

Body Cathexis in Children as a Function of Awareness Training and Yoga

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ABSTRACT

The intimate relationship between mind and body suggests that one's body-image may strongly affect one's self-image. Low body-cathexis has been correlated with low self-cathexis. Since these concepts apparently develop at an early age, the present study was designed to test a means of increasing body satisfaction in children. Twelve third-year elementary school students, ten girls and two boys, who demonstrated low body satisfaction and poor physical coordination were randomly assigned to either an experimental group which received awareness training and yoga exercises or to a control group. A before-after two-group design was used. Measures of body satisfaction were obtained from an adapted children's version of the Secord-Jourard Body Cathexis Test and the Human Figures Drawing Test. Results indicated that the children who experienced awareness training and yoga increased in body satisfaction; no change was found in the control group ($p < .01$). If poor body-image does indeed adversely affect self-image, this study has demonstrated an effective means of counteracting such negative influence.

The relationship between mind and body has long been a consideration of psychology in general and is of particular interest to personality theorists and psychotherapists. Maslow (1954) described the individual as an integrated, organized whole, whose body and mind could not be segregated.

This close relationship has received much deserved attention from researchers. There appears to be a theoretical importance of perceived body characteristics and the central influence such perceptions exert on the formation of the self-concept. Diamond (1957) stated that the image of the body is primary in forming the self-image and is especially salient in distortions of the self-image. As aspects of the body acquire psychological significance in terms of idealized strength, size, attractiveness, etc., the individual's self-concept is likewise shaped, and in turn, further shapes the body concept, leading to a circular effect. Fisher (1970) proposed that perception of the body strongly affects one's life.

Body image has been defined as the concept of one's body

formed by past and present perceptual and sensory experiences and an experiential reservoir of experiences, affects, and memories (Gorman, 1969). Body image is considered a dynamic entity which changes continually in the face of new perceptions and experiences.

Body image, like self-concept, can be realistic or unrealistic. Schilder (1950) reported that the general form of the body image tends to be slightly idealized. Older persons imagined their bodies as appearing younger than their actual age. Younger persons perceived their bodies as more fit and attractive than would be judged by their peers.

However, everyone does not develop a positive attitude toward his or her body. Derogatory parental attitudes, negative sibling or peer evaluations and comparisons, or gross constitutional factors may lead a person to devalue the body and possibly distort the body image at an early age. The individual may imagine the body as ugly and lose confidence in using and exercising the body. This could result in a withdrawal from social contact and a failure to develop motivation.

Body therapies such as orthodox Reichian therapy, Lowenian bio-energetics, primal therapy, psychomotor, and psychodrama, all stress the use of action exercises and emotionally releasing verbal techniques in assisting people to change. These approaches have also been successful in increasing levels of self and body satisfactions, findings which are substantiated by studies on action methods conducted by several researchers (Bebout & Gordon, 1971; Jones & Peters, 1953; Rasmussen, 1968).

Awareness training which emphasizes body experience, non-verbal expression, and the use of fantasy images and experiences has also been suggested as effecting positive change in an individual (Emerson, 1973). Maupin (1969) used a variety of exercises including yoga, meditation, and deep relaxation to obtain a gradual openness in the individual and to cultivate sensitivity. Gibb (1971) also reported improvement in body and self image in creative growth groups which included yoga, psychodrama, and interpretive dance. The practice of nonverbal exercises in therapy groups has also been shown to increase a positive image of the body and the self and to facilitate interpersonal communications (Wheeler, 1972).

Based on the findings concerning increased body and self satisfactions in the studies mentioned, the present study was designed to evaluate the effects of a group process aimed at

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increasing the body satisfaction of children through the use of yoga exercises and awareness training. If successful, this research could suggest a means of changing negative evaluations of the self and the body before these become deeply ingrained as part of the total self-concept of the child. The group interaction should also facilitate social contact among children who demonstrate low body satisfaction and a corresponding low level of participation in group play.

METHOD

Subjects

Twelve black third-year students enrolled in an elementary school in a large southern city participated as subjects. These subjects, selected from a pool of 17 students identified by their physical education instructor as poorly coordinated and minimally involved in physical education classes, received the lowest scores on a subjective test measuring body satisfaction.

The subjects were randomly assigned to either the control or the experimental group. Six children, all of whom were girls, were assigned to the experimental condition. The control condition also contained six children, four boys and two girls. Mean ages for the experimental and control groups were 8 years 3 months and 8 years 6 months, respectively.

Testing

A subjective test measuring the children's reported satisfaction with various body parts or processes was adapted from the Body Cathexis Test developed by Secord and Jourard (1953). This revised test will be referred to as the Children's Body Satisfaction Test (CBS Test). It consisted of a list of 35 body parts or processes to be rated by the children according to their feeling of satisfaction. The five possible responses of the Secord-Jourard test were reduced to three responses, indicating negative, neutral, and positive feelings. The forced-choice responses included a) I do not like it and wish it could be changed; b) I feel O.K. about it or it doesn't matter; and c) I really like it.

Items selected for the CBS test were first administered in screening tests to other children of the same age as the subjects. Items that were difficult to understand were simplified or eliminated. A measure of reported body satisfaction was determined by counting the total number of negative responses given for the various body parts or processes.

The second testing instrument used was the Human Figure Drawings (HFD), from which measures of demonstrated body satisfaction were obtained. HFDs were scored independently according to the system developed by Koppitz (1968). Koppitz's method isolates developmental signs related to age and maturity from emotional signs related to attitudes, concerns, and fears. Emotional indicators are statistically significant when two or more are present in a single drawing. The number of emotional indicators in the HFDs was used as the measure of demonstrated body satisfaction.

Procedure

The daily school routine consisted of lessons taught by a single teacher in a large classroom, except for a 30 minute physical education class conducted outdoors during the final hour of the school day. The control group continued to attend the regular physical education class while the experimental group met in the school clinic. All subjects were administered the CBS test both before and after the treatment program. Only the experimental group was given the HFD test. This was administered before, at the midpoint, and upon completion of the program.

Treatment sessions were conducted three times per week for four weeks. Each 30 minute session was taught by one or both of the two junior authors. Subjects were divided into two

groups of three, with each child receiving ample individual attention from the instructor. Sessions consisted of yoga exercises developed for children (Carr, 1973) and awareness exercises based on responses given in the CBS tests and the preliminary HFDs.

A typical treatment began with a special awareness exercise aimed at increasing satisfaction with particular body parts or processes. These exercises were designed to allow the children to experience their body parts with gradual intensity. First, the children received verbal instructions to imagine the target body part. Then they were asked to imagine a situation that was chosen to be rewarding, thus providing covert positive reinforcement (Cautela, 1970). The children were then directed through a kinesthetic experience which focused sensory awareness on the target body part. Finally, subjects were exposed to an interpersonal situation which involved the target in a pleasurable manner. Touching and acceptance by the other children were encouraged and reinforced by the instructors with verbal praise.

As an example, in an exercise designed to affect attitudes toward the feet, the subjects were asked to remove their shoes, lie down, close their eyes, and relax. They were then asked to rise slowly to a standing position, continuing to keep their eyes closed. After a moment of relaxation, the children were told to imagine first walking slowly, then running and jumping, on a large blanket of cotton. They were instructed to step forward slowly, still imaging the cotton to be under their feet, with all the attendant sensations. Finally, the children stepped forward onto an actual clump of cotton and were asked to compare the sensation with the imagined feeling. With their eyes still closed, subjects were led on a blind walk with instructions to concentrate on the sensations in their feet. Following a few moments of reflection and relaxation, the exercise was concluded by a foot massage with oil, first administered by the instructors and then by the other subjects.

The yoga exercises were introduced gradually over the treatment sessions, with two new exercises being added after reviewing the previously practiced exercises. The yoga exercises consisted of assuming the posture of animate or inanimate objects, including the frog, the bird, the camel, and the wheel. These exercises were modeled by the instructor, and then the children were slowly led into the positions by verbal feedback and reinforcement of successive approximations. Subjects were encouraged to initiate their own imitations of the animate and inanimate objects, which the entire group would follow.

The experimental design used for this study was a before-after two-group comparison. Attendance at the treatment sessions was reinforced by giving the subjects a nutritional snack after each session.

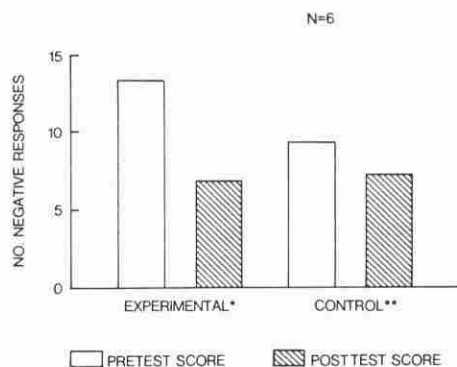
RESULTS

The average number of body parts or processes for which the experimental group reported dissatisfaction on the CBS test decreased significantly by 6.5 points from 13.3 to 6.8, $t(5) = 6.13, p < .01$. All six experimental subjects showed a decrease in the number of body parts or processes reported as unsatisfactory. There was no statistically significant change in the control group's reported body satisfaction. The results of the experimental and control groups pre- and posttreatment CBS test scores are represented in Figure 1.

The results of the experimental group's pre and posttreatment HFD test scores are represented in Figure 2. The number of emotional indicators decreased significantly from 4.0 to 2.7, $t(5) = 6.30, p < .01$ indicating an increase in demonstrated body satisfaction.

DISCUSSION

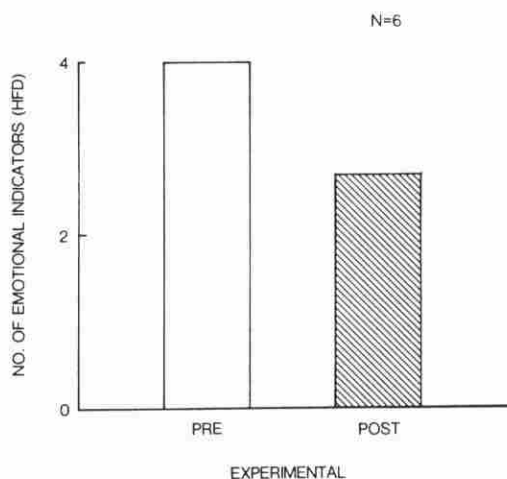
The findings of this study suggest that a group process consisting of awareness training and yoga exercises appears to



*There is a significant decrease in negative responses from pre to post treatment scores from 13.3 to 6.8, ($p < .01$).

**No significant change was reported.

Figure 1. A Comparison of Reported Body Satisfaction as Measured by the Children's Body Satisfaction Test*



*There is a significant decrease in demonstrated emotional indicators from the pre to the post treatment scores from 4.0 to 2.7, ($p < .01$).

Figure 2. A Comparison of Demonstrated Body Satisfaction as Measured by the Human Figure Drawing Test*

facilitate improvement in children's reported and demonstrated satisfaction with their body parts and processes. The subjects' initial body dissatisfaction was hypothesized to be the result of reactions to previous parental or peer evaluations which were introjected into the children's self-concepts. The students appeared to have accepted or perhaps even distorted the negative evaluations made by others. Those children who had come to perceive their bodies as unsatisfactory manifested an anxious reaction toward many physical activities and had habitually withdrawn from such interaction.

The treatment program was designed to change the behavioral-motor habits of these children while providing an experiential-emotional atmosphere in which acceptance and exploration of feelings toward the body were encouraged. The programmed kinesthetic behaviors which were experienced in an accepting environment allowed the children to reevaluate perceptions and to increase acceptance and satisfaction with their bodies.

An effort was made to alter the children's overt behavior of withdrawing from physical activities. Subjects were taken

from the regular physical education classes which they considered unpleasant. The voluntary treatment program reinforced participation in the awareness and yoga exercises, resulting in enthusiastic involvement in a new physical activity. The emotional components of the program consisted of the acceptance of the children's difficulties and fears by the instructors. Individual efforts were encouraged with verbal praise. The attention given to the experimental group was considered by the subjects' classmates as a special privilege.

The purpose of this program was to alter the cognitive-perceptual aspect of the children's body images and to improve body satisfaction. The results indicate that the behavior-motor program combined with the experiential-emotional approach of the instructors achieved this purpose.

Limitations

The current study did not control for the secondary variable sex in the experimental design. Indeed the control group had four boys while the experimental group had none. Subjects were assigned randomly from the original pool of 17 students to either the experimental or the control group. Research indicates differences by sex in perception of body images and associated behaviors. Secord and Remy (1957) concluded that women have more highly differentiated body images than men, as measured by the body-cathexis scale developed by Secord and Jourard (1953). In a study linking Sheldon's body types and behavior (1940), Walker (1962) found many more predictions about behavior were confirmed for boys than for girls, implying that physical factors are more important and determinant of boy's behavior. Future studies should control for sex differences in the experimental design.

Because of manpower constraints and scheduling problems of the students the environment of the control group was not the same as the experimental group. The experimental group was taken inside the school clinic away from their classmates who continued regular physical education activities outdoors. After pretesting the control subjects were allowed to resume their activities with the class outside. In order to minimize laboratory and experimenter bias the control subjects should have been brought inside and led by instructors unaware of the experiment in indoor physical education activities other than yoga and awareness training.

The subjective evaluation of the children's body cathexis or body satisfaction was limited by the constraints of the CBS test. There were only three possible responses which made control of response sets difficult. Secord and Jourard (1953) reported a reliability coefficient of .81 for their Body-Cathexis Test. Split-half reliabilities calculated for the pre and post CBS tests were .77 and .80 respectively, as corrected by the Spearman-Brown formula.

The Human Figure Drawings, HFDs, were scored by an independent judge and one of the experimenters. Because of the simple scoring procedures interrater reliability was 100 percent.

Koppitz (1968) asserts that the HFDs reflect a child's attitudes and concerns toward himself and his body at a given moment and therefore should change over time due to maturation and experience. She was able to differentiate between children with and without emotional problems when two or more emotional indicators were found on HFDs ($X^2 = 69.26$, $P < .001$).

To measure the construct validity of body satisfaction the results of the CBS and the HFD tests were correlated. No positive correlations were found before or after treatment was completed. A positive correlation may have been present if the subjects tested had not presented such a narrow range of the student population. The students selected were chosen because they were not participating in regular physical education activities and presumably had the poorest body images among the class. Future studies should include testing of a sample of all students to insure construct validity.

If improved body-image does indeed improve self image it may be inferred that overall school functioning may also improve. In a six-month follow-up evaluation of the progress of the children it was found that four of five subjects had improved overall academic performance. (A sixth subject's records were unavailable). All subjects had performed satisfactorily in physical education classes. Future studies should include a dependent variable of directly observable behavior related to body satisfaction. For example, it might be expected that the children's social interaction or playground activities would increase as they feel better about their bodies. A single measure of baseline social interaction in this study indicated that four of the six experimental subjects had extremely low levels of interaction with playmates during the physical education activities. A posttreatment single measure of interaction was higher, but this coincided with the closing days of the school year which appeared to have increased the interaction level of all the children.

With these changes, future research in this area could provide additional support for the use of awareness training and yoga exercises in facilitating body satisfaction.

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