Improving Adolescent Mental Health Through Experiential Learning During the COVID-19 Pandemic

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Abstract
Good adolescent mental health is a good investment for a country. During the COVID-19 pandemic, many adolescents did not carry out productive activities, possibly changing their mental health. Experiential learning facilitates metacognition, shapes adolescent cognitive processes, improves performance and problem-solving, and makes learning more meaningful and authentic. This study aimed to explore adolescents' mental health conditions and how experiential learning affects adolescents' mental health. Using a qualitative approach, the data collection through Google Forms questionnaire, FGDs, and interviews using the HEADSS instrument was conducted in September 2022 in Kebon Gedang Village, Batununggal Subdistrict, Bandung City, West Java Province, Indonesia. This study involved 73 adolescents aged 10-19 years as population. Still, only 59 participants were valid as a sample and willing to participate in making oil-based soap as a change for the monthly activity held by Integrated Health Care. The results showed that experiential learning by making oil-based soap at home improved adolescents' mental health by 80%. Following the learning objectives, this activity developed adolescents into healthy and economically successful individuals while significantly contributing to their community.

Keywords: adolescent, experiential learning, mental health

Introduction
World Health Organization suggests perfect physical, mental, and social well-being comprise human life.1 Mental health affects morbidity and mortality worldwide.2 Good adolescent mental health is a good investment for a country.3 Emotional and social developments during adolescence later influence adult health conditions.4,5 Mental disorders contribute to disability among adolescents.6 Therefore, some efforts must address adolescent mental health globally and locally. Poor mental health conditions negatively impact educational attainment, social relationships, community productivity, and quality of life in the short term and potentially across generations.7 Even temporary mental health problems can cause long-term disruptions in the learning and working environments.7,8

Mental health conditions must be considered, especially during a pandemic. According to data from the Indonesian Ministry of Health, the coronavirus disease 2019 (COVID-19) pandemic has had mental and neurological impacts on society.7,9 COVID-19 extensively impacts various aspects of life, including mental health disorders, and its adverse effects cannot be known and anticipated, especially among adolescents.1 Based on the latest data, approximately 1 in 7 adolescents aged 10-19 years worldwide were diagnosed with a mental health disorder yearly; suicide kills nearly 46,000 young people becoming one of the top five causes of death in that age group.2,10 A survey stated that they often felt depressed or had low interest in activities.7

The adolescent development phase is a period of rapid change and exposure to new risk factors, including physical changes, peer pressure, educational pressure, and sexual exploitation.2 Mental health disorders are among the five diseases causing the most misery, death, and dysfunction among young people.2,11 The increased prevalence of mental illness indicates the need for literacy and a diagnosis of adolescent mental health.12 Mental health problems can be adequately detected and treated by useful activities involving adolescents, families, and schools, like making soap, snacks, and other activities. However, difficulties in accessing mental health services lead to delays in treatment.13,14

Efforts for adolescents' mental health integrate cur-
Experiential learning is a pedagogical approach emphasizing the learning process and engagement with ideas, differences, and interpersonal relationships. Interventions to develop self-care practices or inner life are either highly structured or outside the norm of daily experiences. Furthermore, social support is frequently cited as critical in promoting personal well-being.

Professionals diagnose an increased prevalence of mood and anxiety disorders due to poor health perceptions, inadequate health literacy, and difficult health-seeking. Health service innovations must provide responsive and easily accessible innovative adolescent mental health services to adolescents. Mental health care can be obtained in Integrated Health Care (IHC) because of its flexibility and responsiveness to provide an educational approach for adolescents' mental needs.

Experiential learning facilitates metacognition shapes adolescents' cognitive processes, and improves performance and problem-solving by making easy-to-find house materials and tools. In psychology, experiential learning allows students to learn meaningfully and authentically. Experiential learning leads students to better learning outcomes and cognitive and emotional-social abilities. Students can cooperate, communicate, and use their critical thinking more under their teachers' guidance until the final submission and presentation of their projects than conventionally assessed knowledge alone. According to Kolb, experiential learning analysis reveals five themes: learners engaged active participants, knowledge in place and time, learners exposed to new experiences involving risk, learning requires investigation into specific real-world problems, and critical reflection acts as a mediator of meaningful learning.

Therefore, this study aimed to explore how experiential learning affects adolescent mental health, as well as examine their mental condition during the COVID-19 pandemic.

**Method**

This study used a qualitative approach with 73 adolescents aged 10-19 years in Kebon Gedang Village, Batunanggal Subdistrict, Bandung City, West Java Province, Indonesia, as the population. However, only 59 participants were willing to participate. The data was collected by completing questionnaires through Google Forms, focus group discussions (FGD), and interviews. The questionnaire used was the HEADSS instrument (Home, Education/Employment, Eating, Activities, Drugs, Sexuality, Safety, and Suicide) from Cohen, et al., which included: 1) living conditions, 2) eating habits, 3) daily activities and leisure use, 4) use of cigarettes, drugs, and addictive substances, 5) identification of sexual problems, 6) identification of security problems, and 7) identification of depression and suicide problems.

Some indicators were used to measure the level of depth and variables. The variables used in this study were home, eating habits, sports, smoking and drug use, and

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\text{Percentage} = \frac{\text{the total of participants that fill out the form}}{\text{the total of participants}} \times 100\%
\]

**Table 1. Psychosocial Profile Using the HEADSS Instrument Before and After Experiential Learning**

<table>
<thead>
<tr>
<th>Question</th>
<th>Before (%)</th>
<th>After (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living with parents</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>There are adults you trust and are comfortable discussing your problems with</td>
<td>70</td>
<td>7</td>
</tr>
<tr>
<td>Do you think your behaviors and habits at home/school are not good?</td>
<td>79</td>
<td>21</td>
</tr>
<tr>
<td>Is there anything else that happened at home/school that you would like to tell us about?</td>
<td>63</td>
<td>17</td>
</tr>
<tr>
<td>Do you like your breakfast, lunch, and dinner menus?</td>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td>How do you eat when you are stressed? Will you overeat, or will your appetite decrease?</td>
<td>76</td>
<td>61</td>
</tr>
<tr>
<td>Any changes in your weight lately</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>Are you a member of any sports/hobby groups?</td>
<td>50</td>
<td>78</td>
</tr>
<tr>
<td>How is your relationship with your peers?</td>
<td>49</td>
<td>65</td>
</tr>
<tr>
<td>Many teenagers your age are already familiar with cigarettes or drugs/alcohol, are any of your friends like that?</td>
<td>41</td>
<td>59</td>
</tr>
<tr>
<td>How about you? Have you ever consumed cigarettes/alcohol/drugs (drugs)?</td>
<td>39</td>
<td>72</td>
</tr>
<tr>
<td>Do you feel unsafe in the community?</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Do you feel unsafe in the playground?</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Do you feel unsafe on the road? Have you ever felt unfortunate?</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>Have you ever committed an act that could harm yourself (self-harm, set a fire)?</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>
and a sense of security. Each variable was represented in a question item to measure the psychological level of the respondent. The measurement was done to find the percentage of the respondent’s mental condition. Formula 1 used to determine participation in filling out the Google Form.

The data collection was done through several steps. The first step was 59 participants filled out the HEADSS questionnaire using Google Forms. Second, the authors and participants conducted FGD via Zoom Meeting to discuss the suitable activities that could be done at home as a form of experiential learning. After choosing the activity, the participants would be directed to present and promote their products. The participants would be interviewed separately about their activities at home, how they felt about the activities, and whether they were happy to earn additional income.

**Results**

This study’s results were based on general questions about the surrounding environment before applying experiential learning through Google Forms using the HEADSS instrument. After experiential learning, adolescents increasingly trusted adults to tell them their problems. In addition, they prefer to be at home. Questions and responses are shown in Table 1 before and after experiential learning.

Of 59 respondents, 29 said their activities during the pandemic were watching TV and doing household chores (Table 2). Therefore, they felt bored to the point of depression because there was no activity like social interaction with friends. Therefore, the authors proposed several productive activities that test creativity, knowledge, and skills. Some activities offered were making oil-based soap and snacks and sewing clothes. These activities were proposed through FGD via Zoom Meeting, and the results showed that 40 respondents chose to make oil-based soap (Table 3).

The experiential learning through making oil-based soap activity was done individually at home since there was a Large Scale Social Restriction then. However, after the activity, the participants were asked to present and promote their products in IHC and were interviewed separately. The questions were about experiential learning and their feelings about doing it at home (Table 4).

**Discussion**

Youth capacity building must be prepared through youth assistance to the youth community. The COVID-19 pandemic has had a significant impact on their mental health. This condition directly impacts the attitude and personality of young people experiencing a prolonged pandemic. According to van der Westuizhen, et al., the most common factors influencing emotional well-being in mental health are money and possessions, academic achievement, and risky behavior. Only one focus group recognized intrapersonal strength; one participant stated having a “positive mindset” (girl aged 15-19).

Experiential Learning can make learners feel directly involved in the learning process regarding physical materials and interactions between materials as chemical processes, e.g., making oil-based soap. In addition, the hands-on experience of soap making provides an experience for participants to interact with the team, express opinions, and support each other. This activity makes adolescents feel happy and gain new knowledge and skills, and they want to develop this practice into a business if they have enough capital. This means improving the initial condition is necessary for optimal mental health.

The previous studies had significant changes regarding social skills and mental health. Those studies stated that experiential learning positively changes adolescents’ abilities, such as memory, creativity, and sensitivity, impacting social interaction and decreasing anxiety and depression. In experiential learning by making oil-based soap, the participants could learn about the physical aspects of materials such as oil, chemicals, and temperature increases due to chemical reactions.

At the end of the simulation, they revealed the learning process experienced from this activity; they learned to recognize and express their opinions, interacted with friends in groups and conveyed their ideas, and improved

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**Table 2. Questions Before Experiential Learning (n = 59)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have productive activities?</td>
<td>59</td>
<td>0</td>
</tr>
<tr>
<td>Are you bored staying at home?</td>
<td>59</td>
<td>0</td>
</tr>
<tr>
<td>Do you want to have additional income?</td>
<td>59</td>
<td>0</td>
</tr>
<tr>
<td>Do you feel the impact of Covid-19?</td>
<td>54</td>
<td>5</td>
</tr>
</tbody>
</table>

**Table 3. Activities of Experiential Learning (n = 59)**

<table>
<thead>
<tr>
<th>Activities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making oil-based soap</td>
<td>40</td>
</tr>
<tr>
<td>Making snack</td>
<td>10</td>
</tr>
<tr>
<td>Sewing clothes</td>
<td>9</td>
</tr>
</tbody>
</table>

**Table 4. Questions After Experiential Learning (n = 59)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you satisfied with productive activities?</td>
<td>57</td>
<td>2</td>
</tr>
<tr>
<td>Are you happy staying at home?</td>
<td>52</td>
<td>7</td>
</tr>
<tr>
<td>Are you satisfied with the additional income?</td>
<td>59</td>
<td>0</td>
</tr>
</tbody>
</table>
cognitive and metacognitive processes (increasing awareness of one's thinking processes). Their response was in line with the experiential learning conducted by Falloon. Monitoring adolescents in the IHC generally deals with physical health examinations without asking about adolescents' mental health. By implying this study's results, health workers will know the importance of experiential learning for adolescents, especially aged 10-19 years.

Conclusion
Experiential learning in the form of making oil-based soap can make adolescents feel happiness and satisfaction with themselves during the COVID-19 pandemic, thereby improving the mental health of adolescents. Experiential learning facilitated metacognition, shaped students' cognitive processes, improved performance and problem-solving, and made learning more meaningful and authentic. The study results show that exploring the mental health condition and experiential learning among adolescents improved adolescents' mental health by 80%. This activity makes adolescents follow the learning objectives of developing into healthy individuals, economically successful, and significantly contributing to their community.

Abbreviations

Ethics Approval and Consent to Participate
Ethical approval for this study was issued by the Ethics Committee of the Universitas Pendidikan Indonesia because of prioritization involving stakeholders and using multiple criteria.

Competing Interest
The authors declare that there are no significant competing financial, professional, or personal interests that might have affected the performance or presentation of the work described in this manuscript.

Availability of Data and Materials
All data collection regarding the respondents' mental health generated or analyzed during the current study was available from the authors upon reasonable request.

Authors' Contribution
Y designed this research and wrote the results; AH, ESP, and BR collected the data; UW and MK visualized the data.

Acknowledgment
The authors express their appreciation to the Indonesian Universitas Pendidikan Indonesia, the Batununggal Subdistrict, and all parties participating in this study.

References

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