A study explored girls' emerging attitudes toward breast care and breast self-exam (BSE) and the extent to which girls had given thought to these issues. Analyses focused specifically on individual differences related to age, stage of breast development, perceived normalcy of breast development, and body image. The sample consisted of 43 white, middle-class girls in grades 5 through 9. All participants completed measures of pubertal development and body image and completed an attitude questionnaire. Results indicated that attitudes toward breast care and BSE were generally positive. Sixty-one percent of the participants indicated that they would allow a physician to examine their breasts, and 60 percent indicated intent to practice BSE as adults. Age was positively associated with knowledge of BSE, having thought about issues related to breast care, and general acceptance of breast care. Both actual stage of breast development and perceived normalcy of breast development were positively related to having thought about issues related to breast care. Affective feelings about the body were not related to either having thought about breast care or being accepting of care. Contains four references. (Author/HTH)
Girls' Attitudes Toward Breast Care and Breast Self-Examination

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This study explored girls' emerging attitudes toward breast care and breast self-exam (BSE) and the extent to which girls had given thought to these issues. Analyses focused specifically on individual differences related to age, stage of breast development, perceived normalcy of breast development, and the body image. The sample consisted of 43 white, middle class girls in grades 5 through 9. All participants completed measures of pubertal development and body image and answered a questionnaire specifically designed for this study. Attitudes toward breast care and BSE were generally positive. 61% of the participants indicated that they would allow a physician to examine their breasts, and 60.5% indicated intent to practice BSE as adults. Age was positively associated with knowledge of BSE, having thought about issues related to breast care, and general acceptance of breast care. Both actual stage of breast development and perceived normalcy of breast development were positively related to having thought about issues related to breast care. Affective feelings toward the body were not related to either having thought about breast care or being accepting of breast care.

INTRODUCTION

This study assesses girls’ early attitudes toward breast care and breast self-exam and explores individual differences in girls’ interest and acceptance. Although this topic is clearly within the realm of health education, this study was conducted as part of a pubertal study that focused on the importance of breast development to young adolescent girls. Accordingly, the approach taken here varies considerably from that which would be taken in a study that focuses primarily on health education.

Health education practitioners emphasize that children’s behaviors are precursors of adult health behaviors, and thus they are often concerned with children’s understanding of health largely for the influence it may have on adult health status. Although this approach is well-accepted and useful, health education efforts geared to the child level can and should have implications for the child now (Roberts, Maddux, & Wright, 1984). Providing children with information about their own bodies may have value in and of itself regardless of whether or not such knowledge eventually translates into desired adult health behaviors.

Age appropriate information about their own bodies may be particularly important to children during pubertal development. Adaptation to the physical changes of puberty and their incorporation into the self-image, long considered to be a major task of adolescence, is actually the continuation of a process that began much earlier. Understanding of the body and personal feelings about the body develop gradually over childhood. The task of understanding physical changes and incorporating them into the self-image is not peculiar to the pubertal period, but this task is believed to have a special significance during the transition from child to adolescent when the tempo of physical change quickens and there is an accompanying qualitative change in cognitive ability. During puberty children are capable of systematically comparing themselves to others and reflecting on the meaning and consequences of physical change.

Most middle school girls are experiencing the physical changes of puberty, and those who are not yet developing are nevertheless part of a cohort that is visibly maturing. These
circumstances are likely to encourage a general interest in, and curiosity about, the body and a more specific interest in the more visible aspects of puberty. Breast development is one of the most visible pubertal changes, and it is often the first change. The appearance of the breast bud, the first stage of breast development, can occur as early as the eighth year (Reynolds & Wines, 1948). As breast development proceeds, young adolescent girls are likely to monitor their physical development and wonder about life changes that accompany physical maturity. Girls may become interested in aspects of women's health care such as gynecological exam and breast self-exam, but this interest is not necessarily an interest in health, not is it necessarily related to a concern for their own health -- now or in the future. Rather, girls interest may stem largely from curiosity about mature bodies and a desire to know about topics that are not openly discussed and are often concealed from younger children.

**METHOD**

**Participants**

The participants in this study were 43 girls in grades 5-9 and 12. Initially, the twelfth graders were recruited in order to provide a comparison group of girls who had completed development. Because of the small number (n = 5), this group was not suitable for this purpose; however, they were retained in the sample in order to provide a full range of scores for physical development. Mean ages of the participants were 10.7 years (5th grade), 11.8 years (6th grade), 12.6 years (7th grade), 13.6 years (8th grade), 14.6 years (9th grade), and 17.5 years (12th grade). With the exception of one 6th grader, within each grade all participants' ages were within 11 months of each other. The correlation between age and grade was nearly perfect (r = .99).

All participants lived in or near a small midwestern city and came from white, middle class families. The girls were predominantly Catholic and attended one of two small, private Catholic schools. The fifth and sixth grade girls attended a middle school, while the 7th through
12th grade girls attended a junior-senior high school. Most grades had less than 50 students, with approximately half being girls. The schools are closely affiliated, and graduates of the middle school typically attend the high school.

Both schools facilitated the recruitment of participants by having all girls in the designated grades meet briefly with the researchers. The primary researcher described the study to the girls and answered their questions, and a letter was given to each girl to take home to her parents. In addition to a description of the project, the parent letter contained a parents' consent form on which parents could indicate whether or not their daughter(s) wished to participate. Each school provided a letter of support that was included with the parent letter. A total of 132 parent letters were sent. Seventy-nine (60%) were returned, and of these 46 (58%) gave consent.

Measures

The Pubertal Development Scale. The Pubertal Development Scale (PDS; Petersen, Crockett, Richards, & Boxer, 1988) consists of seven items, and is used to classify young adolescents into one of three developmental categories: Early, on-time, or late. The PDS asks participants to rate their growth spurt, the appearance of body hair, skin changes (such as pimples), and breast development. It also asks for date of first menstruation (if applicable) and for present height and weight. Reliability and validity for this scale have been established (Petersen et al., 1988), however, based on pretesting, we added explanations to some of the items (e.g., an explanation of the “growth spurt”).

The Body Image Subscale of the Self-Image Questionnaire for Young Adolescents. The Body Image Subscale (BIS) of the Self-Image Questionnaire for Young Adolescents (SIQYA; Petersen, Schulenberg, Abramowitz, Offer, & Jarcho, 1984) consists of 11 items that are answered using a 6-point Likert-type format. The scale is scored so that a high score represents a positive body image. Based on pretesting, the responses were modified slightly in order to increase the distinctiveness of the possible responses. That is, the responses indicating “strong agreement/disagreement,” “agreement/disagreement,” and “hesitant agreement/disagreement”
were punctuated with an exclamation mark, a period, and a question mark, respectively. Choices could range from (1) “This describes me very well!” to (6) “This definitely doesn’t describe me at all!” Examples of items included on this scale are: “I am proud of my body,” “I frequently feel ugly and unattractive,” and “I feel strong and healthy.” Reliability and validity for the SIQYA have been established (Petersen et al., 1984). Cronbach’s alpha for the subscale was .78 for the sample in this study.

The Daughters’ Questionnaire. This questionnaire was created specifically for this study. It consisted of 60 questions for which responses could range from (1) “This describes me very well!” to (7) “This definitely doesn’t describe me at all!” A midpoint of 4 indicated that the respondent had no opinion about the item. The questions included 40 items pertaining to various aspects of breast development, 10 items pertaining to breast care and breast self-exam, and 10 items pertaining to breastfeeding. Because some girls might never have considered the content of some of the items, the 20 questions pertaining to breast care and breastfeeding included an additional response option. Each item was followed by a blank labeled “never thought about this.” Participants who had never thought about a particular question were asked to check this blank and not circle a numbered response. Items were scored so that a high score represented a high degree of acceptance. Not all items from this questionnaire were used in the analyses reported here.

Procedure

The questionnaires were administered at the girls’ schools during regular school hours. Each school designated a room to be used for the project. Participating girls were released from their classes, and they walked to the project room unescorted. As the girls arrived, they were asked to take any seat at which a questionnaire packet had been placed. Girls were instructed not to open their packets until everyone had arrived and instructions had been given to them. Seating was arranged to ensure each girl’s privacy. The girls worked at their own pace, and returned to their classrooms once they had completed the questionnaires.
RESULTS

Responses to the breast care items are shown in Table 1.

Breast Self-Examination

53.5% of the participants indicated that they knew what breast self-exam (BSE) was, and 60.5% indicated that they intended to practice BSE when they are older. Older girls were more likely to know about BSE than younger girls, $F(41,1) = 10.2, p < .0005$, and they were also more likely to indicate intent to practice BSE, $F(31,1) = 6.07, p < .02$.

Physician Examination

61% of participants would allow a doctor to examine their breasts while 21% would not. 54% would prefer a female doctor; 28% would prefer a male doctor. (Totals not equal to 100% due to undecided responses.) Younger girls were no more likely than older girls to prefer a female doctor, $F(33,1) = 0.29$, n.s.

Thought Given to Breast Care and Related Issues

The number of times each girl used the “I've never thought about this” option was tallied and used to create the variable “never thought.” Younger girls (Grades 5 & 6) were more likely than older girls to use the never thought option, $F(41,1) = 4.07, p < .05$. Girls whose breast development had not begun or had barely begun were more likely to use the never thought option than girls whose development was well-underway or completed, $F(41,1) = 6.21, p < .01$. There was no relationship between scores on the BIS and use of the never thought option, $F(41,1) = .02$, n.s.
Perceived Normalcy

Three items from the breast development questionnaire were used to create an index of perceived normalcy of breast development. These items are shown in Table 2. Cronbach's Alpha for the items was .91. Perceived normalcy was not significantly correlated with age but was correlated with stage of breast development, \( r(43) = .34, p < .02 \), and also with BIS scores, \( r(43) = .37, p < .01 \). Girls who perceived that their breast development was not normal were more likely to use the never thought option than girls who perceived that their development was normal, \( F(41,1) = 2.52, p < .10 \).

Acceptance

Five items were used to create an index of acceptance toward breast care. These items are shown in Table 3. Cronbach's Alpha was .72. Older girls were more accepting of breast care than younger girls, \( F(30,1) = 4.45, p < .05 \). There was no difference in acceptance for stage of breast development, \( F(30, 1) = 0 \). Girls with lower BIS scores (negative body image) did not differ in acceptance from girls with higher BIS scores (positive body image), \( F(30,1) = .23, \text{n.s.} \). There was also no difference in acceptance for perceived normalcy of breast development, \( F(29,1) = 0 \). Girls who were accepting were not more likely than girls who were unaccepting to indicate that they allow a doctor to examine their breasts, \( F(28,1) = .03, \text{n.s.} \), nor were they more likely to indicate intent to practice BSE as adults, \( F(26,1) = .10, \text{n.s.} \).
DISCUSSION

Although the older girls in this sample were more likely to be accepting of breast care, this study does not indicate that younger girls are unaccepting or that they would not be receptive to information. Younger girls were less likely to have relevant information or to have thought about breast care and related issues, and thus they were less able to give definitive responses. But as early as 5th grade some girls had thought about breast care. Relatively few girls indicated that they had never thought about the two learning items, and many girls had thought about physician examination and self-examination.

Both self-reported stage of breast development and perceived normalcy of breast development were related to whether or not girls had thought about issues related to breast care. Girls whose breast development was well-underway or completed, and girls who perceived their breast development to be normal, were more likely to have thought about breast care issues than girls in earlier stages of breast development or girls who did not feel that their development was normal. These results suggest that girls’ first concern is becoming comfortable with and accepting their own pubertal development, and that they would be more receptive to information about breast care once their need to address more immediate concerns was met. This has clear implications for the practice of health education. Most likely girls would benefit from learning about breast care within the context of learning about pubertal changes and their own bodies as opposed to learning within the context of general health-related issues.

Although this study is preliminary and exploratory in nature the results will be helpful in planning future, large-scale studies of girls’ attitudes toward breast care and their perceived educational needs related to pubertal development, health, and acceptance of a mature female body.
REFERENCES


