

Girls on the Run: Formative Evaluation Report

Spring 2006 Results

RESPECTFULLY SUBMITTED BY:

Rita DiGioacchino DeBate, Ph.D., MPH, CHES

**ASSOCIATE PROFESSOR
DEPARTMENT OF COMMUNITY AND FAMILY HEALTH
COLLEGE OF PUBLIC HEALTH
UNIVERSITY OF SOUTH FLORIDA**

Courtney E. Delmar

**MPH STUDENT, HEALTH EDUCATION
DEPARTMENT OF COMMUNITY AND FAMILY HEALTH
COLLEGE OF PUBLIC HEALTH
UNIVERSITY OF SOUTH FLORIDA**

Demographic Characteristics

A formative evaluation of Girls on the Run (GOTR) with respect to spring 2006 program implementation included evaluative data from 293 GOTR participants.* Of these participants, 282 reported their age, with the average age being 10.47 (SD = 0.984) years. Approximately 7% of participants reported being 8 years old or younger, followed by 16.4% reporting their age as 9 years old, and 79.2% reporting their age as 10 years or older. The majority of participants reported themselves as Caucasian (74.1%) and approximately 15.8% reported themselves as being African-American, 3.9% as Latino, and 6.2% as “other.”

The majority of participants reported they were currently in the 5th (35.8%) or 4th grade (33.3%), and approximately 25.5% of the participants reported being in the 3rd grade. With regard to number of times each participant participated in the GOTR program, 67.1% (n = 194) of the girls reported this as their first time, 25.3% (n = 73) as their second time, 5.2% (n = 15) reported as their third time, and 2.4% (n = 7) as their fourth time. Table 1 represents the demographic characteristics of the program participants.

*Note: Due to late delivery of pre and post data to the evaluator, a few sites who did participate in the evaluation were unable to be analyzed with the group. As such, these sites were analyzed separately and not included in this group report.

Table 1. Demographics of all participating in the evaluation who completed both pre and post tests Spring 2006 (n=293)^a

Demographics	N	%
Age ^b (Mean=10.47 ± 0.984)		
8 years or younger	2	0.7
9 years	48	16.4
10 years or older	232	79.2
Total	282	100.0
Race ^c		
Caucasian	192	74.1
African American	41	15.8
Latino	10	3.9
Other	16	6.2
Total	259	100.0
Grade ^d		
2 nd Grade	1	0.4
3 rd Grade	72	25.5
4 th Grade	94	33.3
5 th Grade	101	35.8
6 th Grade	5	1.8
7 th Grade	6	2.1
8 th Grade	3	1.1
Total	282	100.0
GOTR program participation ^e		
1 st time	194	67.1
2 nd time	73	25.3
3 rd time	15	5.2
4 th time	7	2.4
Total	289	100.0

^a Information reported in the tables is of those (n = 293) who participated both pretest and posttest. Participants who only presented pre or post data only were not able to be included in the analysis.

^b 11 participants did not report their date of birth

^c Non-White includes African American, Asian, Hispanic, and others. 34 participants did not report their race

^d 11 participants did not report their grade

^e 4 participants did not report their GOTR program participation

Instrument

The formative impact evaluation assessed the GOTR program and how well it meets proposed program objectives. As such, the formative evaluation included a pre-test/post-test design using quantitative methodology which assessed the following objects of interest: a) attitudes towards physical activity; b) self-esteem; c) eating attitudes/behaviors; d) body image; e) empowerment; f) participation in physical activity.

A Likert-type questionnaire developed by the principal investigator in conjunction with GOTR program staff was utilized to assess demographics (age, gender, residence, race), in addition to above described objects of interest. The questionnaire utilized existing tools such as the Rosenberg's Self-Esteem Scale (Rosenberg, 1965), the Children's Eating Attitudes Test (Maloney et al., 1998), the child/adolescent version of the Schematic Figural Scale (to measure body size (dis)satisfaction) (Collins, 1991), and the Feelings about Physical Activity Scale (Neilson and Corbin, 1986). Approval from University of South Florida's Institutional Review Board will be obtained prior to evaluation implementation.

The Rosenberg Self-Esteem Scale is the most widely utilized measure of self-esteem, which consists of 10 items that measure global self-esteem—lower scores indicating greater self-esteem (Rosenberg, 1965, Alfonzo, 1995). The Rosenberg Self-esteem scale is reported as one of the most valid global measures of self-esteem (Byrne, 1983, Blascovich and Tomaka, 1991) in addition to measures of reliability ranging from Coefiecient alphas of 0.77 to 0.87 (Rosenberg, 1965, Wylie, 1989).

The Children's Eating Attitudes Test (Ch-EAT) (Maloney et al., 1998) is an adapted language version of the EAT (Eating Attitudes Test) as the EAT is structured at a 5th grade reading

level (Williamson, Anderson, Jackman, and Jackman, 1995). The Ch-Eat is reported to have adequate correlations to the EAT ($r = 0.75, p > 0.05$) (Vacc and Rhyne, 1987).

The child/adolescent version of the Schematic Figural Scale (to measure body size (dis)satisfaction) (Collins, 1991) is a figural stimulus method for the assessment of overall body size satisfaction. The participant will look at 7 female child silhouettes (ranging from thin to large) and the participant will be asked to circle the silhouette which (a) represents what they perceive their current size to be (b) what they would like their current size to be. Reliability measures range from Coefficient alpha scores of 0.59 to 0.71 (Thompson, 1995).

Attitudes about physical activity will be measured by the Feelings about Physical Activity Scale (Neilson and Corbin, 1986). The purpose of the scale is to assess attitudes regarding attitudes towards physical activity. The participant will answer a 12-item likert-type scale. Reliability scores ranged from 0.88 to 0.91. Scores ranging from 54-60 indicate very favorable feelings about physical activity, 42-53 favorable, 30-41 neutral, 18-29 unfavorable, and 12-17 very unfavorable.

Physical activity behavior was assessed by the following questions adapted from the Centers for Disease Control's (2004) Youth Risk Behavioral Survey (Middle School Version):

ON HOW MANY OF THE PAST 7 DAYS DID YOU EXERCISE OR PARTICIPATE IN PHYSICAL ACTIVITY FOR AT LEAST 20 MINUTES THAT MADE YOU SWEAT AND BREATHE HARD, SUCH AS BASKETBALL, SOCCER, RUNNING, SWIMMING LAPS, FAST BICYCLING, FAST DANCING OR SIMILAR AEROBIC ACTIVITIES? (CHECK ONE)

- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

Do you play on any sports teams? (check one)

- yes no

Data Analysis

All data were entered and analyzed utilizing SPSS v10. Analysis consisted of initial means, standard deviations, frequency and percentages of variables. Additional tests such as paired samples T-test, and Wilcoxon tests were performed to assess changes from pre to post-GOTR.

RESULTS

Self-Esteem

Table 2 depicts changes in self-esteem among GOTR participants. The overall mean sum score for Self-Esteem was 21.42 among participants pre-GOTR and 22.21 among participants post-GOTR ($p = 0.010$). Statistically significant changes ($p = 0.010$) were depicted in self-esteem when comparing pre and post mean scores, indicating an improvement in participants' self-esteem. The following reports results from an item-analysis of individual variables within the self-esteem construct.

- Pre-GOTR 44.4% of participants reported they “strongly agreed” with the statement “I am satisfied with myself”. Post-GOTR, 50.2% of participants reported they “strongly agreed” with the statement.
- For the statement “Sometimes I think I am no good at all,” 34.8% of the pre-GOTR participants “agreed” with the statement, while 28.7% of the post-GOTR “agreed” with it.
- Pre-GOTR, 50.9% of participants “strongly agreed” with the statement, “I feel that there are lots of good things about me.” Post-GOTR, 56.7% of participants “strongly agreed” with the statement.
- For the statement “I can do things as well as most other people,” 29.7% of participants pre-GOTR “strongly agreed.” Post-GOTR, 37.2% “strongly agreed” with the statement.

Girls on the Run Spring 2006 Formative Impact Evaluation

- Pre-GOTR, 53.2% “strongly disagreed” with the statement, “I feel I do not have much to be proud of.” Post-GOTR, 62.8% of the participants indicated they “strongly disagreed” with the statement.
- Pre-GOTR 67.2% “strongly disagreed” with the statement “All in all, I feel that I am a failure.” Post-GOTR depicted 73.7% of participants indicating they “strongly disagreed” with the statement.

Girls on the Run Spring 2006 Formative Impact Evaluation

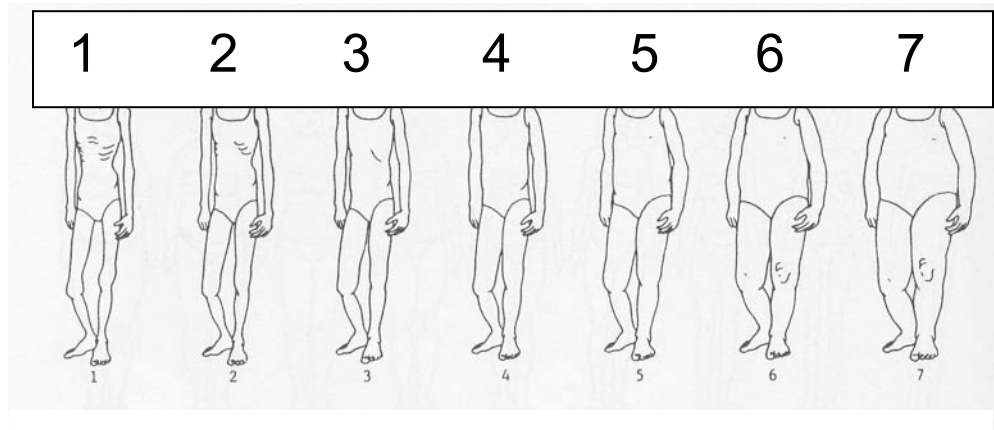
Table 2. Self-Esteem Pre and Post GOTR Intervention (n=293)					
Variable	Group	Strongly Disagree n (%)	Disagree n (%)	Agree n (%)	Strongly Agree n (%)
I am satisfied with myself	Pre*	7 (2.4)	19 (6.5)	137 (46.8)	130 (44.4)
	Post**	4 (1.4)	12 (4.1)	130 (44.4)	147 (50.2)
Sometimes I think I am no good at all	Pre	80 (27.3)	92 (31.4)	102 (34.8)	19 (6.5)
	Post	87 (29.7)	99 (33.8)	84 (28.7)	23 (7.8)
I feel that there are a lot of good things about me	Pre	4 (1.4)	15 (5.1)	125 (42.7)	149 (50.9)
	Post	4 (1.4)	11 (3.8)	112 (38.2)	166 (56.7)
I can do things as well as most other people	Pre	13 (4.4)	54 (18.4)	139 (47.4)	87 (29.7)
	Post	9 (3.1)	36 (12.3)	139 (47.4)	109 (37.2)
I feel I do not have much to be proud of	Pre	156 (53.2)	86 (29.4)	39 (13.3)	12 (4.1)
	Post	184 (62.8)	78 (26.6)	21 (7.2)	10 (3.4)
I feel useless at times	Pre	82 (28.0)	91 (31.1)	98 (33.4)	22 (7.5)
	Post	87 (29.7)	91 (31.1)	95 (32.4)	20 (6.8)
I feel that I'm a person of worth	Pre	6 (2.0)	23 (7.8)	138 (47.1)	126 (43.0)
	Post	7 (2.4)	17 (5.8)	145 (49.5)	124 (42.3)
I wish I could have more respect for myself	Pre	74 (25.3)	78 (26.6)	85 (29.0)	56 (19.1)
	Post	63 (21.5)	91 (31.1)	96 (32.8)	43 (14.7)
All in all, I feel that I am a failure	Pre	197 (67.2)	67 (22.9)	17 (5.8)	12 (4.1)
	Post	216 (73.7)	55 (18.8)	16 (5.5)	6 (2.0)
I take a positive attitude toward myself	Pre	9 (3.1)	21 (7.2)	136 (46.4)	127 (43.3)
	Post	7 (2.4)	13 (4.4)	142 (48.5)	131 (44.7)
Total Sum Score	Pre	21.42 ±4.874	p = .010†		
	Post	22.21 ±4.873			

† Tests are significant at p<.05. Analysis DOES reveal a statistically significant increase in self-esteem score post intervention compared to pre intervention.

Body Image

Statistically significant changes were found for body size satisfaction from pre to post GOTR ($p = .010$). Prior the programs, 49.8% of the participants were satisfied with their body size. Post-GOTR, 53.6% of the participants reported being satisfied with their body size.

Table 3. Body Image Pre and Post GOTR Intervention (n = 293)



	Participant is satisfied with body shape	Participant would like to be smaller than current body size	Participant would like to be larger than current body size	p-value
	n (%)	n (%)	n (%)	
Pre*	146 (49.8)	124 (42.3)	23 (7.8)	.010†
Post	157 (53.6)	114 (38.9)	22 (7.5)	

† Tests are significant at $p < .05$. Analysis reveals statistically significant increase in body size satisfaction score post intervention compared to pre intervention

Health Behaviors and Attitudes

In comparing both the pre-test and post-test scores, items representing health behaviors and attitudes towards health are depicted in Table 4. The following findings were noted:

- The majority of the participants (64.8%) reported “always” eating breakfast every morning.
- The number of participants who reported “always” eating at least 2 fruits per day increased from 31.4% pre-GOTR to 35.2% post-GOTR.
- The number of participants who reported that “always” drinking water is important in post-GOTR was 92.8%
- The number of participants who reported “rarely” thinking about wanting to be thinner increased from 18.1% pre-GOTR to 28.3% post-GOTR.
- The number of participants who reported “never” to “I have been dieting” increased from 64.5% pre-GOTR to 70.3% post-GOTR.
- The number of participants who reported “always” thinking a lot about having fat on their body decreased from 15.0% pre-GOTR to 9.2% post-GOTR.

Girls on the Run Spring 2006 Formative Impact Evaluation

Table 4. Health Behaviors and Attitudes Pre and Post GOTR Intervention (n = 293)					
Variable	Group	Never n (%)	Rarely n (%)	Sometimes n (%)	Always n (%)
I eat breakfast every morning	Pre	6 (2.0)	16 (5.5)	81 (27.6)	190 (64.8)
	Post	6 (2.0)	18 (6.1)	86 (29.4)	183 (62.5)
I eat at least 2 fruits a day	Pre	13 (4.4)	45 (15.4)	143 (48.8)	92 (31.4)
	Post	5 (1.7)	25 (8.5)	160 (54.6)	103 (35.2)
I eat as least 3 vegetables a day	Pre	25 (8.5)	79 (27.0)	142 (48.5)	47 (16.0)
	Post	15 (5.1)	75 (25.6)	142 (48.5)	61 (20.8)
I think drinking water is important	Pre	* (*)	2 (0.7)	38 (13.0)	253 (86.3)
	Post	* (*)	1 (0.3)	20 (6.8)	272 (92.8)
I am scared about being overweight ^a	Pre	74 (25.3)	43 (14.7)	99 (33.8)	77 (26.3)
	Post	87 (29.7)	55 (18.8)	79 (27.0)	72 (24.6)
I brush my teeth at least 2 times a day	Pre	5 (1.7)	17 (5.8)	92 (31.4)	179 (61.1)
	Post	5 (1.7)	18 (6.1)	81 (27.6)	189 (64.5)
I think a lot about wanting to be thinner	Pre	107 (36.5)	53 (18.1)	75 (25.6)	58 (19.8)
	Post	101 (34.5)	83 (28.3)	70 (23.9)	39 (13.3)
I have been dieting	Pre	189 (64.5)	47 (16.0)	42 (14.3)	15 (5.1)
	Post	206 (70.3)	35 (11.9)	42 (14.3)	10 (3.4)
Other people think that I am too thin ^{a, c}	Pre	168 (57.3)	48 (16.4)	53 (18.1)	24 (8.2)
	Post	157 (53.6)	56 (19.1)	54 (18.4)	26 (8.9)
I get at least 8 hours of sleep a night	Pre	9 (3.1)	18 (6.1)	93 (31.7)	173 (59.0)
	Post	3 (1.0)	17 (5.8)	98 (33.4)	175 (59.7)
I think a lot about having fat on my body ^b	Pre	121 (41.3)	69 (23.5)	59 (20.1)	44 (15.0)
	Post	114 (38.9)	80 (27.3)	72 (24.6)	27 (9.2)
I eat diet foods ^{a, c}	Pre	113 (38.6)	61 (20.8)	98 (33.4)	21 (7.2)
	Post	123 (42.0)	59 (20.1)	96 (32.8)	15 (5.1)

Physical Activity

Table 5 represents participation in physical activity among GOTR participants. As depicted in Table 5, there was no significant increase in participation in sports teams among GOTR participants ($p = 0.307$) after GOTR program implementation. Prior to participating in GOTR, 73.8% of participants reported participating on a sports team, while post-GOTR program implementation 75.8% of participants reported participating on sports teams.

Formative evaluation results do not indicate a statistically significant increase in the number of days participants reported being physically active ($p = 0.000$). The mean number of days reported participating in physical activity was approximately 5 days per week.

Table 5. Physical Activity behaviors of all participating in the evaluation who completed both pre and post tests Spring 2006 (n = 293)

Physical Activity	Pretest	Posttest	P-value
Sports Team	n (%)	n (%)	
Yes	295 (73.8)	238 (75.8)	0.307*
No	105 (26.3)	76 (24.2)	
# of days exercise or participate in vigorous physical activity			
Mean \pm SD	4.72 \pm 2.024	5.24 \pm 1.761	.000**

* Tests are significant at $p < .05$. Analysis does not reveal a statistically significant increase in playing sports team post intervention compared to pre intervention.

** Tests are significant at $p < .05$. Analysis does not reveal a statistically significant increase in # of days exercise or participate in vigorous physical activity post intervention compared to pre intervention.

Attitudes regarding Physical Activity

Table 6 represents attitudes towards physical activity among GOTR program participants. Analysis does not reveal a statistically significant increase in positive attitudes about physical activity from pre to post interventions ($p = 0.329$). The following reports results from an item-analysis of individual variables within the physical activity construct:

- Pre-GOTR 19.5% of participants “strongly disagreed” with the statement, “I wish there were better ways to get healthy than being physically active”. Post-GOTR, 24.6% of participants indicated that they “strongly disagree” with the statement.
- Regarding the statement “Life is better because I am physically active”, 48.1% pre-GOTR participants indicated they “strongly agreed.” Post-GOTR, 55.6% of participants indicated they “strongly agreed” with this statement.
- Pre-GOTR, 54.9% of participants indicated they “strongly disagree” with the statement, “I have to force myself to be physically active.” Post-GOTR 58.7% of participants indicated they “strongly disagreed” with the statement.
- Regarding the statement “When I miss a day of being physically active, I like it”, 58.4% of pre-GOTR participants indicated they “strongly disagreed.” Post-GOTR, 53.2% of program participants indicated they “strongly disagreed” with the statement.

Girls on the Run Spring 2006 Formative Impact Evaluation

Table 6. Physical Activity Pre and Post GOTR Intervention (n = 293) ^{a, b}					
Variable	Group	Strongly Disagree n (%)	Disagree n (%)	Agree n (%)	Strongly Agree n (%)
I look forward to physical activity	Pre	2 (0.7)	5 (1.7)	90 (30.7)	196 (66.9)
	Post	1 (0.3)	5 (1.7)	102 (34.8)	185 (63.1)
I wish there were better ways to get healthy than being physically active	Pre	57 (19.5)	97 (33.1)	84 (28.7)	55 (18.8)
	Post	72 (24.6)	103 (35.2)	79 (27.0)	39 (13.3)
Physical activity is hard work	Pre	61 (20.8)	94 (32.1)	102 (34.8)	36 (12.3)
	Post	66 (22.5)	92 (31.4)	104 (35.5)	31 (10.6)
I do not enjoy physical activity	Pre	203 (69.3)	59 (20.1)	15 (5.1)	16 (5.5)
	Post	205 (70.0)	56 (19.1)	18 (6.1)	14 (4.8)
Physical activity is very important to me	Pre	2 (0.7)	9 (3.1)	93 (31.7)	189 (64.5)
	Post	2 (0.7)	6 (2.0)	95 (32.4)	190 (64.8)
Life is better because I am physically active	Pre	3 (1.0)	21 (7.2)	128 (43.7)	141 (48.1)
	Post	3 (1.0)	15 (5.1)	112 (38.2)	163 (55.6)
Physical activity feels good	Pre	4 (1.4)	9 (3.1)	112 (38.2)	168 (57.3)
	Post	3 (1.0)	8 (2.7)	111 (37.9)	171 (58.4)
I don't like thinking about doing physical activity	Pre	184 (62.8)	85 (29.0)	12 (4.1)	12 (4.1)
	Post	179 (61.1)	92 (31.4)	12 (4.1)	10 (3.4)
I would change my schedule to participate in physical activity	Pre	12 (4.1)	24 (8.2)	142 (48.5)	115 (39.2)
	Post	4 (1.4)	32 (10.9)	148 (50.5)	109 (37.2)
I have to force myself to be physically active	Pre	161 (54.9)	90 (30.7)	28 (9.6)	14 (4.8)
	Post	172 (58.7)	89 (30.4)	18 (6.1)	14 (4.8)
When I miss a day being physically active, I like it.	Pre	171 (58.4)	93 (31.7)	22 (7.5)	7 (2.4)
	Post	156 (53.2)	106 (36.2)	25 (8.5)	6 (2.0)
Physical activity is the best part of my day.	Pre	2 (0.7)	36 (12.3)	120 (41.0)	135 (46.1)
	Post	7 (2.4)	40 (13.7)	118 (40.3)	128 (43.7)
Total Sum Score	Pre	27.70 ± 4.865			
	Post	27.98 ± 5.056			
† Tests are significant at p<.05. Analysis does not reveal a statistically significant increase in positive attitudes about physical activity from pre to post interventions.					

Empowerment

Empowerment Scores for Pre and Post GOTR participants are depicted in Table 7. Inter-item analysis reveals the following changes with respect to empowerment variables:

- 56.7% of pre-GOTR participants reported they “sometimes” “accept when people tell them how to be better without getting mad”. Post-GOTR, the number of participants who reported “sometimes” to this statement increased to 60.6%.
- Pre-GOTR 16.7% of program participants reported “sometimes” to the statement, “I respect other people’s values even if they are different from mine.” Post-GOTR 23.7% of participants reported “sometimes” to this statement.
- Regarding the statement, “I believe that it is important to try to understand the other person’s point of view when solving problems”, 24.9% pre-GOTR declared “sometimes” while 28.4% post-GOTR reported “sometimes.”

Girls on the Run Spring 2006 Formative Impact Evaluation

Variable	Group	Never n (%)	Sometimes n (%)	Always n (%)
I believe in my abilities	Pre	4 (1.4)	97 (33.1)	192 (65.5)
	Post	2 (0.7)	98 (33.4)	193 (65.9)
I stick to my dreams and goals even if people don't agree with me	Pre	5 (1.7)	89 (30.4)	199 (67.9)
	Post	* (*)	95 (32.5)	197 (67.5)
I try to solve my problems instead of just worrying about them	Pre	4 (1.4)	152 (51.9)	137 (46.8)
	Post	4 (1.4)	157 (53.8)	131 (44.9)
When people tell me how to be better, I can accept what they say without getting mad	Pre	14 (4.8)	166 (56.7)	113 (38.6)
	Post	8 (2.7)	177 (60.6)	107 (36.6)
I can communicate openly and honestly with people	Pre	4 (1.4)	142 (48.5)	147 (50.2)
	Post	7 (2.4)	136 (46.6)	149 (51.0)
I respect other people's values even if they are different from mine	Pre	3 (1.0)	49 (16.7)	241 (82.3)
	Post	2 (0.7)	69 (23.7)	220 (75.6)
I believe that it is important to be a good listener	Pre	3 (1.0)	39 (13.3)	251 (85.7)
	Post	1 (0.3)	46 (15.8)	244 (83.8)
I believe gossiping can hurt people	Pre	13 (4.4)	35 (11.9)	245 (83.6)
	Post	7 (2.4)	32 (11.1)	250 (86.5)
I believe that it is important to think positively	Pre	2 (0.7)	58 (19.8)	233 (79.5)
	Post	3 (1.0)	59 (20.2)	230 (78.8)
I believe that it is important to try to understand the other person's point of view when solving problems	Pre	4 (1.4)	73 (24.9)	216 (73.7)
	Post	2 (0.7)	83 (28.4)	207 (70.9)

Summary

In conclusion, this formative evaluation was implemented to assess the impacts of the GOTR program on self-esteem, physical activity behavior, attitudes towards physical activity, body size (dis)satisfaction, health behaviors and attitudes, and empowerment.

Results from this formative assessment indicate significant positive impacts on self-esteem and body size satisfaction among GOTR program participants. Although not statistically significant, positive increases were still seen regarding attitudes towards health behaviors, physical activity, and empowerment.

References

- Alfonzo, V.C. (1995). Measures of Quality of Life, Subjective Well-Being, and Satisfaction with life. In D.B. Allison (Ed.), *Handbook of Assessment Methods For Eating Behaviors and Weight Related Problems: Measures, Theory and Research*.
- Black DR. Eating Disorders Among Athletes: Current Perspective. In *Eating Disorders among Athletes*. 1991. Reston, VA: American Alliance for Health, Recreation, and Dance, p1-10.
- Blascovich, J., & Tomaka, J. (1991). Measures of Self-esteem. In J.P. Robinson, P.R. Shaver, & L.W. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp.115-160), New York: Academic Press.
- Brownell, K.D., Rodin, J., & Wimore, J.H. (1992). Eating, body weight, and performance in athletes. Philadelphia: Lea & Febiger.
- Byrne, B.M. (1983). Investigating measures of self-concept. Measurement and Evaluation in Guidance, 16, 115-126.
- Carnegie Council on Adolescent Development. *A Matter of Time: Risk and Opportunity in the Out-of-School Hours. Recommendations for Strengthening Community Programs for Youth*. New York, NY: Carnegie Corporation of New York, 1994
- CDC. Youth risk behavior surveillance—United States, 1997. *Morbidity and Mortality Weekly Report* 47(55-3):1-89, 1998. [PubMed; PMID 9719790](#)
- Collins, M.E. (1991). Body figure perceptions and preferences among preadolescent children. International Journal of Eating Disorders, 10, 199-208.
- Kreipe, R.E., & Birndorf, S.A. (2000). Eating disorders in adolescents and young adults. Medical Clinics of North America, 84, 1027-1049.

- Lewinson, P.M., Striegel-Moore, R.H., & Seeley, J.R. (2000). Epidemiology and natural course of eating disorders in young women from adolescence to young adulthood. Journal of the American Academy of Child and Adolescent Psychiatry, 39, 1284-1292.
- Maloney, M.J., McGuire, J.B., & Daniels, S.R. (1998). Reliability testing of a children's version of the Eating Attitudes Test. Journal of the American Academy of Child and Adolescent Psychiatry, 27, 541-543.
- Neilsen, A. B., and Corbin, C.B. (1986, June). Physical activity commitment. Conference abstracts North American Society for the Psychology of Sport and Physical Activity Conference. Scottsdale, AZ, p. 93.
- Pate, R.R.; Baranowski, T.; Dowda, M.; et al. Tracking of physical activity in young children. *Medicine and Science in Sports and Exercise* 28(1):92-96, 1996. [PubMed; PMID 8775360](#)
- Pate, R.R.; Long, B.J.; and Heath, G. Descriptive epidemiology of physical activity in adolescents. *Pediatric Exercise Science* 6:434-447, 1994.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.
- Sundgot-Borgen, J. (1999). Eating disorders among male and female elite athletes. British Journal of Sports Medicine, 33, 434.
- The President 's Council on Physical Fitness and Sports. 1997. Physical Activity and Sport in the Lives of Girls: Physical and Mental Health Dimensions from an Interdisciplinary Approach .Washington,DC:The President 's Council on Physical Fitness and Sports.
- Thompson, J.K. (1995). Assessment of Body Image. In D.B. Allison (Ed.), Handbook of Assessment Methods For Eating Behaviors and Weight Related Problems: Measures, Theory and Research.

- Thompson, R.A., & Sherman, R.T. (1993). Helping athletes with eating disorders. Champaign, IL : Human Kinetics Publishers.
- Vacc, N.A., & Rhyne, M. (1987). The Eating Attitudes Test: Development of an adapted language form for children. Perceptual Motor Skills, 65, 335-336.
- White, J.H. (2000). The prevention of eating disorders: A review of the research on risk factors with implications for practice. Journal of Child and Adolescent Psychiatric Nursing, 13(2), 76-88.
- Williamson, D.A., Anderson, D.A., Jackman, L.P., & Jackson, S.R. (1995). Assessment of eating disordered thoughts, feelings and behaviors. In D.B. Allison (Ed.), Handbook of Assessment Methods For Eating Behaviors and Weight Related Problems: Measures, Theory and Research.
- Wylie, R. C. (1989). Measures of self-concept. Lincoln: University of Nebraska Press.