Nutrition and Mental Health Empowerment Project for Counseling Teachers and Students of Senior High Schools in Yogyakarta

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INTRODUCTION

According to the World Health Organization (WHO), health, in general, is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.¹ Further, the WHO defines mental health as a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn and work well, and contribute to their community. In line with this definition, mental health in Indonesia is defined as a condition in which a person develops physical, mental, spiritual, and social attributes. It uses those to support clear thinking in their mind, helping them withstand pressure, work productively, and contribute to their society.³ It is clear that mental health, as part of general health, is essential for people to maintain optimum functioning and well-being.

Mental disorders, which threaten mental health, can affect people regardless of age. Riset Kesehatan Dasar (Riskesdas) in 2018 reported that about 11 million people aged 15 or above in Indonesia had experienced depression and anxiety disorders. About 6.2% of these numbers were teenagers or adolescents between 15 and 24 years old.⁴ Besides depression and anxiety, eating disorders (bulimia or anorexia) are another form of mental disorder commonly found in teenagers that affects not only the mental state but also the nutritional state of affected teenagers.⁵,⁶

Growing evidence reports that diets can influence a person’s mental health.⁷,⁸ Healthy dietary patterns are essential not only for physical health but also for the mental health of teenagers.³ Healthy diets are associated with an excellent mental state, while unhealthy dietary patterns are associated with a poorer mental state in children and adolescents.¹⁰ Therefore, having a good nutritional status is one of the ways to prevent mental disorders in teenagers.¹¹

Mental disorders should be managed comprehensively, including prevention and promotion efforts.¹² This comprehensive approach should be delivered as early as possible in a small community, including

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schools where high-risk teenagers spend their time. Teachers are essential in improving teenagers’ mental health in this community. However, the lack of knowledge on mental health issues among school residents (teachers and students) makes such management approaches challenging.

In this project, we conducted a training program to empower counseling teachers and senior high school students to know about the vital role of nutrition in mental health and increase their ability to perform basic and straightforward management of mental health disorders. Here, we trained counseling teachers since they have essential counseling competencies, and we also trained students to be peer support for other students who need help.

METHODS

Project design
The Faculty of Medicine, Public Health and Nursing (FK-KMK) and the Faculty of Psychology, Universitas Gadjah Mada (UGM), Yogyakarta, Indonesia, initiated the project to train counseling teachers and high school students. It was conducted from July to October 2022 in FK-KMK UGM. All data collection had been approved by the Medical and Health Research Ethics Committee (MHREC) FK-KMK, UGM, with reference number KE/FK/1236/EC/2022, and informed consent was given to participants involved in data collection.

Generally, the project consisted of three phases (Figure 1). First, we organized two-day webinars and workshops to train counseling teachers and high school students. On day one, participants joined an online webinar series that discussed basic nutrition knowledge, nutrition’s role in mental health for teenagers, and simple nutritional therapy for mental health among teenagers. Moreover, participants were also introduced to mild mental disorders commonly found among teenagers, especially those in high schools. On day two, participants were trained in a workshop on nutritional state determination and performing basic counseling techniques.

Second, for about two months, all participants were given time to practice and implement their new skills in their schools. In this phase, every participant in each school had to measure the nutritional status of at least ten different people. They also had to educate other students at their school about the importance of nutrition and mental health.

Lastly, we organized a monitoring and evaluation session. We discussed and reflected on participants’ performance during the last two months to implement their skills. Participants shared their challenges and discussed what they could do to overcome those challenges.

Study population
Sixty participants, consisting of 20 counseling teachers and 40 high school students, participated in this project. All participants (20 counseling teachers and 40 students) were from 20 senior high schools across Yogyakarta City, Indonesia (Figure 2). The counseling teachers who participated in this project were all members of the professional organization Musyawarah Guru Bimbingan Konseling (MGBK) Yogyakarta. This project also included other senior high school students in Yogyakarta (165 students) as subjects for the nutritional state measurements performed by participants trained in the webinar and workshop.

Data analysis
We used a pre-test/ post-test to investigate whether our project could significantly improve their knowledge of nutrition and mental health among teenagers. A questionnaire was frequently used to gather participants’ evaluations after events (workshops, webinars) in our facility. However, it has not been validated yet. The data were analyzed using Microsoft Excel. All statistical analyses were considered significant at $p<0.05$. 

Figure 1. Overview of the project design. The project is divided into three phases (blue box), with a pre-test before the first phase (pink box) and a post-test after the third phase (pink box).

Figure 2. The location of all districts and the schools in Yogyakarta city participated in this project.
RESULTS

Participants’ knowledge of nutrition and mental health

Pre-test/ post-tests were used to test the participants’ nutrition and mental health knowledge. As shown in Figure 3, the teachers scored significantly higher than the students in the pre-test (p=0.01), with a mean score of 89.23 ± 8.62 (mean ± SD) and 80.56 ± 8.73 for teachers and students, respectively. These results might indicate that the teachers’ prior knowledge was better than the students. A similar pattern was observed in the post-test results, where the teachers scored slightly higher than the students, with a mean score of 86.92 ± 9.47 and 84.44 ± 9.84 for teachers and students, respectively, although it was not statistically significant.

Remarkably, there was an increase in the post-test score of the students from the pre-test, although it was insignificant. The higher post-test scores indicated an improvement in the students’ knowledge of nutrition and mental health. Although students’ prior knowledge was lower than that of the teachers, the project improved students’ understanding of the importance of nutrition and its role in mental health among teenagers. On the contrary, there was a slight decrease in the teachers’ post-test scores. An extended period, about two months apart, between the pre-test and post-test may have contributed to this decrement.

Figure 3. Pre-test and post-test scores of teachers and students. Data are shown as a bar chart with standard error. *p=0.01.

Participants’ perceptions of the project

A questionnaire assessed participants’ perceptions of the project, including the general and technical aspects (Table 1). Respondents scored their agreement level to each parameter with a score ranging from one (totally disagree) to five (highly agree). We received 35 responses from all 60 participants who participated in this project.

The first part of the questionnaire consisted of 9 statements and explored participants’ perceptions of the general aspect of the project. As shown in Table 1, the vast majority of respondents showed positive responses to all questions. When asked whether they became more aware and understood the role of nutrition in mental health, only one respondent gave a neutral answer. In contrast, other respondents agreed or highly agreed. Apart from this particular statement, all respondents agreed or highly agreed with the other statements. This project’s training topics, time, duration, and delivery methods were compelling, and all participants learned new and vital information.

The second part of the questionnaire consisted of 7 statements. It explored participants’ evaluation of the project’s technical aspects, including the organization, committee, and facilities we provided in this project. All respondents agreed or highly agreed that the project was well-organized and the training location was conducive. The vast majority of respondents stated that they agreed with all of the other statements. One respondent gave a neutral answer when asked about the usefulness of the supporting materials and the workshop kit. Two respondents were neutral about the committees’ responsiveness and the meal quality during the workshop. Three respondents were also neutral on the effectiveness of the time and duration of the training in this project (Table 1). Considering the questionnaire results, our project was highly accepted by those who responded to our questionnaire.

DISCUSSION

Wide coverage area of the project

Mental disorders among teenagers are still common in Indonesia, with depression and anxiety contributing the highest proportion, especially in those aged 15 or above. Apart from the high prevalence of mental disorders among teenagers, nutritional problems were also a common finding that might worsen or put teenagers at risk for mental disorders.

Yogyakarta has a dense student population prone to nutritional problems and mental disorders. In 2022, over 76,000 students aged over 15 studied in Yogyakarta. According to the Indonesian Health Profile, it was estimated that about 4,700 students (6.2%) residing in Yogyakarta might experience depression or anxiety but may not be detected.

Indonesia implemented a zonation system for schooling system where students will be admitted into a school closest to where they live, especially for those who want to study in public schools. For instance, students who live in the Umbulharjo district will study at the schools closest to where they live, especially for those who want to study in public schools. The zonation system is helpful to our project because there is no need to train all schools in the city.

Here, we trained 20 senior high schools covering nine districts in Yogyakarta city (Figure 2), and this number is enough to reach almost all areas of the city where students reside. It is worth noting that some districts in Yogyakarta have no public senior high schools or registered private senior high schools. Schools in the neighboring districts cover students living in those districts. The distribution...
of schools that participated in this project is vital to ensure we could detect any potential nutritional and mental health disorders in all areas of Yogyakarta city.

**Impact of the project on counseling teachers and students**

Our project was designed to empower counseling teachers and students to have the capability to detect mild nutritional problems and mental disorders and to give simple interventions at an early stage. Moreover, counseling teachers and students as front-liners must have the basic skills to deliver simple interventions to teenagers with nutritional problems or mental disorders.

Our project aligned with previous studies highlighting the importance of well-being and resilience in preventing or reducing mental health problems in children, including school-age children, so they can function as well-being and contribute meaningfully in daily life.\(^{20-22}\) Students’ mental health can be achieved through a school-based mental health promotion program, either through a universal or a targeted approach.\(^{20}\) Our project first adopted a targeted approach by training counseling teachers and students. However, in practice, we can say that our project promotes a universal program in schools. A universal program is defined as a mental health promotion program delivered in a class-based approach for all students.\(^ {23}\)

After completing the first phase (webinar and workshop), participants were encouraged to practice their new skills and knowledge at their schools. In addition, participants were encouraged to train and teach other students in their schools, ensuring that they achieved the most effective learning method according to the learning pyramid. In this manner, our project can benefit other students and their learning activity effectively.

**Project limitations and improvements**

Admittedly, we could only invite some schools in Yogyakarta to this project due to resource limitations. In this study, we could only accommodate 20 schools (public and private, ten schools each) out of 42 schools in Yogyakarta (11 public and 31 private schools).\(^ {24,25}\) The other twenty-two schools might have nutritional and mental health problems that this project could not cover. We plan to organize this project again in the following year to cover the remaining schools so that all schools in Yogyakarta city will have the capability to detect and deliver primary interventions for mild nutritional and mental problems.

Participants’ engagement was another challenge in this project. Participation and engagement are essential domains to create community changes and capacity building apart from leadership, vision, and partnership.\(^ {26}\) We may need to improve the trainer-trainee relationship, trust, and communication in the next project to increase participants’ engagement and later empower the community to be physically and mentally healthier.
CONFLICT OF INTERESTS
All authors declare no conflict of interest.

REFERENCES
1. World Health Organization. WHO remains firmly committed to the principles set out in the preamble to the Constitution [Internet]. [cited 2023 Jan 13]. Available from: https://www.who.int/about/governance/constitution
26. McNeish Taormina, R; Massey, T; Walker-Egea, C; Sowell, C; Rigg, K. K; Simmons, C; Tran, Q. Building Capacity to Create Community Change (BCC4): A Model to Support Successful Program Planning and Implementation. Eval. Program Plan. 2023; 97: 102225.