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CREATING SUCCESSFUL ACTIVITY PROGRAMS FOR MIDDLE SCHOOL GIRLS

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Abstract

Results from the 2003-2004 National Health and Examination Survey (NHANES), found that only 3.4% of girls from ages 12-15 met current guidelines for PA adherence (Troiano, et al., 2008), suggesting that there is a need for specially designed physical activity (PA) programming among middle school girls. Using the information garnered from an extensive review of literature on a variety of PA programs, an after-school PA program was developed and implemented using the motivational factors of activity choice, fun and enjoyment, non-competitive lifetime activities and increased skill competence in a “girls only” setting. Statistical results determined that each of the motivational factors used in the program had a positive impact on the improved PA self-efficacy and PA enjoyment among participants at the conclusion of the program.

INTRODUCTION

Declining physical activity in youth is thought to be one of the many interacting factors contributing to the growing childhood obesity epidemic (Strauss, Roddzilsky, Burack & Colin, 2001; United States Department of Health and Human Services (USDHHS), 2012), an epidemic that encumbers our future generation with an alarming 70% chance of becoming overweight or obese adults (USDHHS, 2007). Despite the increase seen in girls’ sports following the passage of Title IX (National Organization for Women, 2009), the transition from childhood to adolescence is associated with a 34% decline in physical activity in girls (Pate, et al. 2009). Results from the 2003-2004 National Health and Examination Survey (NHANES), the largest representative sample of U.S. youth to be objectively examined for rates of participation in moderate-to-vigorous physical activity (MVPA) also found that only 3.4% of girls from ages 12-15 met current guidelines for PA adherence (Troiano et al., 2008). This theme of declining participation in moderate to vigorous physical activity (MVPA) declines with age, most distinctly from early elementary years through

high school is found consistently throughout the literature on this topic (Grunbaum et al., 2002; Sallis, Prochaska & Taylor, 2000).

Research has already shown a strong correlation between perceived self-efficacy and youth participation in PA (Ryan & Dzewaltowski, 2002; Sharma, Hay & Fleming, 2013). In a review of correlates of PA in 108 studies by Sallis, Prochaska, & Taylor (2000), researchers evaluated 40 variables for children (ages 3-12) and 48 variables for adolescents (ages 13-18), concluding that perceived activity competence in adolescents is consistently associated with PA in adolescents. The amount of research looking at self-efficacy and enhancement of PA is undeniable and programs that increase self-efficacy are increasingly popular with practitioners and educators.

Using all available research an after-school program was developed, promoted and evaluated with a small group of volunteer middle school aged girls. The methods used to develop this program, *The GAP (Girls Activity Program)*, is discussed below.

METHODS

The purpose of this project was to develop a PA program that could be implemented in a variety of settings, using activity choice, fun and enjoyment, lifetime non-competitive activities and basic skill development in an attempt to enhance PA self-efficacy and PA enjoyment in middle school aged girls.

Volunteer participants were recruited using a variety of marketing tools, including flyers distributed at three local middle schools, an article in the local newspaper, ads in the local newspaper, an announcement in the local newspaper sports bulletin and a brief interview of the researcher by the local television station.

Program content specifics were determined using data gathered through interviews with five local middle school physical education (PE) teachers, two pre-program focus groups and 113 needs assessments distributed randomly to girls at each of the three middle schools in two Northwest states. The needs assessment consisted of a combination of open-ended questions, checklists and requests for comments. Results were used to determine activity choices, length, time, frequency and the type of environment that participants would prefer in a PA program. The focus groups and the interviews were used to further understand the girls' experiences and attitudes about PA, both positive and negative, the impact of these experiences, as well as clarify questions left unclear or unanswered from the needs assessments. The interviews with the PE teachers were

used to gain knowledge of each teacher's past experiences and perceptions of the variables hypothesized to determine increased PA among middle school girls.

Triangulation (Mathison, 1988), the multi-method approach used to study human behavior was used to analyze the program planning data. All data from the surveys were quantitatively analyzed using different forms of descriptive statistics, including mean and frequency and standard deviation to describe the spread between the scores. Information obtained from this data was summarized using tabulated description in the form of tables. Inferential statistics, using a paired sample t-test was used to measure the statistical significance of skill competence among participants and Cronbach's alpha was used as an objective measure of internal consistency (Mohsen & Reg, 2011).

In an attempt to find a theme in the needs assessments, all data was carefully evaluated. Needs assessment data on preferred PA choices was inconclusive and there were not any activities that clearly prevailed as dominant choices among the activities offered, yet there were a few activities that were clearly not preferred choices. Because of the lack of conclusive data on PA choices, the activities that received a combination of the highest ranks among preferred PA choices on the needs assessments, and the PA choices that received the most positive feedback in focus groups were chosen by the researcher to be the eight non-competitive activities offered as part of the *GAP*. These activities, beginning with the activities that received the highest number of votes to the lowest number of votes were: dance (52), swimming (49), gymnastics (46), yoga/Pilates (41), weight training (32), power walking (20), and fitness balls (10). The activities not on this list but included in the program as a result of focus group results were *Wii Just Dance* and "open gym" or availability to local health clubs.

Variables such as the preferred times of day, the preferred amount of time spent in a PA program, the preferred time of day and preferred location for a program were also inconclusive and decisions about each of these factors were made after considering location availability, school release times and transportation availability.

Subjects

The program began with 24 participants ($n = 24$), finished with 17 active participants ($n = 17$) and 15 participants were able to complete program evaluations ($n = 15$).

Procedure

Using information from the program planning evaluations an eight-week program was developed and implemented. The program took place after-school, for one hour on two alternating days per week in a “girls only” setting. It is important to note that the activities chosen for each group of girls will be different based on their personal preferences. The activities offered in this program based on the pre-program planning evaluations are discussed above in the Program Planning Results section.

Instruments

To measure the impact of the program on the variable of PA self-efficacy participants were asked to complete *The Adolescent PA Self-Efficacy Scale* (Ward, Saunders, & Pate, 2007). The impact of fun and enjoyment on each participants PA self-efficacy was also measured using the *Enjoyment of Physical Activity Scale* (PACES), an evaluation developed by Motl et al. (2001), and later adapted for adolescents by Ward, Saunders & Pate (2007). Both of these evaluations were given on the first and last day of the program. A pre and post activity skill competence evaluation form developed by the researcher, informal direct observation, a parent evaluation questionnaire and a group interview were also used to measure the program objectives.

RESULTS

At completion of the program participants self reported an increase in both PA self-efficacy and PA enjoyment. Data evaluating the motivational factors used to increase PA self-efficacy and PA enjoyment, activity choice, fun and enjoyment, non-competitive activities and increased skill competence were all found to have a positive impact on these results. Results from the *Adolescent PA Self-Efficacy Scale* were reported by mean only because instructions for the original measurement tool by Motl et al. (2000) instructs researchers or instructors to compute the score by taking a mean of all items (Barr-Anderson et al. 2008). In the results from the *Adolescent PA Self-Efficacy Scale* the pre-program (n = 23) mean was 27.9, and the post-program mean was 34.7. When each statement on the scale was examined separately, participants evaluated their PA self-efficacy higher for all 8 statements related to their perceived self-efficacy.

Although the parents of the participants did not partake in any of the activities, they were each given a program evaluation at the conclusion of the program. In reference to the program goal, the parents were asked if they felt that the program had any impact on their daughters PA self-

efficacy and 93% (n = 13) of the parents who completed evaluations reported a response of 'yes' on this question.

Enjoyment of PA was measured using the *Enjoyment of Physical Activity Scale* (PACES). When combining all responses on the PA enjoyment scale, the analysis of the PA enjoyment data found the pre-program (n = 19) mean to be 11.4 and the post-program (n = 15) mean to be 11, indicating a small increase in PA enjoyment due to lower numbers indicating an increase on this scale. Qualitative responses from both participants and parents were recorded to further validate these results. When asked about the importance of fun and enjoyment on their decision about whether or not to continue to be physically active, examples of responses included, "I enjoyed the class very much", "You made the physical activity fun and made me want to come to GAP more", and "If I'm doing something I want to enjoy it". No negative comments were given on this particular question by any of the participants.

DISCUSSION

Large scale programs attempting to address the trend of low PA participation among girls such as the Trial of Activity for Adolescent Girls (TAAG) (Sallis & Owen, 2002), Lifestyle Education for Activity Program (LEAP) (Dishman et al., 2005), Activity by Choice (ACT) (Wilson et al. 2008) and the Fit For Girls (FFG) (Hepburn, 2011) have all been successful in using a variety of motivational factors similar to the variables used in this program. Although these factors are successfully emerging in large scale interventions, this program was able to use a selection of these factors on a smaller scale to impact PA self-efficacy and PA enjoyment among participants, suggesting that unique and specifically tailored programs also have the ability to influence girls in smaller settings developed for after school settings, community settings or even as part of PE curriculums to a smaller extent.

During the post program group interview, the researcher did recognize two prevalent themes not previously discussed or reported. One of these themes is the importance of friendships and how it relates to joining and participating in physical activities. Only two of the girls that finished the GAP were attending regularly on their own or without a friend. The rest of the girls all joined with one or more other girls, suggesting that the "power of friends" should be recognized and positively used in marketing to this age group of girls.

The second theme identified by the researcher during the group interview was the importance of the instructor. When asked if the girls "would do a program like this again", a participant answered by saying, "Only if you were instructing it." Upon further investigation on this

topic the girls shared that they liked that the instructor did not “make them do things they did not want to do, like their PE teachers do” and they “got to do what they wanted”. It is recommended that anyone wanting to implement this type of program follow Hellison’s Model (1995) for teaching PA, which is based on respect and relationships in when implementing a program such as the GAP.

Initially developed to be an after school PA program, the motivational factors used in this program could be successfully used to offer similar programs after-school, in community programs, in health clubs and as a unit as part of a PE program. The novelty of the activities, including activity choice, non-competitive activities and the inclusion of music in a fun and enjoyable environment are all components that can all be used by programmers. Most importantly, these variables should be altered to fit the needs of participants within their own community, program or curriculum to allow for individual growth in a comfortable, non-competitive atmosphere; conceivably motivating currently inactive middle school aged girls to become more physically active.

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