

Abstract

Suicide is becoming an increasingly growing public health issue. According to the World Health Organization, the global rate for suicides in 2012 was 11.4 per 100,000 persons.

Specifically in children, research suggests that approximately 1 in 9 children have attempted suicide prior to their high school graduation, with 40% of those attempts being in grade school (Journal of Adolescent Health via Family Matters, 2011). One of the primary risk factors associated with suicide attempts is hopelessness (Wilkinson et al, 2010).

However, research suggests that hope is a teachable skill (Rand & Cheavens, 2008). Through development of a new hope curriculum, iFred, the International Foundation for Research and Education on Depression aims to lower rates of suicide by teaching hope and equipping adolescents with the social and emotional learning tools necessary to have and maintain hope throughout life. Thus the aim of this study is to determine whether the curriculum is effective in teaching hope to children.

Participants were recruited from twelve fifth grade classrooms in two schools from two local Chicago area school districts. Total number of participants recruited was 370. Data was sourced from pre and post hope curriculum questionnaires that evaluated the participant's overall understanding of the concept of hope. Preliminary findings for the program determined that the curriculum was effective in educating participants on the concept of hope. Additionally, feedback from students and educators reported satisfaction of the fall implementation of the hope curriculum. Future studies should focus on recruiting an even number of participants to the experimental and control groups, and reducing answer choices to a set that is more concise and appropriate to the reading level of the participants.

Introduction

Suicide is a growing concern in many of today's populations. In 2001, the World Health Organization reported that self-inflicting injuries such as suicide accounted for greater than 800,000 deaths (Sher, 2004). Specifically, in adolescents the point prevalence of suicide ideation is approximately 15-25% (Bridge, Goldstein, & Brent, 2006). Research suggests that approximately 1 in 9 children have attempted suicide prior to their high school graduation, with 40% being in grade school (Journal of Adolescent Health via Family Matters, 2011). Relevant research studies that have been performed to determine the risk factors of suicide, indicate that hopelessness is a primary predictor of suicide. Hopelessness is associated with suicide attempts, although the factor may be confounded by the presence of depression (Wilkinson et al, 2010).

Fortunately, research has suggested that hope is a teachable skill (Rand & Cheavens, 2008). It has also been found that a greater level of hope results in greater well-being, and the fact that hope is vital to success (Scioli, 2009). Teaching hope to adolescents is the main objective of a new curriculum based program created by iFred, the International Foundation for Research and Education on Depression. This Hope curriculum was developed in order to equip students, educators, and parents with the tools necessary to finding and maintaining hope throughout life. It was developed by iFred in order to teach hope to adolescents at a young age and ultimately reduce the rate of suicide.

This study will aim to determine the effectiveness of the curriculum in providing hope to adolescents. We hypothesized that after teaching the hope curriculum, comprehension levels of

the concept of hope would increase. Specifically, we hypothesized that the hope curriculum would provide adolescents with a better understanding of the concept of hope and allow them to stay hopeful throughout the most difficult times.

Methods

Participants

Participants for this study were recruited from two schools from two school districts in local Chicago area schools (Oakland Elementary School in Antioch District 34, and Woodland Intermediate School in Woodland District 50). Children in 5th grade classes from each school (n=370) were recruited for study. All participants were given consent forms to be signed by both participant and parent/guardian. Students were divided into two groups, experimental (n=335) and control (n=35). Initially, Woodland Intermediate School had two control groups prior to launch of the experiment, however due to incomplete consent forms; only one control group was adequate to be used. Students from experimental group were recruited from homerooms of 12 different teachers (7 classrooms at Woodland Intermediate School, 5 classrooms at Oakland Elementary School), while students from the control group were recruited from 1 teacher homeroom at Woodland Intermediate School. All 370 students enrolled at the beginning of the study completed both pre and post-hope curriculum surveys. The curriculum consisted of thirty minute lesson plans that were taught for five consecutive days. Data was sourced from hope curriculum surveys that were administered prior to the start of the curriculum and immediately following completion of the fall semester hope curriculum. Data was input into Microsoft Excel 2010 and responses were placed accordingly to pre and post hope curriculum sections and matched on student ID numbers. Administration of the hope curriculum and surveys contained

no information about drugs or therapeutic methods related to depression treatment, nor did it ask participants whether they are current depressed or have had thoughts of suicide.

Questions

A ten question survey was administered to participants prior to receiving instruction from the fall lessons. The fall curriculum contains five lessons lasting approximately thirty minutes and is administered in one week; one lesson for each day of the week. The same ten question survey was administered to participants immediately after completing the five lessons from the fall hope curriculum. The questions were meant to assess the participants understanding of hope, and responses from both surveys were utilized for data analysis. Along with the ten questions, each survey contained teacher name, student ID number assigned by the teacher, gender and an indication of whether it was a pre-hope curriculum survey or a post-hope curriculum survey. All questions included the following answer choices, respectively: None of the time, A little of the time, Some of the time, A lot of the time, Most of the time, All of the time.

Question 1

I can define what hope means to me.

Question 2

The amount of money determined if a person is hopeful.

Question 3

Feelings such as fear, sadness, or anger influence our ability to feel hope.

Question 4

Important things we believe in help us find and keep hope.

Question 5

Knowing that we are grateful for and listing positive things every day give us hope.

Question 6

Activities such as meditation, deep breathing, and journaling help create hope

Question 7

When a person is calm, he/she can think more clearly.

Question 8

Thoughts or feelings can change the way our body feels.

Question 9

When a person does activities that they enjoy, it helps them have hope.

Question 10

A person can have hope no matter what is happening in life.

Data Analytic Approach

Statistical analysis was performed in Microsoft Excel 2010. A t-test: Paired sample of two means was utilized on each individual question in order to compare the average answer choice value between pre-test and post-test for all students. Surveys that contained

missing/incomplete data were discarded from data analysis. Tests of significance were one-tailed and utilized an alpha threshold of 0.05.

Results

Table 1 below shows the results obtained for the experimental group, including a breakdown of mean pre-test score, mean post-test score, difference between mean pre and post test scores, degrees of freedom, t-stat, and p values. A one-tailed test was utilized because our hypothesis states that the second mean score would be higher than the initial mean score.

Overall, the hope curriculum proved to be an effective means of teaching the concept of hope. There is statistical evidence showing a significant difference between the mean scores of pre-test and post-test data ($p < 0.05$) for 8 out of 10 questions. Questions 4 and 10 have p values greater than 0.05, thus supporting the null hypothesis that there is no significant difference between the pre-and post-test scores for those questions.

Discussion

Findings from this study suggest that the hope curriculum administered to students is effective, and shows comprehension and better understanding of the concept of hope. Statistical data outlined in table 1 provides evidence of significant difference in the means between pre-test and post-test scores for eight out of the ten survey questions. This ultimately shows that implementation of the hope curriculum through the experimental group is mostly effective and increases the understanding of the concept of hope. Various activities and questions during each lesson plan may attribute to this increase in comprehension. Additionally, student and teacher feedback have been positive and have indicated reports of overall satisfaction, support, and a desire to continue forward with the program.

Limitations

There are a few limitations to be noted for this study. Only experimental group surveys were utilized for statistical analysis. Due to the small control group (n=35) that was recruited, no viable data was able to be utilized after removing missing/incomplete surveys. Subsequent research studies should utilize a larger control group that contains usable data by minimizing the amount of data that is missing/incomplete. It is important that participants note down their participant ID numbers in order to ensure accuracy in matching up pre-test and post-test data.

Participants from other school districts and geographical areas should be utilized as well in order to determine the reproducibility of the HOPE curriculum. It is important to show that the hope curriculum can be effective in teaching hope both nationally and internationally.

Additionally, changes to the survey questions should be considered. Future studies should employ fewer answer choices that are both concise and appropriate to the reading level of the participants.

Conclusion

This current study investigated the effectiveness of a new curriculum created by iFred, the International Foundation for Research and Education on Depression, in order to teach and equip adolescents with the necessary tools to maintain hope throughout life. Although initial results provided positive feedback and success of the program, further research studies should focus on studying a larger cohort. Preliminary information obtained from this research study can be used to expand and further develop the hope curriculum. It is important to continue exploring the impact of hope on all age groups, and to use this curriculum as a suicide prevention tool.

Table 1: Experimental Group

Question	1	2	3	4	5	6	7	8	9	10
Mean Pre-test	4.435	2.425	3.371	4.833	4.677	3.608	5.070	4.656	4.457	4.747
Mean Post-Test	4.844	2.194	3.833	4.973	4.952	4.828	5.237	4.871	4.817	4.871
Difference	+0.409	-0.231	+0.462	+0.140	+0.275	+1.22	+0.167	+0.215	+0.36	+0.124
Degrees of Freedom	185	185	185	185	185	185	185	185	185	185
T-stat	-4.538	2.226	-3.358	-1.293	-2.406	-9.816	-1.729	-2.011	-3.273	-1.060
p-value <0.05	5.09596E-06**	0.0136**	0.000476**	0.098866278	0.0086**	7.14227E-19**	0.0423**	0.0229**	0.000635**	0.145232207

** p<0.5

References

1. Bridge, J., Goldstein, T., & Brent, D. (2005). Adolescent Suicide And Suicidal Behavior. *Journal of Child Psychology and Psychiatry*, 47(3), 372-394.
2. Cheavens, J., & Grabmeier, J. (n.d.). You've Got To Have Hope: Studies Show "Hope Therapy" Fights Depression. Retrieved January 29, 2015, from <http://researchnews.osu.edu/archive/apahope.htm>
3. Scioli, A, n.d., A Place for Hope in the Age of Anxiety, GainHope.com, <http://www.gainhope.com/hope/default.cfm>
4. Sher, L. (2004). Preventing suicide. *QJM*, 97, 677-680. doi: 10.1093/qjmed/hch106
5. Snyder, C. (2002). TARGET ARTICLE: Hope Theory: Rainbows In The Mind. *Psychological Inquiry*, 13(4), 249-275.
6. Wilkinson, P., Kelvin, R., Roberts, C., Dubicka, B., & Goodyer, I. (2011). Clinical and Psychosocial Predictors of Suicide Attempts and Nonsuicidal Self-Injury in the Adolescent Depression Antidepressants and Psychotherapy Trial (ADAPT). *American Journal of Psychiatry*, 168, 495-501.
7. World Health Organization. Age-standardized suicide rates (per 100,000 population. In: *Global Health Observatory of Mental Health, 2012*.