MINDSTRONG Program Delivery Type for Undergraduate Nursing Students: A Program Evaluation

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ABSTRACT

Background: Many nursing students struggled with mental health problems that may have been exacerbated by pandemic stressors when most educational programs shifted to remote learning. During that time, a Big Ten Conference university study urged institutions to provide effective, evidence-based resilience programs. In 2022, a large Big Ten University College of Nursing initiated MINDSTRONG for undergraduate students through in-person, online, or hybrid formats in the fall. A program evaluation was conducted to determine if the delivery method would influence outcomes.
Aim: To evaluate the MINDSTRONG program delivery method and determine if it impacted students' reports of meeting program objectives, program participation encouragement, and peer program recommendation using retrospective data from an end-of-program survey.
Methods: Applied the CDC Framework for Program Evaluation to generate credible evidence retrospectively sourced from an anonymous end-of-program survey.
Results: In-person participants had the highest self-reported scores when compared to the online and hybrid groups: 89% reported objectives met, 98% reported encouraged interactions, and 72% reported peer program recommendations. Online participants reported the lowest scores in each category: 72%, 90%, and 45%, respectively.
Conclusions: Program delivery affected outcome responses. Feedback guided stakeholder decision-making for future iterations of this program.

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BACKGROUND

A large study of nursing, medicine, and health science students (N = 1087) and faculty (N = 896) at the Big Ten Conference universities found that students reported higher levels of stress, anxiety, and depression than faculty

(Melnyk et al., 2021). Leaders at learning institutions have been urged to encourage evidence-based wellness programs that promote mental resilience and reduce burnout (Melnyk et al., 2021). Other evidence for student nurse behavioral health issues was compiled from five cross-sectional surveys and one systematic review. These studies suggest that students, including nursing students, have experienced a worsening of negative mood symptoms since the beginning of the pandemic as their learning needs shifted dramatically (Bai et al., 2021; Charles et al., 2020; Hoying et al., 2020; Kim et al., 2021; Melnyk et al., 2021; Mulyadi et al., 2021). Charles et al. (2020) compared student mood symptoms in 148 students in the spring of 2020 and 352 students in the fall of 2020 to 240 students in the fall of 2019 before the pandemic. Results indicated increased mood symptoms, alcohol use, and perceived stress for students; therefore, suggesting early intervention at the university level is necessary (Charles et al., 2020).

In the fall of 2022, a large Big Ten University College of Nursing provided a mental resiliency program, MINDSTRONG, to second-year undergraduate students at eight campuses. MINDSTRONG is an evidence-based cognitive skills-building program, created by Dr. Bernadette Melnyk and associates at The Ohio State University, designed to improve healthy lifestyle behaviors while reducing feelings of stress, burnout, anxiety, and depression through facilitator-guided synchronous sessions to support positive change (The Ohio State University, 2022). MINDSTRONG was offered to students in real-time and delivered through various modalities: in-person, online, or hybrid. The program delivery type was assigned based on class size, campus location, and facilitator availability with the facilitator either in the classroom or online. It was not known if the program delivery type would impact outcomes that were assessed by a voluntary, anonymous end-of-program survey.

METHODS

The Centers for Disease Control and Prevention Framework (CDC Framework) for Program Evaluation in Public Health provides a practical, stepwise approach to the evaluation of processes that can be replicated (CDC, 1999). This framework ensures that program evaluations are accurate, beneficial, viable, and ethical, which is reflected in its standards (Kidder & Chapel, 2018). A program evaluation of the MINDSTRONG delivery type, (in-person, online, or hybrid) was conducted to determine student feedback that could be addressed to optimize future delivery of the MINDSTRONG program. Both MINDSTRONG and the program evaluation obtained Institutional Review Board approval prior to administration.

A Qualtrics survey developed by the Academic Wellness Coordinator in consultation with an instructional designer was the source of retrospective data for this program evaluation. It collected descriptive statistics and qualitative responses for the end-of-program evaluation. The survey used qualitative, open-ended questions, as well as questions with a 5-point Likert scale (Appendix A). The Likert scale used the following scale categories: 1 = *strongly agree*, 2 = *somewhat agree*, 3 = *neither agree or disagree*, 4 = *somewhat disagree*, and 5 = *strongly disagree*. The overarching program evaluation questions were selected from the existing end-of-program survey administered at program completion to gather credible evidence and justify conclusions using the CDC Framework (CDC, 1999). An overall survey response threshold was set at a 75% completion rate by stakeholders. Survey questions selected for analysis included the following three questions: (1) students' report of encouragement to interact; (2) students' reporting objectives were met; and (3) students' reporting if they would recommend the program to a peer. Report measures were considered "met" if answers 1 or 2 were scored on the Likert scale. Qualitative data were gathered and analyzed for thematic patterns using responses from three open-ended questions about (1) the most beneficial aspects of the program, (2)

suggestions for enhancement, and (3) any additional comments. Student perception of program utility was important for consideration of future resiliency programs. Thresholds were established at 90% for in-person, 80% for hybrid, and 70% for online participants.

RESULTS

A total of 361 end-of-program survey responses were collected from the second-year nursing students to establish an 84% completion rate. Nine classes across eight campuses participated in the program, including both the traditional undergraduate program and the second-degree program. A total of 46 students classified themselves as in-person participants, 285 classified themselves as online, and 28 as hybrid. Two participants did not specify program delivery type on the survey, which resulted in 359 responses being utilized for the program evaluation.

Of all student respondents, 75% reported meeting program objectives, 91% reported that interactions were encouraged, and 50% would recommend the program to a peer. Survey results showed that 41 of 46 in-person participants, 206 of 285 online, and 21 of 28 hybrid participants met the program objectives. The survey also revealed that 45 of 46 in-person students reported encouragement to interact; 256 of 285 online students, and 26 of 28 hybrid students reported interactions were encouraged. Regarding program recommendations, 33 of 46 in-person, 129 of 285 online, and 16 of 28 hybrid students reported they would recommend the program to a peer.

The qualitative data collected from the survey were sorted and grouped using NVivo 14 software. Participant-recorded responses to the three qualitative questions selected regarding program benefits, program enhancements, and any additional comments were categorized as positive, negative, or none (Table 1).

Table 1

Qualitative Responses

	Positive	Negative	None
Question 1: Benefits	253	6	19
Question 2: Suggestions	162	15	4
Question 3: Additional Comments	32	49	n/a

Two hundred and fifty-three positive responses to the question about the most beneficial program aspect were recorded, six were categorized as negative, and 19 responded "none." Upon review of the most frequently reported student survey responses related to program benefits, respondents identified stress and anxiety management techniques or coping skills as the most beneficial. Students also identified workbooks or homework assignments, practicing positive statements, and changing negative thoughts as helpful. Many found the practice of reflection, journaling, or writing out goals beneficial. A negative response categorized as "no personal benefit" was recorded for this question, as well as responses like "nothing/none." Students reported program dislike or would not recommend

it; stated information was already known or "too generic," or irrelevant for a second-degree student. Participants also stated the course created more stress, it was not helpful, or it felt forced.

The second question analyzed reviewed student responses about program enhancements. One hundred and sixty-two responses were categorized as positive, 15 were negative categorizations, and four were none. Many students considered the course "one more thing to worry about" which was a frequently reported categorization of student responses, but many continued to offer improvement suggestions. Participants indicated more stress as it related to homework assignments and "extra work." The most common suggestions included removing written assignments, making the program more interactive, and offering it in-person or separate from the designated course time. This question also had overlapping responses from the previous question for "no personal benefit." Students also expressed that the program was too scripted and that it should be optional. Of note from this question, the theme that the program seemed better suited for first-year or first-degree students became clearer.

The last survey question solicited any additional comments. Responses were categorized as 32 positive and 49 negative. A common student comment continued: the program "seemed to be a better fit for first-year students" and that conceptually "the program was good, but not for everyone." Critiques of the program included that the program was not personally helpful to the student, no credit was provided for the course, students did not like having assignments or having to make up sessions, and students did not want the program included during designated course time. However, other participants continued to list more positive comments. Students stated that the program was helpful and enjoyable, and the instructors were effective and engaged. Participants additionally identified feeling "not alone" and cared for as a benefit.

DISCUSSION

From this program evaluation, stakeholders were provided with answers to the overarching questions about the MINDSTRONG program delivery type from the credible evidence. Key findings indicated that a larger percentage of students who participated in the MINDSTRONG program in person and completed the end-of-program survey had higher self-report scores of meeting program objectives, encouraging interaction, and recommending the program to a peer than their peers who completed the program online or via hybrid format. The online students had the lowest percentage of self-reported scores in all categories. It was anticipated that the qualitative responses would be a mix of positive and negative comments based on the types of questions that were posed.

The results of the summarized quantitative and qualitative measures were shared with key stakeholders which included the most beneficial portions, suggested program enhancements, and additional comments that might improve future program iterations. Some modifications based upon feedback from the fall of 2022 surveys included removing MINDSTRONG from the professional development course time and offering varying times with more in-person options. The program was also weighted with course credit and offered voluntarily for second-degree students. Some logistical issues within the course were resolved to improve ease of use and enhance user satisfaction.

Limitations

The program evaluation had a narrow focus of evaluating only a portion of the MINDSTRONG program which was the delivery method of in-person, online, or hybrid with a few select questions and not the MINDSTRONG program

overall. A general student preference for in-person learning was supported in the literature (Grech, 2022; Leighton et al., 2021; Sharma et al., 2021). However, since no CDC framework-based program evaluation of MINDSTRONG or its program delivery type was found in the existing literature, it was not known if there would be a preferential learning mode. Another limitation was that participant self-identification of participant status (in-person, online, or hybrid) was subjective. There was no definition of the classification for students to follow and the students may have incorrectly coded themselves as hybrid if they were in-person and the facilitator was online. Finally, since this was a program evaluation, there was no control group or randomization, and the results have limited generalizability.

Recommendations

Program evaluation is a process designed to promote reevaluation and reassessment for improvements to future wellness initiatives. Much of the feedback provided from the survey was incorporated into the next iteration of MINDSTRONG for the College of Nursing. A comparison between the groups would give useful information to contrast their outcomes. Ongoing evaluation will keep wellness programs relevant within the College of Nursing. Dissemination of the program evaluation process utilized in this setting could be useful for other colleges seeking a benchmark.

CONCLUSIONS

This program evaluation was successful and feasible as it answered the overarching questions using the CDC Framework for Program Evaluation (CDC, 1999) and was performed at no cost to the college. The MINDSTRONG program delivery type affected participants' reports of meeting program objectives, being encouraged to interact, and recommending the program to a peer. The largest percentage of students in each of these categories came from the in-person category compared to online or hybrid groups. Categorized qualitative student survey data provided useful information about the beneficial aspects and suggestions for program enhancements. While not generalizable, the collection of credible evidence established a basis for the program evaluation conclusions which were shared with stakeholders to inform decisions on program sustainability and guide future improvements.

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Appendix A:

MINDSTRONG End-of-Program Survey Questions Selected for Evaluation

Q9 Participation and interactions were encouraged throughout the program:

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q11 The objectives of the program were met:

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q18 Considering your complete experience with the program, how likely would you be to recommend it to a friend?

- ○ Extremely Likely (1)
- ○ Somewhat Likely (2)
- ○ Neither Likely nor unlikely (3)
- ○ Somewhat Unlikely (4)
- ○ Unlikely (5)

Q15 What portions of the program were most beneficial?

Q16 Do you have any suggestions to enhance this program?

Q17 Please share other comments or expand on previous responses here: