A preliminary evaluation of the Angel Faces Level I Retreat

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**Introduction**

For more than 13 years, Angel Faces has provided a weeklong retreat for young women with facial burns and/or other disfiguring conditions (<http://www.angelfaces.com/program-overview/>). The Level 1 retreat was designed to help young women heal from the psychological impact of their traumas while also improving their self-image and increasing their self-confidence and resilience. The retreat incorporates therapeutic approaches to working through trauma and loss such as individual and group counseling as well as educational and strength-based activities like journaling and art therapy that are designed to promote emotional healing and growth. For quality improvement purposes, for the past several years, the program has used validated questionnaires to assess its impact on the young women who attended the retreat.

**Method**

In 2009, 2010, and 2013 to 2016, participants were asked to complete questionnaires before and after the retreat. The questionnaires used included the Rosenberg Self-Esteem Scale (RSES), Future Scale (AHS), Children’s Dermatology Quality of Life Index (CDQL), Strengths and Difficulties Questionnaire (SDQ), Social Anxiety Scale for Adolescents (SAS-A), Children’s Depression Inventory (CDI), Satisfaction with Appearance Scale (SWAP), and the Dating Anxiety Scale for Adolescents (DAS-A).The participants were asked to complete questionnaires on the first and last days of the retreat and again three months later. Those who completed both a pre- and a one week post-test for at least one of the questionnaires were included in the analyses. We used t-test for pairs to assess the differences between scores at baseline and one week and between baseline and three month follow up.

**Measures**

*The Rosenberg Self Esteem Scale*

The Rosenberg Self Esteem Scale (RSES) is a ten-item questionnaire that assesses self-worth by asking respondents about positive and negative feelings about themselves. Items are answered on a four point Likert scale ranging from 1 (Strongly Agree) to 4 (Strongly Disagree).[1](#ENREF_1) Responses on the RSES have demonstrated a significant positive correlation *(r*=.51) with the Mental Component Summary of the SF-8 Health Survey)[2](#ENREF_2), which is an overall indicator of mental health, as well as a significant negative correlation with the Depression, Anxiety, and Stress (DASS-21) Depression (*r*=-.62), Anxiety (*r*=-.47), and Stress (*r*=-.52) subscales.[2](#ENREF_2) The RSES has also demonstrated high internal reliability with a Cronbach alpha of *a*=.91.[2](#ENREF_2)

*The Future Scale (AHS)*

The Future Scale, which often goes by the acronym AHS (Adult Hope Scale), is a 12-item questionnaire that contains an overall score for hope as well as two subscales assessing Agency (goal directed energy) and Pathway (planning to accomplish goals). Items are answered on an 8-point Likert-type scale ranging from1 (Definitely False) to 8 (Definitely True).[3](#ENREF_3) The AHS has shown high internal consistency for overall hope (Cronbach alpha=.74-.84)[3](#ENREF_3), for Agency (*a*=.71-.76)[3](#ENREF_3), and for Pathways (*a*=.63-.80)[3](#ENREF_3). The AHS has also shown strong test-retest reliability after 3 weeks (*r*=.85, p<.001), 8 weeks (*r*=.73, p<.001), and 10 weeks (*r*=.76-.*r*= .82, p<.001).[3](#ENREF_3) Additionally, the AHS has demonstrated a significant positive correlation with the Life Orientation Test, a measure of general positive outcomes expectations (*r*=.50 -*r*=60)[3](#ENREF_3) and with the Expectancy for Success Scale, which assesses respondents’ expectations of reaching their goals (*r*=.54-*r*=.55).[3](#ENREF_3)

*The Social Anxiety Scale for Adolescents (SAS-A)*

The Social Anxiety Scale for Adolescents(SAS-A) is a revised version of the Social Anxiety Scale for Children–Revised, with modified wording that makes the scale appropriate for self-report by adolescents.[4](#ENREF_4) The SAS-A consists of 22 items answered on a 5-point rating scale, with higher scores reflecting greater social anxiety. The SAS-A contains three subscales of Fear of Negative Evaluation (FNE) by others, Social Avoidance and Distress in New or unfamiliar situations (SAD-N), and Social Avoidance and Distress in the company of peers (SAD-General).[4](#ENREF_4) Previous studies have replicated the three-factor structure as well as demonstrated good internal consistency (*a*=.76-.91).[5](#ENREF_5), [6](#ENREF_6)

*Children's Dermatology Quality of Life Index (CDQL)*

The Children's Dermatology Quality of Life Index (CDQL) is a ten-item scale measuring the impact of skin diseases on quality of life for children ages 4 to 16.[7](#ENREF_7) The questions assess six areas of daily activities that include symptoms and feelings, leisure, school or holidays, personal relationships, sleep, and treatment.[7](#ENREF_7) Items are answered on a three point Likert scale ranging from 0 (Not At All) to 3 (Very Much), with higher scores representing greater impairment on quality of life.[8](#ENREF_8) The CDQL has demonstrated good internal consistency (*a*=.82-.92)[7](#ENREF_7) as well as test re-test reliability (*a*=.74–.97, p*<.*01).[7](#ENREF_7)

*Children's Depression Inventory*

 The Children's Depression Inventory (CDI) is a 27-item questionnaire used to measure depression in children ages 7 to 17. Each item consists of three statements graded in order of increasing severity with scores ranging from 0 to 2. Respondents select the statement that characterized their symptoms best during the past 2 weeks. The item scores are combined into a total depression score, which ranges from 0 to 54. A higher CDI score means a higher depressive state. Cutoff scores of 13 and 19 are recommended for clinical and community samples in the US. The CDI consists of five subscales that assess Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia, and Negative Self-Esteem.[9](#ENREF_9)

*Strengths and Difficulties Questionnaire*

The Strengths and Difficulties Questionnaire (SDQ) is a 25-item scale that consists of five subscales that assess Emotional problems, Conduct problems, Hyperactivity, Peer problems, and Prosocial behavior.[10](#ENREF_10) The questionnaire assesses behavior in the past six months, and responses are scored on a 3-point Likert scale ranging from 0 (Not True) to 2 (Certainly True).[10](#ENREF_10)The SDQ has demonstrated good internal consistency for Total Difficulties (*a*=.83)[10](#ENREF_10) and Impairment scores (*a=*.80)[10](#ENREF_10) as well as fair consistency for peer problems (*a=*.46).[10](#ENREF_10)

*Satisfaction with Appearance Scare*

The Satisfaction with Appearance Scare (SWAP) is a 14-item questionnaire for burn survivors that measures satisfaction with appearance on a subjective and social-behavioral level. Participants respond to how strongly they agree with each item on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree),[11](#ENREF_11) with higher scores indicating decreased satisfaction with appearance.[11](#ENREF_11) The SWAP has demonstrated high internal consistency (*a=*.87) and test-retest reliability (r=.59). [11](#ENREF_11)

*Dating Anxiety Scale for Adolescents*

The Dating Anxiety Scale for Adolescents (DAS-A) is a 21-item questionnaire for youth from 12 to 18 years of age.[12](#ENREF_12) The subscales of the measure are divided into ten items on Fear of Negative Evaluation (FNE-Dating), seven items on Social Distress with partner or potential partner (SD-Date), and four items on Social Distress in a co-ed group (SD-Group).[12](#ENREF_12) The items are rated on a 5-point Likert scale with values of 1-5 and summed, with possible total scores ranging from 21 to 105. The DAS-A has demonstrated high internal consistency overall (*a*=.94) as well as for its subscales (FNE (*a*=.92), SD-Date (*a*=.88), and SD-Group (*a*=.81)).[12](#ENREF_12)

**Results**

In the six years of data collection from 2009-2010 and 2013 to 2016, 77 young women attended the Level 1 Retreat, 22 of them returning for an additional year or years. Of the unique individuals, 66 (86%) completed at least one questionnaire on the first and last day of the retreat, and 19 (25%) also completed at least one additional questionnaire three months after the retreat. The AHS and the Rosenberg Self Esteem scale were administered in 2009-2010 and 2013-2016. The CDQL was administered in 2010 and 2013-2015, the CDI in 2010, 2013, and 2014, the SDQ in 2013-2016, the SAS in 2014-2016, and the SWAP in 2014 and 2016. The DAS had been administered for only one time point (baseline) in 2013 and was therefore not included in the analyses. Different questionnaires were used in different years due to changes in the focus of each year’s retreat, the preferences of the psychologists who designed the interventions, and feedback from respondents.

For the AHS and the Rosenberg scale, a higher score indicates better adjustment, whereas lower scores for the CDQL, SDQ, SAS-A, CDI, and SWAP reflect a more positive outcome.

As shown in Table 1, the young women who attended the retreat showed improvement on six of the seven measures, with the differences on five of them reaching statistical significance. Specifically, both the Rosenberg and the AHS scores showed significant increases in mean scores (ΔM=2.2, SD=5.0, p<.001 and ΔM= 3.1, SD=7.1, p<.001, respectively), suggesting that the retreat was associated with an improvement in self-esteem as well as hopefulness. Additionally, scores on the CDQL (ΔM=3.6, SD=4.8, p<.001), SAS-A (ΔM=9.7, SD=13.2, p<.001), and CDI-1 (ΔM=2.0, SD=3.1, p<.01) significantly decreased, suggesting an improvement in quality of life as well as decreases in social anxiety and depression after attending the retreat. Although scores on the SDQ decreased, suggesting an improvement in overall well-being and coping, the .5 point change from before and after the retreat failed to reach statistical significance. Scores on the SWAP increased 3.3 points, suggesting the possibility of *decreased* appearance satisfaction after the retreat, but this change failed to reach statistical significance.

As shown in Table 2, a subsample (N=19) of participants with pre-tests also completed at least one questionnaire three months after the retreat. Although the sample for these analyses is small, improvements in quality of life on the CDQL (ΔM=3.7, SD=3.7, were significantly greater three months after the retreat than they had been on the first day of the retreat as well as lower (but not significantly so) than they had been at the end of the retreat. The SDQ and the Future Scale showed the same pattern of improvement from Time 1 to Time 2 to Time 3, but these changes failed to reach statistical significance. On the CDI and the SAS-A, the scores at Time 3 were still lower than they had been at Time 1, suggesting positive change over 3 months. The Rosenberg Self Esteem scale was the only scale to have the score at Time 3 that was worse than it had been at Time 1.

**Conclusion**

 The current study provides clear evidence that the Angel Faces retreat is associated with a measurable and significant positive immediate impact on several different dimensions of psychosocial well-being for adolescent girls and young women recovering from disfiguring injuries from burns and other trauma. From the first day to the last day of the retreat, there were statistically significant improvements in self-esteem, hopefulness, and quality of life in addition to significant decreases in depression and social anxiety. Additionally, although the subsample that completed questionnaires three months after the retreat is too small to generate strong conclusions, the patterns do suggest that Angel Faces was associated with sustained improvements even several months after the retreat.

 Given that the retreat only lasts one week, future work to assess whether there were specific aspects of the retreat that contributed more to the young women’s immediate improvement could provide helpful insights for making the current program even stronger. These analyses might also identify other ways in which the program could enhance existing methods for post retreat contact and support. Given the relatively low response rate for the three month follow up assessments it would also make sense for the program to devote additional efforts to increasing participation. Having a higher response rate will be especially necessary to assess the degree to which the benefits of attending the retreat persist several months after it is over. The one non significant but discrepant trend noted in the one week change data was a possible decrease in satisfaction with appearance scores, so future research should examine this area in more depth.

Using the core measures described in this report, efforts to improve the one week retreat should continue as should efforts to monitor all program participants over a longer term. Although the findings from the current evaluation are strongly positive, it seems likely that many young women with disfiguring conditions might benefit from additional interventions or continuing support.

**Table 1**. Mean scores on outcome measures at the beginning and end of the retreat

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Pre-retreat score (T1) Mean (SD)** | **Post-retreat Score****(T2) Mean (SD)** | **Change T2-T1**  |
| **ROSENBERG** (N=65) | 21.0 (5.5) | 23.2 (5.2) | 2.2 (5.0)\*\*\* |
| **FUTURE** (N=62) | 50.7 (7.9) | 53.8 (8.4) | 3.1 (7.1)\*\*\* |
| **CDQL** (N=43) | 7.6 (4.9) | 4.1 (4.4) | 3.6 (4.8)\*\*\* |
| **SDQ** (N=33) | 25.7 (5.8) | 25.1 (5.1) | .5 (4.6) |
| **SAS-A** (N=31) | 64.0 (16.8) | 54.3 (15.1) | 9.7 (13.2)\*\*\* |
| **CDI** (N=29) | 6.9 (6.2) | 4.9 (6.0) | 2.0 (3.1)\*\* |
| **SWAP** (N=24) | 66.8 (15.8) | 70.2 (14.4) | 3.3 (9.2) |

\*One case was excluded from the SWAP analyses due to extreme change score

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 2.** Mean scores for participants who completed outcome measures at three time points

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Intake score****(T1) Mean (SD)** | **Time 2 Score****(T2) Mean (SD)** | **Time 3 Score****(T3) Mean (SD)** | **Change T3-T2** | **Change T3-T1**  |
| **ROSENBERG** (N=13)  | 20.4(6.0) | 22.1 (5.7) | 16.9(10.0) | 5.2 (10.6) | 5.7 (8.6) |
| **FUTURE** (N=12) | 49.7 (8.3) | 52.3 (7.4) | 53.6 (7.4) | .83 (6.8) | 3.9 (7.9) |
| **CDQL** (N=13) | 7.6 (5.0) | 5.1 (4.4) | 3.9 (4.7) | 1.2 (3.2) | 3.7 (3.7)\*\* |
| **CDI** (N=5) | 2.6 (2.7) | 1.4 (1.9) | 1.8 (1.6) | .4 (3.1) | .8 (3.3) |
| **SDQ**(N=6) | 24.5 (4.7) | 23.7 (3.4) | 23.2 (3.2) | .5 (3.6) | 1.3 (5.9) |
| **SAS-A** (N=6) | 53.8 (16.0) | 49.2 (14.0) | 52.3 (9.6) | 3.2 (19.7) | 1.5 (19.1) |

\*p<.05, \*\*p<.01, \*\*\*p<.001

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