

## Sources of Strength

Sources of Strength, a universal suicide prevention program, is designed to build socioecological protective influences among youth to reduce the likelihood that vulnerable high school students will become suicidal. The program trains students as peer leaders and connects them with adult advisors at school and in the community. With support from the advisors, the peer leaders conduct well-defined messaging activities intended to change peer group norms influencing coping practices and problem behaviors (e.g., self-harm, drug use, unhealthy sexual practices). Specifically, these activities are designed to reduce the acceptability of suicide as a response to distress, increase the acceptability of seeking help, improve communication between youth and adults, and develop healthy coping attitudes among youth. Sources of Strength is also designed to positively modify the knowledge, attitudes, and behaviors of the peer leaders themselves.

Depending on the size of the high school, 10-50 students are recruited through staff and student nominations to form a team of peer leaders, who are mentored by 2-5 adult advisors. Certified Sources of Strength trainers provide the peer leaders with an initial 4-hour interactive training, which the adult advisors also must attend. Adult advisors facilitate peer leader meetings over 3-4 months to plan, design, and practice tailored messaging activities, including individual messaging, classroom presentations, and media messaging, that reflect local cultural adaptations. The peer leaders have one-on-one conversations within their network of friends; develop posters and public service announcements with local faces and voices; give peer-to-peer presentations; and develop messages to be delivered via video, the Internet, or text messages.

The program is often initiated as a 3- to 6-month project, but it is designed as a multiyear project with ongoing peer messaging and contacts growing over time. Adult advisors receive monthly teleconference support meetings with Sources of Strength staff.

## Descriptive Information

<b>Areas of Interest</b>	Mental health promotion
<b>Outcomes</b>	<p><b>Review Date: September 2011</b></p> <ul style="list-style-type: none"> <li>1: Attitudes about seeking adult help for distress</li> <li>2: Knowledge of adult help for suicidal youth</li> <li>3: Rejection of codes of silence</li> <li>4: Referrals for distressed peers</li> <li>5: Maladaptive coping attitudes</li> </ul>
<b>Outcome Categories</b>	<ul style="list-style-type: none"> <li>Family/relationships</li> <li>Mental health</li> <li>Suicide</li> </ul>
<b>Ages</b>	<ul style="list-style-type: none"> <li>13-17 (Adolescent)</li> <li>18-25 (Young adult)</li> </ul>
<b>Genders</b>	<ul style="list-style-type: none"> <li>Male</li> <li>Female</li> </ul>
<b>Races/Ethnicities</b>	<ul style="list-style-type: none"> <li>Black or African American</li> <li>Hispanic or Latino</li> <li>White</li> </ul>
<b>Settings</b>	School
<b>Geographic Locations</b>	<ul style="list-style-type: none"> <li>Urban</li> <li>Rural and/or frontier</li> </ul>
<b>Implementation History</b>	Sources of Strength was developed in North Dakota in 1998, in partnership with rural communities and several Northern Plains tribes. From 2000 to 2004, through a statewide collaborative effort involving the North Dakota Adolescent Suicide Prevention Task Force, Mental Health America of North Dakota, and the North Dakota Department of Health, the program trained approximately 7,500 teens and young adults. In 2006, Sources of



Department of Health, the program trained approximately 7,500 teens and young adults. In 2006, Sources of Strength and the University of Rochester in New York began a community research partnership and conducted a randomized trial with 18 high schools in Georgia, New York, and North Dakota. In 2010, the partnership began a 5-year randomized trial using Sources of Strength with more than 40 high schools to measure the impact of 1,500 peer leaders on approximately 15,000 adolescents; this study is being funded by the National Institute of Mental Health as part of the National Peer Leadership Study. Since 2006, Sources of Strength has been implemented in Arizona, California, Colorado, Georgia, Michigan, Minnesota, New Jersey, New York, North Dakota, Oklahoma, South Dakota, and Wyoming, as well as in Washington, DC. It also has been implemented with the Salmon River Tribe, Spirit Lake Nation, Three Affiliated Tribes, Tohono O'odham Nation, and Turtle Mountain Nation. These implementations represent approximately 130 peer teams, with 3,000 peer leaders, reaching out to approximately 25,000 adolescents and young adults.

<b>NIH Funding/CER Studies</b>	Partially/fully funded by National Institutes of Health: Yes Evaluated in comparative effectiveness research studies: No
<b>Adaptations</b>	No population- or culture-specific adaptations of the intervention were identified by the developer.
<b>Adverse Effects</b>	No adverse effects, concerns, or unintended consequences were identified by the developer.
<b>IOM Prevention Categories</b>	Universal

## Quality of Research

**Review Date: September 2011**

### Documents Reviewed


The documents below were reviewed for Quality of Research. The research point of contact can provide information regarding the studies reviewed and the availability of additional materials, including those from more recent studies that may have been conducted.

#### Study 1

[Wyman, P. A., Brown, C. H., LoMurray, M., Schmeelk-Cone, K., Petrova, M., Yu, Q., et al. \(2010\). An outcome evaluation of the Sources of Strength suicide prevention program delivered by adolescent peer leaders in high schools. \*American Journal of Public Health, 100\*\(9\), 1653-1661.](#) 

### Supplementary Materials

[Gould, M. S., Velting, D., Kleinman, M., Lucas, C., Thomas, J. G., & Chung, M. \(2004\). Teenagers' attitudes about coping strategies and help-seeking behavior for suicidality. \*Journal of the American Academy of Child and Adolescent Psychiatry, 43\*\(9\), 1124-1133.](#) 

[Schmeelk-Cone, K., Pisani, A. R., Petrova, M., & Wyman, P. A. \(2012\). Three scales assessing high school students' attitudes and perceived norms about seeking adult help for distress and suicide concerns. \*Suicide and Life-Threatening Behavior, 42\*\(2\), 157-172.](#)  (NOTE: At the time of the NREPP review, the manuscript of this article had been submitted for publication but not yet accepted.)

## Outcomes

### Outcome 1: Attitudes about seeking adult help for distress

#### Description of Measures

Attitudes about seeking adult help for distress were assessed with the Help-Seeking From Adults at School scale, a 4-item self-report measure. All scale items begin with the following stem: "If I was really upset and needed help..." Using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree), students responded to the items, which assess intentions to seek help ("I would talk to a counselor or other adult at school"), expectations about receiving help ("I believe a counselor or other adult at school could help me"), and perceived support from their friends and family for seeking help ("My friends would want me to talk to a counselor or other adult at school" and "My family would want me to talk to a counselor or other adult at school").

#### Key Findings

Participating schools were randomly assigned to the intervention condition or the wait-list control condition. Students designated as peer leaders in the intervention schools began training with Sources of Strength immediately, and those in the control schools began training 5 months later.



	<p>Students (those who were designated as peer leaders and those who were not) completed the scale at baseline and at 4 months after baseline, before peer leaders in the control schools began training.</p> <p>At 4 months after baseline, trained peer leaders were more likely than untrained peer leaders were to seek help from adults at school (<math>p &lt; .001</math>). Also at 4 months after baseline, students in the intervention schools were more likely than students in the control schools were to seek help from adults at school (<math>p = .04</math>).</p>
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	3.1 (0.0-4.0 scale)

### Outcome 2: Knowledge of adult help for suicidal youth

<b>Description of Measures</b>	<p>Knowledge of adult help for suicidal youth was assessed with the Adult Help for Suicidal Youth scale, a 3-item self-report measure. Using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree), students responded to the following items: "I know adults who could help a friend thinking of suicide," "My school has people who can help students going through hard times," and "I can think of an adult who I trust enough to help a suicidal friend."</p>
<b>Key Findings</b>	<p>Participating schools were randomly assigned to the intervention condition or the wait-list control condition. Students designated as peer leaders in the intervention schools began training with Sources of Strength immediately, and those in the control schools began training 5 months later. Students (those who were designated as peer leaders and those who were not) completed the scale at baseline and at 4 months after baseline, before peer leaders in the control schools began training.</p> <p>At 4 months after baseline, trained peer leaders were more likely than untrained peer leaders were to have knowledge of adult help for suicidal students (<math>p &lt; .001</math>). Also at 4 months after baseline, students in the intervention schools were more likely than students in the control schools were to have knowledge of adult help for suicidal students (<math>p = .034</math>).</p>
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	3.1 (0.0-4.0 scale)

### Outcome 3: Rejection of codes of silence

<b>Description of Measures</b>	<p>Rejection of codes of silence was assessed with the Reject Codes of Silence scale, a 6-item self-report measure designed to determine adolescents' attitudes toward overcoming secrecy barriers to engage adults about suicidal peers. Using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree), students responded to each item (e.g., "I would tell an adult about a suicidal friend, even if that friend asked me to keep it secret").</p>
<b>Key Findings</b>	<p>Participating schools were randomly assigned to the intervention condition or the wait-list control condition. Students designated as peer leaders in the intervention schools began training with Sources of Strength immediately, and those in the control schools began training 5 months later. Students (those who were designated as peer leaders and those who were not) completed the scale at baseline and at 4 months after baseline, before peer leaders in the control schools began training.</p> <p>At 4 months after baseline, trained peer leaders were more likely than untrained peer leaders were to reject codes of silence (<math>p &lt; .002</math>). However, between students in the intervention and control schools, there was no significant difference in rejection of codes of silence.</p>
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental



**Quality of Research Rating** 3.1 (0.0-4.0 scale)

#### Outcome 4: Referrals for distressed peers

<b>Description of Measures</b>	Referrals for distressed peers were assessed with the Referred Distressed Peers to Adults scale, a 2-item self-report measure. Using a 4-point frequency scale (never, 1-2, 3-5, 6 or more times), students designated as peer leaders responded to each item: "I told a friend who was considering suicide to get help from an adult" and "I told a friend to get help because of emotional or behavior problems."
<b>Key Findings</b>	<p>Participating schools were randomly assigned to the intervention condition or the wait-list control condition. Students designated as peer leaders in the intervention schools began training with Sources of Strength immediately, and those in the control schools began training 5 months later. Students who were designated as peer leaders completed the scale at baseline and at 4 months after baseline, before peer leaders in the control schools began training.</p> <p>At 4 months after baseline, trained peer leaders were more likely than untrained peer leaders were to refer distressed peers to adults at school (<math>p = .03</math>).</p>
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	3.0 (0.0-4.0 scale)

#### Outcome 5: Maladaptive coping attitudes

<b>Description of Measures</b>	Maladaptive coping attitudes were assessed with the Maladaptive Coping scale, a 4-item self-report measure. Using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree), students designated as peer leaders responded to each item (e.g., "Suicide is a possible solution to problems").
<b>Key Findings</b>	<p>Participating schools were randomly assigned to the intervention condition or the wait-list control condition. Students designated as peer leaders in the intervention schools began training with Sources of Strength immediately, and those in the control schools began training 5 months later. Students designated as peer leaders completed the scale at baseline and at 4 months after baseline, before peer leaders in the control schools began training.</p> <p>At 4 months after baseline, trained peer leaders had a greater decrease in maladaptive coping attitudes compared with untrained peer leaders (<math>p &lt; .01</math>).</p>
<b>Studies Measuring Outcome</b>	Study 1
<b>Study Designs</b>	Experimental
<b>Quality of Research Rating</b>	2.8 (0.0-4.0 scale)

### Study Populations

The following populations were identified in the studies reviewed for Quality of Research.

Study	Age	Gender	Race/Ethnicity
<b>Study 1</b>	13-17 (Adolescent) 18-25 (Young adult)	54% Female 46% Male	82.6% White 11.8% Hispanic or Latino 5.6% Black or African American

### Quality of Research Ratings by Criteria (0.0-4.0 scale)

External reviewers independently evaluate the Quality of Research for an intervention's reported results using six criteria:

1. Reliability of measures
2. Validity of measures

3. Intervention fidelity
4. Missing data and attrition
5. Potential confounding variables
6. Appropriateness of analysis

For more information about these criteria and the meaning of the ratings, see [Quality of Research](#).

Outcome	Reliability of Measures	Validity of Measures	Fidelity	Missing Data/Attrition	Confounding Variables	Data Analysis	Overall Rating
<b>1: Attitudes about seeking adult help for distress</b>	2.8	3.5	2.5	3.0	3.5	3.5	<b>3.1</b>
<b>2: Knowledge of adult help for suicidal youth</b>	2.8	3.5	2.5	3.0	3.5	3.5	<b>3.1</b>
<b>3: Rejection of codes of silence</b>	2.8	3.5	2.5	3.0	3.5	3.5	<b>3.1</b>
<b>4: Referrals for distressed peers</b>	2.5	3.0	2.5	3.0	3.5	3.5	<b>3.0</b>
<b>5: Maladaptive coping attitudes</b>	2.0	2.5	2.5	3.0	3.5	3.5	<b>2.8</b>

### Study Strengths

The study article presents factor analytic findings that bolster reliability and validity for some outcome measures. The psychometric scales developed for the study have reasonable reliability. All scales have acceptable content validity, as established by the program developer and/or expert panel reviews. Intervention fidelity checks were conducted. The study randomized schools and used a control condition, which helped control for confounding variables. Statistical power was thoroughly addressed and appeared to be adequate. Data were collected across many sites in a number of geographical regions. Data analysis was sophisticated and appropriate.

### Study Weaknesses

The psychometric properties of some outcome measures are not well documented. Although fidelity checks were conducted, documentation of intervention fidelity was inadequate. Inability to match the study participants from baseline to the postbaseline assessment was a limitation because it precluded a clear assessment of change over the course of the study.

## Readiness for Dissemination

**Review Date: September 2011**

### Materials Reviewed

The materials below were reviewed for Readiness for Dissemination. The implementation point of contact can provide information regarding implementation of the intervention and the availability of additional, updated, or new materials.

Evaluating and Sustaining Sources of Strength

Program Web site, <http://www.sourcesofstrength.org>

Sources of Strength Adult Advisor Step-by-Step Guide

Sources of Strength Implementation Manual

Sources of Strength Peer Leaders Spreading Hope, Help, and Strength

### Readiness for Dissemination Ratings by Criteria (0.0-4.0 scale)

External reviewers independently evaluate the intervention's Readiness for Dissemination using three criteria:

1. Availability of implementation materials
2. Availability of training and support resources
3. Availability of quality assurance procedures

For more information about these criteria and the meaning of the ratings, see [Readiness for Dissemination](#).

Implementation	Training and Support	Quality Assurance	Overall
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Materials	Resources	Procedures	Rating
4.0	4.0	4.0	4.0

### Dissemination Strengths

Comprehensive materials that address program design and implementation are available electronically and in print. Materials are visually appealing and written in clear, audience-appropriate language. A start-up questionnaire is included on the program Web site to help potential implementers assess their readiness for program implementation. The program Web site provides easily navigated hyperlinks to program materials, and descriptive content is readily accessible. The program uses social media (e.g., Facebook, YouTube, Twitter) to enhance the potential resonance of the program with the target population. The developer also provides a grant writing packet, which contains information to enhance implementation and sustainability opportunities for implementers. The training for adult advisors and peer leaders follows a well-developed curriculum and is conducted by a certified trainer. Trainings include didactic instruction and experiential exercises. Implementers participate in monthly technical assistance support calls with Sources of Strength trainers, which provide opportunities for peer-to-peer sharing. The Web-based technical support system and toolkit facilitate the monitoring of progress and include opportunities for ongoing developer feedback. The fidelity guidelines are specific to each step in the implementation process and include benchmarks that should be achieved by implementers. When implementers fall below benchmarks, program facilitators are alerted and provided with possible reasons as well as guidance and support. The online data entry system that tracks program fidelity and assists in evaluating program impact also provides reports that the implementer can use to compare the local program data with national norms. Outcomes are further measured by the systematic use of several pre- and postprogram implementation surveys.

### Dissemination Weaknesses

No weaknesses were identified by reviewers.

### Costs

The cost information below was provided by the developer. Although this cost information may have been updated by the developer since the time of review, it may not reflect the current costs or availability of items (including newly developed or discontinued items). The implementation point of contact can provide current information and discuss implementation requirements.

Item Description	Cost	Required by Developer
Program I Model Package (includes implementation manuals; organizational support; protocol review; four annual Webinars, plus teleconference support; adult advisor and peer leader training materials; Web, audio, and video resources; and Facebook and texting resources and templates)	<ul style="list-style-type: none"> <li>\$4,000 per school or community team per year (for years 1 and 2 of implementation), plus travel expenses</li> <li>\$2,500 per school or community team for year 3 of implementation, plus travel expenses</li> </ul>	Yes (one program model package is required)
Program II Model Package (includes all items in the Program I Model Package, as well as community and schoolwide presentations; additional creative support in developing local posters and videos; evaluation tools, analysis, and summary reports; and trainer Webinars)	<ul style="list-style-type: none"> <li>\$10,000 per school or community team per year (for years 1 and 2 of implementation), plus travel expenses</li> <li>\$5,000 per school or community team for year 3 of implementation, plus travel expenses</li> </ul>	Yes (one program model package is required)
Sources of Strength annual affiliation fee (includes updated handouts, manuals, access to monthly teleconference support, Web-based trainings, and updated messaging templates)	\$500 per year	Yes, starting with year 3 of implementation
Provisional trainer certification	<ul style="list-style-type: none"> <li>\$4,000 per trainer for first year</li> <li>\$1,000 for recertification training every 2 years</li> </ul>	No
On-site Regional Certified Trainer Training	\$500-\$1,200 per team, plus travel expenses	Yes
Basic evaluation toolkit	Included in the cost of the Program I Model Package	Yes

Multilevel program evaluation (includes online pre- and posttest survey systems for advisors and peer leaders, as well as evaluations for large student bodies)	\$500-\$4,000 per team, depending on the needs of the implementer	No
Additional Sources of Strength items (e.g., T-shirts, wristbands, mugs, sweatshirts, blankets, magnets, posters)	\$8-\$10	No

### Additional Information

Before implementation begins, the developer provides the site with a memorandum of agreement that clarifies yearly costs, deliverables, expectations of local schools and community partners, the estimated number of advisors and peer leaders needed per team, and information on Sources of Strength staff travel. Peer leader resources, which include food and drinks during training, recognition events, printing, and materials used during messaging campaigns, are estimated to cost between \$300 and \$1,000 per team. For large school districts, regions, tribes, and States that want to develop multiple peer leader teams, a regional multiteam model package is available. The package includes all features of the Program I Model Package, with costs ranging from \$25,000 to \$75,000 per year (for years 1 and 2 of implementation), depending on the needs of the implementer.

### Replications

No replications were identified by the developer.

### Contact Information

#### To learn more about implementation, contact:

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#### To learn more about research, contact:

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Consider these [Questions to Ask](#) (PDF, 54KB) as you explore the possible use of this intervention.

#### Web Site(s):

- <http://www.sourcesofstrength.org>