

Girls on the Run & Girls on Track: Formative Evaluation Report

Spring 2007 Results

RESPECTFULLY SUBMITTED BY:

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Demographic Characteristics

A formative evaluation of Girls on the Run (GOTR) and Girls on Track (GOT) with respect to spring 2007 program implementation included evaluative data from 2233 GOTR participants representing 33 councils.* Of these participants, 1512 reported their age, with the average age being 10.5 (SD = 1.163) years. Approximately 0.5% of participants reported being 8 years old, followed by 20.4% reporting their age as 9 years old, 32.2% were 10 years old, 28.5% were 11 years old, 14% were 12 years old, 2.9% were 13 years old, 1.2% were 14 years old, and 0.3% reported their age as 15 years old. The majority of participants reported themselves as Caucasian (77.2 %) and approximately 6.5% reported themselves as “other,” 7.5% as Latino, and 8.8% as African-American (36.6% of participants had missing data for race/ethnicity).

The majority of participants reported they were currently in the 4th (33.9%) or 3rd grade (32%), followed by approximately 27% of participants in the 5th grade, 5.2% in 6th grade, 1.3% in 7th grade, 0.3% in 2nd grade, 0.2% in 8th grade, and 0.1% in 1st grade (51.3 % of participants did not report grade). With regard to number of times each participant participated in the GOTR program, 61.9% (n = 704) of the girls reported this as their first time, 27.3% (n = 310) as their second time, 4.6% (n = 52) reported as their third time, and 6.2% (n = 71) 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 2007 (n= 1034)^a

Demographics	N	%
Age ^b (Mean=10.50 ± 1.163)		
8 years	8	0.5
9 years	308	20.4
10 years	487	32.2
11 years	431	28.5
12 years	211	14.0
13 years	44	2.9
14 years	18	1.2
15 years	5	0.3
Total	1512	100.0
Race ^c		
Caucasian	1093	77.2
African American	125	8.8
Latino	106	7.5
Other	92	6.5
Total	1416	100.0
Grade ^d		
1 st Grade	1	0.1
2 nd Grade	3	0.3
3 rd Grade	348	32.0
4 th Grade	369	33.9
5 th Grade	294	27.0
6 th Grade	57	5.2
7 th Grade	14	1.3
8 th Grade	2	0.2
Total	1088	100.0
GOTR program participation ^e		
1 st time	704	61.9
2 nd time	310	27.3
3 rd time	52	4.6
4 th time	71	6.2
Total	1137	100.0

^a Information reported in the tables is of those (n = 1034) 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 721 participants did not report their date of birth

^c Non-White includes African American, Asian, Hispanic, and others. 817 (36.6%) participants did not report their race

^d 1145 participants did not report their grade (51.3%)

^e 1096 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 coefficient alphas of 0.77 to 0.87 (Rosenberg, 1965, Wylie, 1989).

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).

Commitment to physical activity will be measured by the Feelings about Physical Activity Scale (Neilson and Corbin, 1986). The purpose of the scale is to assess commitment towards physical activity. The participant will answer a 12-item 4-point Likert-type scale. A factor analysis was conducted to establish validity and Cronbach's alpha was calculated as an estimate of internal consistency reliability. A scree plot of eigenvalues from a principal axis factoring showed three factors with eigenvalues ≥ 1.0 . "Value of physical activity" items loaded on Factor 1 (scores ranged from 0-18; higher scores indicating greater perceived value of physical activity), "Attitudes about physical activity" items loaded on Factor 2 (scores ranged from 0-9; higher scores indicated fewer negative attitudes towards physical activity), and, "Motivation regarding physical activity" items loaded on factor 3 (scores ranged from 0-9; higher scores indicating fewer motivational barriers to physical activity). Eigenvalues for the three factors extracted were 2.7, 1.9, and 1.9, respectively. The percent of variance accounted for by each factor was 22.6, 16.0, 15.7, respectively; 54.3% of the total variance was explained by this solution. Cronbach's alpha for Factors 1, 2, and 3 were .75, .64, .59, respectively for pre-intervention and .75, .66, and .59 for post-intervention (see Table 2).

Table 2. Three factor solution for principle axis factor analysis of Feelings about Physical Activity Scale (n=183)

Item content	Factor loadings		
	1	2	3
Physical activity is important to me	.750	.246	.043
Physical activity is the best part of my day	.728	.060	.002
I would change my schedule to participate in physical activity	.623	-.071	.208
Life is better because I am physically active	.630	.013	.261
Physical activity feels good	.630	.288	-.063
I look forward to physical activity	.501	.407	.159
I do not enjoy physical activity	.074	.810	-.037
I don't like thinking about doing physical activity	.179	.660	.321
When I miss a day being physically active, I like it	.322	.515	.471
Physical activity is hard work	.099	.003	.765
I wish there were better ways to get healthy than being physically active	.156	.123	.679
I have to force myself to be physically active	-.077	.483	.603
Eigenvalue for three extracted factor	2.717	1.923	1.880
% of the Variance accounted for	22.638	16.024	15.665

Note: Kaiser-Meyer-Olkin measure of sampling adequacy=.819; Bartlett's test of sphericity=518.494 (p<.001)

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 the 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 22.27 among participants pre-GOTR and 23.45 among participants post-GOTR ($p = 0.000$). Changes in self-esteem when comparing pre and post test mean scores were statistically significant ($p=0.000$). The following reports results from an item-analysis of individual variables within the self-esteem construct:

- Pre-GOTR 43.8% of participants reported they “strongly agreed” with the statement “I am satisfied with myself”. Post-GOTR, 55.9% of participants reported they “strongly agreed” with the statement.
- Pre-GOTR, 52.6% of participants “strongly agreed” with the statement, “I feel that there are lots of good things about me.” Post-GOTR, 60.2% of participants “strongly agreed” with the statement.
- Pre-GOTR, 47.4% “strongly agreed” with the statement, “I take a positive attitude toward myself.” Post-GOTR, 56.6% of the participants indicated they “strongly agreed” with the statement.

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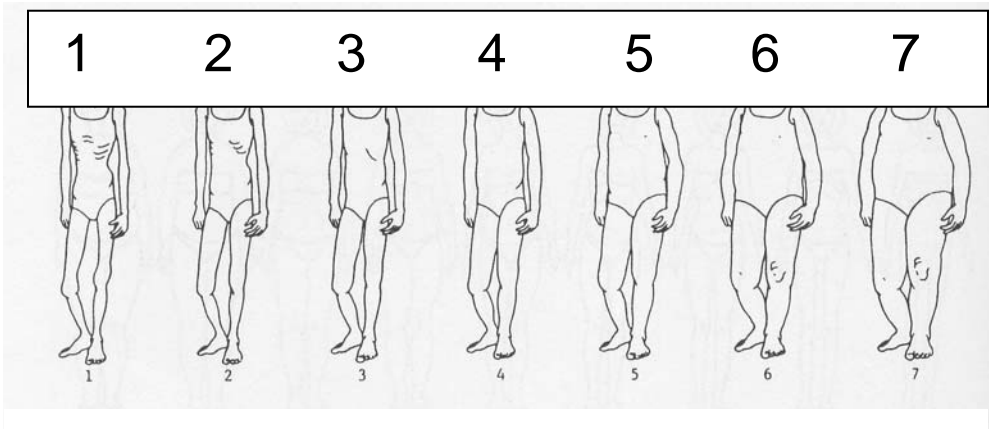
Variable	Group	Strongly Disagree n (%)	Disagree n (%)	Agree n (%)	Strongly Agree n (%)
I am satisfied with myself	Pre*	16 (1.6)	85 (8.3)	476 (46.3)	450 (43.8)
	Post**	10 (1.0)	37 (3.6)	405 (39.6)	572 (55.9)
Sometimes I think I am no good at all	Pre	636 (62.0)	250 (24.4)	87 (8.5)	52 (5.1)
	Post	750 (73.3)	188 (18.4)	47 (4.6)	38 (3.7)
I feel that there are a lot of good things about me	Pre	10 (1.0)	32 (3.1)	443 (43.3)	538 (52.6)
	Post	6 (0.6)	23 (2.2)	380 (37.0)	619 (60.2)
I can do things as well as most other people my age	Pre	28 (2.7)	137 (13.4)	549 (53.6)	311 (30.3)
	Post	27 (2.6)	106 (10.3)	537 (52.4)	355 (34.6)
I feel I do not have much to be proud of	Pre	607 (59.2)	279 (27.2)	96 (9.4)	44 (4.3)
	Post	704 (68.8)	227 (22.2)	61 (6.0)	31 (3.0)
I feel useless at times	Pre	274 (26.7)	328 (32.0)	356 (34.7)	68 (6.6)
	Post	302 (29.5)	322 (31.4)	330 (32.2)	71 (6.9)
I feel that I'm a person of worth	Pre	24 (2.3)	123 (12.0)	545 (53.2)	332 (32.4)
	Post	18 (1.8)	115 (11.3)	484 (47.6)	400 (39.3)
I wish I could have more respect for myself	Pre	227 (22.1)	295 (28.8)	321 (31.3)	183 (17.8)
	Post	297 (29.1)	304 (29.8)	278 (27.2)	142 (13.9)
Sometimes, I feel I am a failure	Pre	734 (71.7)	213 (20.8)	54 (5.3)	23 (2.2)
	Post	786 (76.6)	185 (18.0)	40 (3.9)	15 (1.5)
I take a positive attitude toward myself	Pre	28 (2.7)	75 (7.3)	436 (42.5)	486 (47.4)
	Post	14 (1.4)	48 (4.7)	384 (37.4)	581 (56.6)
Total Sum Score	Pre	22.27 ±4.576	p = .000†		
	Post	23.45 ±4.386			

† 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

Changes for body size satisfaction from pre to post GOTR were found to be statistically significant ($p = .000$). Prior to the programs, 40.9% of the participants were satisfied with their body size. Post-GOTR, 55.2% of the participants reported being satisfied with their body size. Pre-GOTR, 53.7% of participants reported wanting to be smaller than their current body size, while post-GOTR this decreased to 38.5% reporting wanting to be smaller than their current body size.

Table 3. Body Image Pre and Post GOTR Intervention (n = 1003) (31 participants did not provide responses to the questions)



	Participant is satisfied with body shape n (%)	Participant would like to be smaller than current body size n (%)	Participant would like to be larger than current body size n (%)	p-value
Pre*	410 (40.9)	539 (53.7)	54 (5.4)	.000†
Post	552 (55.2)	385 (38.5)	63 (6.3)	

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

Physical Activity

Table 5 represents participation in physical activity among GOTR participants. As depicted in Table 5, there was a significant increase in participation in sports teams among GOTR participants ($p = 0.000$) after GOTR program implementation. Prior to participating in GOTR, 66.4% of participants reported participating on a sports team, while post-GOTR program implementation 68.5% of participants reported participating on sports teams.

Formative evaluation results 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 Fall 2006 (n = 1065)

Physical Activity	Pretest	Posttest	P-value
Sports Team	n (%)	n (%)	
Yes	671 (66.4)	676 (68.5)	0.000*
No	339 (33.6)	311 (31.5)	
# of days exercise or participate in vigorous physical activity			
Mean \pm SD	4.71 \pm 2.002	5.13 \pm 1.828	0.000**

* Tests are significant at $p < .05$. Analysis DOES reveal a statistically significant increase in playing sports team post intervention compared to pre intervention.

** Tests are significant at $p < .05$. Analysis DOES reveal a statistically significant increase in # of days exercise or participate in vigorous physical activity post intervention compared to pre intervention.

Commitment regarding Physical Activity

- Table 6 represents commitment towards physical activity among GOTR program participants. Analysis does not reveal a statistically significant increase in commitment to physical activity from pre to post interventions ($p = 0.196$).
 - With regard to attitudes, motivation, and value of physical activity, there were no statistically significant differences from pre to post.
 - Motivation (pre = 3.31, post = 3.21, $p = 0.099$)
 - Attitude (pre = 1.88, post = 1.79, $p = 0.161$)
 - Value (pre = 14.55, post = 14.64, $p = 0.284$)

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Table 6. Physical Activity Commitment Pre and Post GOTR Intervention (n = 1034) ^{a, b}					
Variable	Group	Strongly Disagree n (%)	Disagree n (%)	Agree n (%)	Strongly Agree n (%)
I look forward to physical activity	Pre	5 (0.5)	23 (2.2)	355 (34.6)	642 (62.6)
	Post	8 (0.8)	19 (1.9)	345 (34.4)	631 (62.9)
I wish there were better ways to get healthy than being physically active	Pre	280 (27.4)	318 (31.1)	254 (24.9)	170 (16.6)
	Post	291 (29.0)	317 (31.6)	270 (26.9)	124 (12.4)
Physical activity is hard work	Pre	193 (18.9)	370 (36.2)	358 (35.0)	101 (9.9)
	Post	192 (19.3)	358 (36.0)	323 (32.5)	122 (12.3)
I do not enjoy physical activity	Pre	706 (69.0)	203 (19.8)	49 (4.8)	65 (6.4)
	Post	699 (70.0)	199 (19.9)	56 (5.6)	44 (4.4)
Physical activity is very important to me	Pre	13 (1.3)	44 (4.3)	363 (35.4)	605 (59.0)
	Post	6 (0.6)	39 (3.9)	329 (32.9)	626 (62.6)
Life is better because I am physically active	Pre	21 (2.0)	75 (7.3)	372 (36.2)	560 (54.5)
	Post	12 (1.2)	54 (5.4)	328 (32.8)	606 (60.6)
Physical activity feels good	Pre	8 (0.8)	27 (2.7)	391 (38.7)	585 (57.9)
	Post	9 (0.9)	27 (2.7)	343 (34.8)	606 (61.5)
I don't like thinking about doing physical activity	Pre	623 (61.1)	279 (27.4)	75 (7.4)	43 (4.2)
	Post	613 (61.9)	268 (27.0)	71 (7.2)	39 (3.9)
I would change my schedule to participate in physical activity	Pre	47 (4.6)	115 (11.3)	434 (42.7)	421 (41.4)
	Post	36 (3.6)	114 (11.5)	433 (43.6)	409 (41.2)
I have to force myself to be physically active	Pre	544 (53.2)	331 (32.4)	104 (10.2)	43 (4.2)
	Post	558 (56.0)	314 (31.5)	84 (8.4)	41 (4.1)
When I miss a day being physically active, I like it.	Pre	449 (43.9)	350 (34.2)	159 (15.6)	64 (6.3)
	Post	448 (45.1)	325 (32.7)	172 (17.3)	49 (4.9)
Physical activity is the best part of my day.	Pre	29 (2.8)	153 (14.9)	389 (38.0)	453 (44.2)
	Post	27 (2.7)	190 (19.1)	388 (39.0)	390 (39.2)
Total Sum Score	Pre	27.26 ± 5.288	p = 0.196†		
	Post	27.74 ± 5.209			

† 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.

Summary

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

Results from this formative assessment do indicate significant positive impacts on self – esteem, body size satisfaction, and PA behaviors.

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, D.C.: 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.