Evaluating middle school students’ understanding and emotional outlook on the COVID-19 pandemic

Evon Cornish, Boris I. Stepanyuk, Rouha Mohran, Madiha Abdel-Maksoud M.D., Ph.D.

University of Colorado School of Medicine, University of Colorado School of Public Health

Abstract

The COVID-19 pandemic interrupted the education of nearly 94,000 students throughout Denver Public School (DPS) in the spring of 2020. Students were required to engage in remote learning to protect against the spread of COVID-19, but this change in learning environment has been associated with increased levels of anxiety and feelings of disconnection. This study evaluated middle school students’ understanding and emotional outlook on the COVID-19 pandemic through a 2-week camp that provided students a hands-on and immersive experience to understand the mechanisms of COVID-19 and how infectious diseases spread.

Participants and Methods

Participants in the COVID-19 Science Academy (CVSC) were recruited from middle schools across the Denver area. The camp was designed to provide students with an immersive experience to learn about the mechanisms of COVID-19 and infectious diseases. Students were provided with word banks, corresponding to positions on a pleasantness vs energy intensity scale. These word banks were used to assess the students’ emotional outlook on the COVID-19 pandemic through a survey.

Results

The two camps combined included 85 participants. Students completed the post-CVS survey and 36 completed the post-CVS survey (164 total) with 76% (104) of the post-CVS survey participants completing at least one of the surveys. Additional information on the participants is provided in Table 1. Students completed a pre-CVS survey, and 41 completed the post-CVS survey (72% completion). The surveys assessed the students’ understanding and emotional outlook on the COVID-19 pandemic.

Conclusions

This study highlights the importance of understanding youth’s emotional outlook on the COVID-19 pandemic, as it may be an effective mechanism for facilitating school re-implementation. Results showed that students who completed the camp had improved understanding of the mechanisms of the COVID-19 pandemic and increased confidence in discussing such topics.

Table 1. Survey responses to the questions assuming association with the COVID-19 pandemic.

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre-CVS</th>
<th>Post-CVS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’m scared about getting COVID-19</td>
<td>25%</td>
<td>15%</td>
</tr>
<tr>
<td>I’m worried about my family getting COVID-19</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>I’m worried about my friends getting COVID-19</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>I’m worried about my teachers getting COVID-19</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>I’m worried about my classmates getting COVID-19</td>
<td>10%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Acknowledgments

Thank you to Dr. Abdel-Maksoud for her feedback on the final manuscript and Dr. Imran N. for reviewing the manuscript. This work was supported by a grant from the U.S. Army Medical Research and Material Command under the terms of Grant Number W81XWH-19-2-0031 to Dr. Abdel-Maksoud. We would like to thank the students, parents, and teachers who participated in the camp.

References