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Age and Gender Differences Expressed Through Drawings: A Study of Attitudes Toward Self and Others

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Abstract

This study investigated gender and age differences in attitudes expressed in response to a drawing task. Subjects included 531 respondents in five age groups: children ages 7–10, younger adolescents ages 13–16, older adolescents ages 17–19, younger adults ages 20–50, older adults ages 65 and older.

Although proportionally more females than males drew pictures about relationships, and more males than females drew pictures about solitary subjects, these differences did not reach statistical significance. However, when the attitudes expressed toward self and others were taken into account, significant differences were found.

- 1. Respondents tended to choose and draw subjects the same gender as themselves to a highly significant degree.*
- 2. Males expressed positive attitudes toward solitary subjects, negative attitudes toward relationships to a highly significant degree.*
- 3. Females expressed positive attitudes toward solitary subjects, both positive and negative attitudes toward relationships to a highly significant degree.*
- 4. Males showed significantly higher frequency than females in drawing about assaultive relationships. However, age and gender differences interacted resulting in a significant age variability in assaultiveness for females but*

not for males. The proportion of older women who drew pictures about assaultive fantasies exceeded the proportion of older men who did so, as well as the proportion of all other female age groups.

- 5. A converse age and gender interaction was found for caring relationships. Males showed significant age variability whereas females had significant frequency of caring relationships across all age groups. The proportion of younger men who drew pictures about caring relationships exceeded the proportion of younger women who did so, as well as the proportion of all other male age groups.*

Introduction

This study asked whether responses to a drawing task can express attitudes toward self and others, whether males and females have characteristically different attitudes, and if so, whether attitudes change from youth to maturity to old age.

Although these questions are not usually asked by art therapists, answers may provide useful norms for evaluating emotional needs as well as more accurate expectations. For example, several studies have found that males focus on independence and competition, that females focus on connectedness and caring for others, and that our school systems favor the male point of view (Gilligan, Ward, & Taylor, 1988; Tannen, 1991; *The American Association of University Women Report*, 1992). These studies based their findings on academic achievement and verbal communication.

Editor's note: This research study received the 1992 Research Award of the American Art Therapy Association. It is included in this special issue of *Art Therapy* to highlight Dr. Silver's professionalism and commitment to art therapy research.

This paper presents an expansion of a study of gender differences in drawings by children (Silver, 1992). It considers the same questions but expands the inquiry and includes adolescents and adults. The underlying **theory**—that drawings can yield information about differences between genders and age groups—received some support in another previous study (Silver, 1987). Differences between genders were found in the emotional content of drawings across four age groups: third graders, high school seniors, younger adults, and older adults. The male groups consistently portrayed more negative environments inhabited by positively seen subjects; female groups seemed to relate subjects to environments, portraying fortunate subjects in pleasant worlds and unfortunate subjects in unpleasant worlds. These **differences** were significant across the four age groups. To the extent that the principal subject of a drawing reflects the self-image of the person who draws it, and the environment reflects the way that person perceives the world, the findings suggested that boys and men tend to see themselves as fighting in a dangerous world, while women and girls tend to see themselves as part of the world rather than opposing it.

The case for unconscious representation of the self in human figure drawings has not been firmly established, according to Harris (1963). He suggests that the concept defies objective validation and questions the theories of Machover (1949) and Buck (1948). Harris also cites studies of gender differences by Jolles (1952) who found that 80% of children ages five to eight drew their own sex first, and by

Schubert and Wagner (1954) who found that a smaller proportion of women drew the female figure first than the proportion of men who drew the male figure first.

The present study is an attempt to clarify previous findings by asking three questions:

1. Do respondents to a specific drawing task choose same-gender subjects to a significant degree, supporting the view that the subjects of drawings reflect self-images?
2. Do women and girls respond to a specific drawing task with drawings about interpersonal relationships, while men and boys respond with drawings about solitary subjects?
3. Can responses to a drawing task provide information about age and/or gender differences in expressing attitudes toward solitary subjects and **relationships**, and if so, can this information clarify expectations and identify emotional strengths and weaknesses?

Methodology

In response to the first question, the genders of respondents were compared with the genders of principal subjects in their drawings. For answers to the second question, genders were compared after dividing responses into two groups: those portraying solitary subjects and those portraying relationships. For answers to the third question, responses were assessed on a five-point rating scale (see Figure 1).

Attitudes Toward Solitary Subjects

- 1 point: Strongly negative: for example, solitary subjects who are **sad**, helpless, or dead; the future seems hopeless.
- 2 points: Moderately negative: for **example**, solitary subjects who are angry, frightened, dissatisfied, or unfortunate.
- 3 points: Intermediate level: neither negative nor positive (unemotional) or both negative and positive (ambivalent or ambiguous).
- 4 points: Moderately positive: solitary subjects associated with passive enjoyment, for example, watching TV or being rescued.
- 5 points: Strongly positive: solitary subjects associated with active enjoyment, accomplishment, for example, drinking soda or escaping.

Attitudes Toward Relationships

- 1 point: Strongly negative: for **example**, life-threatening or assaultive relationships.
- 2 points: Moderately negative: for example, stressful, **hostile**, confrontational, or unpleasant relationships.
- 3 points: Intermediate level: neither negative nor positive (unemotional) or both negative and positive (ambivalent or ambiguous).
- 4 points: Moderately positive: for example, friendly or pleasurable relationships.
- 5 points: Strongly positive: for example, caring or loving relationships.

Figure 1 Rating Scale for Assessing Attitudes Toward Solitary Subjects and Relationships Expressed in Response to the Drawing Task

Age and gender groups were then compared in terms of percentages and mean scores.

Subjects

Subjects for the study included 531 children and adults, 257 male, 274 female. Five age groups were sampled: children ages 7 to 10, young adolescents ages 13 to 16, older adolescents ages 17 to 19, younger adults aged 20 to 50, and older adults ages 65 and older.

The children included 116 girls and 145 boys attending grades 2, 3, and 4 in urban and suburban elementary schools in New Jersey, New York, Pennsylvania, and Ontario, Canada. Seven schools were public and one was parochial. The young adolescents included 28 females and 37 males attending grades 8 to 10 in three public urban and suburban schools in Pennsylvania and New York. The older adolescents included 38 females and 22 males attending 12th grade classes in New York urban and suburban public high schools, as well as a class of college freshman in Nebraska.

The sample of younger adults included 61 women and 25 men who attended lectures or workshops and responded to the drawing task anonymously. The older adults included 28 men and 31 women over the age of 65 who lived independently in their communities and responded anonymously to the drawing task while attending recreational programs or social occasions.

The Drawing Task

Respondents were asked to choose two drawings from the array of *Silver Drawing Test* (SDT) stimulus drawings, imagine something happening between the subjects they chose, then draw a picture of what they imagined. They were encouraged to change the stimulus drawings and to add their own ideas. When drawings were finished, they were given titles and discussed, whenever possible, so that meanings could be clarified. Examples of stimulus drawings are shown in Figure 2.

The Assessment Instrument

The assessment instrument (Figure 1) was adapted in part from a scale in the *Silver Drawing Test* (SDT, Silver, 1990), a five-point continuum ranging between strongly negative and strongly positive themes. It was also adapted from the scale in *Stimulus Drawings and Techniques* (Silver, 1991) which was used in the 1987 study. Relationships be-

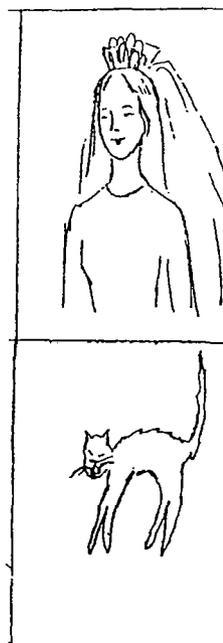


Figure 2. Examples of stimulus drawings.

tween the two previous scales have been examined in a study of interscorer reliability in which 12 of the 24 scored drawings were responses to the *Stimulus Drawing* task and 12 were responses to the SDT task. No significant differences in mean ratings were found ($t(22) = .8$). Thus, there appears to be consistency of measurement between the scales. In addition, the new scale was developed from the scale used in the 1992 study (which was based on the two previous scales), but, in addition, distinguished between autonomous subjects and relationships.

Procedures

Responses were divided into two groups: drawings about solitary subjects and drawings about relationships between subjects. These were then examined for gender differences and similarities. It was theorized that respondents who drew solitary subjects thought of themselves as alone while those who drew relationships thought of themselves as part of a group. A solitary principal subject was defined as a person or animal acting autonomously, either the only living subject of a drawing or, if several living subjects are portrayed, they act independently or appear indifferent to one another. Drawings about relationships were defined as drawings of people or animals interacting with one another. The relationships may be visible in the drawing, verbalized in the story, or else implied.

Because the sample of children was considerably larger than any other sample, it was felt that an additional perspective on gender differences would be gained by equalizing the number of subjects in each group and obtaining mean scores on the five-point rating scale. With this in mind, 20 subjects from each of the age and sex groups were selected at random (N=200) and mean scores of the 100 males and 100 females were compared. Although these numbers are too small for a reliable statistical analysis, they provided interesting information and raised questions for further research.

Results

Question 1. Do respondents to a specific drawing task choose same-gender subjects to a significant degree, supporting the view that the subjects of drawings reflect self-images?

Most respondents chose same-gender subjects. Among the 257 males in our sample, 54% chose male principal subjects, 11% chose female subjects, as shown in Table 1. Among the 274 females, 52% chose female subjects, 11% chose male subjects, as shown in Table 2. To determine whether they drew same-gender subjects to a significant degree, a 2 X 2 chi square (X^2) was calculated utilizing those males and females who clearly drew human subjects in their response drawings (N=338). Results indicated

that respondents who drew human subjects, drew same-gender subjects to a degree significant at the .001 level of probability ($X^2 = 145.839 p < .001; 0 = .657$). The phi coefficient (ϕ) was calculated on the chi square to determine the strength of the relationship. The phi coefficient ranges from 0, a weak or nonexistent relationship, to 1, a very strong, definitive relationship.) This finding seems to support the assumption that responses to projective drawing tasks tend to be self-gender images.

Another similarity between genders was found in the choice of animal subjects (34% males, 31% females) which seemed to serve as human symbols, consciously or unconsciously disguised. This observation was illustrated in the response of an older man who apparently drew an analogy: man chases women as dog chases cats (Figure 3).

The tendency to choose same-gender subjects peaked in childhood (63% girls, 59% boys) and reached its lowest level among adults. A surprising difference between genders also appeared. Among younger adults, the tendency to choose same-gender subjects declined to virtually the same level (40% men, 39% women). Among older adults, however, the decline continued among older women, but reversed among the older men, most of whom, like the sample of boys, chose male subjects (boys 59%, older men 54%).

Only 19% of the older women chose same-gen-

Table 1
The Gender of Principal Subjects in Drawings by 257 Men and Boys

Age, Number	Male Subjects	Female Subjects	Animal Subjects	Unclear
7-10, N= 145	86 (59%)	09 (6%)	50 (34%)	0
13-16, N= 37	17 (46%)	03 (8%)	17 (46%)	0
17-19, N= 22	10 (45%)	04 (18%)	08 (36%)	0
20-50, N= 25	10 (40%)	06 (24%)	05 (20%)	4 (16%)
65+, N= 28	15 (54%)	05 (18%)	07 (25%)	1 (4%)
257	138 (54%)	27 (11%)	87 (34%)	5 (2%)

Table 2
The Gender of Principal Subjects in Drawings by 274 Women and Girls

Age, Number	Male Subjects	Female Subjects	Animal Subjects	Unclear
7-10, N= 116	12 (10%)	73 (63%)	31 (27%)	0
13-16, N= 28	05 (18%)	16 (57%)	07 (25%)	0
17-19, N= 38	05 (13%)	23 (61%)	10 (26%)	0
20-50, N= 61	06 (10%)	22 (39%)	26 (43%)	05 (8%)
65+, N= 31	03 (10%)	06 (19%)	09 (29%)	13 (42%)
274	31 (11%)	142 (52%)	83 (31%)	18 (7%)

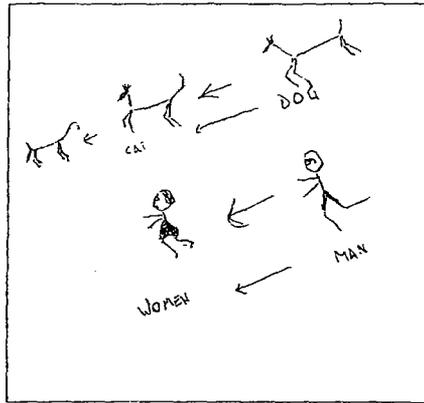


Figure 3. Drawing by an older man.

der subjects, a proportion **smaller** than any other age or gender group. It should be noted, however, that 42% of the older women, a proportion larger than any other age or gender group, drew genderless human subjects. By **comparison**, all the children and adolescents who drew human subjects drew them as male or female.

Question 2. Do women and girls respond to a specific drawing task with drawings about interpersonal relationships, while men and boys respond with drawings about solitary subjects?

Although proportionally more females than males drew pictures about relationships, and more males than females drew pictures about solitary subjects, these differences did not reach statistical significance. As shown in Table 3, of the 257 men and boys in the sample, 44% drew solitary subjects, 56% drew relationships. Of the 274 women and girls, 39% drew solitary subjects, 61% drew relationships. Both genders drew more relationships than solitary subjects.

These findings may seem to deny that males

tend to focus on self-sufficiency and females on responsibility and care, but when *attitudes* were taken into account, as in the third question, significant differences were found.

Question 3. Can responses to a drawing task provide information about age and/or gender differences in expressing attitudes toward solitary subjects and relationships, and if so, can this information clarify expectations and identify emotional strengths and weaknesses?

Proportionally more men and boys expressed positive attitudes toward solitary subjects (63% positive, 17% negative), negative attitudes toward relationships (57% **negative**, 26% positive) as shown in Tables 4 and 5. These differences were significant at the .001 level of probability ($X^2 = 46.971$, $p < .001$; $\phi = .474$).

Proportionally more women and girls also expressed positive attitudes toward solitary subjects (68% positive, 17% negative) as shown in Table 6. Their drawings about relationships, however, were both positive and negative (46% negative; 41% positive, as shown in Table 7. These findings, too, were significant at the .001 level of probability ($X^2 = 25.32$, $p < .001$; $\phi = .327$).

In addition, chi-square analyses were conducted on the frequency of particular attitudes expressed by males and females in the five age groups. The data on this analysis were limited to the frequencies of four attitudes: assaultive relationships, caring relationships, active solitary pleasures, and passive solitary pleasures.

Males showed a significantly higher frequency than females of drawings about assaultive relationships ($X^2(1) = 9.38$, $p = <.01$). However, gender and age differences interact ($X^2(4) = 13.07$, $p <.05$), resulting in a significant age variability in **assaultiveness** for females ($X^2(4) = 11.89$, $p <.05$), but

Table 3
Comparing Genders in Drawings About Solitary Subjects and Relationships

Age, Number	Drawings by 257 Males		Drawings by 274 Females		
	Solitary S.	Relationships	No.	Solitary S.	Relationships
7-10, N= 145	67 (46%)	78 (54%)	N= 116	43 (37%)	73 (63%)
13-16, N= 38	15 (39%)	23 (61%)	N= 28	09 (32%)	19 (68%)
17-19, N= 21	06 (29%)	15 (71%)	N= 38	16 (42%)	22 (58%)
20-50, N= 25	12 (48%)	13 (52%)	N= 61	22 (36%)	39 (64%)
65+, N= 28	14 (50%)	14 (50%)	N= 31	16 (52%)	15 (48%)
N=257	114 (44%)	143 (56%)	N=274	106 (39%)	168 (61%)
M+F =531	114* = 21%	143 = 27%		106 = 20%	168 = 32%

Table 4
Attitudes Toward Solitary Subjects in Responses by Boys and Men

Age, Number	Score				
	1. Sad or Helpless	2. Frustrated or Frightened	3. Ambivalent, Unemotional or Unclear	4. Passive Pleasure	5. Active Pleasure
7-10, N = 67	3 (4%)	3 (4%)	13 (19%)	29 (43%)	19 (28%)
13-16, N = 15	0	3 (20%)	3 (20%)	3 (20%)	6 (40%)
17-19, N = 6	0	2 (33%)	1 (17%)	2 (33%)	1 (17%)
20-50, N = 12	0	5 (42%)	1 (8%)	2 (17%)	4 (33%)
65+, N = 14	0	3 (21%)	5 (36%)	3 (21%)	3 (21%)
Total N = 114	3 (3%)	16 (14%)	23 (20%)	39 (34%)	33 (29%)
	Negative: 19 (17%)			Positive: 72 (63%)	

Table 5
Attitudes Toward Relationships in Responses by Boys and Men

Age, Number	Score				
	1. Assaultive	2. Stressful	3. Ambivalent, Unemotional or Unclear	4. Friendly	5. Caring
7-10, N = 78	15 (19%)	22 (28%)	17 (22%)	13 (17%)	11 (14%)
13-16, N = 23	8 (35%)	6 (26%)	6 (26%)	2 (9%)	1 (4%)
17-19, N = 15	7 (47%)	5 (33%)	1 (7%)	0	2 (13%)
20-50, N = 13	2 (15%)	4 (31%)	0	1 (8%)	6 (46%)
65+, N = 14	3 (21%)	9 (64%)	1 (7%)	1 (7%)	0
Total N = 143	35 (25%)	46 (32%)	25 (17%)	17 (12%)	20 (14%)
	Negative: 81 (57%)			Positive: 37 (26%)	

not males. In other words, female assaultiveness appeared to change with age, whereas male assaultiveness remained stable.

The converse age and gender interaction was found for caring relationships ($X^2(4) = 12.52, p < .05$). Males showed significant age variability ($X^2(4) = 13.10, p < .05$), whereas females had similar frequency of caring relationships across age groups.

No significant age or gender effects occurred for passive and active pleasures.

When attitudes toward relationships and solitary subjects were examined in greater detail some intriguing differences appeared:

1. Negative Attitudes Toward Relationships

Strongly negative (assaultive, 1 point). Proportionally more older women than older men responded with fantasies about aggressiveness (27% females, 21% males), the only age group in which females surpassed males, as shown in Tables 5 and 7. The least difference between genders was found among older adults; the greatest difference was found among children and younger adults. Five times as

many younger men as younger women drew pictures about assaultive relationships (15% men, 3% women) and approximately four times as many boys as girls (19% boys, 5% girls). In both adolescent groups, about twice as many males as females drew pictures about assaultive relationships. The fantasies about assaultive relationships followed similar patterns with both genders, increasing with age from third graders to younger adolescents and to older adolescents, dropping to their lowest levels with younger adults, and rising with older adults.

Moderately negative (stressful relationships, 2 points). Although little difference between genders was found in drawing about stressful relationships (males 32%, females 36%), noteworthy differences appeared when age groups were examined.

Proportionally more older men expressed fantasies about stressful relationships (5-1%), than any other age or gender group. Also high was the proportion of younger adolescent girls (53%). An example is shown in Figure 4. The smallest proportion (14%) was found among older adolescent girls.

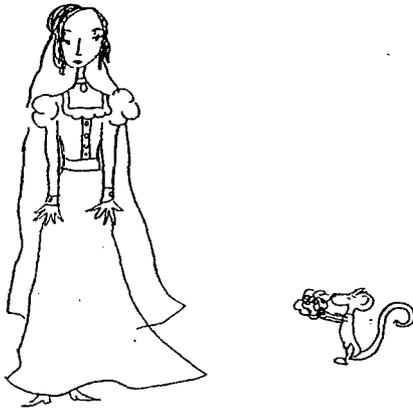


Figure 4. Drawing by a girl, age 11.

2. Positive Attitudes Toward Relationships

When caring and friendly relationships were combined, the female age groups excelled (41% females, 26% males). Differences appeared, however, when caring and friendly relationships were examined separately.

Strongly positive (caring relationships, 5 points). Almost no gender differences were found in drawings about caring relationships (15% females, 14% males); age differences, however, were found. The younger men produced the largest proportion of drawings about caring relationships (46%), a proportion surpassing all other male and female age groups (Figure 5). By comparison, only 10% of the younger women drew pictures about caring relationships. Among female age groups, the greatest disparities were found among adolescents (27% older adolescents, 5% younger). Among male age groups, the

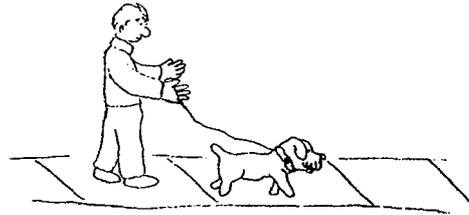


Figure 5. Walking my dog, by a young man.

Table 6
Attitudes Toward Solitary Subjects in Responses by Girls and Women

Age, Number	Score				
	1. Sad or Helpless	2. Frustrated or Frightened	3. Ambivalent, Unemotional or Unclear	4. Passive Pleasure	5. Active Pleasure
7-10, N = 43	2 (5%)	4 (9%)	7 (16%)	24 (56%)	6 (14%)
13-16, N = 9	1 (11%)	0	0	6 (67%)	2 (22%)
17-19, N = 16	0	3 (19%)	2 (13%)	8 (50%)	3 (19%)
20-50, N = 22	1 (5%)	4 (18%)	1 (5%)	10 (45%)	6 (27%)
65+, N = 16	2 (13%)	1 (6%)	6 (38%)	2 (13%)	5 (31%)
Total N = 106	6 (6%)	12 (11%)	16 (15%)	50 (47%)	22 (21%)
	Negative: 18 (17%)			Positive: 72 (68%)	

Table 7
Attitudes Toward Relationships in Responses by Girls and Women

Age, Number	Score				
	1. Assaultive	2. Stressful	3. Ambivalent, Unemotional or Unclear	4. Friendly	5. Caring
7-10, N = 73	4 (5%)	29 (40%)	7 (10%)	21 (29%)	12 (16%)
13-16, N = 19	3 (16%)	10 (53%)	2 (11%)	3 (16%)	1 (5%)
17-19, N = 22	5 (23%)	3 (14%)	2 (9%)	6 (27%)	6 (27%)
20-50, N = 39	1 (3%)	16 (41%)	6 (15%)	12 (31%)	4 (10%)
65+, N = 15	4 (27%)	3 (20%)	4 (27%)	2 (13%)	2 (13%)
Total N = 168	17 (10%)	61 (36%)	21 (13%)	44 (26%)	25 (15%)
	Negative: 78 (46%)			Positive: 69 (41%)	

smallest proportion was found among younger adolescents(4%).

Moderately positive (friendly relationships, 4 points). Approximately twice as many females as males drew pictures about friendly relationships (26% females, 12% males), and all age groups followed this pattern of gender differences.

3. Negative Attitudes Toward Solitary Principal Subjects

When strongly and moderately negative attitudes were combined, no gender differences were found (17% of both males and females). When they were separated, however, differences again appeared.

Strongly negative (sad or helpless, 1 point). Although few respondents drew pictures about sad or helpless principal subjects, the proportion of females doubled the proportion of males (6% females, 3% males) as shown in Tables 4 and 6. When age groups were examined, the largest proportions were produced by the sample of older women (13%) and younger adolescent girls (11%) (Figure 6). None of



Figure 6. "The Dying Bride," by a girl, age 14.

the older adolescent girls and only 5% of the children and younger women drew sad or helpless solitary subjects. Only three of the 114 male respondents drew sad or helpless solitary subjects, and all three were boys ages 7 to 10.

Moderately negative (frustrated or frightened, 2 points). A larger proportion of males than females drew angry or frightened solitary subjects (14% males, 11% females).

4. Positive Attitudes Toward Solitary Subjects

Strongly positive (active pleasures, 5 points). Larger proportions of males than females associated solitary subjects with active pleasures (29% males, 21% females), except for the older women who reversed the tendency. A large proportion of older women than older men associated solitary subjects with active pleasures (31% women, 21% men).

Moderately positive (passive pleasures, 4 points). Larger proportions of females than males associated solitary subjects with passive pleasures (47% females, 34% males). The largest proportion was found among younger adolescent girls (67%); the largest male proportion among boys (43%).

In comparing mean scores, the females expressed more positive attitudes toward relationships than did males; males expressed more positive attitudes toward solitary subjects than did females, as shown in Table 8. Except for the sample of younger men, age groups among both genders had higher mean scores for solitary subjects than for relationships. The spread was greater for males than for females. The younger men received mean scores of 3.70 in both categories.

In attitude toward relationships, the younger men received a higher mean score, expressing more

Table 8
Comparing Mean Scores of 100 Males and 100 Females
for Age and Gender Differences in Attitudes Toward Solitary Subjects
and Toward Relationships

Age Group (N = 20)	Responses by 100 Males		Responses by 100 Females	
	Solitary Subjects	Relationships	Solitary Subjects	Relationships
1. 7-10	4.0	2.0	4.0	3.08
2. 13-16	4.5	2.25	3.59	2.62
3. 17-19	3.69	2.0	3.86	2.62
4. 20-50	3.70	3.70	3.33	3.27
5. 65+	<u>3.50</u>	<u>1.92</u>	<u>3.25</u>	<u>2.42</u>
Total Scores	19.39	11.87	18.03	15.16
Mean Scores	3.88	2.37	3.61	3.03

positive attitudes than any other age or gender group. The older men received a lower mean score, expressing more negative attitudes than any other age or gender group.

In attitudes toward solitary subjects, the younger male adolescents received a higher mean score expressing more positive attitudes than any other age or gender group. The older women received a lower mean score, expressing more negative attitudes than any other age or gender group.

Discussion and Summary

The findings of this study, built on previous findings, seem to support the assumption that the principal subjects of **projective** drawings tend to represent self-images. Respondents who drew human subjects, drew same-gender subjects to a degree that was highly significant at the .001 level of probability. For art therapists, this finding provides evidence that looking for overt and covert self-images in projective drawings is appropriate and productive. It should be noted, however, that even though comparatively few respondents drew principal subjects of the opposite sex, this finding may also have useful implications. These respondents, particularly the adults, tended to express *negative* attitudes toward opposite-gender subjects. Although the numbers were too small for statistical analysis, this observation suggests that further study with additional respondents would be worthwhile.

The study did not find that females draw pictures about relationships and that males draw pictures about independent solitary subjects. Although proportionally more females than males drew relationships, and more males than females drew solitary subjects, these differences were not statistically significant.

When responses were examined for particular attitudes, significant differences were found between age groups as well as gender groups. Males showed a stable and significantly higher frequency of drawings about assaultive relationships, as might be expected. It was surprising, however, to find that females showed significant age variability in drawings about assaultiveness. Female fantasies about being **assaultive** appeared to change with age. The proportion of women age 65 and older not only surpassed the proportion of older men as well as all other female age groups, but also surpassed the proportion of all male age groups combined.

When drawings about caring relationships were evaluated, it was surprising to find that males

showed significant age variability. The proportion of younger men ages 20 to 50 not only surpassed the proportion of younger women as well as all other male age groups, but also surpassed the proportion of all female age groups combined. Again, the numbers were too small for statistical analysis, but hold promise for future studies.

The findings of this study raise questions about traditional expectations regarding ages and genders. It is usually **expected** that males are **more** aggressive and that females are more caring. Some investigators attribute these differences to social pressures and the way children are raised. Others look to biological causes, such as hormones which program males for aggression and competitiveness and females for caring and nurturing. One explanation for the finding about men age 20 to 50 fantasizing about caring relationships could be that they are biologically programmed to protect and care for their families. An explanation for the finding about older women fantasizing about aggression could be the effect of menopause on the production of estrogen and progesterone.

In any event, the findings seem to suggest that drawings can serve to identify age/gender differences in attitudes. If expanded, the findings may eventually provide norms on which to base more accurate expectations as well as information about emotional needs. For example, the older adults expressed more negative attitudes than any other age group. These findings suggest a need for thorough follow-up when drawings about sad, solitary subjects or stressful relationships are found.

On the other hand, it is important to note that many of the negative responses by older adults were characterized by sardonic or self-disparaging humor. The implication seems to be that art therapists who work with the elderly can expect to find not only frailties, but also wit and **resilience**.*

I hope some readers will be interested in joining this ongoing study by presenting the drawing task to additional respondents. If the sample populations can be expanded, some of the tentative findings reported here could be clarified.

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*For further details about the study of older adults, see Silver, in press.

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