2	Empathic vs. Informational Messaging in Search Ads for Suicide Prevention: A Field Study in Tokyo
3	Satoshi Ono <sup>1</sup> , Hajime Sueki <sup>2</sup> , Tai Nakahara <sup>3</sup> , Asumi Takahashi <sup>4</sup> , Jiro Ito <sup>3</sup>
4	
5	<sup>1</sup> Otsuma Women's University
6	<sup>2</sup> Wako University
7	<sup>3</sup> Specified Nonprofit Corporation OVA
8	<sup>4</sup> Hokusei Gakuen University
9	
10	*Correspondence:
11	Satoshi Ono (E-mail: onosatoshi0925@gmail.com)
12	
13	Abstract
14 15 16	<b>Background:</b> Although search-based advertising has been used for suicide prevention, the ad message type that most effectively promotes access to support information among users searching for life issues related to suicide risk remains unclear.
17 18	Aims: This study examined the types of ad messages that promote access to support information for users searching for life issues.
19 20 21 22 23 24	<i>Method:</i> We displayed advertisements in Tokyo to users who searched for keywords related to six life issue areas (perinatal women, domestic violence, addiction, depression, sexual minorities, and child abuse). Four advertisement types were combined: two headlines (empathic vs. informational) and two descriptions (with vs. without expertise). The outcomes were ad click and conversion rates for the three landing-page actions (self-check for mental health, self-care, and consultation services).
25 26 27 28	<b>Results:</b> Empathic headlines increased click and self-check rates, suggesting their effectiveness in promoting early-stage engagement. In contrast, informational headlines were effective in promoting access to consultation services. Expertise cues decreased access to self-care and consultation services, yet increased access to self-care with empathic headlines.
29 30 31 32	<i>Limitations:</i> This study examined a limited set of ad elements, was conducted in Tokyo for a limited period, and used Japanese-language advertisements and webpages. Additionally, conversion outcomes may have been influenced by the structure of the multifunction landing page.
33 34	<b>Conclusion:</b> Empathic messages facilitate early-stage behaviors, whereas informational messages promote access to information about consultation services. These findings highlight

the importance of tailoring ad messages to users' stage of help-seeking and life issue areas in digital suicide prevention strategies.

3

4

5

**Keywords**: suicide prevention, search-based advertising, empathic message, help-seeking behavior, life issues

6

7

8

9 10

11

12 13

14

15

16 17

18

19

20

21

22

2324

25

26

27

28

29 30

31

32

33

34

35 36

37

38 39

40

Suicide is a global public health concern. The World Health Organization (WHO) (2014) recommends the use of the Internet as part of crisis interventions for suicide prevention. The Internet and social networking services (SNS) can reach individuals who are less likely to access face-to-face support because of their immediacy, anonymity, and broad accessibility. Internet-based suicide prevention counseling services have been implemented worldwide (e.g., Kohl et al., 2022). SNS platforms provide users with support information when they search for or post suicide-related terms (e.g., X Corp., 2025). In line with global trends, Japan has revised its Basic Act on Suicide Prevention in 2025 to incorporate the use of information and communication technologies (ICT) and artificial intelligence (AI)-related technologies as guiding principles. Consequently, the importance of appropriately utilizing digital technologies is likely to increase in future suicide prevention strategies.

Search-based advertising has been utilized as part of digital suicide prevention strategies. Search-based advertising displays ads based on users' search keywords and directs them to specific websites. Users who search for suicide-related terms are at higher risk of suicide (Sueki & Ito, 2018; Takahashi et al., 2023). In a UK clinical sample of suicidal mental health patients, the most common suicide-related internet use was searching for suiciderelated content (87.4%), and while engaging in suicide-related internet use most participants (84.7%) had seen suicide prevention messaging and nearly half (45.4%) interacted with these messages (e.g., followed links to helpful content or called a helpline) (Bojanić et al., 2025). Therefore, search-based advertising is considered a useful method for delivering support information to individuals at a high risk of suicide. Onie et al. (2023) reported two studies that used Google Ads to target users searching for suicide-related terms. In Study 1, the ads directed users to a hotline during a 16-day campaign in the United States. The click rate was 4.02% and the conversion rate (calls to the hotline) reached 15.21%. In Study 2 in Australia, four categories of search terms (e.g., low- and high-risk terms) were defined, and Google Ads were displayed accordingly. After clicking the ads, users were directed to a website offering lived-experience stories, calming activities, links to support services, and a hotline. The click rate was 5.15%, and the conversion rate (e.g., clicking on a link to call a support service) was 22.79%. In Japan, search-based advertising has also been used in online gatekeeping activities, in which individuals searching for suicide-related terms are presented with ads offering free email-based counseling to connect them with support services. Studies have reported click rates of approximately 1% to 5% and conversion rates of approximately 3% to 5% (Sueki & Ito, 2015; Sueki & Ito, 2018; Sueki et al., 2023). Moreover, suicidal ideation

decreased approximately four weeks after the initial use of the consultation service through this approach (Sueki et al., 2023). These findings suggest that search-based advertising is a useful and effective method for reaching individuals at high risk of suicide.

Suicide is a complex event resulting from the accumulation of multiple risk factors and life issues. Therefore, in suicide prevention strategies, it is important to provide support at an early stage before suicide risk becomes severe. Ono et al. (2025) implemented searchbased advertising targeting six life issues related to suicide risk: perinatal women, domestic violence (DV), addiction, depression, sexual minorities, and child abuse. Approximately 70% to 90% of users who searched for the five life issues, excluding addiction, experienced psychological distress equivalent to mood or anxiety disorders. Côté and Lane (2024) evaluated suicide.ca, a Quebec digital suicide prevention platform. The platform deploys the three levels of suicide prevention defined by the WHO (2014): universal, selective, and indicated, as a single, centralized platform. It includes multiple functions such as providing psychoeducational information, disseminating information on risk factors, offering selfassessment tools, and delivering crisis interventions through chat services. The evaluation indicated that the platform effectively reached a wide range of users, from the general population to individuals at high risk of suicide, and half of the users who engaged in the chat service experienced positive intervention effects. These findings suggest that digital technology-based approaches, including search-based advertising, may be effective even at an early stage before the suicide risk becomes severe and imminent.

To enhance the effectiveness of approaches using search-based advertising, it is important to adjust the message tone for the target users. A prior study targeting users who search for suicide-related terms has reported that advertisements with direct messages in the headline (e.g., "Please consult") increased use of telephone counseling (odds ratio = 1.6) compared with advertisements with empathic messages (Takahashi et al., 2020). Moreover, when advertisements include explicit terms such as "suicide," engagement with the website can increase or decrease depending on the risk level of the search terms (Onie et al., 2024). Accordingly, the tone of ad messages should be tailored to the search terms and the user's state. However, these findings have primarily pertained to users who search for suicide-related terms, and it has not yet been sufficiently examined which ad messages most effectively promote access to support information among users who are at the stage of searching for life issues. Many users who search for terms related to life issues are already experiencing severe psychological distress (Ono et al., 2025). Therefore, ad message designs should be empirically examined to guide users to support information at an early stage before suicide risk becomes imminent.

The present study aimed to examine the types of ad messages that promote access to support information among users searching for life issues. The data analyzed in this study were obtained from a survey dataset publicly released by the Tokyo Metropolitan Government. Although part of the same dataset has already been analyzed by Ono et al.(2025), this study focuses on the effects of ad messages. In this survey, users who searched for keywords related to the six life issues were presented with search-based advertisements; clicking an ad directed them to a multifunctional website that provided self-check tools,

- 1 self-care information, and information on consultation services. We manipulated two
- 2 elements of the advertisements: headlines and descriptions. Takahashi et al. (2020)
- 3 demonstrated the effectiveness of including a direct message in the headline; however, users
- 4 searching for life issues may not necessarily be at the stage of seeking immediate
- 5 consultation, and the landing pages in the present study offered multiple functions.
- 6 Accordingly, we employed an informational headline aligned with the landing page design
- 7 and, for comparison, an empathic headline while manipulating the description to include or
- 8 exclude expertise as a credibility cue (Takahashi et al., 2020). We then examined how these
- 9 message elements influenced the ads' click rate and landing page actions after clicking.

11 Method

## **Procedure and Participants**

The data analyzed in this study were extracted from publicly available aggregate data provided by the Tokyo Metropolitan Government; the data obtained from the same survey were analyzed in a previous study (Ono et al., 2025). To equalize the number of ads displayed (impressions) across the four advertisement conditions, advertisements were first displayed during a preliminary adjustment period from October 17 to November 15, 2023. Data from this preliminary period were excluded from the analysis. Data obtained between November 16, 2023, and January 31, 2024, were used for the analysis. Search-based advertisements were displayed to users in Tokyo who searched for keywords related to life issues in six areas (perinatal women, DV, addiction, depression, sexual minorities, and child abuse). When users clicked an advertisement, they were directed to the original website created for each area. On the original website, (a) a self-check function, (b) self-care information, and (c) information on consultation services (including links to the Tokyo Metropolitan Government's support services and to the Japanese Office for Policy on Loneliness and Isolation) were provided (for details, see Ono et al., 2025).

### Ad Design

Each advertisement consisted of a headline and a description (an example advertisement is shown in Electronic Supplementary Material 1 [ESM 1]). For the headline, two types of messages were used: an empathic message (e.g., "It was tough, wasn't it?") and an informational message about the website (e.g., "Introducing consultation services and self-care methods"). For the description, two types were used: with expertise explicitly stated (e.g., "Supervised by psychologists and other professionals") and without such a statement. Four types of advertisement were created by combining two types of headlines (empathic/informational) and two types of descriptions (with or without expertise). The four types of advertisements were adjusted to display at equal frequencies. All the advertisements were written in Japanese.

### Outcomes

We compiled impressions, ad clicks, click rates (clicks/impressions), conversions, and conversion rates (conversions/clicks). In this study, the outcomes were click rate (engagement with the ad) and conversion rate (engagement with the landing page). Conversions were defined as user actions after clicking an advertisement, specifically: (1) performing a self-check, (2) accessing self-care information, and (3) accessing consultation service information. Each conversion action was analyzed as a separate outcome and the conversion rate for each action was calculated as conversions/clicks.

### **Statistical Analysis**

We calculated descriptive statistics and plotted the click and conversion rates with 95% confidence intervals (CI) for each life issue area and advertisement condition. We then conducted logistic regression analyses to examine the main effects of the headline (empathic vs. informational) and description (with vs. without expertise), as well as their interaction (headline × description). The primary analyses were performed using a model that integrated all six areas. Regression coefficients were transformed into odds ratios (OR) and reported with 95% confidence intervals (CI) and p values. All analyses were conducted using the R software (version 4.3.1; R Core Team, 2023). Logistic regression was performed using the glm function in the stats package and figures were created using ggplot2.

### Use of Generative AI

During the preparation of this study, OpenAI ChatGPT was used to check the correctness of the analysis scripts in R. All analyses were independently performed and verified using R (version 4.3.1; R Core Team, 2023). After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

### **Ethical Considerations**

This study was approved by the Ethical Review Board of \*\*\*\* University (approval number: 2022–009). Publicly available aggregate data were used and no personally identifiable information was included. The original website stated that collected data would be used for research purposes. Users were free to close the web browser at any time or refuse to provide responses, and opt-out procedures were available. In addition, the response data from individuals who did not consent to the use of their data for the study were excluded from the analysis.

37 Results

### **Descriptive Statistics**

During the analysis period, advertisements were displayed 1,101,831 times and clicked 44,611 times (click rate: 4.05%). For headline type, the click rate was 3.68% for informational messages (19,226/522,130) and 4.38% for empathic messages (25,385/579,701). By description, the click rate was 4.06% with expertise (22,314/549,912) and 4.04% without expertise (22,297/551,919). For each combination of the life issue area and ad condition, the click rates ranged from 1.53% to 8.58% (Figure 1; numerical details in ESM 2).

Regarding landing page actions after clicking the ads, the overall percentages (conversions/clicks) for the three conversion actions were 20.38% for self-check (9,090/44,611), 5.70% for self-care (2,543/44,611), and 10.30% for consultation services (4,596/44,611). The following percentages were observed for the different types of headlines: informational messages—self-check 17.67% (3,397/19,226), self-care 5.06% (973/19,226), and consultation services 11.02% (2,118/19,226); empathic messages—self-check 22.43% (5,693/25,385), self-care 6.18% (1,570/25,385), and consultation services 9.76% (2,478/25,385). According to the provided descriptions, the percentages for the three conversion actions were as follows: with expertise—self-check 20.35% (4,542/22,314), self-care 5.61% (1,252/22,314), and consultation services 9.89% (2,206/22,314); without expertise—self-check 20.40% (4,548/22,297), self-care 5.79% (1,291/22,297), and consultation services 10.72% (2,390/22,297). For each combination of the life issue area and ad condition, conversion rates ranged from 10.19% to 33.12% for self-check, 2.65% to 12.69% for self-care, and 6.36% to 22.56% for consultation services (Figure 2; numerical details in ESM 3).

- 25 [Figure 1 near here]
- 26 [Figure 2 near here]

## **Logistic Regression Analyses**

The results of the logistic regression analysis with the click rate as the dependent variable are presented in Table 1. The primary outcome of the study indicated a significant association between headline type and the probability of individuals engaging with the ads. Specifically, the analysis revealed that empathic messages were associated with higher odds of clicking than informational messages (OR = 1.18, 95% CI [1.15, 1.21], p < .001). The main effect of the description (with vs. without expertise) and the interaction between headline and description were not significant.

In the logistic regression analyses with each conversion rate (self-check, self-care, and consultation services) as dependent variables, the main effect of the headline was significant for self-check (OR = 1.33, 95% CI [1.24, 1.42], p < .001) and consultation services (OR = 0.86, 95% CI [0.79, 0.94], p < .001). The main effect of the description was significant for

self-care (OR = 0.85, 95% CI [0.75, 0.97], p = .01) and consultation services (OR = 0.90, 95% CI [0.82, 0.99], p = .02). The interaction between the headline and description was significant only for self-care (OR = 1.23, 95% CI [1.04, 1.45], p = .01). Specifically, the combination of an empathic headline and a description with expertise was associated with higher odds of self-care than the reference combination.

6

7

[Table 1 near here]

8

10

11

12 13

14

15

16 17

18

19

20

21

22

2324

25

26

2728

29 30

31

32

33

34

35

36

37

38 39

40

9 Discussion

This study aimed to examine the types of ad messages that promote access to support information among users searching for life issues. The overall click-through rate was 4.05%, which is comparable to recent suicide-prevention studies using search-based advertising (e.g., Onie et al., 2023; Sueki et al., 2023; Takahashi et al., 2020). The conversion rates were approximately 20% for self-check, 6% for self-care, and 10% for consultation services. The conversion rates varied significantly across the six areas, ranging from 10% to 33% for self-check, 2% to 12% for self-care, and 6% to 23% for consultation services (Figure 2). These findings indicate that post-click actions vary among perinatal women, DV, addiction, depression, sexual minorities, and child abuse.

Regarding the effect of headlines, the results showed that empathetic messages increased ad click rates by approximately 18% and self-check rates by approximately 33%. Existing models of help-seeking behavior generally highlight three stages: (1) problem recognition, (2) the decision to act to seek help, and (3) the selection of a help source, with problem recognition being commonly reported as an antecedent to help-seeking behavior (Heerde & Hemphill, 2018). Self-check is the act of assessing one's own mental health status and is considered the initial stage for recognizing problems. Therefore, empathic messages that evoke psychological acceptance may function to promote early actions, such as ad clicking and self-checking, more effectively than informational messages that merely signal the availability of counseling services. While many users searching for life issues experience psychological distress (Ono et al., 2025), they may be at a stage of contemplating whether they need support and may not yet be ready to seek professional help immediately. In the depression and sexual minority areas, access rates to consultation services were relatively low, whereas self-check rates were approximately 30% (Figure 2). This suggests that for users experiencing significant psychological distress but not yet ready to seek help, empathic messages may function as a gateway to early-stage help-seeking behaviors, such as selfcheck.

However, informational messages were more effective than empathic messages in promoting access to consultation services, particularly in the DV area. Previous research showed that as intimate partner violence escalates in severity and duration, women are more likely to seek help not only from informal sources of support, such as family and friends, but also from formal services, such as medical and legal services (Ansara & Hindin, 2010). Most

users in the DV area exceeded the cutoff for victimization, suggesting that they were experiencing severe violence (Ono et al., 2025). Therefore, they may have responded more strongly to informational headlines that directly highlight the availability of consultation services than to empathic headlines. This pattern is consistent with prior findings that direct messages that encourage consultation are more effective than empathic messages among individuals searching for suicide-related terms (Takahashi et al., 2020). It also aligns with clinical evidence that suicidal mental health patients who are already motivated to seek help are more likely to engage with web-based suicide-prevention messages (Bojanić et al., 2025). The present findings suggest that messages that directly promote consultation or explicitly highlight available consultation services are effective for users at elevated suicide risk or with acute consultation needs (e.g., suicide-related or DV areas). Conversely, empathic messages may be more suitable for users who are not yet ready to seek help (e.g., depression or sexual minorities areas).

The explicit inclusion of expertise cues in the description decreased access to both self-care and consultation service information. Similarly, Takahashi et al. (2020) reported that information about professionals (e.g., public health nurses) did not affect clicks on the telephone consultation button. In contrast, the present study identified an interaction effect whereby self-care access increased when empathic messages were combined with expertise cues; this effect was particularly evident in the depression area (Figure 2). Thus, in areas such as depression, where self-managed coping behaviors are relatively salient, presenting expertise in combination with empathic messages may act synergistically to promote self-care behavior.

Collectively, these findings highlight the importance of optimizing message design in search-based advertising according to the user's stage of help-seeking and the life issue area. Empathic headlines are effective in promoting early-stage behaviors such as ad clicking and self-check, whereas messages highlighting consultation services are more effective when consultation needs are elevated, as in the DV area. Explicit expertise cues in the description may reinforce access to self-care information when combined with empathic messages. However, their use should be limited according to the purpose. The present findings offer practical implications for the implementation of digital suicide prevention strategies (Côté & Lane, 2024; Onie et al., 2023). Adjusting the tone of ad messages to the user's stage of help-seeking may enhance the effectiveness of online interventions, and empathic messages appear to be particularly useful in suicide-prevention campaigns focused on early interventions.

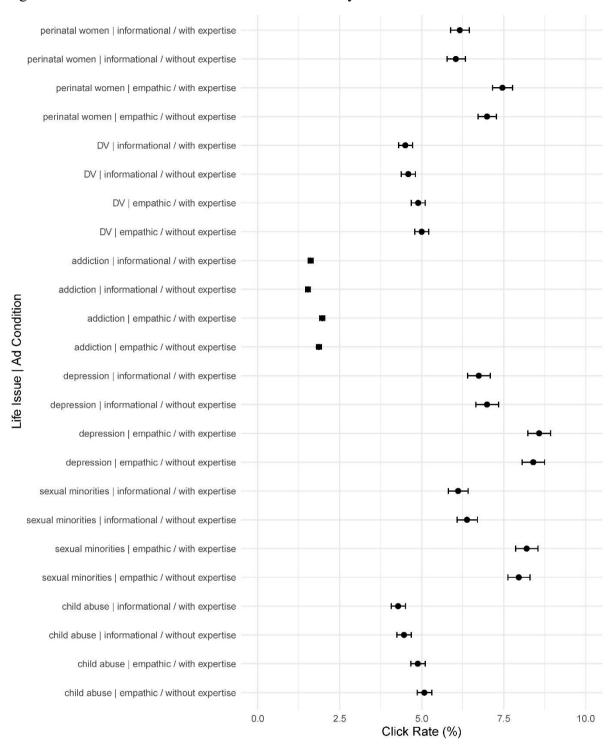
### Limitations

The present study has some limitations. First, the analyses were conducted using aggregate data from Google Ads rather than user-level records. This approach precludes the possibility of adjusting for important covariates (e.g., device or time-of-day effects and ad position). Consequently, this may introduce an ecological fallacy because repeated actions by the same user cannot be distinguished from unique users. Second, the outcomes of the conversion process were manifested as proxy behavioral indicators on a multifunction

1 2 3 4 5 6 7 8 9 10 11 12	landing page (self-check, self-care, and consultation information views) rather than as verified service uptake or clinical change. The information architecture of the page itself may have influenced the post-click behavior, thereby confounding the effects of the message. Third, the message manipulation employed in this study encompasses only two components: headline tone, categorized as empathic or informational, and the presence of an expertise cue within the description. Numerous potentially influential advertisement features, including lexical specificity, call-to-action phrasing, length, bid and placement settings, and device tailoring, were not subjected to experimental variation. Finally, the campaign was executed in Tokyo for a limited period (November 16, 2023, to January 31, 2024), employing Japanese-language advertisements and web pages. Consequently, the extent to which these findings can be generalized to other seasons, regions, languages, platforms, and page designs remains uncertain.
13	
14	Conclusion
15 16 17 18	This study shows that empathic messages may facilitate early-stage engagement (ad clicks and self-checks), whereas informational messages may be more effective in promoting consultation access. These findings highlight the importance of tailoring ad messages to the user's stage of help-seeking and the life issue area.
19	
20	Reference
21 22 23	Ansara, D. L., & Hindin, M. J. (2010). Formal and informal help-seeking associated with women's and men's experiences of intimate partner violence in Canada. <i>Social Science &amp; Medicine</i> , 70(7), 1011–1018. <a href="https://doi.org/10.1016/j.socscimed.2009.12.009">https://doi.org/10.1016/j.socscimed.2009.12.009</a>
24 25 26 27	Bojanić, L., Hunt, I. M., Flynn, S., Ibrahim, S., & Turnbull, P. (2025). Exploring suiciderelated internet use among suicidal mental health patients in the United Kingdom: Cross-sectional questionnaire study. <i>JMIR Mental Health</i> , <i>12</i> , e70458. <a href="https://doi.org/10.2196/70458">https://doi.org/10.2196/70458</a>
28 29 30	Côté, L. P., & Lane, J. (2024). Evaluation of the Effectiveness of Suicide. ca, Quebec's Digital Suicide Prevention Strategy Platform: Cross-Sectional Descriptive Study. <i>JMIR Formative Research</i> , 8, e46195. <a href="https://doi.org/10.2196/46195">https://doi.org/10.2196/46195</a>
31 32 33	Heerde, J. A., & Hemphill, S. A. (2018). Examination of associations between informal help-seeking behavior, social support, and adolescent psychosocial outcomes: A meta-analysis. <i>Developmental Review</i> , 47, 44–62. <a href="https://doi.org/10.1016/j.dr.2017.10.001">https://doi.org/10.1016/j.dr.2017.10.001</a>
34 35 36 37	Kohls, E., Guenthner, L., Baldofski, S., Eckert, M., Efe, Z., Kuehne, K., Saee, S., Thomas, J., Wundrack, R., & Rummel-Kluge, C. (2022). Suicidal ideation among children and young adults in a 24/7 messenger-based psychological chat counseling service. <i>Frontiers in Psychiatry</i> , <i>13</i> , 862298. <a href="https://doi.org/10.3389/fpsyt.2022.862298">https://doi.org/10.3389/fpsyt.2022.862298</a>

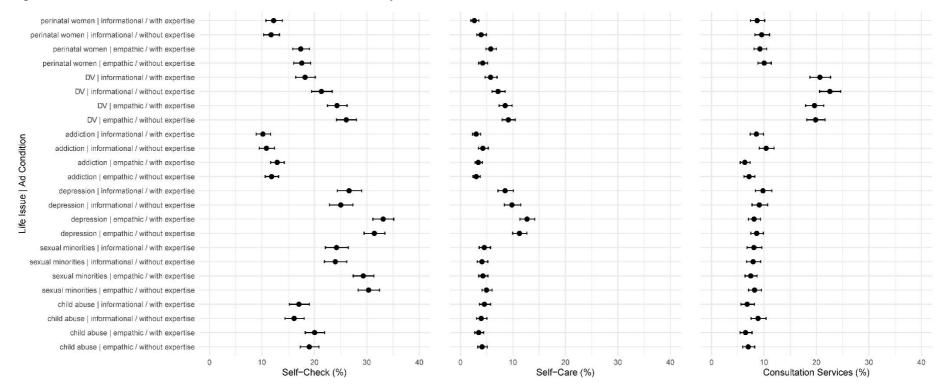
1 2 3	Onie, S., Berlinquette, P., Holland, S., Livingstone, N., Finemore, C., Gale, N., Larsen, M. (2023). Suicide prevention using Google ads: Randomized controlled trial measuring engagement. <i>JMIR Mental Health</i> , 10, e42316. <a href="https://doi.org/10.2196/42316">https://doi.org/10.2196/42316</a>
4 5 6 7	Onie, S., Armstrong, S. O., Josifovski, N., Berlinquette, P., Livingstone, N., Holland, S., & Larsen, M. (2024). The effect of explicit suicide language in engagement with a suicide prevention search page help-seeking prompt: nonrandomized trial. <i>JMIR mental health</i> , <i>11</i> (1), e50283. <a href="https://doi.org/10.2196/50283">https://doi.org/10.2196/50283</a>
8 9 10 11	Ono, S., Sueki, H., Nakahara, T., Takahashi, A., Koda, A., Sakai, A., Saito, M., & Ito, J. (2025). Upstream approaches for suicide prevention using search-based advertising: A pilot study. <i>The Japanese Psychological Research</i> , 67(2), 208–227. <a href="https://doi.org/10.1111/jpr.12582">https://doi.org/10.1111/jpr.12582</a>
12 13	R Core Team. (2023). R: A language and environment for statistical computing. R Foundation for Statistical Computing. <a href="https://www.R-project.org/">https://www.R-project.org/</a>
14 15 16	Sueki, H., & Ito, J. (2015). Suicide prevention through online gatekeeping using search advertising techniques: A feasibility study. <i>Crisis</i> , <i>36</i> (4), 267–273. <a href="https://doi.org/10.1027/0227-5910/a000322">https://doi.org/10.1027/0227-5910/a000322</a>
17 18 19	Sueki, H., & Ito, J. (2018). Appropriate targets for search advertising as part of online gatekeeping for suicide prevention. <i>Crisis</i> , <i>39</i> (3), 197–204. <a href="https://doi.org/10.1027/0227-5910/a000486">https://doi.org/10.1027/0227-5910/a000486</a>
20 21 22	Sueki, H., Takahashi, A., & Ito, J. (2023). Changes in suicide ideation among users of online gatekeeping using search-based advertising. <i>Archives of Suicide Research</i> , 27(4), 1339–1350. <a href="https://doi.org/10.1080/13811118.2022.2131491">https://doi.org/10.1080/13811118.2022.2131491</a>
23 24 25 26	Takahashi, A., Tsuchida, T., Sueki, H., & Ito, J. (2020). What are the elements of internet advertisements to promote help-seeking behaviors of users who search suicide-related words? <i>Suicide Prevention and Crisis Intervention</i> , 40(2), 67–74. (In Japanese with English abstract.)
27 28 29	Takahashi, A., Sueki, H., & Ito, J. (2023). Reflection of suicidal ideation in terms searched for by Japanese internet users. <i>Crisis</i> , 44(4), 361–364. <a href="https://doi.org/10.1027/0227-5910/a000854">https://doi.org/10.1027/0227-5910/a000854</a>
30 31	World Health Organization. (2014). Preventing suicide: A global imperative. Retrieved April 18, 2025, from <a href="https://www.who.int/publications/i/item/9789241564779">https://www.who.int/publications/i/item/9789241564779</a>
32 33	X Corp. (2025). Help Center: Suicide and Self-harm policy. Retrieved January 24, 2025, from <a href="https://help.twitter.com/en/rules-and-policies/glorifying-self-harm">https://help.twitter.com/en/rules-and-policies/glorifying-self-harm</a>
<b>√</b> /I	

## 1 Figure 1. Click rates with 95% confidence intervals by ad condition across life issues



Note. Black dots show the click rate for each life issue × ad condition (headline × description).
Error bars indicate 95% confidence intervals.

# Figure 2. Conversion rates with 95% confidence intervals by ad condition across life issues



*Note*. Black dots show the conversion rate for each life issue × ad condition (headline × description). Error bars indicate 95% confidence intervals. The three landing page actions are self-check, self-care, and consultation services.

Table 1. Logistic regression analysis of click rates and conversion rates by ad condition

	Ad Click	Self-	Self-check		Self-care		Consultation services	
Ad condition	OR [95%CI] p	OR [95%CI]	p	OR [95%CI]	p	OR [95%CI]	p	
headline	1.18 [1.15–1.21] 1.46e-3	1.33 [1.24–1.42]	1.07e-16***	1.12 [1.00–1.26]	0.05	0.86 [0.79–0.94]	0.00***	
description	0.99 [0.96–1.02] 0.44	0.98 [0.91–1.05]	0.54	0.85 [0.75–0.97]	0.01*	0.90 [0.82–0.99]	0.02*	
headline×description	1.03 [0.99–1.07] 0.15	1.03 [0.94–1.13]	0.53	1.23 [1.04–1.45]	0.01*	1.03 [0.91–1.16]	0.67	

p<.05, \*\*p<.01, \*\*\*p<.001Note. OR = odds ratio; CI = confidence interval. Reference categories: headline = informational; description = without expertise.

- 1 Electronic Supplementary Material 1.
- Figure 1. Examples of search-based advertisements used in the study 2





5



7

8

9

6

- *Note.* The figure presents examples of search-based advertisements shown to users who searched for depression-related terms, which represent one of the life issues. Panels
- correspond to four ad conditions combining headline type (empathic vs informational) and 10
- description type (with vs without expertise): (A) empathic headline with expertise 11
- 12 description; (B) empathic headline without expertise description. (C) informational headline
- with expertise description; (D) informational headline without expertise description; 13
- Empathic headline: "To those struggling with depression It was tough, wasn't it?." 14
- Informational headline: "To those struggling with depression Introducing consultation 15
- 16 services and self-care methods." Description with expertise: "A site offering information on
- 17 consultation services and self-care. For residents, workers, and students in Tokyo. Supervised
- by psychologists and other professionals." Description without expertise: "A site offering 18
- information on consultation services and self-care. For residents, workers, and students in 19
- 20 Tokyo."

1 Electronic Supplementary Material 2.

2 Table 1. Click rates by ad condition across life issues

Life Issues	Headline	Description	Impression	Clicks (%)
Perinatal women	information	with	27,591	1,700 (6.16)
			28,177	1,703 (6.04)
	empathic	with	29,044	2,167 (7.46)
		without	31,014	2,169 (6.99)
DV	information	with	36,441	1,640 (4.50)
		without	36,237	1,662 (4.59)
	empathic	with	41,057	2,007 (4.89)
		without	41,063	2,051 (5.00)
Addiction	information	with	118,061	1,904 (1.61)
		without	117,862	1,805 (1.53)
	empathic	with	132,046	2,596 (1.97)
		without	131,846	2,457 (1.86)
Depression	information	with	20,405	1,375 (6.74)
		without	20,403	1,426 (6.99)
	empathic	with	24,994	2,144 (8.58)
		without	25,009	2,100 (8.40)
Sexual minorities	information	with	23,877	1,458 (6.11)
		without	24,096	1,538 (6.38)
	empathic	with	24,825	2,035 (8.20)
		without	24,777	1,972 (7.96)
Child abuse	information	with	34,370	1,472 (4.28)
		without	34,610	1,543 (4.46)
	empathic	with	37,201	1,816 (4.88)
		without	36,825	1,871 (5.08)

*Note.* Click rates were calculated as clicks divided by impression (number of ads displayed).

1 Electronic Supplementary Material 3.

2 Table 2. Conversion rates by ad condition across life issues

Life Issues	Headline	Description	Clicks	Self-check (%)	Self-care (%)	Consultation Services (%)
Perinatal	information	with	1,700	208 (12.24)	45 (2.65)	148 (8.71)
women		without	1,703	200 (11.74)	67 (3.93)	163 (9.57)
	empathic	with	2,167	377 (17.40)	125 (5.77)	200 (9.23)
		without	2,169	382 (17.61)	92 (4.24)	218 (10.05)
DV	information	with	1,640	299 (18.23)	94 (5.73)	339 (20.67)
		without	1,662	355 (21.36)	119 (7.16)	375 (22.56)
	empathic	with	2,007	488 (24.31)	171 (8.52)	394 (19.63)
		without	2,051	535 (26.08)	187 (9.12)	407 (19.84)
Addiction	information	with	1,904	194 (10.19)	57 (2.99)	163 (8.56)
		without	1,805	196 (10.86)	77 (4.27)	188 (10.42)
	empathic	with	2,596	335 (12.90)	88 (3.39)	165 (6.36)
		without	2,457	291 (11.84)	74 (3.01)	176 (7.16)
Depression	information	with	1,375	366 (26.62)	117 (8.51)	135 (9.82)
		without	1,426	357 (25.04)	140 (9.82)	130 (9.12)
	empathic	with	2,144	710 (33.12)	272 (12.69)	174 (8.12)
		without	2,100	660 (31.43)	236 (11.24)	181 (8.62)
Sexual	information	with	1,458	353 (24.21)	66 (4.53)	118 (8.09)
minorities		without	1,538	369 (23.99)	63 (4.10)	122 (7.93)
	empathic	with	2,035	597 (29.34)	87 (4.28)	152 (7.47)
		without	1,972	598 (30.32)	98 (4.97)	162 (8.22)
Child	information	with	1,472	251 (17.05)	67 (4.55)	100 (6.79)
abuse		without	1,543	249 (16.14)	61 (3.95)	137 (8.88)
	empathic	with	1,816	364 (20.04)	63 (3.47)	118 (6.50)
		without	1,871	356 (19.03)	77 (4.12)	131 (7.00)

<sup>3</sup> Note. Conversions refer to three distinct actions on the landing page: self-check, self-care,

<sup>4</sup> and consultation services. Conversion rates are calculated as the number of conversions

<sup>5</sup> divided by the number of ad clicks.