Attitude Toward Physical Activity and Self-Concept of Emotionally Disturbed and Normal Children

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This study investigated the relationship between attitude toward physical activity and self-concept of emotionally disturbed and normal children. The subjects were 470 boys and girls, ranging from 8 to 13 years of age ($M=10.95$, $SD=1.91$). The sample included 80 emotionally disturbed children from two psychiatric hospitals in Ohio and 390 normal children from a parochial school in Ohio. Data were collected through the Children's Attitude Toward Physical Activity Inventory (CATPA) and the Piers-Harris Self-Concept Scale. A significant difference on CATPA occurred between emotionally disturbed and normal children and between boys and girls. A two-way ANOVA revealed a significant difference in self-concept between emotionally disturbed and normal children. The Pearson product-moment correlation revealed low but significant relationships between self-concept and the following subscales of the CATPA: social experience, thrill, and release of tension. The results indicated that normal children had a more positive attitude toward physical activity and self-concept than emotionally disturbed children.

Emotionally disturbed children tend not to participate in physical activity. Through social rejection, society often reinforces this lack of participation. Frequently, emotionally disturbed children are unable to participate because physical and attitudinal barriers limit access to the development of motor skill (Craft & Hogan, 1985; Gorman, 1983). These children often lack the social opportunity, physical skills, positive attitudes toward physical activity, and positive self-concept needed for successful participation in a physical activity program (Craft & Hogan, 1985; Gorman, 1983). Emotionally disturbed children typically experience more failures than do normal children, and consequently they meet new situations with a low expectation of success. This in turn precipitates less than optimal performance. Physical activity is thought to provide a potential source of success and to be important in the development of positive attitudes toward physical activity as well as fostering significant increases in self-concept (Moran & Kalakian, 1977; Van Andel & Austin, 1984; Wright & Cowden, 1986).

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tive outcomes are generally associated with participation in physical activity (Dummer, Ewing, Habeck, & Overton, 1987).

In recent years there has been a growing belief that success in physical activity will lead to an enhanced self-concept and positive attitude (Craft & Hogan, 1985). Attitude and self-concept have been recognized as important to an individual’s growth and learning. Self-concept refers to the person’s internal perception of her/himself (Coopersmith, 1967; Craft & Hogan, 1985; Piers, 1977; Samuels, 1977). It is viewed as a link between observable behavior and the individual’s underlying processes and is believed to be a directing force in all behavior. The process of discovery as well as that of development is involved in self-concept (Crosby, 1982).

Attitudes form a complex psychological system of feelings based upon evaluative reactions toward objects, persons, and institutions (Nunnally, 1970; Shaw & Wright, 1967). Kenyon (1968b) defined attitudes as “a latent or non-observable complex, but relatively stable behavior disposition reflecting both direction and intensity of feeling towards a particular object, whether it be concrete or abstract” (p. 567). It is common knowledge that favorable attitude patterns play a vital role in learning (Seaman, 1970). A favorable attitude toward physical activity is desirable for enhancing learning (Campbell, 1969).

Although much has been written about the measurement of both attitude toward physical activity and self-concept, very little research has been undertaken concerning the relationship between self-concept and attitudes toward physical activity. Neale, Sonstroem, and Metz (1969) assessed 165 adolescent boys to determine the relationship between physical fitness, self-esteem, and attitude toward physical activity. Their results indicated there was no significant relationship between physical fitness, self-esteem, and attitude toward physical activity. Clayton (1970) studied the attitudes toward physical activity, personality, and self-concept of junior high school girls. None of the self-concept variables correlated significantly with measures of attitude toward physical activity.

Karper and Martinek (1983) studied the motor performance and self-concept of handicapped and nonhandicapped children in integrated physical education classes. They found no significant correlations between motor performance and self-concept for the pretest and posttest scores.

In a study to determine the effect of a running program on self-concept of college students, Hilyer and Mitchell (1979) revealed that college students with low self-concept increased both their fitness levels and their self-concept scores. Other studies have shown similar positive results (Martinek, Cheffers, & Zaiczkowsky, 1978; Wright & Cowden, 1986). These and other studies suggest that proficiency in physical activities could enhance self-concept.

The relationship between attitude toward physical activity and self-concept is not clearly defined. Although it would seem that attitude and self-concept should be positively and substantially related, the relationship between these two variables is still in question since there is no body of research to support such a relationship (Van Andel & Austin, 1984). The purpose of this study was to investigate the relationship between attitude toward physical activity and self-concept of emotionally disturbed and normal children. The following questions were investigated:

1. Are there differences in children’s attitude toward physical activity (CATPA) between emotionally disturbed children in two hospitals, and are these differences consistent for both sexes?
2. Are there differences in CATPA between normal boys and girls?
3. Are there differences in CATPA between emotionally disturbed and normal children, and are these differences consistent for both sexes?
4. Are there differences in self-concept between emotionally disturbed children in the two hospitals, and are these differences consistent for both sexes?
5. Are there differences in self-concept between normal boys and girls?
6. Are there differences in self-concept between normal and emotionally disturbed children, and are these differences consistent for both sexes?
7. Is there a relationship between CATPA composite and the subscales and self-concept of emotionally disturbed and normal children?

Methods

Subjects

The subjects were 470 boys and girls ranging from 8 to 13 years of age ($M=10.95$, $SD=1.91$). The 80 emotionally disturbed children resided in either Dayton Children's Psychiatric Hospital or Sagamore Hills Children's Psychiatric Hospital in Northfield, Ohio. The 390 normal children attended a parochial school in Kettering, Ohio. Girls comprised 49% and boys comprised 51% of the total. Within the selected sample, 83% were normal and 17% were emotionally disturbed.

Procedures

Data were collected through the administration of the Children's Attitude Toward Physical Activity Inventory (CATPA) (Simon & Smoll, 1974) and the Piers-Harris Children's Self-Concept Scale (P-H CSCS) (Piers, 1977). The CATPA is an instrument designed to assess the attitude toward physical activity of elementary school children. It was used because it permits the assessment of the same factors in various age groups and has reliability coefficients ranging from .80 to .89, which are comparable to those established by Kenyon (1968a). The inventory is useful with elementary school children who have at least a third grade reading level. The CATPA identified the following six factors of physical activity: social experience, health and fitness, beauty in human movement, release of tension, thrill involving some risk, and long and hard training.

Self-concept was assessed using the P-H CSCS, which consists of 80 declarative sentences that are answered “yes” or “no.” The scale yields a total self-concept score and is normed on students in Grades 4 through 12. The internal consistency and reliability coefficients of the scale ranges from .78 to .93. It has a criterion referenced validity of .78 when correlated with the Coopersmith Self-Esteem Inventory (Franklin, Dudley, Rousseau, & Sabers, 1981).

The instruments were administered to approximately 3 to 5 subjects at a time in a classroom either by the investigator, an educational therapist (teacher), or a classroom teacher. The data collection required 4 days. The CATPA took approximately 20 minutes to complete and the P-H CSCS required approximately 15 minutes.

The MANOVA procedure was used to analyze the CATPA scores whereas the ANOVA procedure was selected to analyze the self-concept data. The Pearson product-moment correlation coefficient was chosen to determine the relationship between scores on self-concept and each subscale of the CATPA as well as the composite CATPA. In all of these analyses, an alpha level of .01 was stated.
Results and Discussion

Descriptive data for CATPA subscales and CATPA composite of emotionally disturbed and normal children are presented in Table 1. Findings are not presented separately for the two hospitals because MANOVA statistics revealed no significant differences between emotionally disturbed children in both hospitals; this finding provided the rationale for the organization of Table 1. The same MANOVA procedure revealed no significant difference between boys and girls for the hospital group. The findings of no significant difference between the hospitals on the CATPA, $F(1,76) = .54$, $p < .78$, was not unexpected considering the similarity of physical education experiences of the children in both hospitals. However, the finding of no significant differences between boys and girls, $F(1,76) = 1.45$, $p < .21$, was unexpected, as boys generally tend to participate more in physical activities than girls do.

The MANOVA was also employed to determine if there were differences in the CATPA subscales between boys and girls within the normal group; there was a significant difference between them, $F(1,388) = 25.34$, $p < .001$, indicating that gender does influence CATPA scores for that group. The univariate follow-up indicated that the beauty in human movement subscale, $F(1,388) = 97.50$, $p < .001$, is the best predictor of gender differences for the normal group (i.e., the observed multivariate difference was more highly related to scores on the beauty subscale than to any other subscale comprising the CATPA scores). The girls scored higher on this subscale than the boys did.

MANOVA was also used to examine the difference in CATPA between the emotionally disturbed and normal groups and between the sexes. Results of the MANOVA indicated significant differences between emotionally disturbed and normal groups, $F(1,466) = 19.20$, $p < .001$, and between the sexes $F(1,466) = 9.18$, $p < .001$. The interaction between condition and gender was not significant,

### Table 1

**Means and Standard Deviations of the CATPA Subscales and Composite Scores for Gender and Location**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Hospitals</th>
<th>School</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Social experience</td>
<td>38.40</td>
<td>10.29</td>
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<tr>
<td>Health and fitness</td>
<td>41.22</td>
<td>10.84</td>
</tr>
<tr>
<td>Thrill</td>
<td>33.13</td>
<td>13.38</td>
</tr>
<tr>
<td>Beauty of human movement</td>
<td>34.80</td>
<td>14.91</td>
</tr>
<tr>
<td>Release of tension</td>
<td>37.20</td>
<td>12.37</td>
</tr>
<tr>
<td>Long and hard training</td>
<td>32.04</td>
<td>13.49</td>
</tr>
<tr>
<td>CATPA composite</td>
<td>216.61</td>
<td>46.55</td>
</tr>
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</table>
Scores on the social experience and release of tension subscales were the best predictors of the difference between the emotionally disturbed and normal groups (i.e., the observed multivariate difference was more related to social experience and release of tension than to any other subscale). On both subscales, scores for the normal group were significantly higher than corresponding scores for the emotionally disturbed group. For the gender factor, beauty and release subscales were the best predictors of differences on the CATPA. Girls scored significantly higher on the beauty subscale whereas boys had significantly higher scores on the release subscale.

Descriptive data for self-concept scores of emotionally disturbed children in the two hospitals and for the normal group in the school are presented in Table 2. Data on the children from the two hospitals were combined because a two-way ANOVA revealed no significant difference between emotionally disturbed children, $F(1,76)=5.75, p<.019$, or between the sexes, $F(1,76)=6.66, p<.012$. For the normal group, results from a one-way ANOVA indicated no significant difference on self-concept scores between boys and girls, $F(1,388)=56.54, p<.45$.

A two-way ANOVA revealed a significant difference in self-concept scores of the normal and emotionally disturbed population, $F(1,469)=224.54, p<.001$. The ANOVA results indicated the normal group had a higher score and more positive self-concept than the emotionally disturbed group. There was no significant difference, $F(1,469)=.623, p<.430$, between the sexes in self-concept. However, there was a significant Gender $\times$ Location interaction, $F(1,469)=12.57, p<.001$. The significant interaction indicates an inconsistent pattern between the sexes within the emotionally disturbed and normal groups.

The Pearson product-moment correlation technique was used to determine whether significant relationships existed between total scores on self-concept and scores on the separate subscales of CATPA as well as composite CATPA score. The correlations are presented in Table 3. Significant relationships were found to exist between self-concept and the following subscales for the emotionally disturbed group: social experience, $r=.334, p<.001$; thrill, $r=.30, p<.003$; and release of tension, $r=.276, p<.007$. Additionally, a significant correlation was determined for scores on self-concept and CATPA composite for this group, $r=.329, p<.001$. No significant relationships were found between scores on CATPA and self-concept for the normal group.

Before initiating this study, the investigator assumed that attitude toward

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hospitals $M$</th>
<th>Hospitals $SD$</th>
<th>School $M$</th>
<th>School $SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>40.94</td>
<td>12.70</td>
<td>59.75</td>
<td>9.82</td>
</tr>
<tr>
<td>Males</td>
<td>44.53</td>
<td>13.24</td>
<td>59.37</td>
<td>9.88</td>
</tr>
<tr>
<td>Females</td>
<td>36.31</td>
<td>10.46</td>
<td>69.13</td>
<td>9.77</td>
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Table 3
Relationship Between Self-Concept, CATPA Variables, and CATPA Composite

<table>
<thead>
<tr>
<th>Variables</th>
<th>Disturbed</th>
<th></th>
<th>Normal</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$r$</td>
<td>$p$</td>
<td>$r$</td>
<td>$p$</td>
</tr>
<tr>
<td>Social experience</td>
<td>.334</td>
<td>.001*</td>
<td>.055</td>
<td>.138</td>
</tr>
<tr>
<td>Health and fitness</td>
<td>.175</td>
<td>.060</td>
<td>.054</td>
<td>.143</td>
</tr>
<tr>
<td>Thrill</td>
<td>.300</td>
<td>.003*</td>
<td>.088</td>
<td>.041</td>
</tr>
<tr>
<td>Beauty in human movement</td>
<td>.135</td>
<td>.116</td>
<td>.062</td>
<td>.110</td>
</tr>
<tr>
<td>Release in tension</td>
<td>.276</td>
<td>.007*</td>
<td>.018</td>
<td>.362</td>
</tr>
<tr>
<td>Long and hard training</td>
<td>.010</td>
<td>.464</td>
<td>.059</td>
<td>.119</td>
</tr>
<tr>
<td>CATPA composite</td>
<td>.329</td>
<td>.001*</td>
<td>.100</td>
<td>.024</td>
</tr>
</tbody>
</table>

*Significant level $p<.01$.

Physical activity and self-concept were related and that the relationship would be more positive for the normal group than for the emotionally disturbed group. In this study the CATPA and self-concept were related on some subscales for the emotionally disturbed group but not for the normal group. It is a widely accepted belief that an emotionally disturbed population usually has a more negative attitude toward physical activity and a lower self-concept than does the normal population. The data in the present study confirmed this belief. Normal children have usually been more predisposed to engage in physical activity and have had more opportunities for success, on which self-concept is in part built. Disturbed children usually participate on a limited basis, often becoming disruptive and receiving negative feedback for this behavior. This in turn may limit their opportunity to develop positive self-concept and positive attitudes toward physical activity. Children with an emotional disturbance exhibit multiple motor deficits that often differ when compared with normal children (Gorman, 1983). These differences may be a factor in the lower self-concept and negative attitudes.

Failure to show significant difference in attitude toward physical activity between the children in the hospitals and between the sexes suggests that the children's backgrounds were similar. The physical education programs, the emotional deviations of the children, the age range, and mean stay in the hospital were similar and the results were not unexpected.

While looking at the CATPA differences between boys and girls in the normal population, the best predictor of gender difference was the subscale beauty in human movement. The girls scored significantly higher than the boys on this subscale. These findings were not consistent with those of Cooper, Sherrill, and Marshall (1986), who found no significant difference between male and female cerebral palsied athletes in ATPA. However, other studies investigating ATPA of nonathletes found significant differences between the sexes (Kenyon, 1968a; Zaichkowsky, 1975). An investigation of the attitude of blind persons toward physical education indicated that males have significantly more favorable attitudes toward physical education than do females (Sherrill, Rainbolt, & Ervin, 1984).
The normal group scored significantly higher than the emotionally disturbed group on the CATPA. It also scored significantly higher on the subscales of release of tension and beauty of human movement, thus indicating a more positive attitude toward physical activity than the emotionally disturbed population on these subscales. The boys in both groups scored higher than the girls in both groups on release, and the girls in both groups had a higher score on beauty. These findings are supported by the results of Kenyon (1968a) and Zaichkowsky (1975). In these studies, females expressed a more positive attitude toward physical activity as an aesthetic experience and males were high on vertigo or thrill.

Examination of the correlation analysis supported the contention that self-concept and attitude toward physical activity are related, even though this relationship is low. The low correlation indicated that unexplained factors contribute to the relationship. A stronger relationship between ATPA and self-concept may reflect a reciprocal association between failure and disliking (and conversely, success and liking) physical activity. This association may dissipate to some extent as the emotionally disturbed child’s self-concept improves and as he or she experiences more success in physical activity.

The findings of the present study contradict the findings of Karper and Martinek (1983) in a study of differences in motor performance and self-concept of handicapped and nonhandicapped children in an integrated physical education class. In that study, no significant correlation was found between motor performance and self-concept for pretest and posttest scores. Wright and Cowden (1986) investigated changes in self-concept and cardiovascular endurance in mentally retarded youth after participating in a Special Olympic swim training program. It was concluded that participation in the swim training program contributed significantly to increases in self-concept and cardiovascular endurance.

It is important to identify attitudes toward physical activity and self-concept of emotionally disturbed children so that suitable physical activity programs can be planned. The vicious cycle of failure and defeat that ineffective physical involvement creates for such children contributes further to their problems, their negative attitudes toward physical activity, and poor self-image. Without appropriate physical activity, the emotionally disturbed child is losing a major opportunity for development on all levels. In physical education/recreation, attitude toward physical activity and self-concept may be two variables that relate to the quality of motor performance level of emotionally disturbed children. If a child’s motor performance can be improved, this may have a positive impact on increased success while engaged in physical activity.

References


