with SI among adults aged 60 years or older, suggesting that this association may be more pronounced among younger individuals, possibly reflecting either their greater susceptibility to platform-related influences or their greater tendency to turn to social media when experiencing SI. Although these stratified analyses are exploratory and should be interpreted cautiously because of multiple comparisons, these findings highlight the possibility that the relationship between social media use and mental health is heterogeneous, varying according to both SMP characteristics and user attributes.

Each SMP's characteristics may partially explain these associations, although the potential mechanisms were not directly examined in this study. X, which showed a consistent association with SI across younger demographics, differs from other platforms in several aspects. Its text-based format, in contrast to more image-based platforms, and relatively high degree of anonymity [20,50,51] may make it easier for users to verbalize internal thoughts and emotions. Unlike platforms in which content produced by creators predominates, X is characterized by active interaction among general users, and its algorithmic structure is known to encourage the formation of "echo chambers" [52] in which individuals with similar views gather and interact, reinforcing one another's depressive cognitions and sharing experiences of self-injury or suicide attempts. Consistent with this, a study of young Japanese internet users found that suicide-related Twitter (subsequently rebranded X) use, including explicit online expressions of suicidal intent, was associated with suicidal behavior [53]. These features may attract individuals experiencing SI who are seeking connection or help, whereas exposure to such an environment may in turn relate to SI [53,54]. The high prevalence of online harassment [55] on this SMP may also be associated with substantial psychological harm. Because X use is most prevalent among younger users (Table S1 in Multimedia Appendix 1), any association with SI may carry greater weight in this age group, although interaction analyses did not indicate that it differed specifically among young women.

The characteristics of the other platforms differ correspondingly. The association with Facebook use may be explained by status- or achievement-based social comparisons, as suggested by prior research [56]. Regarding TikTok, some systematic reviews [57,58] have reported that its use is associated with deterioration in cognitive function and mental health, possibly due to its endless scrolling interface and algorithm-driven recommendation systems. In contrast, Instagram showed no significant association with SI in the overall analysis, whereas interaction analyses suggested an inverse association with SI in younger groups. This pattern is consistent with previous research [59] suggesting that Instagram may facilitate intimacy and social connectedness through visual communication, which could promote well-being. Nevertheless, it is possible that individuals with better baseline mental health use Instagram disproportionately more than those with poorer baseline mental health [42]. Beyond platform characteristics, given that neuroticism is associated with both suicidal behavior and patterns of

social media use [34,35], personality traits may shape which platforms individuals select and how they experience them, potentially contributing to platform-specific differences in associations with SI.

SI does not inevitably lead to suicide attempts. The ideation-to-action framework emphasizes that the emergence of ideation and the progression from ideation to actual attempts are distinct processes [24]. Although this study focused exclusively on SI, social media exposure may also be associated with the transition to action by lowering psychological barriers through repeated exposure to suicide-related content, suicide methods, and suicide narratives, as shown in Figure S1 in Multimedia Appendix 1. Future studies should investigate these downstream processes to better understand the relationship between social media use and suicide.

In supplementary analyses distinguishing first-onset from recurrent SI, the platforms associated with each differed. Our cross-sectional design does not allow us to determine what underlies this difference, but the pattern suggests that distinguishing between the two is a worthwhile direction for prospective research.

The observed associations between social media use and SI are broadly consistent with findings from recent systematic reviews that identified social media use and its frequency as significant correlates of suicide-related behaviors [11,60]. Our results are consistent with those of a previous Japanese study [20] showing that Twitter (subsequently rebranded X) use across age groups was associated with distress and loneliness, whereas Instagram use among younger individuals was associated with better well-being and lower distress. However, their findings showing that frequent Facebook posts were associated with better well-being among middle-aged adults are not supported by our results.

Using nationwide data collected between 2024 and 2025, this study provides timely evidence of SMP-specific associations with SI in Japan. Its findings are particularly relevant following the recent revision of the Basic Act on Suicide Countermeasures, which explicitly addresses suicide prevention in digital society and among children and adolescents [61]. Our results suggest that certain SMP user populations may be more likely to include individuals experiencing SI. Thus, SMPs more strongly associated with SI may warrant consideration as channels for strategic dissemination of suicide prevention resources such as online counseling services and digital mental health information. Moreover, the analysis of such SMPs may also be useful for understanding population-level mental health conditions, as shown in previous studies, including ours, using social media to monitor mental health and suicide-related risk [53,62,63]. Broad avoidance of specific SMPs is impractical given their integration into modern social infrastructure and their benefits for social connection and information access [15]. Instead, appropriate SMP-specific use should be considered based on the differential associations identified in this study.

Limitations

This study had several limitations. First, social media use was measured approximately 1 month after the recall period for SI had concluded. We assumed short-term stability of use to link the 2 survey waves. It was partly for this reason that we characterized exposure as use vs nonuse of each platform rather than by frequency of use as the platforms that a person uses are likely to be more stable over time than how often they use them. Nevertheless, a single measurement cannot capture use patterns across the entire 12-month recall period, and platform use may change with life events, platform trends, and personal circumstances. Our findings are therefore strictly associational and should not be interpreted as evidence that social media use influences SI. This constraint arises from the use of 2 existing nationwide surveys, a design that afforded a large and geographically diverse sample but did not allow us to align the timing of exposure and outcome measurement.

Second, although stratified and interaction analyses were conducted to explore possible differences in associations across user attributes, these analyses involve multiple comparisons and should therefore be interpreted with caution. Third, regarding generalizability, although we conducted unweighted analyses because we focused on assessing adjusted associations rather than population prevalence, selection bias may still be present. Consequently, these findings may not be representative of the general Japanese population. Additionally, because social media use patterns vary across countries and cultures, our findings may not be generalizable to other settings. Fourth, the participants were not asked about the daily use time or purpose of social media use. A sensitivity analysis using the number of days of use indicated that the associations were not concentrated among daily users; however, the meaning of daily use differs across platforms, and this measure captures the number of days of use rather than time spent or intensity of engagement. We therefore could not evaluate the dose-response relationship or distinguish between passive and active use. Fifth, although we adjusted for key demographic confounders, we deliberately excluded potential mediators such as current psychiatric disorders, loneliness, and sleep duration to avoid overadjustment bias. Nevertheless, residual confounding by unmeasured variables could not be excluded. Sixth, SI was not assessed using a validated multi-item clinical scale but, instead, a single-item self-report measure that has also been used in other JACSIS and JASTIS studies [33]. This measure does not capture the severity of ideation, ranging from passive thoughts of not wanting to live to active ideation with a specific plan. Finally, because the number of participants younger than 20 years was small, this study may not have adequately captured the situation of adolescent girls.

Future studies should use longitudinal designs to clarify causal relationships and examine associations with social media use intensity, problematic or addictive use, and specific use purposes (eg, posting vs viewing). Additionally, studies focusing on adolescent populations are required.

Conclusions

This nationwide study demonstrated that the association between social media use and SI in Japan varies substantially by SMP and demographic characteristics. After adjusting for confounding factors, instances of X, Facebook, and TikTok use were associated with higher odds of SI, whereas instances of Instagram and YouTube use showed no significant associations. X exhibited a consistent association across participants younger than 45 years of age, including young women, a demographic experiencing rising suicide rates. Stratified and interaction analyses suggested that the associations for Facebook and TikTok use may be more pronounced among men. Although no associations specific to young women were identified, these findings indicate that the relationship between social media use and SI depends on SMP-specific characteristics and user attributes. Considering these SMP-level differences may enhance the targeting and effectiveness of suicide prevention strategies in the digital era. Owing to the temporal ordering of the measurement, these findings do not permit inference about the direction of the observed associations. They should be regarded as hypothesis generating for future longitudinal studies that measure social media use prospectively before assessing SI, with repeated measures to capture use patterns over time.

Acknowledgments

The authors thank Editage for conducting English-language editing. The authors used the AI-based language models ChatGPT (GPT-5.1; OpenAI), Gemini (Gemini 3 Pro; Google), and Claude (Claude Sonnet 4.5; Anthropic) between August 2025 and December 2025 to assist with translating the text into English, refining the wording, and improving the organization and clarity of the manuscript. The authors reviewed and edited all the content generated by these tools and take full responsibility for the integrity and accuracy of the final manuscript.

Funding

The Japan COVID-19 and Society Internet Survey 2024 was supported by Japan Society for the Promotion of Science Grants-in-Aid for Scientific Research (grants JP21H04856, JP25H01079, and JP24K15576), Japan Science and Technology Agency Research Institute of Science and Technology for Society grants (grant JPMJRX21K6), the intramural fund of the National Institute for Environmental Studies (Health Labor Sciences Research Grants 23EA1003, 22FA2001, 24LA0201, 22JA1005, 22FA1001, 22FA1010, 23EA1001, 23FA1004, 24FA1020, and 24LA1002), and the Japan Agency for Medical Research and Development "Strategic Center of Biomedical Advanced Vaccine Research and Development for Preparedness and Response" (grant JP243fa627004). The Japan Society and New Tobacco Internet Survey 2025 was supported by Health Labor Sciences Research Grants 22FA1002 and 23FA1004, Japan Society for the Promotion of Science Grants-in-Aid for Scientific Research (grants JP20K19633, 23K21579, JP24H00663, and JP21H04856), and the intramural fund of the National Institute for Environmental Studies. The funders had no involvement in the study design; data collection, analysis, and interpretation; or writing of the manuscript.

Data Availability

The data used in this study are not available in public repositories as they contain personally identifiable or potentially sensitive participant information. On the basis of the regulations for ethical guidelines in Japan, the Research Ethics Committee of the Osaka International Cancer Institute imposed restrictions on the dissemination of the data collected in this study. All data inquiries should be addressed to the person responsible for data management (author TT).

Authors' Contributions

Conceptualization: YT, MH, YK
Data curation: TT, YT
Formal analysis: YT, MH
Funding acquisition: TT
Investigation: YT, MH, YH, TT, YK
Methodology: YT, MH, YK
Project administration: TT, YK, MH
Supervision: TT, HT, YK
Visualization: YT
Writing—original draft: YT, MH, YH, HT, YK
Writing—review and editing: YT, MH, YH, HT, TT, YK

Conflicts of Interest

TT received financial support for research (research funding) from Daiichi Sankyo, Johnson & Johnson, Dataseed, Workout Plus, Emma, Addness, CotoIT, and Laugh (in the last 36 months). He also serves as a research advisor to Dataseed and receives personal consulting fees. All other authors declare no other conflicts of interest.

Multimedia Appendix 1

Supplementary methods, tables, and figure.
[DOCX File (Microsoft Word File), 171 KB-Multimedia Appendix 1]

Checklist 1

CHERRIES checklist
[PDF File (Adobe File), 234 KB-Checklist 1]

References

1. Okada M, Matsumoto R, Shiroyama T, Motomura E. Suicidal mortality and motives among middle-school, high-school, and university students. JAMA Netw Open. Aug 1, 2023;6(8):e2328144. [doi: 10.1001/jamanetworkopen.2023.28144] [Medline: 37548975]
2. Suicide statistics: basic data on suicide in local communities [Article in Japanese]. Ministry of Health Labour and Welfare Japan. URL: https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000140901.html [Accessed 2026-09-23]
3. Sakamoto H, Ishikane M, Ghaznavi C, Ueda P. Assessment of suicide in Japan during the COVID-19 pandemic vs previous years. JAMA Netw Open. Feb 1, 2021;4(2):e2037378. [doi: 10.1001/jamanetworkopen.2020.37378] [Medline: 33528554]
4. White paper on suicide prevention, 2025 edition [Article in Japanese]. Ministry of Health Labour and Welfare Japan. URL: https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/hukushi_kaigo/seikatsuhogo/jisatsu/jisatsuhakusyo2025.html [Accessed 2025-11-20]
5. Narita ZC, Knowles G, Yamasaki S, Kasai K, Nishida A. The silent crisis in girls' mental health. Nat Hum Behav. Dec 2025;9(12):2409-2410. [doi: 10.1038/s41562-025-02322-2] [Medline: 41028811]
6. Campbell OL, Bann D, Patalay P. The gender gap in adolescent mental health: a cross-national investigation of 566,829 adolescents across 73 countries. SSM Popul Health. 2021;13:100742. [doi: 10.1016/j.ssmph.2021.100742] [Medline: 33748389]
7. de Looze ME, Cosma A, Elgar FJ, et al. Exploring mechanisms behind the increasing gender gap in adolescent psychological symptoms, 2002-2022: the role of national-level gender equality. J Child Psychol Psychiatry. May 2025;66(5):737-751. [doi: 10.1111/jcpp.14081] [Medline: 39644150]
8. Survey on information and communication media usage time and information behavior [Report in Japanese]. Ministry of Internal Affairs and Communications Japan; 2026. URL: https://www.soumu.go.jp/iicp/research/results/media_usage-time.html [Accessed 2026-09-23]
9. Keles B, McCrae N, Grealish A. A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. Int J Adolesc Youth. Dec 31, 2020;25(1):79-93. [doi: 10.1080/02673843.2019.1590851]
10. McCrae N, Gettings S, Purssell E. Social media and depressive symptoms in childhood and adolescence: a systematic review. Adolescent Res Rev. Dec 2017;2:315-330. [doi: 10.1007/s40894-017-0053-4]
11. Macrynikola N, Auad E, Menjivar J, Miranda R. Does social media use confer suicide risk? A systematic review of the evidence. Comput Hum Behav Rep. 2021;3:100094. [doi: 10.1016/j.chbr.2021.100094]
12. Nesi J, Burke TA, Bettis AH, et al. Social media use and self-injurious thoughts and behaviors: a systematic review and meta-analysis. Clin Psychol Rev. Jul 2021;87:102038. [doi: 10.1016/j.cpr.2021.102038] [Medline: 34034038]
13. Vidal C, Lhaksampa T, Miller L, Platt R. Social media use and depression in adolescents: a scoping review. Int Rev Psychiatry. May 2020;32(3):235-253. [doi: 10.1080/09540261.2020.1720623] [Medline: 32065542]
14. Weigle PE, Shafi RM. Social media and youth mental health. Curr Psychiatry Rep. Jan 2024;26(1):1-8. [doi: 10.1007/s11920-023-01478-w] [Medline: 38103128]
15. Grossberg A, Rice T. Depression and suicidal behavior in adolescents. Med Clin North Am. Jan 2023;107(1):169-182. [doi: 10.1016/j.mcna.2022.04.005] [Medline: 36402497]
16. Chen Y, Zhang X, Akaishi R. Exploring digital use, happiness, and loneliness in Japan with the experience sampling method. Npj Ment Health Res. 2024;3(1):63. [doi: 10.1038/s44184-024-00108-4] [Medline: 39643615]
17. Jaycox LH, Murphy ER, Zehr JL, Pearson JL, Avenevoli S. Social media and suicide risk in youth. JAMA Netw Open. Oct 1, 2024;7(10):e2441499. [doi: 10.1001/jamanetworkopen.2024.41499] [Medline: 39453651]
18. Vandenbosch L, Fardouly J, Tiggemann M. Social media and body image: recent trends and future directions. Curr Opin Psychol. Jun 2022;45:101289. [doi: 10.1016/j.copsyc.2021.12.002] [Medline: 35030460]
19. Masciantonio A, Bourguignon D, Bouchat P, Balty M, Rimé B. Don't put all social network sites in one basket: Facebook, Instagram, Twitter, TikTok, and their relations with well-being during the COVID-19 pandemic. PLoS One. 2021;16(3):e0248384. [doi: 10.1371/journal.pone.0248384] [Medline: 33705462]

20. Sakurai R, Nemoto Y, Mastunaga H, Fujiwara Y. Who is mentally healthy? Mental health profiles of Japanese social networking service users with a focus on LINE, Facebook, Twitter, and Instagram. PLoS One. 2021;16(3):e0246090. [doi: 10.1371/journal.pone.0246090] [Medline: 33657132]
21. Kuwabara Y, Imamoto A, Hori N, Kim H, Kinjo A, Osaki Y. Excessive gaming and social media are associated with depressive symptoms among junior high school students in Japan. Pediatr Int. 2025;67(1):e70063. [doi: 10.1111/ped.70063] [Medline: 40417746]
22. Nishida T, Tamura H, Sakakibara H. The association of smartphone use and depression in Japanese adolescents. Psychiatry Res. Mar 2019;273:523-527. [doi: 10.1016/j.psychres.2019.01.074] [Medline: 30708204]
23. Shimazu A, Hamada Y, Mori S, et al. Research on suicide countermeasures using social media [Report in Japanese]. Japan Suicide Countermeasures Promotion Center; 2021. URL: https://jscp.or.jp/assets/img/3-1.achivement2020.pdf [Accessed 2026-09-23]
24. Klonsky ED, May AM, Saffer BY. Suicide, suicide attempts, and suicidal ideation. Annu Rev Clin Psychol. 2016;12:307-330. [doi: 10.1146/annurev-clinpsy-021815-093204] [Medline: 26772209]
25. Rizvi A, Harmer B, Saadabadi A. Suicidal ideation. In: StatPearls. StatPearls Publishing; 2024.
26. Tabuchi T, Shinozaki T, Kunugita N, Nakamura M, Tsuji I. Study profile: the Japan "Society and New Tobacco" Internet Survey (JASTIS): a longitudinal internet cohort study of heat-not-burn tobacco products, electronic cigarettes, and conventional tobacco products in Japan. J Epidemiol. Nov 5, 2019;29(11):444-450. [doi: 10.2188/jea.JE20180116] [Medline: 30318495]
27. Someko H, Anan K, Tabuchi T, et al. Data resource profile: the Japan COVID-19 and Society Internet Survey (JACSIS). Int J Epidemiol. Feb 18, 2026;55(2):dyag025. [doi: 10.1093/ije/dyag025] [Medline: 41806390]
28. von Elm E, Altman DG, Egger M, et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. Lancet. Oct 20, 2007;370(9596):1453-1457. [doi: 10.1016/S0140-6736(07)61602-X] [Medline: 18064739]
29. Eysenbach G. Improving the quality of web surveys: the Checklist for Reporting Results of Internet E-Surveys (CHERRIES). J Med Internet Res. Sep 29, 2004;6(3):e34. [doi: 10.2196/jmir.6.3.e34] [Medline: 15471760]
30. Nock MK, Borges G, Bromet EJ, et al. Cross-national prevalence and risk factors for suicidal ideation, plans and attempts. Br J Psychiatry. Feb 2008;192(2):98-105. [doi: 10.1192/bjp.bp.107.040113] [Medline: 18245022]
31. Cranney S, Wilkinson ST. The relationship between marital status and risk for suicidal thoughts, plans, and attempts: evidence for a growing association. J Affect Disord. Dec 15, 2025;391:119862. [doi: 10.1016/j.jad.2025.119862] [Medline: 40683538]
32. Shahghasemi E, Emamzadeh Z. Factors influencing social media usage in the US. J Cyberspace Stud. 2019;3(1):5-22. [doi: 10.22059/jcss.2019.270606.1029]
33. Sasaki N, Tabuchi T, Okubo R, Ishimaru T, Kataoka M, Nishi D. Temporary employment and suicidal ideation in COVID-19 pandemic in Japan: a cross-sectional nationwide survey. J Occup Health. Jan 2022;64(1):e12319. [doi: 10.1002/1348-9585.12319] [Medline: 35196411]
34. Mota MS, Ulguim HB, Jansen K, Cardoso TA, Souza LD. Are big five personality traits associated to suicidal behaviour in adolescents? A systematic review and meta-analysis. J Affect Disord. Feb 15, 2024;347:115-123. [doi: 10.1016/j.jad.2023.11.002] [Medline: 37956831]
35. Correa T, Hinsley AW, de Zúñiga HG. Who interacts on the web?: The intersection of users' personality and social media use. Comput Human Behav. 2010;26(2):247-253. [doi: 10.1016/j.chb.2009.09.003]
36. Mitani H, Kondo N, Amemiya A, Tabuchi T. Promotive and protective effects of community-related positive childhood experiences on adult health outcomes in the context of adverse childhood experiences: a nationwide cross-sectional survey in Japan. BMJ Open. Jun 25, 2024;14(6):e082134. [doi: 10.1136/bmjopen-2023-082134] [Medline: 38925696]
37. Domoff SE, Borgen AL, Wilke N, Hiles Howard A. Adverse childhood experiences and problematic media use: perceptions of caregivers of high-risk youth. Int J Environ Res Public Health. Jun 22, 2021;18(13):6725. [doi: 10.3390/ijerph18136725] [Medline: 34206472]
38. Cong Q, van Geel M, Buisman RS, Vedder P. Adverse childhood experiences and problematic social media use: longitudinal evidence among Chinese adolescents. J Adolesc. Jan 2026;98(1):213-227. [doi: 10.1002/jad.70053] [Medline: 40963336]
39. Gosling SD, Rentfrow PJ, Swann WB. A very brief measure of the Big-Five personality domains. J Res Pers. 2003;37(6):504-528. [doi: 10.1016/S0092-6566(03)00046-1]
40. Oshio A, Abe S, Cutrone P. An attempt to create a Japanese version of the Ten Item Personality Inventory (TIPI-J) [Article in Japanese]. Jpn J Pers. 2012;21(1):40-52. [doi: 10.2132/personality.21.40]
41. Fujiwara T. Impact of adverse childhood experience on physical and mental health: a life-course epidemiology perspective. Psychiatry Clin Neurosci. Nov 2022;76(11):544-551. [doi: 10.1111/pcn.13464] [Medline: 36002401]

42. Daine K, Hawton K, Singaravelu V, Stewart A, Simkin S, Montgomery P. The power of the web: a systematic review of studies of the influence of the internet on self-harm and suicide in young people. PLoS One. 2013;8(10):e77555. [doi: 10.1371/journal.pone.0077555] [Medline: 24204868]
43. Pirkis J, Gunnell D, Shin S, et al. Suicide numbers during the first 9-15 months of the COVID-19 pandemic compared with pre-existing trends: an interrupted time series analysis in 33 countries. EClinicalMedicine. Sep 2022;51:101573. [doi: 10.1016/j.eclinm.2022.101573] [Medline: 35935344]
44. Analysis of suicide trends during the COVID-19 pandemic [Report in Japanese]. Japan Suicide Countermeasures Promotion Center; 2024. URL: https://jscp.or.jp/research/report/kinkyureport_241115.html [Accessed 2026-09-23]
45. Koda M, Harada N, Eguchi A, Nomura S, Ishida Y. Reasons for suicide during the COVID-19 pandemic in Japan. JAMA Netw Open. Jan 4, 2022;5(1):e2145870. [doi: 10.1001/jamanetworkopen.2021.45870] [Medline: 35099547]
46. Tanaka T, Okamoto S. Increase in suicide following an initial decline during the COVID-19 pandemic in Japan. Nat Hum Behav. Feb 2021;5(2):229-238. [doi: 10.1038/s41562-020-01042-z] [Medline: 33452498]
47. Motohshi Y, Kizuki M, Yoshino S. Increase in suicide during the COVID-19 pandemic in Japan: possible link between contingent employment and suicide by VAR time-series analysis. Suicide Policy Research. 2020;3(1):3-8. URL: https://jscp.or.jp/assets/img/english/RCSP_3-1-3.pdf [Accessed 2026-09-25]
48. White paper on suicide prevention, 2021 edition [Article in Japanese]. Ministry of Health Labour and Welfare Japan. 2021. URL: https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/hukushi_kaigo/seikatsuhogo/jisatsu/jisatsuhakusyo2021.html [Accessed 2025-11-22]
49. Kikuchi S, Kitao S, Mikoshiba M. Who suffers from the COVID-19 shocks? Labor market heterogeneity and welfare consequences in Japan. J Jpn Int Econ. 2021;59. [doi: 10.1016/j.jjie.2020.101117]
50. Ma X, Hancock J, Naaman M. Anonymity, intimacy and self-disclosure in social media. In: CHI '16: Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems. Association for Computing Machinery; 2016:3857-3869. [doi: 10.1145/2858036.2858414]
51. Peddinti ST, Ross KW, Cappos J. "On the internet, nobody knows you're a dog": a Twitter case study of anonymity in social networks. In: COSN '14: Proceedings of the Second ACM Conference on Online Social Networks. Association for Computing Machinery; 2014:83-94. [doi: 10.1145/2660460.2660467]
52. Cinelli M, De Francisci Morales G, Galeazzi A, Quattrociocchi W, Starnini M. The echo chamber effect on social media. Proc Natl Acad Sci U S A. Mar 2, 2021;118(9):e2023301118. [doi: 10.1073/pnas.2023301118] [Medline: 33622786]
53. Sueki H. The association of suicide-related Twitter use with suicidal behaviour: a cross-sectional study of young internet users in Japan. J Affect Disord. Jan 1, 2015;170:155-160. [doi: 10.1016/j.jad.2014.08.047] [Medline: 25240843]
54. Sueki H, Yonemoto N, Takeshima T, Inagaki M. The impact of suicidality-related internet use: a prospective large cohort study with young and middle-aged internet users. PLoS One. 2014;9(4):e94841. [doi: 10.1371/journal.pone.0094841] [Medline: 24740115]
55. Survey on the actual state of distribution of illegal and harmful information on the internet [Report in Japanese]. Ministry of Internal Affairs and Communications Japan; 2023. URL: https://www.soumu.go.jp/main_content/000909496.pdf [Accessed 2026-09-23]
56. Vogel EA, Rose JP, Roberts LR, Eckles K. Social comparison, social media, and self-esteem. Psychol Pop Media Cult. 2014;3(4):206-222. [doi: 10.1037/ppm0000047]
57. Nguyen L, Walters J, Paul S, et al. Feeds, feelings, and focus: a systematic review and meta-analysis examining the cognitive and mental health correlates of short-form video use. Psychol Bull. Sep 2025;151(9):1125-1146. [doi: 10.1037/bul0000498] [Medline: 41231585]
58. Jain L, Velez L, Karlapati S, et al. Exploring problematic TikTok use and mental health issues: a systematic review of empirical studies. J Prim Care Community Health. 2025;16:21501319251327303. [doi: 10.1177/21501319251327303] [Medline: 40105453]
59. Pittman M, Reich B. Social media and loneliness: why an Instagram picture may be worth more than a thousand Twitter words. Comput Human Behav. Sep 2016;62:155-167. [doi: 10.1016/j.chb.2016.03.084]
60. Chen Z, Liao X, Yang J, et al. Association of screen-based activities and risk of self-harm and suicidal behaviors among young people: a systematic review and meta-analysis of longitudinal studies. Psychiatry Res. Aug 2024;338:115991. [doi: 10.1016/j.psychres.2024.115991] [Medline: 38833936]
61. Basic law on suicide prevention [Article in Japanese]. e-Gov Laws and Regulations Japan. URL: https://laws.e-gov.go.jp/law/418AC0100000085/20260401_507AC0100000064 [Accessed 2025-11-20]
62. Wang S, Ning H, Huang X, et al. Public surveillance of social media for suicide using advanced deep learning models in Japan: time series study from 2012 to 2022. J Med Internet Res. Jun 2, 2023;25:e47225. [doi: 10.2196/47225] [Medline: 37267022]

63. Fujii S, Kunii Y, Nonaka S, et al. Real-time prediction of medical demand and mental health status in Ukraine under Russian invasion using tweet analysis. Tohoku J Exp Med. Feb 15, 2023;259(3):177-188. [doi: 10.1620/tjem.2022.J111] [Medline: 36543243]

Abbreviations

ACE: adverse childhood experience
aOR: adjusted odds ratio
JACSIS: Japan COVID-19 and Society Internet Survey
JASTIS: Japan Society and New Tobacco Internet Survey
SI: suicidal ideation
SMP: social media platform
STROBE: Strengthening the Reporting of Observational Studies in Epidemiology

Edited by Amaryllis Mavragani; peer-reviewed by Ali AL-Asadi, Ikuo Otsuka; submitted 01.Jun.2026; final revised version received 24.Aug.2026; accepted 08.Sep.2026; published 16.Nov.2026

Please cite as:
Taniguchi Y, Hino M, Hamaie Y, Tomita H, Tabuchi T, Kunii Y
The Association Between Platform-Specific Social Media Use and Suicidal Ideation in Japan: Cross-Sectional Web-Based Survey Study
J Med Internet Res 2026;28:e103235
URL: https://www.jmir.org/2026/1/e103235
doi: 10.2196/103235

© Yusei Taniguchi, Mizuki Hino, Yumiko Hamaie, Hiroaki Tomita, Takahiro Tabuchi, Yasuto Kunii. Originally published in the Journal of Medical Internet Research (https://www.jmir.org), 16.Nov.2026. This is an open-access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work, first published in the Journal of Medical Internet Research (ISSN 1438-8871), is properly cited. The complete bibliographic information, a link to the original publication on https://www.jmir.org/, as well as this copyright and license information must be included.