

# **Girls on the Run: Formative Evaluation Report**

## **Spring 2005 Results**

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### **Demographic Characteristics**

A formative evaluation of Girls on the Run (GOTR) for spring 2005 included evaluative data from 157 GOTR participants. Of these participants, 144 reported their age, with the average age being 10.25 (SD = .94) years. Approximately 38% of participants reported being 10 years old followed by 29% reporting their age as 11 years old, and 24% reporting their age as 9 years old. The majority of participants reported themselves as white (65.6 %) and approximately 34% reported themselves as being African-American, Asian, Latino, or "other".

The majority of participants reported that they were currently in the 3<sup>rd</sup> (37%) or 4<sup>th</sup> grade (37.4 %). Only 26% of participants reported being in the 5<sup>th</sup> grade. In relation to number of times each participant participated in the GOTR program, over 80% (n =125) of the girls reported this as their first time, 10.3 % (n = 16) as their second time, 2.5 % (n=4) reported as their third time, and 6.5 % (n=10) as their fourth time. Table 1 represents the demographic characteristic of the program participants.

**Table 1. Participant Demographics (n=157<sup>a</sup>)**

Demographics	n	%
Age <sup>b</sup> (Mean=10.25 ± .94)	144	
9	34	23.6
10	55	38.2
11	41	28.5
12-13	14	9.7
Race <sup>c</sup>	157	
White	103	65.6
Non-White	54	34.4
Grade <sup>d</sup>	155	
3 <sup>rd</sup> Grade	56	36.9
4 <sup>th</sup> Grade	57	37.4
5 <sup>th</sup> Grade	39	25.7
GOTR program participation <sup>e</sup>	155	
1 <sup>st</sup> time	125	80.6
2 <sup>nd</sup> time	16	10.3
3 <sup>rd</sup> time	4	2.5
4 <sup>th</sup> time	10	6.5

<sup>a</sup> 24 participants participated pretest only, 17 participated posttest only, 8 only reported demographics. Information reported in the tables is of those (n=157) who participated both pretest and posttest.

<sup>b</sup> 13 participants did not report their birth of date

<sup>c</sup> Non-White includes African American, Asian, Hispanic, and others.

<sup>d</sup> 2 participants did not report their grade

<sup>e</sup> 2 participants did not report their GOTR program participation

## **Instrument**

The formative impact evaluation assessed the GOTR program and how well it meets stated objectives. As such, the formative evaluation will consist of pre-test/post-test assessing attitudes towards physical activity, self-esteem, eating attitudes, body image and communication. A Likert-type questionnaire developed by the principal investigator in conjunction with GOTR program staff was utilized to assess demographics (age, gender, residence, race), attitudes towards physical activity, physical activity behaviors, self-esteem, eating attitudes, body size (dis)satisfaction, in addition to curriculum content regarding health behaviors and empowerment. 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), and the child/adolescent version of the Schematic Figural Scale (to measure body size (dis)satisfaction) (Collins, 1991). Additionally, consent will be obtained by the parents of the participants at the time of registration for the program. Approval from Old Dominion University's Institutional Review Board will be obtained prior to study 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 Coeficient alphas of .77 to .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 5<sup>th</sup> grade reading

level (Williamson, Anderson, Jackman, and Jackman, 1995). The Ch-Eat is reported to have adequate correlations to the EAT ( $r=.75$ ,  $p>.05$ ) (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 .59-.71 (Thompson, 1995).

Attitudes about physical activity will be measured by the Feelings about Physical Activity Scale (Neilson and Corbin, 1986). 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 .88-.91. Scores ranging from 54-60 indicate very favorable feelings about physical activity, 42-53 favorable, 30-41 neutral, 18-29 unfavorable, 12-17 very unfavorable.

Physical activity behavior will be 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. As depicted in Table 2, there was a statistically significant increase in the total self-esteem score among GOTR participants ( $p=.004$ ) from pre-intervention to post-intervention. The following reports results from an item-analysis of individual variables within the self-esteem construct.

- Pre-GOTR 44.6% of participants reported that they “strongly agreed” with the statement “I am satisfied with myself”. Post-GOTR, 48.1% of participants reported that they “strongly agreed” with the statement.
- Pre-GOTR only 30.6% of participants “strongly disagreed” with the statement: “Sometimes I think I am no good at all.” Post-GOTR, 36.4% of participants indicated that they “strongly disagreed” with this statement.
- Pre-GOTR, 49% of participants “strongly agreed” with the statement “I feel that there are a lot of good things about me. Post-GOTR, 57.1% of the participants “strongly agreed” with the statement.
- For the statement “I can do things as well as most other people,” 31.2% of the pre-GOTR participants “strongly agreed” with the statement, while as 35.1% of the post-GOTR “strongly agreed” with it.

- Pre-GOTR 54.8% participants “strongly disagreed” with the statement , “I do not have much to be proud of.” Post-GOTR 64.3% of participants “strongly disagreed” with this statement.
- Pre-GOTR, 26.8% of participants “strongly disagreed” with the statement, “I feel useless at times.” Post-GOTR, 34.4% participants “strongly disagreed” with the statement.
- For the statement “I feel that I’m a person of worth”, 45.9% of participants pre-GOTR “strongly agreed.” Post-GOTR, 52.9% “strongly agreed” with the statement.
- Pre-GOTR, 15.9% “strongly disagreed” with the statement, “I wish I could have more respect for myself.” Post-GOTR, 30.5% of the participants indicated that they “strongly disagreed” with the statement.
- Pre-GOTR 63.7% “strongly disagreed” with the statement “All in all, I feel that I am a failure.” Post-GOTR depicted 74.7% of participants indicating that they “strongly disagreed” with the statement.
- Lastly, pre-GOTR 44.6% of participants “strongly agreed” with the statement, “I take a positive attitude toward myself.” Post-GOTR, 51.9% of participants “strongly agreed” with this statement.

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Variable	Group	Strongly Disagree n(%)	Disagree n(%)	Agree n(%)	Strongly Agree n(%)
I am satisfied with myself	Pre*	4 (2.5)	13 (8.3)	70(44.6)	70(44.6)
	Post**	4(2.6)	12(7.8)	64(41.6)	74(48.1)
Sometimes I think I am no good at all	Pre	48(30.6)	60(38.2)	40(25.5)	9(5.7)
	Post	56(36.4)	42(27.3)	46(29.9)	10(6.5)
I feel that there are a lot of good things about me	Pre	2 (1.3)	8(5.1)	70(44.6)	77(49.0)
	Post	1(.6)	9(5.8)	56(36.4)	88(57.1)
I can do things as well as most other people	Pre	5(3.2)	24(15.3)	79(50.3)	49(31.2)
	Post	5(3.2)	25(16.2)	70(45.5)	54(35.1)
I feel I do not have much to be proud of	Pre	86(54.8)	47(29.9)	15(9.6)	9(5.7)
	Post	99(64.3)	32(20.8)	18(11.7)	5(3.2)
I feel useless at times	Pre	42(26.8)	43(27.4)	55(35.0)	17(10.8)
	Post	53(34.4)	47(30.5)	44(28.6)	10(6.5)
I feel that I'm a person of worth	Pre	9(5.7)	15(9.6)	61(38.9)	72(45.9)
	Post	4(2.6)	12(7.8)	57(37.0)	81(52.6)
I wish I could have more respect for myself	Pre	25(15.9)	42(26.8)	47(29.9)	43(27.4)
	Post	47(30.5)	33(21.4)	47(30.5)	27(17.5)
All in all, I feel that I am a failure	Pre	100(63.7)	44(28.0)	6(3.8)	7(4.5)
	Post	115(74.7)	23(14.9)	9(5.8)	7(4.5)
I take a positive attitude toward myself	Pre	9(5.7)	13(8.3)	65(41.4)	70(44.6)
	Post	2(1.3)	10(6.5)	62(40.3)	80(51.9)
Total Sum Score	Pre	21.13±4.81	p=.004†		
	Post	22.37±5.02			

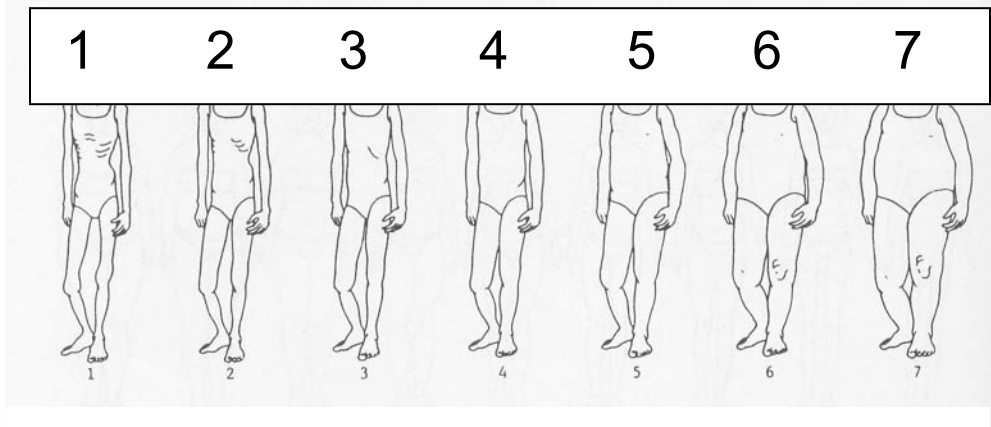
† tests are significant at p<.05. Analysis reveals a statistically significant increase in self-esteem score post intervention compared to pre intervention.

\*157 reported self-esteem pre intervention \*\*154 reported self-esteem post intervention

**Body Image**

Statistically significant changes were found for body size satisfaction from pre to post GOTR ( $p=.001$ ). Prior the program, only 38.3% of the participants were satisfied with their body size. Post-GOTR, 55.2% of the participants reported being satisfied with their body size.

**Table 3. Body Image Pre and Post GOTR Intervention (n=157)**



	Unsatisfied (participant desires to be thinner/bigger) n(%)	Satisfied n(%)	
Pre	95 (61.7)	59 (38.3)	p=.001†
Post	69 (44.8)	85 (55.2)	
† tests are significant at $p<.05$ . Analysis reveals statistically significant difference in body-image score from pre to post intervention. More girls were satisfied with their body image post intervention.			

### **Health Behaviors and Attitudes**

In comparing both the pre-test and post-test scores, items representing health behaviors and attitudes towards health were analyzed. Overall, there were no statistically significant differences in responses when comparing responses pre-GOTR to post-GOTR. However, as depicted in Table 4 the following findings were noted:

- The majority of the participants reported “always” eating breakfast every morning.
- The number of participants who reported “sometimes” eating 2 fruits per day increased from 48% pre-GOTR to 52% post-GOTR. In addition, the number of participants who reported “sometimes” eating 3 vegetables per day increased from 46% pre-GOTR to 50% post-GOTR.
- The number of participants who reported “never” thinking about wanting to be thinner increased from 29% pre-GOTR to 34% post-GOTR.
- The number of participants who reported “never” eating diet foods increased from 37% pre-GOTR to 43% post-GOTR.

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Variable	Group	Never n(%)	Rarely n(%)	Sometimes n(%)	Always n(%)	p-value
I eat breakfast every morning	Pre	2 (1.3)	8 (5.1)	46 (29.5)	100 (64.1)	.242
	Post	1 (.6)	5 (3.2)	47(30.5)	101(65.6)	
I eat at least 2 fruits a day	Pre	11 (7.0)	22(14.0)	76 (48.4)	48 (30.6)	.329
	Post	10(6.5)	15(9.7)	80 (51.9)	49(31.8)	
I eat as least 3 vegetables a day	Pre	12(7.6)	31(19.7)	72 (45.9)	42(26.8)	.901
	Post	12(7.7)	29(18.7)	78 (50.3)	36 (23.2)	
I think drinking water is important	Pre	3 (1.9)	2 (1.3)	10(6.4)	142(90.4)	.566
	Post	2 (1.3)	3 (1.9)	15(9.7)	135(81.1)	
I am scared about being overweight	Pre	37(23.6)	29 (18.5)	54 (34.4)	37(23.6)	.484
	Post	41 (26.5)	29 (18.7)	53(34.2)	32(20.6)	
I brush my teeth at least 2 times a day	Pre	0 (0)	15(9.6)	46 (29.3)	96 (61.1)	.173
	Post	3 (1.9)	10(6.5)	35 (22.6)	107(69.0)	
I think a lot about wanting to be thinner	Pre	46 (29.3)	43(27.4)	27(17.2)	41(26.1)	.152
	Post	53 (34.2)	40 (25.8)	31(20.0)	31(20.0)	
I have been dieting	Pre	114(72.6)	14(8.0)	18(11.5)	11(7.0)	.414
	Post	106(69.3)	15(9.8)	22(14.4)	10(6.5)	
Other people think that I am too thin	Pre	99(63.1)	23(14.6)	27(17.2)	8 (5.1)	.388
	Post	93 (60.4)	22 (14.3)	27(17.5)	12(7.8)	
I get at least 8 hours of sleep a night	Pre	6 (3.8)	5 (3.2)	46 (29.3)	100(63.7)	.685
	Post	2 (1.3)	8 (5.2)	53 (34.2)	92 (59.4)	
I think a lot about having fat on my body	Pre	64 (40.8)	39(24.8)	28(17.8)	26(16.6)	.867
	Post	62 (40.0)	39(24.8)	31(20.0)	23(14.8)	
I eat diet foods	Pre	58 (36.9)	38(24.2)	49 (31.2)	12(7.6)	.612
	Post	66 (43.1)	24(15.7)	54 (35.3)	9 (5.9)	

Analysis reveals no statistically significant differences in Health Behaviors and Attitudes from pre to post intervention.

**Physical Activity**

Table 5 represents participation in physical activity among GOTR participants. As depicted in Table 2, there was a significant increase in participation in sports teams among GOTR participants ( $p < .001$ ) after GOTR program implementation. Prior to participating in GOTR, 57.5% of participants reported participating on a sport team while post-GOTR program implementation, 61.3% of participants reported participating on sport teams.

Formative evaluation results also indicate a statistically significant increase in the number of days participants reported being physically active ( $p = .001$ ). Pre-GOTR program, participants reported an average of approximately 4 days of physical activity, while post program, participants reported an average of approximately 5 days of physical activity.

**Table 5. Physical Activity Behaviors**

Physical Activity	Pretest	Posttest	P-value
Sports Team	N (%)	N(%)	
Yes	88(57.5)	95(61.3)	.000*
No	65(42.5)	60(38.7)	
# of days exercise or participate in vigorous physical activity			
Mean $\pm$ SD	4.27 $\pm$ 2.05	4.89 $\pm$ 1.78	.001**

\* McNemar is significant at  $p < .05$ . Analysis reveals a statistically significant increase in playing sports team post intervention compared to pre intervention.

\*\*Wilcoxon is significant at  $p < .05$ . Analyses 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. Although statistical analysis did not reveal statistical differences ( $p=.405$ ) from pre-GOTR to post-GOTR, there was a positive movement regarding attitudes regarding physical activity. Notably, the following changes were noted among participants:

- Pre-GOTR 55% of participants “strongly agreed” with the statement, “Physical activity is very important.” Post-GOTR, 61% of participants indicated that they “strongly agreed” with the statement.
- Regarding the statement “Life is better because I am physically active”, 40% pre-GOTR participants indicated that they “strongly agreed.” Post-GOTR, 51% participants indicated that they “strongly agreed” with this statement.
- Pre-GOTR, 50% of participants indicated that they “strongly agreed” with the statement, “Physical activity feels good.” Post-GOTR 58% of participants indicated that they “strongly agreed” with the statement.
- Regarding the statement “I don’t like thinking about doing physical activity”, 61% of pre-GOTR participants indicated that they “strongly disagree.” Post-GOTR, 64% of program participants indicated that they “strongly disagreed” with the statement.
- Pre-GOTR 11% of participants reported that they “strongly agree” with the statement, “I have to force myself to be physically active.” Post-GOTR, the numbers of participants who “strongly agreed” with this statement dropped to 6%.
- Pre-GOTR 54% of program participants reported that they “strongly disagreed” the statement, “When I miss a day of being physically active, I like it.” Post-GOTR only 48% of participant indicated that they “strongly disagreed” with this statement.

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Variable	Group	Strongly Disagree n(%)	Disagree n(%)	Agree n(%)	Strongly Agree n(%)
I look forward to physical activity	Pre*	3 (1.9)	0 (0)	47 (29.9)	107(68.2)
	Post**	1 (.6)	4 (2.6)	56 (35.9)	95 (60.9)
I wish there were better ways to get healthy than being physically active	Pre	34(21.7)	46 (29.3)	49 (31.2)	28(17.8)
	Post	35 (22.4)	48 (30.8)	44 (28.2)	29(18.6)
Physical activity is hard work	Pre	35(22.3)	52 (33.1)	47(29.9)	23(14.6)
	Post	37(23.7)	44 (28.2)	58(37.2)	17(10.9)
I do not enjoy physical activity	Pre	114(73.0)	28 (17.9)	8 (5.1)	7 (4.5)
	Post	100(69.9)	31(19.9)	10(6.4)	6 (3.8)
Physical activity is very important to me	Pre	4 (2.5)	5 (3.2)	62 (39.5)	86(54.8)
	Post	1 (.6)	13(8.3)	47 (30.1)	95 (60.9)
Life is better because I am physically active	Pre	13(8.3)	6 (3.8)	75 (47.8)	63 (40.1)
	Post	4 (2.6)	15(9.6)	57 (36.5)	80 (51.3)
Physical activity is feels good	Pre	5 (3.2)	5 (3.2)	69 (43.9)	78 (49.7)
	Post	1 (.6)	8 (5.1)	57 (36.5)	90 (57.7)
I don't like thinking about doing physical activity	Pre	95 (60.5)	40(25.5)	12(7.6)	10(6.4)
	Post	100(64.1)	40 (25.6)	6 (3.8)	10(6.4)
I would change my schedule to participate in physical activity	Pre	11(7.0)	14(8.9)	70 (44.6)	62(39.5)
	Post	11(7.1)	21(13.5)	68 (43.6)	56 (35.9)
I have to force myself to be physically active	Pre	88 (56.1)	40 (25.5)	12(7.6)	17(10.8)
	Post	87 (55.8)	38(24.4)	21(13.5)	10(6.4)
When I miss a day being physically active, I like it.	Pre	84 (53.5)	53 (33.8)	11(7.0)	9 (5.7)
	Post	75 (48.1)	54 (34.6)	22(14.1)	5 (3.2)
Physical activity is the best part of my day.	Pre	9 (5.7)	19(12.1)	60 (38.2)	69 (43.9)
	Post	5 (3.2)	26(16.7)	62 (39.7)	63 (40.4)
Total Sum Score	Pre	26.61±5.20	p=.405†		
	Post	27.01±5.45			

† tests are significant at p<.05. Analysis reveals no 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.

Although there were no statistically significant differences in the total scores ( $p=.293$ ) for empowerment pre and post-GOTR, positive changes were noted for individual items. For example:

- Seventy-two percent (72%) of pre-GOTR participants reported that they “always” “respect other people’s values even if they are different from mine.” Post-GOTR, the number of participants who reported “always” to this statement increased to 77%.  
Seen within the time frame of testing.
- Pre-GOTR 39% of program participants reported “always” to the statement, “I try to solve my problems instead of just worrying about them.” Post-GOTR 42% of participants reported “agree” to this statement.
- Regarding the statement, “I believe in my abilities”, 1.3% pre-GOTR declared “never” while 0% post-GOTR reported “never.”

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Variable	Group	Never n(%)	Sometimes n(%)	Always n(%)
I believe in my abilities	Pre*	2 (1.3)	39(25.0)	115(73.7)
	Post**	0 (0)	43(27.6)	113(72.4)
I stick to my dreams and goals even if people don't agree with me	Pre	0 (0)	41(26.3)	115(73.7)
	Post	2 (1.3)	51(32.7)	103(66.0)
I try to solve my problems instead of just worrying about them	Pre	2 (1.3)	94 (60.3)	60(38.5)
	Post	7 (4.5)	83 (53.2)	66 (42.3)
When people tell me how to be better, I can accept what they say without getting mad	Pre	6 (3.8)	96 (61.5)	54 (34.6)
	Post	12(7.7)	96 (61.5)	48 (30.8)
I can communicate openly and honestly with people	Pre	3 (1.9)	76 (48.7)	77 (49.4)
	Post	4 (2.6)	85 (54.5)	67 (42.9)
I respect other people's values even if they are different from mine	Pre	3 (1.9)	41(26.3)	112(71.8)
	Post	1 (.6)	35(22.4)	120(76.9)
I believe that it is important to be a good listener	Pre	0 (0)	15(9.6)	141(90.4)
	Post	0 (0)	25(16.0)	131(84.0)
I believe gossiping can hurt people	Pre	4 (2.6)	24(15.4)	128(82.1)
	Post	5 (3.2)	25 (16.0)	126(80.8)
I believe that it is important to think positively	Pre	0 (0)	35(22.4)	121(77.6)
	Post	2 (1.3)	32(20.5)	122(78.2)
I believe that it is important to try to understand the other person's point of view when solving problems	Pre	3 (1.9)	41 (26.3)	112(71.8)
	Post	1 (.6)	46(29.5)	109(69.9)
Total Score	Pre	13.33±2.10	p-value=.293†	
	Post	13.13±2.35		

† tests are significant at p<.05. Analysis reveals no statistically significant difference in empowerment score from pre to post intervention.

\*156 reported self-esteem pre intervention \*\*156 reported self-esteem post intervention

## **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 positive impacts regarding self-esteem, body size satisfaction, and physical activity behaviors among GOTR program participants. Also noted are positive changes regarding attitudes towards physical activity, health behaviors, and empowerment.

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