

RED FLAGS DEPRESSION AWARENESS PROGRAM

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This report presents the findings of a research grant that was funded for three years, for the purpose of evaluating the Red Flags Depression Awareness program. Red Flags is an educational program designed to help middle school students, teachers, and school staff recognize signs of depression (and other mental health issues), symptoms related to suicide, and resources that can help children in Grades 6 through 8 seek assistance for themselves, peers, or siblings who may be suffering from and/or exhibiting signs of depression.

Red Flags, developed by the Mental Health Association of Summit County (MHASC) Ohio, was created in response to the wave of school violence and shootings that had taken place across the country. The Ohio Department of Mental Health asked that a program be developed that focused on adolescent depression, an often unrecognized crisis facing many young people. Suicide, resulting from untreated depression, is the leading cause of death among young people ages 15 to 24. An education subcommittee of the Mental Health Association of Summit County went to work to develop a school-based program to address this critical issue.

A central component of the Red Flags program is the video called “Claire’s Story.” In an attempt to help her adolescent daughter tell the story of her struggle with depression and thoughts of suicide, Claire’s mother, Penny Frese, co-wrote with Claire, and produced the video to educate others about this mental health threat. That video, along with other program materials for students, teachers and parents, was developed to provide Red Flags participants with an understanding of the symptoms, the illness, and the available resources for recognizing and treating depression in adolescents.

To help combat depression and reduce the risk of suicide among middle school students, the MHASC in conjunction with Ohio Department of Mental Health distributes the Red Flags program material, free of charge, to middle schools across the state that are looking for a prevention program to educate their school community. To date, over 300,000 students in the State of Ohio have participated in Red Flags training. The program has also been used in a number of other states and it is being piloted in others. Our task, as evaluators, was to assess the effectiveness of the Red Flags program in meeting its program goals.

Methodology

A mixed methods research design, consisting of qualitative and quantitative methods (Green & Caracelli, 1997; Lincoln & Guba, 1985; Morse, 1991; Newman, Ridenour, Newman, & DeMarco, 2006; Ridenour & Newman, 2005; Tashakkori & Teddlie, 2003) was utilized for the Red Flags evaluation project. This approach to evaluation research was used to maximize the effectiveness of each methodology by allowing each method to inform the other, and to give the researchers a more holistic

picture of what was represented by the data. Two separate qualitative investigations were conducted (I and II), and one major quantitative investigation took place. *Qualitative I – Initial Focus Groups*, the initial qualitative investigation, consisted of several focus group interviews involving participants and administrators of the Red Flags program. *Qualitative II – Follow-Up Phone Interviews*, the second qualitative phase, consisted of phone interviews involving program administrators only. The major quantitative investigation consisted of distributing packets of research instruments for students and school staff, consisting of the School Climate Survey (NASSP, 1987), the BarOn Emotional Quotient Inventory: Youth Version (EQ-i; Bar-On, 1997; Bar-On & Parker, 2000), and the Red Flags Program Survey (MHASC, 1997). These surveys were sent to middle schools throughout the state of Ohio that agreed to participate in the Red Flags evaluation. Most of the schools that received the evaluation materials are using the Red Flags program in their curriculum but some were non-participating schools that agreed to serve as our comparison group.

Results

Qualitative I – Initial Focus Groups. The initial qualitative investigation was conducted to identify a best practice model, an overarching theoretical framework that would help to guide our procedures, and to identify measurement concepts that would facilitate our ability to answer the quantitative research questions. This was a crucial step in helping us to focus the evaluation by correctly identifying quantitative constructs, helping in our selection of measurement instruments and identifying related concepts. The components of a best practice model were identified, as were several qualitative themes. Five middle schools participated in the Qualitative I investigation. Each of these schools participated in at least one and up to three focus groups for a total of 12 focus groups and one principal interview. These interviews are presented in the Appendix of the final report.

Five major themes emerged from the focus group investigation. The five themes were (a) Implementation, (b) Constituents, (c) Support, (d) Infusion, and (e) Limitations and Risks. In addition, several subthemes were noted under each of these major themes. Based upon the initial qualitative survey, the major research instruments selected for the evaluation were School Climate and School Satisfaction Scales, EQ-i, and a Red Flags Knowledge Survey that was constructed to assess knowledge of symptoms of depression, resources available for support, and the likelihood of referring self or others for help. Each of these instruments reflects the important concepts identified by the analysis of the qualitative investigation. School climate was used as a surrogate variable for estimating academic achievement (Bulach, Malone, & Castleman, 1995; McEvoy, & Welker, 2000; Phillips, 1997), while EQ-I is predictive of achievement as well as personal, social, and emotional development (Bar-On, 1997, 2003; Parker, Creque, Barnhart, Harris, Majeski, Wood, Bond, & Hogan, 2004; Swart, 1996).

Quantitative Analyses. The results of the quantitative analysis were predominantly positive. Analysis of the data indicated that participants in the Red Flags program were significantly more aware of signs of depression ($p < .001$) than were the non-participants. Responses indicated there was no significant difference in the willingness of middle school students to make referrals, but data also indicated that students who participated in the Red Flags program had significantly more positive gains in their academic orientation, as measured by the School Climate Academic Orientation scale. Both the School Climate and EQ-i scales, as well as the qualitative analysis, also indicated a greater reduction in the students' disruptive behavior following participation in the program. When looking at 18 of the School Climate and School Satisfaction Scales, students who participated in Red Flags had higher gain scores on each of the scales than those who did not participate. The probability that this would be a chance outcome is less than $p < .001$ (less than 1 time in 1000), as measured by a Sign test.

We were not able to get good estimates of each school's fidelity in presenting all of the key components of the Red Flags program due to the idiosyncratic implementation of the program by participants. Each of the schools we interviewed selected the aspects of the Red Flag program that it felt best met its needs and fit within the time constraints and resources. Schools also varied widely in the amount of class time they allowed for teaching Red Flags, and in who taught the program. All data indicate the program is low cost to implement, however many schools did not have additional funds that could be used to purchase consumable materials (i.e., parent information booklets) when needed. This would have amounted to 20 cents per student.

Quantitative analyses also identified overall significant student gains on the School Climate and EQ-i scores, and on the Knowledge test, which assessed their awareness of the symptoms of depression and other mental health issues. Even though there was no statistically significant difference on several other variables, the qualitative analysis gave some indication of positive evidence regarding the Red Flags program on these measures.

Qualitative II – Follow-Up Phone Interviews. In this phase, telephone interviews were conducted with eight of the individuals who were responsible for coordinating the Red Flags program administration in their respective schools. These interviews are presented in the Appendix of the final report. Findings were consistent with the five themes that emerged in the Qualitative I phase, and provided further evidence of the long-term impact that the Red Flags program is having on participants.

The findings indicate that all eight respondents believe that students and teachers increased their awareness and sensitivity to the content of the Red Flags program. The interview data support the notion that even though fidelity to all components of the model could not be estimated because the flexibility of the Red Flags program allows schools to choose how they will implement it, there was more consistency among schools in their presentation of the student component. It also became apparent that while the program did not result in immediate noticeable changes in student behavior, the qualitative data suggest that the program did have long-term effects on students. Teachers were able to relate a number of incidences in which students referenced Red Flags when discussing mental health issues and depression, a year or more after exposure. (See the Appendix in the final report for examples.)

The results of the Qualitative II – Follow-Up Phone Interview investigation indicated a great deal of consistency among all interviewees. These results are also consistent with the data collected from the Qualitative I – Initial Focus Group phase and are supportive of the positive results obtained when comparing the Red Flags participant group to the non-participant group on School Climate, EQ-i and the Red Flags knowledge test.

Even though there was a very limited intervention time period (the time between the pretest, Red Flags instruction, and the posttest), the data indicate overall support for the Red Flags program. Both the quantitative and qualitative data suggest the program has many positive aspects, as indicated by strong positive qualitative comments, the gain scores on the Knowledge, School Climate, and EQ-i surveys, and the anecdotal reports of long-term effects. Red Flags is a program that can be implemented in a short amount of time and it appears to be meeting its program goals.

Research Design Challenges

There were a variety of factors that limited our ability to carry out the program evaluation that we originally planned. Due to their concern for the protection of human subjects, several obstacles to the evaluation were imposed by The University of Akron Institutional Review Board. For example, the evaluation team identified key research instruments for the quantitative data collection, but we were

subsequently restricted from using the Beck Depression Inventory for Youth (BDI-Y) and student grade point averages unless we obtained a release form from each parent and student. This was identified as a major obstacle since it would require individual students to sign an assent form and their parents to sign and return a consent form to the school. These signature forms would then have to be matched to individual research packets and teachers would have to ensure that only packets from students with assent and consent forms were submitted for analysis. While this would have met the IRB requirements, it would have put a much greater burden on the schools and they were unwilling to take on this additional responsibility. We felt that these added tasks would have negatively impacted on the schools' willingness to participate in the Red Flags program evaluation. Additionally, the research team, the participant schools and the Red Flags staff felt that it would be virtually impossible to obtain these forms from a large number of the parents and students, so we modified our data collection procedures by eliminating these variables.

Another major challenge was that schools in Ohio are under tremendous pressure to ensure that all instructional time is spent in tasks that will allow their students to demonstrate proficiency on the Ohio Achievement Tests. Any request for including an activity that does not focus on this goal is viewed as an unwelcome diversion and imposition, and it is often denied. Many schools we approached indicated that while they value the Red Flags program and are willing to give time to providing their students with the important information contained in the program, they were not able (or willing) to give up the two additional classroom periods we needed to administer pre and post assessments. This appeared to be even more of a concern for the administrators and teachers in our comparison schools because their students were not deriving any benefit from the Red Flags program.

Another issue that was somewhat problematic for the evaluation was that the Red Flags program does not require a uniform method of implementation. As previously mentioned, each school is able to determine how to best implement the program, based on its unique needs. This lack of consistency made it virtually impossible to develop an overall assessment of the schools' fidelity to the Red Flag model.

The number of components each school chose to utilize, the level of infusion into the school curriculum, and the variations in program management across so many schools, indicated that program participants differed widely in what they considered to be essential program elements. The one largely consistent piece was that all schools utilized the student component, even though they varied as to who delivered the information (usually a guidance counselor or a health teacher) and in the amount of time they allocated for instruction. Some distributed these sessions over time while others presented the material in a very few days. Most indicated that teacher in-service is important but they also reported that their professional development was already designated to academic curricular issues related to content being tested by the state. Therefore, only a few of the schools we interviewed reported that they provided training sessions for teachers, and some said they made the program video available to teachers. The parent component of the Red Flags program received the least attention among participants. Although several schools reported trying to implement this component, they had little success in regard to parent participation, and therefore did not continue with it in subsequent years. Another somewhat surprising response was that several of the schools indicated they distributed the Red Flags information booklets that they received free, but they did not have the money to replace them, even though the cost per child seems to be quite low.

Given these variations from building to building, the estimate of fidelity to the program was very weak. Variation was a product of the unique needs and resources of individual schools and their manner of implementation. The developers of the program were aware that schools have various needs and resources regarding the level of component implementation, and subsequently designed Red Flags to allow for the flexibility required based upon the individual school needs and resources. This is both a

strength and weakness of the program. It is a strength in that it gives schools a lot of flexibility to implement needed components and therefore increases the likelihood that they will participate. However, it is a weakness in that it does not require all components to be implemented, thus limiting the sharing of program information with parents, and cutting down on the time allocated to training and sharing information with teachers.

Only two of the major components of the program (the student component and to a lesser extent the teacher component) appeared to be relatively consistent in that some form of these were present in all settings, even though there was variation in how they were presented. It also appears that much of the program effect that was detected was due to the student component, and secondarily to the teacher component.

Summary of Findings

The primary goal of this evaluation was to determine if there is a difference among students and teachers who received Red Flags training and those who did not on variables such as awareness and knowledge of depression and mental health issues, willingness to self-refer or refer others for help, and knowledge of resources available to get help when needed. Another goal was to determine the long-term effects of Red Flags, if any, on students and teachers.

The data support that there are overall differences between the Red Flags and comparison schools when looking at the directionality of gain scores across the identified variables, $p < .0001$ based upon a Sign test (see Table 1). However, as is expected in situations of low incidence (Newman, Ridenour, Newman, Smith, & Brown, 2007), we did not find statistically significant differences between Red Flags and non-Red Flags schools on most of the specific subscales. Statistically this makes sense because even though the percentage of incidents of depression and mental health concerns in schools has grown substantially, it is still relatively small in absolute number. So if we had two schools of 500 students each, and if two students attempted suicide in one school, and no one did in the other, there would be no detectable significant difference between the schools. This is not meant to infer that the two suicide attempts in the one school are not alarming. They should be a “red flag” to the school’s administrators, counselors, teachers and parents that intervention is needed, but the data from the two schools would not produce results that are statistically different. However, differences would more likely be identified through qualitative analyses (case study) such as interviews, focus groups, surveys, etc. Those personal contacts would provide a better opportunity to identify variables that may be of concern.

In our analyses of the Qualitative II – Follow-Up Phone Interview data, all of the teachers interviewed indicated that the Red Flags training had a positive and long-lasting effect. They were able to anecdotally identify specific instances in which students referenced the Red Flag training, materials or experiences that lead them to seek the help of a teacher or counselor, for themselves or a friend. Sometimes it was a year or more after their training that students were able to use the information that had been provided to them. To determine the likelihood that all teachers would be able to cite such examples, we conducted a Sign Test that produced a $p > .01$, which is statistically significant. Therefore, we believe these data provide support of positive long-term effects of the Red Flags training for students and for their teachers who were able to recall incidents that they regarded as positive results of the Red Flags program. Given the wide variation in implementation and program management, we believe it is very positive that the program was able to demonstrate an effect, as indicated by both the qualitative and quantitative analyses.

Table 1. Analyses of Gain Scores When Comparing Red Flags Students to Comparison Groups on the Knowledge, EQ-I, School Climate and Student Satisfaction Constructs

Knowledge	Scale	Interaction		Main	
		sig. <.001	direction +	sig.	direction
EQI	Total Knowledge				
	Intrapersonal	0.052	+		
	Interpersonal	ns	+	<.001	+
	Stress Management	0.062	+		
	Total EQI	ns	+	ns	+
	G	ns	+	0.023	-
	Adaptability	ns	+	ns	-
	SCS: Teacher Student Positive Relationships Scale	ns	+	<.001	+
	SCS: Security Maintenance Scale	ns	+	<.001	+
	SCS: Administration Scale	0.038	+		
SCS	SCS: Academic Orientation Scale	0.055	+		
	SCS: Student Behavioral Values Scale	0.085	+		
	SCS: Guidance Scale	ns	+	<.001	+
	SCS: Student Peer Relationships Scale	ns	+	<.001	+
	SCS: Parent and Community Relationships Scale	ns	=	<.001	+
	SCS: Instructional Management Scale	ns	+	<.001	+
	SCS: Student Activities Scale	0.0755	+		
	SSS: Teachers	0.085	+		
	SSS: Fellow Students Scale	ns	+	<.001	+
	SSS: Schoolwork Scale	0.099	+		
SSS	SSS: Student Activities Scale	ns	+	<.001	+
	SSS: Student Discipline Scale	ns	+	<.001	+
	SSS: School Buildings Scale	0.0655	+		
	SSS: Communications Scale	ns	+	<.001	+
	SSS: Decision Making Opportunities	0.065	+		

Note. Alpha was set at .10 for the study.

Conclusions

The data presented in this evaluation were analyzed from a number of research perspectives (qualitative, quantitative, and mixed-methods). Overall, the qualitative and quantitative data support the effectiveness of the Red Flags program. Qualitative I revealed the components of a “best practice” model of Red Flags utilization. Each of the identified schools demonstrated aspects of what constitutes a model of best practice of the Red Flags program. A Best Practice model resulted in a summary of five major themes. The five themes were as follows: (a) Implementation, (b) Constituents, (c) Support, (d) Infusion, and (e) Limitations and Risks. In addition, several sub-themes were noted under each of these major themes.

There were noted limitations and risks associated with the utilization of the Red Flags program (see pages 32 and 33 of the final report). Schools that choose to implement the Red Flags program must understand that limitations (personnel, financial and physical resources, and time) do indeed exist, and that several noted risks (potential for increased suicide ideation and behavior, stigma to students, servicing identified students, parent concerns) are apparent. Therefore, it is important for schools utilizing

the Red Flags program to consider both limitations and risks. Program administrators must be aware of such matters, and be prepared to address them. Data provided from the participants seem to indicate that the limitations and risks do not outweigh the potential benefit of the Red Flags program.

Data from both qualitative analyses (I and II) in this study reveal consistency in themes that emerged and participant perceptions of the program. In essence, in both analyses the Red Flags program was perceived as being a positive, flexible, low-cost educational program.

Quantitative data reveal support for the Red Flags program when looking at the directionality of gains over all variables, when students who participated in the Red Flags program were compared to those who did not ($p < .0001$). This overall effect is highly statistically significant.

One of the biases of the evaluators is that replicability of the effects of programs such as Red Flags is more important than statistical significance. Significance does not mean that the program effect is replicable, even though it is a related concept. For example, if a study is significant at a .05 alpha level, depending upon the N size, the effect may only replicate 50 percent of the time. If it is significant at the $p = .01$ level, the effect may replicate 72 percent of the time, and at $p = .001$, it may replicate approximately 90 percent of the time. In this evaluation, the overall significance, using the Sign Test, was $p < .0001$, which gives an estimate that the effect of the Red Flags program on the variables measured by the School Climate and School Satisfaction Surveys, EQ-i, and the Knowledge scale is likely to be replicated. It is always desirable to get additional estimates of replicability by duplicating or cross validating. We suggest consideration of this notion as well as the suggestions for implementation that were derived from the qualitative analyses.

Even though there was a very limited intervention time period, the qualitative and quantitative data both indicate support for the Red Flags program. Red Flags appears to be working effectively across a number of dimensions, as indicated above.

Recommendations to Strengthen the Red Flags Program

As a result of the qualitative and quantitative evaluations, we have generated several recommendations that we believe would strengthen the Red Flags Depression Awareness program. While we make these suggestions, we are also mindful that, if implemented, they might limit some of the program flexibility that has been so attractive to participating schools, and that this might result in a disincentive for their continued participation. Therefore, we also suggest that each recommendation be carefully considered in terms of how it may impact on the schools' willingness to offer Red Flags to their students.

Recommendations for improvement to the Red Flags program were provided by the focus group participants. Participants consisted of students, teachers, school counselors, a principal, and other school personnel. In addition, the focus group research team provided recommendations based upon their analysis of the focus group data. The researchers proposed the following five major considerations to enhance the Red Flags program: (a) Develop a theoretical framework, (b) Develop a comprehensive model, (c) Develop an implementation plan, (d) Develop an evaluation procedure, and (e) Develop a resource center.

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Presentations of the Research to Date

Newman, I., Smith, S., Newman, C., & Brown, R. (2006, October). *An evaluation of Red Flags: An adolescent depression awareness program*. Poster presented at Research Results Briefing 2006: Knowledge to Transform Mental Health Services in Ohio, Columbus.

Newman, I., Smith, S., Newman, C., & Brown, R. (2006, August). *An evaluation of Red Flags Program*. Executive Briefing at the Ohio Department of Mental Health, Columbus.