



WESTERN MICHIGAN UNIVERSITY
Homer Stryker M.D.
SCHOOL OF MEDICINE

Delivery of Health Education in Adolescents with Behavioral Health Challenges



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Ashley Akkal, Amy Rechenberg, Michael Madrid, Sulin Wu, José Lopez-Vera, Duncan Vos

BACKGROUND

Adolescents with behavioral health issues tend to have inadequate access to health education, and are thus less aware of the importance of personal hygiene, exercise, and healthy diet and lifestyle habits. Due to this disparity, this population harbors a higher prevalence of STI's, drug and alcohol abuse, physical altercations, juvenile detention, and suicide attempts.

PURPOSE

The overall objective of this study was to examine the effect of integrating a health science curriculum in this population.

METHODS

Participants aged 5 - 17 were recruited and assigned to either control or science groups by Family & Children Services (FCS). We created an 8-week health science curriculum, and a questionnaire was utilized to assess participants' comprehension of health information. Pre/post measurements were employed to determine the efficacy of delivering health science to two science groups and two control groups that did not receive science curriculum ($N_S=23$ and $N_C=20$ respectively.)

The effect of the curriculum on participants' behaviors was examined using a self-reported pre/post "Behavioral Insight" questionnaire. The first question (Q1) reveals whether the participant understands the behaviors they are supposed to change. The second question (Q2) reveals whether the participant understands how they can improve each behavior. A Non-parametric Mann-Whitney U test was utilized to determine whether there was a significant difference in behavioral goals and science based knowledge between the control and science groups.

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RESULTS

The health knowledge assessment result demonstrated a marginally significant improvement of understanding and retaining health science information, which was delivered to the science group in 8 independent sessions on a weekly basis ($p=0.0669$, Fig. 1). This marginal significance suggests a potential trend towards significance which could be elucidated with a greater sample size.

Secondly, we observed a statistically significant difference in participants' understanding of their behavioral deficits and how to improve primary behavior ($p=0.01$, Fig. 2). The results indicated that there is a significant decrease of understanding and managing their primary response to external stimuli (Q2PB1) after receiving health science curriculum as compared with control groups ($Z=2.5720$, $p=0.0101$.) Before receiving the science curriculum, there was no significant differences of PB1 reported among all participants from all groups (Q1PB1, $Z=0.3507$, $p=0.7258$).

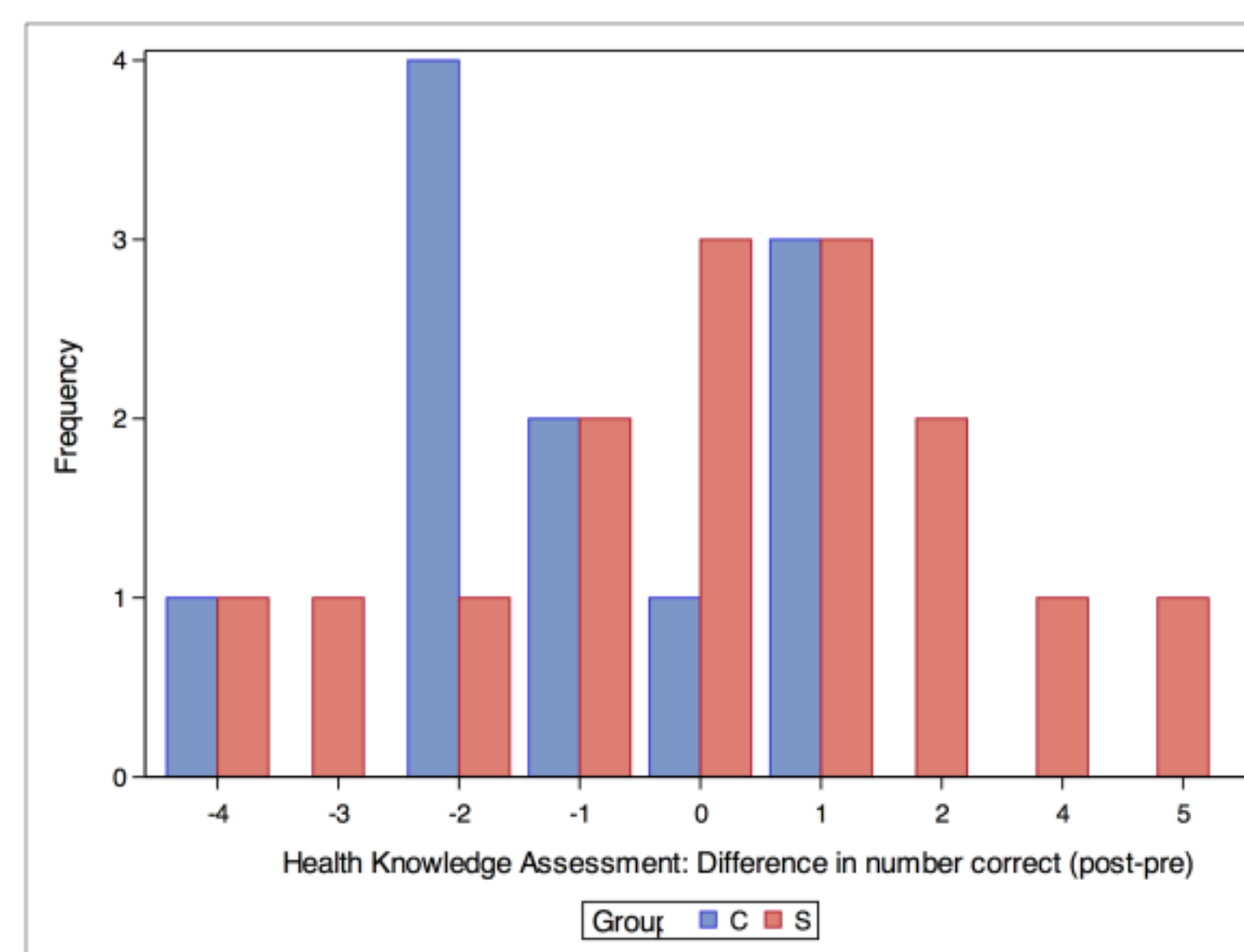


Figure 1. Pre-post difference between science and control groups regarding retention of health science information. Results show a marginally statistically significantly greater shift in the total number correct from pre to post for the science group compared to that for the control group. That is, the science group exhibited a greater shift in retention of health science information from pre to post compared to the control group.

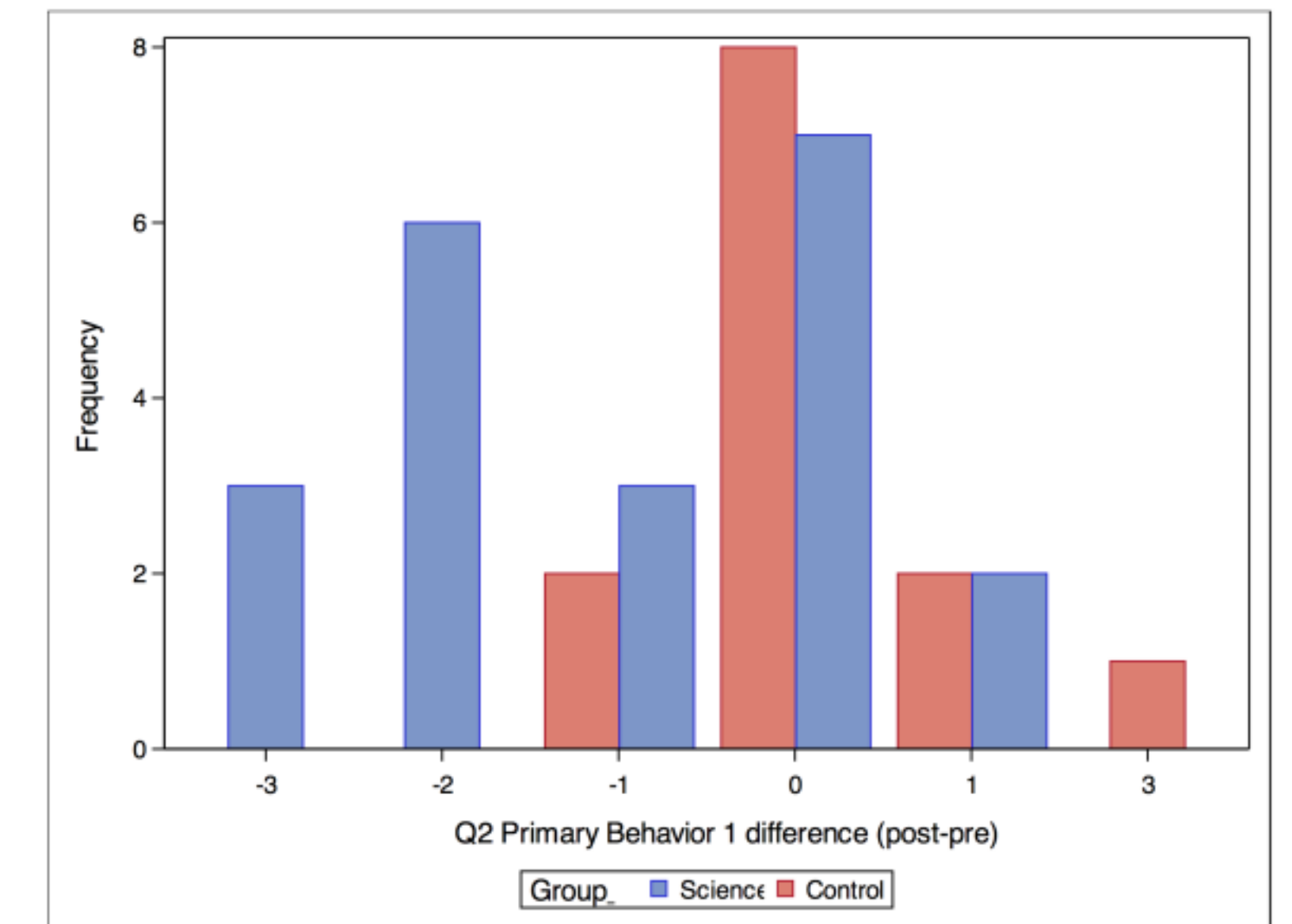


Figure 2. Pre-post difference between science and control groups regarding participants' understanding and improvement of their behavioral goals. Results show a statistically significantly greater shift in scores from pre to post for the control group than the shift in scores from pre to post for the science group. That is, the control group exhibited a greater shift in understanding of what they are supposed to do differently/how successful behavior looks from pre to post compared to the science group.

CONCLUSION

Findings from our study demonstrate that compared to the control group, we observed a marginally significant increase in health knowledge assessment scores among students in the science group. Thus, the 8-week science curriculum was determined to be an effective delivery method for the content involved. Further study in a larger sample may be necessary to detect significant effects of the curriculum. However, integration of the curriculum negatively affected participants' understanding of how to improve on their primary behavioral goals. This may be due to the novelty of the curriculum, and may or may not resolve itself as the curriculum continues to be implemented in the future with larger sample sizes.

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