



HOKKAIDO UNIVERSITY

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Author(s)	NGUYEN, Tan Dat
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氏 名 ヌーイエン・タン・ダット
(Name of recipient: NGUYEN Tan Dat)

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Studies on the Role of Self-esteem and Self-compassion in Suicide Prevention

(自殺予防における自尊感情とセルフコンパッションの役割に関する研究)

[Literature Review]

Suicide is a serious social issue, especially in university students. In Japan, the suicide rates of young adults aged 18 to 25 years old witnessed a significant rise since 2018. Furthermore, with the sudden emergence of the COVID-19 pandemic, serious mental health issues are expected to surge, especially after the disruption in education and social life that university students suffered during this period. As a result, it is important to investigate risk factors for suicide as well as necessary intervention for suicide prevention among this sample.

[Chapter 1]

Background and Objectives: Suicide is a serious social issue and is often treated using psychological interventions. Although various psychological interventions exist, there is a growing interest in targeting self-esteem as a key component in suicide prevention strategies. The first chapter would conduct a systematic review and meta-analysis aimed to investigate the effectiveness of self-esteem-related interventions on suicidal behaviors.

Methods: A systematic literature search for randomized controlled trials (RCTs) including a self-esteem component was conducted on 29 May 2021 and updated on 4 April 2022 using the database of PubMed, Web of Science, and PsychInfo. Screening and data extraction was performed by the thesis's author and data analysis was conducted using Review Manager.

Results: In total, 12 studies were included in the systematic review and five studies were included in the meta-analysis. Small effect sizes were found for suicidal ideation at post intervention [$g = -0.24$, 95% CI (-0.48, 0.00)] and a 3-month follow-up [$g = -0.36$, 95% CI (-0.62, -0.11)].

Discussion: The current review suggests that future intervention studies should incorporate self-esteem enhancement in the treatment of suicidal behaviors, especially for suicidal ideation. However, these results should be interpreted cautiously due to the limited number of included studies and varied sample population. Additionally, the variability in study populations suggests that interventions may need to be tailored to specific groups to maximize effectiveness.

[Chapter 2]

Background and Objectives: Several studies have highlighted the impact of the novel coronavirus disease (COVID-19) pandemic on suicide. Accordingly, investigating the risk factors of suicide during this crisis is crucial for future prevention. Based on the escape theory of suicide, the current chapter examined the serial mediating roles of psychological distress and hopelessness in the relationship between self-esteem and suicidal ideation. It also aimed to explore whether or not the COVID-19 pandemic changed the mediation effect in any way.

Methods: Data were collected from 645 university students before and during the pandemic at the health care center of Hokkaido university. The study employed mediation and multi-group analyses to test the hypotheses using SPSS and AMOS software.

Results: The results demonstrated that individuals with low self-esteem reported high psychological distress, which further lead to hopelessness and eventually heightened suicidal ideation. Furthermore, multi-group analysis revealed that psychological distress exerted a greater impact on suicidal ideation during COVID-19.

Discussion: The finding suggested that self-esteem, hopelessness, and psychological distress could help elucidate the development of suicidal ideation. Clinicians may target these factors in suicide prevention programs, particularly in the settings of the COVID-19 pandemic or future crisis.

[Chapter 3]

Background and Objectives: Suicide is a serious mental health problem among university students. The final chapter of the current thesis aimed to examine the effectiveness of a novel psychoeducation program targets suicidal ideation by enhancing self-esteem and self-compassion.

Methods: A single-arm study design was implemented to investigate the feasibility and acceptability of a novel psychoeducation program for university students who experienced suicidal ideation. The novel psychoeducation program is based on the previous literature and focuses on enhancing self-esteem using techniques from cognitive behavioral therapy and self-compassion interventions. The program consists of four weekly one-hour sessions: the first session introduces the concepts of self-esteem and self-compassion; the second session addresses cognitive distortions; the third session focuses on coping with self-criticism; and the final session covers suicide prevention and summarizes the program. Recruitment took place in Hokkaido University health care center and Hokkaido University hospital. Suicidal behaviors, self-compassion, self-esteem, and other psychological variables were measured at baseline, post-intervention, 1-month, 2-month and 3-month follow-up. A subset of participants also completed an evaluation of the program's acceptability.

Results: Seventeen participants consented to take part in the intervention with fourteen participants completed post treatment assessments. The paired-sample t-test indicated that self-compassion ($g = 1.02 [0.56; 1.48]$), depression ($g = 0.62 [0.22; 1.03]$), hopelessness ($g = 0.49 [0.18; 0.79]$), and suicide risk ($g = 0.43 [0.06; 0.79]$) significantly changed from baseline to post-intervention. At the four-week follow-up, we observed significant changes between baseline and one-month-follow-up for self-esteem and self-compassion, with a large effect size ($g = 1.04 [0.39; 1.69]$) and a moderate effect size ($g = 0.53 [0.08; 0.98]$) respectively. At the eight-week follow-up, improvements in self-esteem ($g = 0.44 [0.05; 0.82]$) and self-compassion ($g = 1.00 [0.20; 1.80]$) remained significant. Additionally, changes in hopelessness ($g = 0.37 [0.09; 0.66]$) and suicide risk ($g = 0.64 [0.27; 1.01]$) returned to be significant during this period. At the twelve-week follow-up, the paired-sample t-test demonstrated that only self-compassion ($g = 1.22 [0.05; 2.38]$), suicide risk ($g = 0.68 [0.03; 1.33]$), and depression ($g = 0.96 [0.44; 1.48]$) showed significant changes with moderate to large effect sizes. Four participants also experience clinically significant changes in depression severity. Additionally, the psychoeducation program was positively received by the participants.

Discussion: The study showed high acceptability and feasibility, and promising early outcomes for the psychoeducation program. However, the study suffers from a small sample size in combination with a lack of control group. Further studies to examine the efficacy of the program is highly warranted.

[Conclusion]

The synthesis of findings across these studies highlights the importance of self-image, especially self-esteem and self-compassion in both the development and prevention of suicidal behaviors. Chapters 1 and 2 underscore the critical role of self-esteem in mitigating suicidal ideation, particularly through its influence on psychological distress and hopelessness. Additionally, the small but significant effects observed in the meta-analysis suggest that enhancing self-esteem can be an effective component of suicide prevention strategies.

Based on the results collected from Chapters 1 and 2, the pilot study presented in Chapter 3 offers preliminary evidence that a self-image-based psychoeducation program is both feasible and acceptable for university students experiencing suicidal ideation. Although the study's limitations, such as a small sample size and a lack of control group, prevent definitive conclusions, the positive outcomes observed warrant further investigation.

In light of these findings, it is recommended that future research focus on conducting larger-scale randomized controlled trials to rigorously assess the efficacy of self-esteem and self-compassion interventions in reducing suicidal behaviors. Additionally, the adaptability of such interventions to different populations and crisis contexts, such as the COVID-19 pandemic, should be explored. Overall, this review contributes to the growing body of evidence supporting the integration of self-image enhancement in suicide prevention programs, particularly for university students.