



# Relationship Between Expression of Gratitude and the Success of Email Counseling for Suicide Prevention

著者	SUEKI Hajime, ITO Jiro
journal or publication title	Bulletin of the Faculty of Human Studies
volume	12
page range	7-16
year	2019-03-08
URL	<a href="http://id.nii.ac.jp/1073/00004634/">http://id.nii.ac.jp/1073/00004634/</a>

# Relationship Between Expression of Gratitude and the Success of Email Counseling for Suicide Prevention

SUEKI Hajime 末木 新 ITO Jiro 伊藤次郎

- 
- 1 — Introduction
  - 2 — Methods
  - 3 — Results
  - 4 — Discussion

**【Abstract】** *Background:* Studies focused on gratitude as a suicide prevention strategy that strengthens protective factors are increasing. However, previous studies did not examine the relationship between the actual occurrence of gratitude behavior and its suicide prevention effect. *Aim:* We examined whether the occurrence of gratitude behavior is related to suicide prevention. *Methods:* An advertisement inviting viewers to use free email-based psychological consultation services was placed on web pages that displayed the results of searches using suicide-related keywords. All emails received replies as part of gatekeeping activities, and the data obtained (responses to an online questionnaire and the content of the emails received) were analyzed. *Results:* In total, 197 consultation service users were analyzed; 33.3% were male and the median age range was 20–29 years. Logistic regression analysis showed an association between service users' expression of gratitude to the gatekeeper in their second consultation email and successful online gatekeeping (odds ratio = 4.62, 95% confidence interval = 2.52–8.48). There were no statistically significant associations with other independent variables. *Conclusion:* This study supports the hypothesis that gratitude functions as a protective factor for suicide.

## 1 — Introduction

Globally, there are an estimated 800,000 suicide deaths per year, and suicide has become a major social problem in many countries (WHO, 2014). Suicide prevention can be roughly classified into two approaches. The first is to remove risk factors for suicide (e.g., limitation of suicide methods, treatment of mental disorders) and the second is to strengthen protective factors for suicide. Many studies have shown robust evidence for suicide prevention strategies that eliminate risk factors for suicide (Mann et al., 2005; WHO, 2014; Zalsman et al., 2016). However, few studies have focused on suicide prevention strategies involving strengthening protective factors for suicide.

Some recent studies have investigated gratitude as a suicide prevention strategy that

strengthens protective factors (Kleiman, Adams, Kashdan, & Riskind, 2013a; 2013b; Krysinska, Lester, Lyke, & Corveleyn, 2015; Li, Zhang, Li, Li, & Ye, 2012; Lo, Kwok, Yeung, Low, & Tam, 2017; Stockton, Tucker, Kleiman, & Wingate, 2016). It has been repeatedly shown that there is a relationship between a high gratitude tendency and low risk for suicide (Krysinska et al., 2015; Li et al., 2012; Stockton et al., 2016). Gratitude reduces suicidal ideation through strengthening social connections and enhancing the meaning of life (Kleiman et al., 2013b; Stockton et al., 2016). Gratitude buffers the effect of two suicide risk factors: hopelessness and depressive symptoms (Kleiman et al., 2013a). A preliminary study showed that an intervention involving a gratitude letter for inpatients at high risk for suicide lowered hopelessness and increased optimism (Huffman et al., 2014). This suggests that gratitude to others may have a suicide prevention function.

There are two main problems with previous research. First, previous studies did not examine the relationship between the actual occurrence of gratitude behavior and its suicide prevention effect. Many studies used self-administered questionnaires that measured the strength of gratitude tendencies, but did not measure participants' actual gratitude behavior. Second, participants in most studies were university/college students, a population that does not have a high risk for suicide. However, one study is an exception to these issues (Huffman et al., 2014), although that study simultaneously involved interventions other than gratitude (e.g., kindness, forgiveness), meaning they could not examine the influence of gratitude on suicide prevention. Therefore, in this study, we investigated people at high risk for suicide and examined whether the occurrence of gratitude behavior was related to suicide prevention.

## 2 — Methods

### Research Design

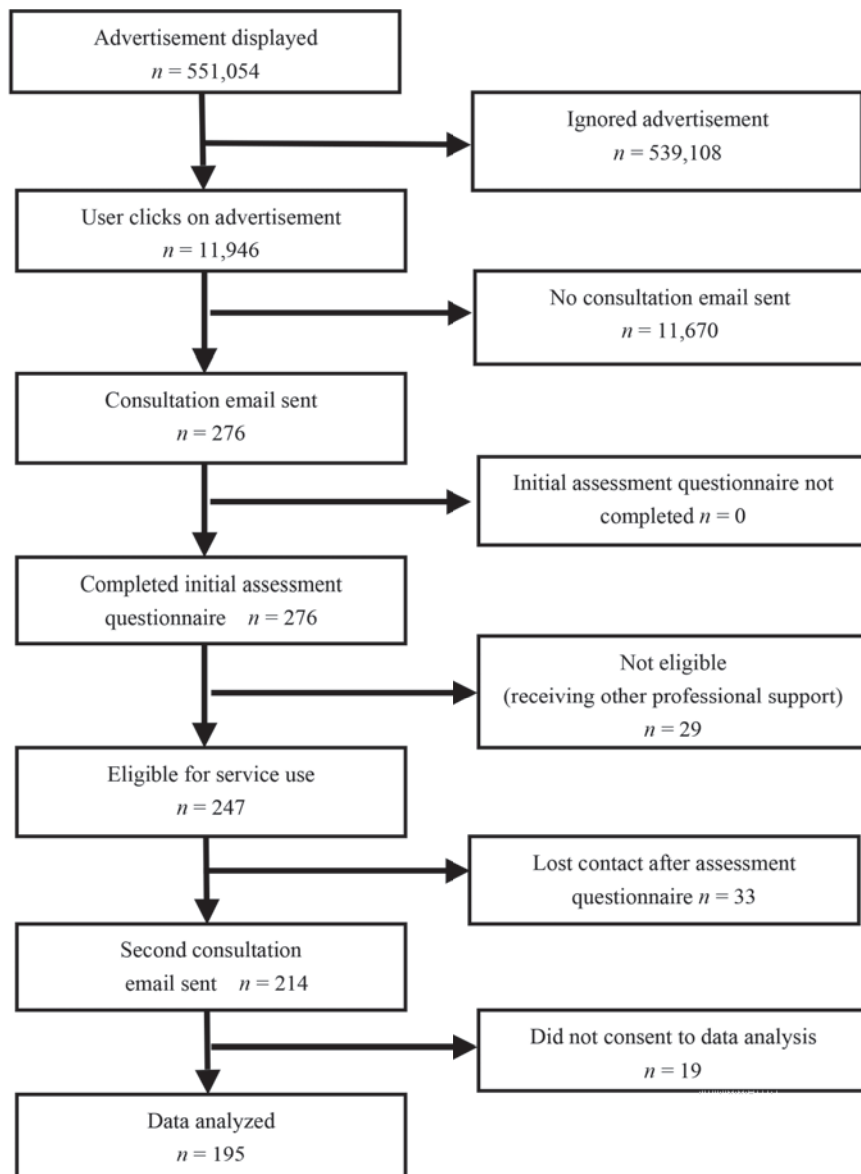
This case-control study was conducted using the consultation log for online gatekeeping activities for suicide prevention conducted by OVA, a non-profit organization in Japan (Sueki, 2015; Sueki & Ito, 2015, 2018). These gatekeeping activities for suicide prevention included an online advertisement that offered free email consultation displayed on the search result screen for suicide-related terms.

### Participants

Figure 1 shows the sampling process used for this study. The online gatekeeping activity period was from October 2014 to January 2017. The target area for advertisement presentation was the Kanto region of Japan. We used Google AdWords to present web advertisements. There were 551,054 people browsing the advertisements during the activity period. Users who clicked on the advertisement ( $n = 11,946$ ) then browsed the explanation about use of the consultation service on

the website. We displayed our email address for consultations on the website and explained that consultation was free, people who routinely visit a psychiatric clinic would not be eligible, and that data will be used for our research. We disseminated an online questionnaire survey to all eligible people who contacted the consultation email and assessed their psychological state ( $n = 276$ ). All participants who used the consultation service and agreed with research use of the data obtained through consultation were analyzed ( $n = 195$ ). All participants gave informed consent for inclusion before they participated in the study.

Figure 1. Sampling process



### Online Gatekeeping Activity

After receiving the first email from a consultation service user, gatekeeping was initiated within 24 hours, mainly via email. Based on the Gatekeeper Training Textbook (Japanese Cabinet Office, 2012) developed from the Mental Health First Aid Manual (Kitchener & Jorm, 2002), basic procedures to deal with consultation service users were implemented in a specific order: recognizing the target; performing an initial approach (establishing trust-based relationships, supportively listening, and obtaining approval); assessing risks (confirming the presence/absence of suicidal ideation, risk and protective factors, and attitudes toward problem-solving); and providing support (solving problems and guiding toward social resources, such as psychiatric consultations and welfare services). The purpose of replying to the first email from a consultation service user was to direct them to the questionnaire site for assessment and elicit answers. The first gatekeeper reply is shown in Table 1; similar content was returned to all users.

### Questionnaire

After receiving the first email from a consultation service user, an online questionnaire survey was conducted. The survey questions covered: sex, age group (20–29 years, 30–39 years, and 40 years and over), tendency toward depression/anxiety, history of psychiatric hospital visits, drinking habits, and suicidal ideation/behavior (suicide plans and attempts). Tendency toward depression/anxiety was measured using the Kessler Psychological Distress scale (K6) (Kessler et al., 2002). The K6 asks participants to rate how often in the last month they felt: i) nervous, ii) hopeless, iii) restless or fidgety, iv) so depressed that nothing could cheer them up, v) that everything was an effort, and vi) worthless. For each item, responses were rated on a 5-point scale from 0 (“Not at all”) to 4

Table 1 First reply message from the gatekeeper

---

Good evening. Thank you for your email.

[Clarification and empathy of the content of the first consultation email from service users]\*

Thank you for talking to me in such a difficult situation.

Will you tell me more about your situation and feelings now?

I would like to think about it together.

I would be happy if you could respond to a simple questionnaire because I would like to understand your physical and psychological health status as we exchange mail in future.

This will take about 3 minutes.

[URL of assessment questionnaire]

I am asking questions from here, but please feel free to tell me what you want to talk about. I await your reply. Good night.

---

\* This part of the reply differed for each service user

(“Always”). Total scores ranged from 0–24. A Japanese version of the K6 is available, and has the same screening performance as the original (Furukawa et al., 2008). The Cronbach’s alpha coefficient for the K6 obtained in this study was 0.71.

### Data Analysis

After terminating email-based consultation services, the first author and another gatekeeper read the emails received independently. Emails were evaluated based on: whether an expression of gratitude to gatekeeper was included in the second consultation email from users, whether users stated their name (online names were allowed), positive changes in their mood as a result of consultation (such as postponing suicide attempts), and the development of face-to-face help-seeking behavior toward new providers (e.g., visiting a psychiatric hospital). The two raters evaluated these items against whether they matched the reports of the service users. Evidence of positive mood changes included mentioning a decrease in suicidal ideation or postponement of suicide attempts. Evidence of the development of help-seeking behavior included references to actually seeking help from service providers. When evaluations of the two raters differed, they conferred with the second author to reach agreement. All items were evaluated as binary variables Cohen’s kappa coefficient for each item showed sufficient agreement; all items had kappa values  $>0.72$ .

Statistical analyses were performed to clarify the relationship between expressions of gratitude in the second consultation email from service users and suicide-preventive change through the email-based intervention. Whether an expression of gratitude to the gatekeeper was included in the second consultation email from users was assumed to reflect the strength of the user’s gratitude tendency, because the content of the first reply from the gatekeeper to all service users was similar (see Table 1). The gatekeeping activity was regarded as successful (suicide-preventive) when positive changes in moods of consultation service users were observed, or if they developed help-seeking behavior toward new providers after the intervention. Chi-square or t-tests were conducted with expression of gratitude as the independent variable and consultation service users’ attributes (previously listed) as dependent variables. Logistic regression analyses (variable increase method: likelihood ratio) were then performed to examine the relationships between expression of gratitude and suicide-preventive changes. The dependent variables were the results of the gatekeeping activity (success/failure), and independent variables were expression of gratitude, demographics (sex, age), suicidal ideation/behaviors, and other characteristics (including K6 score). Odds ratios and 95% confidence intervals were calculated. The p-values presented are for two-tailed tests. The analysis was performed using SPSS (SPSS 23.0 for Windows; SPSS Inc., Chicago, IL).

### 3 — Results

Table 2 outlines the consultation service users who were included in the final data set; 33.3% were male and the median age range was 20–29 years. In total 86.3% had a history of suicidal ideation, 62.9% had a history of suicide plans, and 44.2% had attempted suicide. In their second consultation email, 42.1% showed gratitude to the online gatekeeper. An average of 21.8 emails per user were exchanged in our online gatekeeping service. After assessment, 91.4% of service users revealed their names (including online names). Positive changes in mood as a result of consultations were observed in 31.5% of users, and 26.9% of users displayed help-seeking behavior resulting in access to direct support from experts. Online gatekeeping was successful in 45.2% of all cases.

Table 2 also shows the test results of a comparison between the gratitude and non-gratitude groups. The proportion of lifetime suicide attempts in the gratitude group was statistically significantly lower than that in the non-gratitude group. The rate at which online gatekeeping was suc-

Table 2 Characteristics of consultation users who showed gratitude to the gatekeeper

	Total (n = 197)	Gratitude (n = 83)	Non-gratitude (n = 114)	Test	P
Demographics					
Sex (male)	65 (33.3%)	23 (27.7%)	42 (37.5%)	chi-square	0.231
Age (AR); years				chi-square	0.693
20–29	108 (54.8%)	44 (53.0%, -0.4)	64 (56.1%, 0.4)		
30–39	45 (22.8%)	18 (21.7%, -0.3)	18 (21.7%, 0.3)		
40+	44 (22.3%)	21 (25.3%, 0.9)	21 (25.3%, -0.9)		
Suicidal ideation/behaviors					
Suicidal ideation (present)	154 (78.2%)	60 (72.3%)	94 (82.5%)	chi-square	0.116
Suicidal ideation (lifetime)	170 (86.3%)	68 (81.9%)	102 (89.5%)	chi-square	0.145
Suicide plan (present)	75 (38.1%)	28 (33.7%)	47 (41.2%)	chi-square	0.302
Suicide plan (lifetime)	124 (62.9%)	49 (59.0%)	75 (65.8%)	chi-square	0.371
<b>Suicide attempt (lifetime)</b>	<b>87 (44.2%)</b>	<b>28 (33.7%)</b>	<b>59 (51.8%)</b>	<b>chi-square</b>	<b>0.014</b>
Mental health and others					
Depression/anxiety (K6); mean (SD)	18.6 (3.5)	18.3 (3.9)	18.9 (3.2)	t-test	0.247
Previous psychiatric treatment	93 (47.2%)	40 (48.2%)	53 (46.5%)	chi-square	0.885
Drinking alcohol everyday	29 (14.7%)	10 (12.0%)	19 (16.7%)	chi-square	0.420
Email communication					
Number of consultation emails; mean (SD)	21.8 (22.8)	23.2 (24.3)	20.8 (21.7)	t-test	0.464
Provided name	180 (91.4%)	78 (94.0%)	102 (89.5%)	chi-square	0.313
Changes after consultation					
<b>Positive mood change</b>	<b>62 (31.5%)</b>	<b>40 (48.2%)</b>	<b>22 (19.3%)</b>	<b>chi-square</b>	<b>&lt;0.001</b>
<b>Help-seeking behavior</b>	<b>53 (26.9%)</b>	<b>31 (37.3%)</b>	<b>22 (19.3%)</b>	<b>chi-square</b>	<b>0.006</b>
<b>Correspond to any of the above</b>	<b>89 (45.2%)</b>	<b>55 (66.3%)</b>	<b>34 (29.8%)</b>	<b>chi-square</b>	<b>&lt;0.001</b>

Bold:  $P < 0.05$

AR: Adjusted residual

cessful for the gratitude group was statistically significantly higher than that of the non-gratitude group. The logistic regression analysis showed an association between expression of gratitude and successful online gatekeeping (Odds Ratio = 4.62, 95% : 2.52–8.48). There were no statistically significant associations for other independent variables.

## 4 — Discussion

### Principal Findings and Comparison With Previous Studies

The results of this study showed that consultation service users who showed gratitude to the online gatekeeper had a lower proportion of lifetime suicide attempts than those who did not show gratitude. Users in the gratitude group received a suicide preventive influence from online gatekeeping activities more strongly than the non-gratitude group. This study supports the hypothesis that gratitude functions as a protective factor for suicide.

The results of this study are consistent with several previous studies that suggested trait gratitude may reduce the risk of suicide. This study showed that the proportion of lifetime experiences of suicide attempts was higher in the gratitude group than in the non-gratitude group. This is consistent with results reported by Li et al. (2012) that a lower rate of suicide attempts was associated with a higher gratitude score among Chinese adolescents after controlling for demographic variables. However, the results of this study did not show a statistically significant difference in the rate of experiences of suicidal ideation between the gratitude and non-gratitude groups. This finding differs from previous studies that showed the relationship between suicidal ideation and trait gratitude (Krysinska et al., 2015; Kleiman et al., 2013a; Li et al., 2012; Stockton et al., 2016). This discrepancy may be explained by differences in participants. Participants in our study were a clinical group, whereas many previous studies used non-clinical groups (e.g., university students) as participants. Most participants in our study indicated that they had experienced suicidal ideation, and therefore there was no difference related to the presence or absence of expression of gratitude.

Users who expressed gratitude in their second email to the gatekeeper were 4.6 times more likely to finish consultation successfully than those who did not express gratitude. This study showed that expression of gratitude to others may lead to suicide preventive changes, which is consistent with the result of a previous study (Huffman et al., 2014) that found interventions based on positive psychology (such as a gratitude letter) may show suicide preventive effects. However, the design of this study does not show a causal relationship between gratitude and a reduced risk of suicide. To our knowledge, no randomized controlled trial has been conducted to show that intervention involving gratitude reduces the risk of suicide. In the future, a randomized controlled trial is necessary to clarify the influence of interventions involving gratitude on the risk of suicide.



## Strengths and Limitations

Many previous studies revealed the relationship between trait gratitude and the risk of suicide (Kleiman et al., 2013a; 2013b; Krysinska et al., 2015; Li et al., 2012; Lo et al., 2017; Stockton et al., 2016). In contrast to previous studies that measured trait gratitude with a self-administered questionnaire, we analyzed an actual consultation log and examined the relationship between consultation service users' action of expressing gratitude and suicidality. In addition, previous studies were conducted mainly on groups with a low risk for suicide (e.g., university students), whereas this study targeted a group with a high risk for suicide. The significance of this research is to expand generalizability and improving the validity of the knowledge regarding the relationship between gratitude and risk of suicide by broadening the sample and changing the method of measuring gratitude.

This study had two main limitations. First, generalizability of the results is limited. Participants in this study were users of an online gatekeeper activity conducted in Japan. These users had high scores for depressive symptoms and many were young women. It is also important to note that there are cultural differences in the meaning of gratitude (Naito & Washizu, 2015). Second, the expressions of gratitude measured in this study do not necessarily reflect service users' trait gratitude. To the present authors' knowledge, no research has shown that expressions of gratitude in consultation services are related to trait gratitude. It is necessary to carefully consider the relationship between expression of gratitude and trait gratitude as measured with a questionnaire in a future study.

## Conclusions and Future Research

Despite these limitations, the present study contributes to the literature by clarifying the relationship between gratitude and suicidality. To develop a suicide prevention approach by strengthening protective factors concerning suicide, research in two areas is needed in future. First, a randomized controlled trial is needed to examine the effect of interventions involving gratitude on suicide. Second, the characteristics of human strengths other than trait gratitude should be investigated. Based on the interpersonal theory of suicide (van Orden et al., 2010), we need to consider elements such as kindness and optimism because kindness is thought to weaken the sense of perceived burdensomeness and optimism weakens the sense of hopelessness. Preventing suicide by strengthening protective factors may be more effective if the research is expanded to include various strength characteristics of individuals.

## Disclosures and Acknowledgments

This study was funded by the Mitsubishi Foundation (Mitsubishi Zaidan, ID: 26318) and the Telecommunications Advancement Foundation. The funders had no role in study design, data col-

lection and analysis, decision to publish, or preparation of the manuscript. Part of the data of this study includes data analyzed in previous studies (Sueki & Ito, 2018). All authors have approved the final article. There are no conflicts of interest to declare.

#### 《References》

- Furukawa, T. A., Kawakami, N., Saitoh, M., Ono, Y., Nakane, Y., Nakamura, Y., ... & Watanabe, M. (2008). The performance of the Japanese version of the K6 and K10 in the World Mental Health Survey Japan. *International Journal of Methods in Psychiatric Research, 17*, 152-158. doi:10.1002/mpr.257
- Huffman, J. C., DuBois, C. M., Healy, B. C., Boehm, J. K., Kashdan, T. B., Celano, C. M., ... & Lyubomirsky, S. (2014). Feasibility and utility of positive psychology exercises for suicidal inpatients. *General Hospital Psychiatry, 36*, 88-94. doi: 10.1016/j.genhosppsy.2013.10.006
- Japanese Cabinet Office (2012). Gatekeeper Training Textbook. Retrieved from [http://www8.cao.go.jp/jisatsutaisaku/kyoukagekkan/gatekeeper\\_text.html](http://www8.cao.go.jp/jisatsutaisaku/kyoukagekkan/gatekeeper_text.html). (accessed 06.14.2016).
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L., ... & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine, 32*, 959-976. doi: 10.1017/S0033291702006074
- Kitchener, B.A., & Jorm, A.F. (2002). *Mental health first aid manual*. Canberra: Centre for Mental Health Research.
- Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013a). Grateful individuals are not suicidal: Buffering risks associated with hopelessness and depressive symptoms. *Personality & Individual Differences, 55*, 595-599. doi:10.1016/j.paid.2013.05.002
- Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013b). Gratitude and grit indirectly reduce risk of suicidal ideations by enhancing meaning in life: Evidence for a mediated moderation model. *Journal of Research in Personality, 47*, 539-546. doi:10.1016/j.jrp.2013.04.007
- Krysinska, K., Lester, D., Lyke, J., & Corveleyn, J. (2015). Trait gratitude and suicidal ideation and behavior. *Crisis, 36*, 291-296. doi:10.1027/0227-5910/a000320
- Li, P., Zhong, W., Li, X., Li, N., & Ye, B. (2012). Gratitude and suicidal ideation and suicide attempts among Chinese adolescents: Direct, mediated, and moderated effects. *Journal of Adolescence, 35*, 55-66, doi:10.1016/j.adolescence.2011.06.005
- Lo, H. H., Kwok, S. Y., Yeung, J. W., Low, A. Y., & Tam, C. H. (2017). The moderating effects of gratitude on the association between perceived parenting styles and suicidal ideation. *Journal of Child and Family Studies, 26*, 1671-1680. doi:10.1007/s10826-017-0683-y
- Mann, J. J., Apter, A., Bertolote, J., Beautrais, A., Currier, D., Haas, A., ... & Mehlum, L. (2005). Suicide prevention strategies: a systematic review. *JAMA, 294*, 2064-2074. doi:10.1001/jama.294.16.2064
- Naito, T., & Washizu, N. (2015). Note on cultural universals and variations of gratitude from an East Asian point of view. *International Journal of Behavioral Science, 10*(2), 1-8.
- Stockton, J. G., Tucker, R. P., Kleiman, E. M., & Wingate, L. R. (2016). How does gratitude affect the relationship between positive humor styles and suicide-related outcomes? *Personality & individual differences, 102*, 240-244. doi: 10.1016/j.paid.2016.07.016
- Sueki, H. (2015). Suicide prevention using the Internet: Mini-review and a case study in online gatekeeping activity. In B.Weaver (Ed.), *Suicidal ideation: Predictors, prevalence and prevention* (pp. 85-100). New York: Nova Science Publishers.

- Sueki, H., & Ito, J. (2015). Suicide prevention through online gatekeeping using search advertising techniques: A feasibility study. *Crisis, 36*, 267–273. doi:10.1027/0227-5910/a000322
- Sueki, H., & Ito, J. (2018). Appropriate targets for search advertising as part of online gatekeeping for suicide prevention. *Crisis, 39*, 197-204. doi: 10.1027/0227-5910/a000486
- van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner Jr, T. E. (2010). The interpersonal theory of suicide. *Psychological Review, 117*, 575-600. doi: 10.1037/a0018697
- World Health Organization (2014). Preventing suicide: A global imperative. Retrieved from [http://www.who.int/mental\\_health/suicide-prevention/world\\_report\\_2014/en/](http://www.who.int/mental_health/suicide-prevention/world_report_2014/en/) (accessed 10.06.2016).
- Zalsman, G., Hawton, K., Wasserman, D., van Heeringen, K., Arensman, E., Sarchiapone, M., ... & Purebl, G. (2016). Suicide prevention strategies revisited: 10-year systematic review. *Lancet Psychiatry, 3*, 646-659. doi: 10.1016/S2215-0366(16)30030-X

——— [SUEKI Hajime, Associate Professor of Department of Psychology and Education  
of Human Sciences, Wako University]  
[すえき はじめ・和光大学現代人間学部心理教育学准教授]  
[ITO Jiro, Representative Director of Non-profit Organization OVA]  
[いとう じろう・特定非営利活動法人OVA代表理事]