FCRC | Research

Do Presentation or Discussion Based Workshop Styles Elicit the Best User Feedback from Vulnerable Populations in Northwestern Ontario?

Anthony Frederick Miller,[1] Brittany Pennock,[1,2] Jacqueline Hanley,[1] Josée Malette,[1,2] Tiffany Leung,[1] Adrian Grebowicz,[1,2] Ashley Moir,[1] Ocean Nenadov,[1,2] Barbara Gunka,[1,2] and Sally Prystanski[1,2]

[1] Compass North Student-Led Health Outreach, Ontario, Canada
[2] Northern Ontario School of Medicine, Thunder Bay, Ontario, Canada

Background: Compass North (CN) is a student-led health outreach initiative that focuses on providing health services to address the unmet needs of marginalized populations in Thunder Bay, Ontario. To address this goal, CN has developed a range of health promotion workshops on various topics pertinent to the community, including managing anxiety, self-care, and smoking cessation. As a means of quality improvement, CN sought to determine whether a presentation or discussion-based health promotion workshop style would be of greater educational value and lead to higher engagement.
Methods: Over a period of two months, a total of five 30-minute workshops (three presentation-based, two discussion-based) on anxiety and coping with stress were delivered in Thunder Bay at two community organizations, Shelter House and John Howard Society. A training manual was created that outlined delivery procedures to ensure consistency of information between workshop styles. After the workshop, participants completed a 10-question survey regarding educational value and engagement level. Seven of the questions were assessed using a Likert scale, while the remaining three questions were open-ended for additional feedback.
Results: Twenty-two participants completed the feedback surveys (n = 13 presentation-style; n = 9 discussion-style). Median scores for educational value ($U = 56.5$, $p > 0.05$) and engagement level ($U = 48.5$, $p > 0.05$) were not statistically different between the presentation and discussion-based workshop styles.
Conclusion: The style of delivery did not have a significant effect on the educational value or engagement level of participants during an anxiety workshop. Participant feedback suggested that as opposed to thinking of any presentation style as being superior, it may be more appropriate to think of the best fit between the workshop and the participant. Future research should examine whether certain presentation characteristics are best suited for certain topics or groups of people.

Compass North (CN) is a student-led health outreach initiative that focuses on the provision of health services and research that aims to address the unmet needs of underserved populations in Thunder Bay, Ontario. Since Northwestern Ontario is a rural area, many communities in the region lack the health services, resources, and ability to manage diseases appropriately. According to the North West Local Health Integration Network (LHIN), Northwestern Ontario has a high prevalence of heavy drinking, obesity, smoking, hypertension, poorer perceived mental health, and a larger percentage of residents without a family doctor compared to other areas in the province.[1] In order to address the health disparities of individuals within Northwestern Ontario, our research team conducted a needs assessment in the city of Thunder Bay, in 2014.[2]

Since the needs assessment in 2014, Compass North has worked collaboratively to develop health promotion workshops on various topics including mental health, self-care, and vaccinations. These workshops have been

delivered to community members at partner facilities throughout the city, including health access centres and shelters. Previously, the Compass North health promotion workshops were delivered using a presentation-based style. This style sees a facilitator delivering a 30-minute presentation followed by a question and answer period. Then, a discussion-based presentation was delivered, which garnered positive participant feedback, resulting in the interest of whether a presentation or discussion-based workshops was more effective from a participant's perspective.

Presentation versus Discussion Based Teaching Styles

PowerPoint-type presentations have come to be expected within the world of health education of health professionals.[3] However, studies have shown that the use of PowerPoint presentations for all health education does not necessarily create added value to the experience.[4]

Discussion-based learning environments are increasingly being used to facilitate team-based learning in environments of higher education. Team-based learning employs active learning to promote self-directed learning and enhances student adaptability in problem-solving situations.[4] It has been shown that team-based learning improves or maintains academic performance for all students when compared to traditional lecture or presentation-based learning models.[5,6] A study by Arias and colleagues quantified traditional lecture or small-group discussion effects in dental students based on two outcome measures: knowledge and skills acquisition.[7] No statistical differences between teaching models was achieved for knowledge acquisition; however, the discussion-based teaching format was associated with greater skill acquisition by the students.

In addition to knowledge and skill acquisition, discussion-based learning environments are associated with greater user-identified instruction quality. A 2016 quasi-experimental study by Ögeyik evaluated the use of didactic lecture-based teaching versus a discussion group.[8] A total of 89 students enrolled in an English Language Teaching Methodology course were divided into a control and experimental group. The experimental group was taught using a PowerPoint presentation, while the control group was subjected to a blended lecture and discussion model. Qualitative analysis of the project revealed that the control group expressed greater positive attitudes toward the quality of instruction. Discussion-based education facilitated by an instructor may create "a supportive learning environment for positive transfer of insights."[9]

Health Promotion Workshops

Psychoeducation is described as an individual or group-based education and information session provided to those who are currently seeking or receiving mental health services.[7] This has been used for several different situations and populations, including patients, caregivers, and family members affected by cancer, eating disorders, panic attacks, bipolar disorder, and schizophrenia.[7]

In various settings, it has been shown that health promotion workshops provide positive results for participants. A 2013 study by Bentham and colleagues evaluated the impact of a mental health workshop delivered by medical students to eight middle school classrooms.[10] The mental health workshop aimed to deliver education and support in relation to depression and anxiety.

Following the workshops, the awareness of mental health symptom prevalence among young students increased from 47.0% to 97.8%. The ability to identify symptoms of anxiety rose from 21.7% to 44.8%, and the ability to identify depression rose from 29.0% to 53.5%. Pre- and post-workshop questionnaires revealed that medical student-led workshops were an effective method for improving health knowledge and encouraging positive attitudes towards mental health topics.[10] Student-led health promotion workshops have a place in preventative medicine within a community setting.

Project Goal

Compass North was founded to support the Northern Ontario School of Medicine's mandate of social accountability. Since Northwestern Ontario has a high proportion of underserviced residents with unmet healthcare needs, Compass North recognized the importance of delivering effective, user-friendly health promotion workshops in order to increase knowledge translation and education

within the community. As such, the goal of this research was to determine whether a presentation or discussion-based health promotion workshop style would be more effective among a marginalized sample from Northwestern Ontario.

In this study, we provided a health promotion workshop on anxiety and coping at two local community organizations. We were interested in determining whether a presentation-based style would affect educational value and engagement level, as rated by participants. We hypothesized that participants of the discussion-based workshop would perceive greater educational value and have higher engagement levels than participants of the presentation-based workshop.

Methods

Ethics approval was obtained from the Lakehead University Board of Ethics. The target population for the workshop was at-risk individuals who were interested in learning more about anxiety and improving their coping skills. To reach participants, Compass North partnered with two community organizations within the city of Thunder Bay: Shelter House (an organization that provides housing, food, and harm reduction services to those living in poverty) and John Howard Society (an organization that provides legal services and advocates for correctional reform). Each partner organization agreed to have Compass North members give presentations to individuals who use their services.

Workshop Training

Student and faculty members of Compass North developed a workshop training manual containing an outline of the procedures for both styles of workshop delivery of presentation-based and discussion-based. Since there were two different styles of workshops and multiple presenters of the workshops, this training manual was developed to ensure the content remained consistent across workshops and to eliminate presenter bias when delivering the material.

Included in the workshop manual was background information on anxiety to ensure that presenters had the same baseline knowledge when delivering the workshops, delivery instructions for each style of workshop, a list of resources used to gather the content for the presentations, and other tips for delivering an effective workshop. Presenters were also instructed not to give information supplemental to the training package.

Workshop Delivery

Researchers obtained informed consent from participants prior to beginning the workshops. During the approximately 30-minute workshop, participants learned about anxiety and associated coping mechanisms. Participants were given the opportunity to ask questions or share life experiences to generate discussion throughout.

The presentation-based workshop delivery style consisted of a didactic session from a 23-slide PowerPoint, although participants were still given the opportunity to discuss topics throughout the workshop. Comparatively, the discussion-based workshop did not feature a PowerPoint presentation. Instead, presenters engaged the audience through discussions, including teaching, asking questions, and encouraging discussion amongst participants.

Data Collection and Analysis

After the workshop, participants were invited to provide feedback to the presenters via a brief questionnaire (see **Figure 1**). The questionnaire featured ten questions, seven of which were assessed using a Likert scale and three of which were open-ended for the participants to provide additional feedback. Of the seven Likert questions, three of them were designed to assess the educational value of the workshop and four of them assessed the engagement level experienced during the workshop.

The Likert responses were coded as follows for statistical analysis: 0 = no response; 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree. Results were analyzed using SPSS Statistics 25. A Mann-Whitney U test was run to determine if there were significant differences in educational value or engagement levels between the presentation-style and discussion-style workshop sessions. A significance level of $p < 0.05$ was used in the data analysis.

Figure 1. Anxiety Presentation Survey.

Anxiety Presentation Survey

Participant #:

Thank you for agreeing to fill out this survey! It is part of a research project conducted by Compass North Student Led Clinic. Your feedback will help us to determine the best ways to deliver our workshops and improve future workshops.

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The presenter(s) were easy to understand	☐	☐	☐	☐	☐
2. I learned useful information from this topic	☐	☐	☐	☐	☐
3. I can use the information I learned today in my daily life	☐	☐	☐	☐	☐
4. The topic kept me interested	☐	☐	☐	☐	☐
5. I enjoyed the workshop	☐	☐	☐	☐	☐
6. I would recommend this workshop to others	☐	☐	☐	☐	☐
7. I would attend another workshop	☐	☐	☐	☐	☐
8. Is there anything you would change about the workshop? ☐yes ☐no If so, what would you change					
9. What is the main lesson you learned from the workshop? I did not learn anything ☐ I learned …					
10. Do you have any suggestions for future workshop topics? ☐yes ☐no If so, what are they?					
11. Other comments:					

Results

A total of five workshops were delivered: three presentation-based and two discussion-based workshops. From these workshops, 22 participants completed the feedback surveys (n = 13 presentation-style; n = 9 discussion-style).

Table 1. Survey Results: Number of participants who answered in each category.

Q	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	8 *	4 *	1 *	0 *	0 *
	6	2	1	0	0
2	5 *	7 *	0 *	0 *	0 *
	6	3	0	0	0
3	5 *	6 *	2 *	0 *	0 *
	5	3	1	0	0
4	5 *	6 *	2 *	0 *	0 *
	5	3	1	0	0
5	3 *	9 *	1 *	0 *	0 *
	5	4	0	0	0
6	6 *	5 *	2 *	0 *	0 *
	5	3	1	0	0
7	3 *	6 *	3 *	0 *	0 *
	4	3	2	0	0

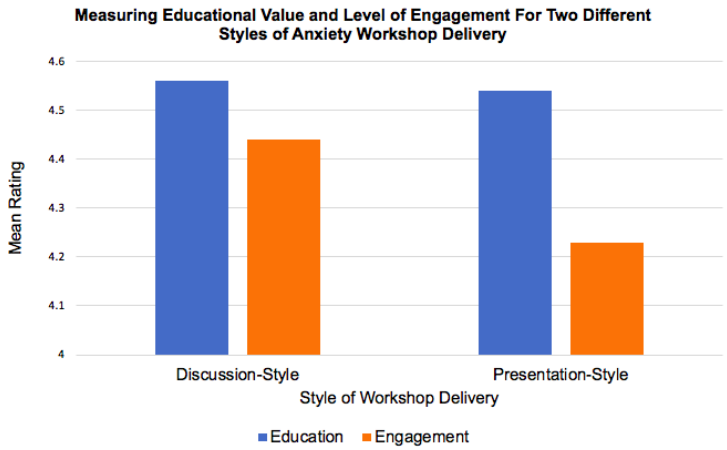
Note: Blue background or asterisk (*) symbol indicates presentation-style. White background indicates discussion-style.

The descriptive statistics are illustrated in Figure 1. An examination of the descriptive statistics demonstrates that the discussion-style sessions elicited slightly higher mean values for educational value (M = 4.56) and engagement levels (M = 4.44) than the presentation-style sessions (M = 4.54; M = 4.23, respectively).

Table 2. Comments from Questions 8-11.

Q	Presentation-Style Comment	Discussion-Style Comment
8	"More interaction" "I preferred the previous verbal workshop rather than this PowerPoint presentation" "The PowerPoint was distracting"	
9	"Anxiety too common"	"A lot of people share my anxieties" "A couple of ways to deal with anxiety"
10		"More organized"
11	"Was well presented"	

Figure 2. Descriptive Statistics of Two Different Workshop Delivery Styles.



However, the results of the Mann-Whitney U test revealed that median scores for educational value were not statistically different between the presentation-style and discussion-style sessions ($U = 56.5$, $p > 0.05$). Similarly, median scores for engagement value were not statistically different between the presentation-style and discussion-style sessions ($U = 48.5$, $p > 0.05$).

Discussion

The results of the current study were in conflict with our hypothesis, as we found no significant effect of presentation style on educational value or engagement level of participants. Much of the previous literature reviewed suggested that discussion-based learning environments were superior to didactic, traditional lecture-style learning environments in regard to knowledge and skill acquisition,[8] adaptability in problem-solving situations,[5] and user-identified instruction quality.[9]

It is worth highlighting that that when presentation-style had been examined in an empirical manner, the participant group utilized had typically been exclusively students. Findings from student samples often do not translate to community samples; therefore, a primary strength

of the present paper was that a marginalized sample was utilized.[12] The lack of significant findings may signify that the content of the workshop may be more pertinent than the delivery style of the workshop.

Although there was no difference in educational value or engagement level as a function of presentation style, some of the qualitative feedback gathered from the questionnaires demonstrated preference for one style of workshop over the other. This feedback, however, did not reveal preference consistently for one workshop style. One participant who attended both workshops styles expressed preference in the discussion-based workshop: "I preferred the previous verbal workshop rather than this PowerPoint presentation." The participant explained that "the PowerPoint presentation was distracting." Alternatively, an individual who participated in the discussion-based workshop indicated a suggestion for the workshop to be "more organized." Ultimately, participants expressed overall positive feedback regarding both workshop styles.

The qualitative feedback suggested that as opposed to thinking of any presentation style as being superior, it may be more appropriate to think of the best fit between the workshop and the participant. Certain participants may prefer workshops that are more informational, in which the facilitator acts as an expert providing knowledge and suggestions, while others may prefer a less structured session in which learning occurs through back-and-forth conversations between facilitator and participant.

There are four main limitations of the study which will be expanded upon in turn. The first limitation concerns the small sample size. As participation in the workshops were voluntary and promoted solely through the two partnership organizations, recruitment was difficult. This resulted in a small sample size and reduced statistical power to find a significant effect. The second limitation concerns the fact that information on the participants was not collected. As distrust for health and research professionals is prominent within marginalized populations within the city, it was decided that inquiry would be limited to the experience of attendance to the workshops. However, this meant that further analysis could not be done on demographic features of the sample, which may be influential to the learning experience of participants. The third limitation concerns the fact that recruitment was done solely within Thunder Bay, and no participants within rural areas were included. As such, our results may not be generalizable to all populations of Northwestern Ontario, as the availability of resources and needs within the community may fluctuate greatly across the region. The final limitation concerns the facilitators of the workshop. Different individuals presented across conditions; thus, it is possible that results do not reflect solely a difference in presentation style but also reflect facilitator competence and likability. Such factors need to be evaluated and quantified in future research. Large-scale studies involving individuals from rural and urban areas across the Northwestern Ontario region are necessary to address the primary limitations of the current study. Researchers need to continuously form community partnerships and to re-establish trust among community members, so that recruitment among a diverse range of marginalized populations is possible.

Conclusion

Research surrounding psychoeducation and presentation delivery method is invaluable, as ensuring learning and engagement among participants is relevant for all health organizations. As a student-led outreach initiative, Compass North delivers many workshops to different groups and is constantly revising the services offered to better address community needs.

The results of the current study found no effect of workshop delivery style (presentation versus discussion-based) on educational value or engagement level following a health promotion workshop on anxiety and coping. The attained qualitative feedback suggested that as opposed to thinking of any presentation style as being superior, it may be more appropriate to think of the best fit between workshop and participant. Future research should examine whether certain presentation characteristics are best suited for certain topics or groups of people.

References

1. North West LHIN. "North West LHIN Population Health Profile." December 2015.
2. Thorgrimson J, Doble D, Balfour-Boehm J, et al. "Going Beyond Good Intentions: Needs Assessment for Student-Led Health Outreach in Northern Ontario." *J Stud-Run Clin*. 2016;2(2).
3. Penciner R. "Does PowerPoint enhance learning?" *CJEM.* 2013;15(2):109-112.
4. Frame TR, Cailor SM, Gryka RJ, Chen AM, Kiersma ME, Sheppard L. "Student Perceptions of Team-based Learning vs Traditional Lecture-based Learning." *Am J Pharm Educ*. 2015;79(4).
5. Wiener H, Plass H, Marz R. "Team-based Learning in Intensive Course Format for First-year Medical Students." *Croat Med J.* 2009;50(1):69-76.
6. Chung E-K, Rhee J-A, Baik Y-H, A O-S. "The effect of team-based learning in medical ethics education." *Med Teach.* 2009;31(11):1013-1017.
7. Mental Health Academy. "Psychoeducation: Definition, Goals and Methods." June 2014.
8. Ögeyik MC. "The effectiveness of PowerPoint presentation and conventional lecture on pedagogical content knowledge attainment." *Innov Educ Teach Int*. 2017;54(5):503-510.
9. To J, Carless D. "Making productive use of exemplars: Peer discussion and teacher guidance for positive transfer of strategies." *J Furth High Educ.* 2016;40(6):746-764.
10. Bentham C, Daunt A, Taylor S, Simmons M. "Mental health workshops delivered by medical students in Cambridge secondary schools: an evaluation of learning." *Psychiatr Danub*. 2013;25 Suppl 2:S224-230.