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# Social Skills and Satisfaction with Social Relationships in Home-Schooled, Private-Schooled, and Public-Schooled Children

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**Abstract**

Despite the fact that 1.5 to 2.1 million children are home-schooled, there is limited research on the impact of home-schooling on children's social skills. This study compares 53 home-schooled, 49 private-schooled, and 48 public-schooled children between the ages of 8 and 12 on social skills, as measured by the Parent and Student Forms of the Social Skills Rating System (SSRS). In addition, the groups' satisfaction with social relationships were compared using the Peer Network and Dyadic Loneliness Scale (PNDLS), the Loneliness and Social Dissatisfaction Questionnaire (LSDQ), and the Friendship Qualities Scale (FQS). There were significant differences between the home-schooled children and private-schooled children on the SSRS-Student Form and between home-schooled children and the public-schooled children on the FQS.

ALTHOUGH IT IS difficult to determine the exact number of American children who are home-schooled, researchers estimate the figure at 1.5 to 2.1 million (Lines, 1998; Ray, 1998). Despite the growing popularity of this educational option, relatively little research has been done on its efficacy. This is, no doubt, due at least in part to the methodological difficulties involved in studying home-schooled children (see Medlin, 2000, for a review). For example, recruiting participants to such studies is difficult for numerous reasons. Public schools may be reluctant to participate in studies on this topic. Home-schooling families may also be difficult to recruit, in part because they cannot be required to participate in such studies and also because families prefer not to come to the attention of individuals perceived as being in authority. As a result, volunteer bias, which is a concern in many psychological studies, may be of special concerns in these studies. Additionally, those families who are willing to participate may be over-researched. In addition, studies comparing home-schooled and other-schooled children can never be experimental in design, as it would be both impossible and unethical to randomly assign children to a certain type of schooling. As a result, there are many potential confounds that may interfere with the ability to make conclusions regarding the effects of home-schooling.

Of the little research that has been conducted on home-schooling, much of it has focused on the academic benefits of home-schooling, with most studies finding that home-schooled children outperform their traditionally schooled peers (see Ray, 2000 for a review). Far less research has been conducted on the social skills of home-schooled children. This is unfortunate, given that social skills are a major focus of the critics of home-schooling (Gray, 1993; Mayberry, Knowles, Ray, & Marlow, 1995). Specifically, critics express concern that home-schooled children do not develop adequate social skills because they are not exposed to the same number or types of people as are traditionally schooled children (Harris, 1995).

Several writers have pointed out the fallacy of these concerns. They have noted, for example, that home-schooled children are often involved in many extracurricular activities (e.g., sports teams and clubs) that provide social contact (Rakestraw, 1988; Ray, 1990, 1997, 2003; Wartes, 1988, 1990). In addition, home-schooled children are more likely to be exposed to a wide variety of people, rather than being limited to contact with same-age, demographically similar children, as are children in public schools (Tillman, 1995). Finally, self-report measures with home-schooling parents indicate that parents, too, are concerned about their children's socialization (Gray, 1993; Gustafson, 1988; Howell, 1989; Mayberry et al., 1995; Van Galen, 1987; Van Galen & Pitman, 1991). However, they are concerned about the negative peer influences that their children may be exposed to in traditional schools. In addition, they describe conventional schools as being overly rigid and authoritarian, where conformity is rewarded. Thus, for many home-schooling parents, socialization provides an argument for home-schooling, not against it (Mayberry, 1995).

Only one study to date has used non-self-report methodologies to compare the social skills of home-schooled

children to traditionally schooled children. Specifically, Shyers (1992) matched home-schooled and non-home-schooled children. He then had naïve observers rate the social skills of all child participants while they played or worked together to solve puzzles. Results indicated that traditionally schooled participants had eight times the number of problem behaviors (such as being aggressive and overly competitive) that the home-schooled children had.

The remaining research that has been done on social skills in home-schooled children has relied primarily on self-report methodologies. For example, Medlin (in press) studied home-schooled children's scores on the SSRS-Student Form using a sample of home-schooled third- to sixth-graders. He found that home-schooled children scored significantly higher than the standardization sample on the majority of SSRS-Student Form subscales. Francis and Keith (2004) had similar findings using a different technique: a matched-pairs design in which home-schooling parents to identify their own match. All parents completed the SSRS-Parent Form. He found that home-schooled children scored significantly higher than standardization samples on the Self-Control subscale of the SSRS-Parent Form as well as on the total SSRS-Parent Form scores.

In addition with the general difficulties of most home-schooled studies, there are several limitations with previous studies. First, each study included only one measure of social skills. In addition, the comparison groups in previous studies were limited. In some studies, home-schooled children were compared to national standardization samples. Unfortunately, however, the home-schooled children may have been different from national standardization sample in numerous ways, not only with regard to their schooling. In other studies, home-schooled children were compared to public-schooled children. In fact, parental involvement in their lives may make home-schooled children more comparable to private-schooled children than public-schooled children.

The present study aimed to eliminate the confounds present in previous studies by including multiple measures of children's social skills and by comparing home-schooled children with both public-schooled and private-schooled children, most of whom were from the same geographical region as home-schooled participants. Based on previous research, it was hypothesized that home-schooled children would score significantly higher on all measures of children's social skills and significantly lower on all measures of loneliness and social dissatisfaction.

## Method

### Participants

This study compared the social skills of 53 home-schooled, 49 private-schooled, and 48 public-schooled children between the ages of 8 and 12. The mean age of participants was 10.29 (SD = 1.38). Seventy-five females and 76 males participated in the study. The mean age of participants by gender and schooling status is shown in Table 1. Eighty-seven percent of the children were Caucasian; three home-schooled, three private-schooled, and thirteen public-schooled children were not Caucasian. The majority of children were Christian, with only 3 home-schooled, 1 private-schooled, and 2 public-schooled children being identified as non-Christian.

Home-schooled children and their parents were recruited through local home-schooling groups and home-schooling listserves. The majority of private-schooled children were recruited at a local parochial school. In addition, all children were recruited by word-of-mouth, at local summer camps, and at the local YWCA. To encourage participation, all participants except for those recruited through the parochial school were paid $10.00 for their participation. Rather than directly compensating participants from the parochial school, a $10.00 donation per participant was made to the school.

| | N | Mean Age (SD) |
|---|---|---|
| Home-Schooled Children | | |
| Male | 29 | 10.34 (1.37) |
| Female | 24 | 10.45 (1.40) |
| Total | 53 | 10.39 (1.37) |
| Public-Schooled Children | | |
| Male | 24 | 10.60 (1.33) |
| Female | 25 | 10.54 (1.69) |
| Total | 49 | 10.57 (1.51) |
| Private-Schooled Children | | |
| Male | 22 | 9.41 (.93) |
| Female | 26 | 10.33 (1.23) |
| Total | 48 | 9.91 (1.19) |

**Table 1.** Mean Age of Participants by Schooling Status and Gender.

This sampling methodology ensured that the majority of participants were from the same general geographic area (e.g., approximately a 100-mile radius of the first author's university affiliation). However, many of the home-schooled participants were recruited through national homeschooling listserves; as a result, 17 participants were from outside this geographical area. When analyses revealed significant differences between home-schooled and traditionally schooled children, analyses were re-run without these 17 participants.

### Materials

Child participants completed four measures: an adaptation of the Peer Network and Dyadic Loneliness Scale (PNDLS; Hoza, Bukowski, & Beery, 2000), an adaptation of the Loneliness and Social Dissatisfaction Questionnaire (LSDQ; Cassidy & Asher, 1992), and the student form of the Social Skills Rating System (SSRS-Student Form; Gresham & Elliott, 1990), and the Friendship Qualities Scale (FQS; Bukowski, Hoza, & Boivin, 1994). In addition, participants' parents completed demographic questionnaires especially designed for this study and the parent form of the SSRS (SSRS-Parent Form; Gresham & Elliott, 1990).

Demographic form. The demographic questionnaire was especially designed for this study. On it, parents reported basic information about their children, such as sex, race and ethnicity, religion, and educational history.

Social Skills Rating System. The Social Skills Rating System (SSRS; Gresham & Elliott, 1990) comprises a series of nationally standardized questionnaires to obtain information on children's social behaviors from the children, their parents, and their teachers. For this study, Parents' and Students' Forms were used. Students' Forms consisted of 34 statements to which respondents answered "never," "sometimes," or "very often." Parents' Forms consisted of 38 statements about children's social skills, to which parents provided a frequency rating (by indicating "never," "sometimes," or "very often"), as well as an importance rating (by indicating "not important," "important," or "critical"). On 17 additional items concerning children's problem behaviors, parents provided only frequency ratings. Surveys were scored in accordance with the directions in the SSRS manual (Gresham & Elliott, 1990).

The SSRS-Student Form yields a Total score, as well as four subscale scores: Cooperation, Assertiveness, Empathy, and Self-Control. The Cooperation subscale measures "behaviors such as helping others, sharing materials, and complying with rules and directions" (Gresham & Elliott, 1990, p. 3). The Assertiveness subscale assesses "initiating behaviors, such as asking others for information, introducing oneself, and responding to the actions of others" (Gresham & Elliott, 1990, p. 3). The Empathy subscale measures "behaviors that show concern and respect for others' feelings and viewpoints" (Gresham & Elliott, 1990, p. 3). Finally, the Self-Control subscale assesses behaviors "such as responding appropriately to teasing, and in nonconflict situations that require taking turns and compromising" (Gresham & Elliott, 1990, p. 3). Total score are calculated by adding the four subscale scores. Previous research using both internal consistency and test-retest methods has indicated that the SSRS-Student Form has adequate reliability. In addition, the content, criterion-related, and construct validity of the measure have been examined and found to be excellent (Gresham & Elliott, 1990; Demaray & Ruffalo, 1995).

The SSRS-Parent Form yields a total score, as well as four subscores: Cooperation, Assertion, Responsibility, and Self-Control. The Cooperation and Assertion subscales are parallel to those of the SSRS-Student Form. In addition the Parent Form also yields a Responsibility subscore, which measures "behaviors that demonstrate ability to communicate with adults and regard for property or work" (Gresham & Elliott, 1990, p.3). Like the Student Form, the Parent Form of the SSRS has been found to have adequate reliability and validity(Gresham & Elliott, 1990; Demaray & Ruffalo, 1995).

Peer Network and Dyadic Loneliness Scale (PNDLS). This scale was developed by Hoza, Bukowski, and Beery (2000) for use with fifth- to sixth-graders. It consists of 16 items, 8 of which assess peer network loneliness and 8 of which assess dyadic loneliness. In the original version of this scale, which was administered by researchers in person, children were presented with pairs of sentences describing children who differ with regard to certain characteristics. For example, one pair of items was "Some kids feel like most kids like them" and "Other kids feel like hardly any kids like them." Participants were then asked to select which of the two types of children they were most like and to specify whether the chosen description was "sort of true" or "really true" for them.

This format was revised to better accommodate the mailed questionnaire format of this study. One statement of each of the 16 original pairs was randomly selected for inclusion on the revised version (with the restriction that on 8 items, a high score would mean greater loneliness and on the other 8 items, a high score would mean less loneliness). Children responded to these items by indicating whether the statements were "Not At All Like Me," "Mostly Not Like Me," "A Little Like Me," or "A Lot Like Me." Items were reverse-scored as necessary so that higher scores indicated greater loneliness. Two subscales (peer network loneliness and dyadic loneliness) were then calculated by summing the appropriate items. When data was missing for 1 or 2 items, the mean score per item was calculated using the completed items. This score was then substituted for the missing values. When data was missing for 3 or more items, the participant's PNDLS data was deleted in its entirety.

Loneliness and Social Dissatisfaction Questionnaire. The scale used in this study is an adaptation of the Loneliness and Social Dissatisfaction Questionnaire (LSDQ) originally developed by Asher, Hymel and Renshaw (1982) for use with third- through sixth-graders. The original version required students to respond to 24 statements using a 5-point Likert scale. In a later revision of this scale (Cassidy & Asher, 1992), participants responded to questions by answering "yes," "no," or "sometimes." The latter format was used in this study. In addition, for this study, questions were revised to delete any mention of "school." The resulting questionnaire consisted of 24 questions, including 8 filler questions and 16 questions focusing on children's loneliness, feelings of social adequacy, subjective estimates of peer status, and appraisals of whether relationship characteristics are being met. Children responded by circling "yes," "no," or "sometimes" in response to these questions. Questionnaires were scored by assigning a value of 2 to the response indicating greater loneliness, 1 to the answer "sometimes," and 0 to the response indicating less loneliness. Item ratings were then summed.

Friendship Qualities Scale. The Friendship Qualities Scale (FQS) was designed to measure the quality of children's relationships with their best friends (Bukowski, Hoza, & Boivin, 1994). The test measures five dimensions of friendship (companionship, conflict, help, security, and closeness), three of which each have two subcomponents. The Companionship Subscale measures the degree to which children and their best friends voluntarily spend time together. The Conflict Subscale items indicate that children get into fights and arguments with their best friends and that they annoy each other (Bukowski, Hoza, & Boivin, 1994). The Help subscale has the two sub-components of Aid and Protection from Victimization. The Help-Aid sub-component is made up of items about the amount of mutual help and assistance that is available through the friendship. The Help-Protection from Victimization sub-component measures friends' willingness to protect each other

from being victimized. The Security Subscale has the two sub-components of Reliable Alliance and Transcending Problems. The Reliable Alliance sub-component measures the extent to which friends can be relied on and trusted. The Transcending Problems sub-component measure children's beliefs that the friendship would be strong enough to withstand quarrels or fights. Finally, the Closeness subscale consists of two sub-components: Affective Bond and Reflected Appraisal. The Affective Bond sub-component refers to children's feelings about their friends. The Reflected Appraisal sub-component refers to children's impressions of how important they are to their friends.

Although the original FQS was developed with 5th through 7th graders, private correspondence with the second author indicated that this measure was appropriate for use in children as young as 3rd grade. The measure consists of 23 statements about friendship. Respondents rank each answer on a 5-point Likert scale where 1 meant "Very true of me" and 5 meant "Very Untrue of Me." Questionnaires were scored by summing respondents' answers within each of the five subcategories. In some isolated instances, children failed to provide appropriate ratings for 1 or 2 items. These items and their corresponding subscales were coded as missing data; however, the remaining subscales were scored.

**Procedure**

Participants were provided with packets containing surveys and return envelopes. Participants returned surveys to the author (either in person or by mail) or, in the case of private-schooled participants, to their teachers. To ensure accuracy, all questionnaires, except demographic questionnaires, were scored by two authors. Any discrepancies in scoring were resolved by the first author.

## Results

THE DESCRIPTIVE STATISTICS for all dependent variables were calculated. The means and standard deviations for all groups on all dependent variables are shown in Table 2.

To test the hypotheses that home-schooled children would score significantly higher than the comparison groups on measures of social skills and significantly lower on measures of loneliness, a series of one-way, between-subjects ANOVAs was conducted. Follow-up Tukey's HSD analyses were conducted as appropriate to compare the home-schooled children to the private-schooled and public-schooled children.

Results indicated that there was no main effect of schooling status on the SSRS-Parent Form or any of its subscales. However, there was a significant difference amongst the means of the three schooling groups on the total SSRS-Student Form scores ($F(2,148) = 4.45$, $p = .05$), and its Cooperation ($F(2,148) = 3.34$, $p = .038$), Assertion ($F(2,148) = 5.26$, $p = .006$), and Self-Control subscales ($F(2,148) = 4.84$, $p = .009$). Tukey's HSD analyses indicated that private-schooled children scored significantly higher than the home-schooled children on all four measures ($p = .01$, $p = .03$, $p = .006$, and $p = .008$, respectively). There were no significant differences between the means of home-schooled and public-schooled children.

In terms of satisfaction with social relationships (Table 3), there was a significant difference amongst the means of the three groups on the Loneliness and Social Dissatisfaction Questionnaire ($F(2,146) = 4.18$, $p = .017$), with post-hoc tests indicating that home-schooled children scored significantly higher than private-schooled children ($p = .021$). There was no significant difference amongst the means of the groups on either subscale of the Peer Network and Dyadic Loneliness Scale.

| | Group | | | |
|---|---|---|---|---|
| | Home | Private | Public | Total |
| SSRS-Student Form | | | | |
| Cooperation Subscale | 14.70 (3.19) | 16.25 (2.75) | 15.60 (3.12) | 15.49 (3.08) |
| Assertion Subscale | 13.47 (3.07) | 15.27 (2.61) | 14.74 (2.92) | 13.47 (3.07) |
| Empathy Subscale | 16.94 (2.56) | 17.46 (2.24) | 16.60 (3.01) | 16.99 (3.01) |
| Self-Control Subscale | 11.55 (3.13) | 13.35 (2.51) | 12.04 (3.26) | 12.28 (3.07) |
| Total | 56.66 (10.01) | 62.33 (7.52) | 58.98 (10.76) | 59.23 (9.79) |
| SSRS-Parent Form | | | | |
| Cooperation Subscale | 13.43 (3.39) | 12.65 (3.15) | 11.92 (3.35) | 12.69 (3.35) |
| Assertion Subscale | 16.51 (2.85) | 17.29 (2.17) | 16.21 (2.48) | 16.66 (2.55) |
| Responsibility Subscale | 15.49 (2.45) | 14.75 (2.18) | 14.75 (2.62) | 15.01 (2.43) |
| Self-Control Subscale | 14.49 (3.48) | 14.69 (3.27) | 13.25 (2.47) | 14.15 (3.16) |
| Total | 59.92 (9.53) | 59.38 (7.74) | 56.17 (8.21) | 58.54 (8.66) |

Table 2. Descriptive Statistics for Social Skills Variables by Schooling Group

On the Friendship Qualities Scale, there was a significant difference amongst the means of the groups on the Conflict subscale ($F(2,145) = 7.26$, $p = .001$), Help-Aid subcomponent ($F(2,144) = 3.11$, $p = .048$), and Closeness-Affective Bond subcomponent ($F(2,146) = 4.84$, $p = .009$). Post-hoc tests revealed that the home-schooled children scored significantly lower on the Conflict subscale than both private- and public-schooled children ($p = .003$ and $p = .005$, respectively). There was no difference between the means of home-schooled children and either of the other groups on the Help-Aid subcomponent. On the Closeness-Affective Bond component, home-schooled children scored significantly higher than the public-schooled children ($p = .042$).

## Discussion

RESULTS INDICATED THAT private-schooled children scored significantly higher than home-schooled children on measures of cooperation, assertion, self-control and overall social skills,

as measured by the SSRS-Student Form. In addition, home-schooled children rated themselves as significantly lonelier than the private-schooled children on the Loneliness and Social Dissatisfaction Questionnaire, although no significant differences were found on the Peer Network and Dyadic Loneliness Scale. However, both private- and public-schooled children report experiencing significantly more conflict than home-schooled children in their closest friendships, as measured by the Friendship Qualities Scale (FQS). In addition, home-schooled children report more affective bonds with their closest friends than public-schooled do, again as measured by the FQS.

| | Group | | | |
|---|---|---|---|---|
| | Home | Private | Public | Total |
| Friendship Qualities Scale | | | | |
| Companionship | 15.38 (3.25) | 15.98 (2.45) | 15.96 (2.67) | 15.76 (2.82) |
| Conflict | 7.23 (2.08) | 13.60 (1.85) | 9.67 (3.74) | 8.87 (4.02) |
| Help-Aid | 13.21 (2.08) | 13.60 (1.85) | 12.52 (2.43) | 13.11 (2.16) |
| Help-Protection | 9.00 (1.53) | 8.60 (1.87) | 8.78 (1.54) | 8.80 (1.65) |
| Help Total | 22.19 (3.37) | 22.19 (3.37) | 21.27 (3.73) | 21.89 (3.49) |
| Security-Reliability | 7.60 (2.26) | 8.32 (2.12) | 8.18 (2.13) | 8.02 (2.18) |
| Security-Transcending Problems | 10.26 (1.43) | 10.46 (1.39) | 10.32 (1.30) | 10.34 (1.37) |
| Security Total | 17.87 (3.11) | 18.84 (3.12) | 18.66 (2.81) | 18.43 (3.03) |
| Closeness-Affective Tone | 14.28 (1.29) | 14.45 (1.10) | 13.55 (2.00) | 14.09 (1.55) |
| Closeness-Reflected Appraisal | 8.91 (1.46) | 9.13 (1.31) | 8.84 (1.43) | 8.95 (1.40) |
| Closeness Total | 23.19 (2.37) | 23.60 (2.10) | 22.39 (2.89) | 23.05 (2.51) |
| Peer Network and Dyadic Loneliness Scale | | | | |
| Peer Network | 13.17 (4.31) | 11.37 (3.89) | 12.08 (3.10) | 12.24 (3.86) |
| Dyadic | 11.79 (4.75) | 10.13 (3.07) | 10.88 (3.30) | 10.97 (3.85) |
| LSDS | 22.82 (6.34) | 20.07 (4.11) | 20.61 (4.32) | 21.23 (5.18) |

**Table 3.** Descriptive Statistics for Satisfaction with Social Relationship Variables by Schooling Group

It is interesting to note that these differences were not found on parental measures of social skills. In fact, parental measures of social skills yielded no significant differences among the groups. Although parental and child measures often yield different findings (which is the purpose of including both measures), the pattern of differences in this study is consistent. There are two possible reasons for this pattern. First, it is possible that parents (who knew the intended purpose of this study) were biased toward making their child's school option appear most desirable. Children, who were probably not as aware of the purposes of this study, may have given less biased responses. Alternatively, perhaps children and parents have different expectations for social skills. Further studies are needed to ascertain why children and parents provided different results. For example, research could examine parents' biases toward their own school choices (and against home-schooling), as well as children's and parents' perceptions of their social skills relative to other children. Studies using third-party observers who are blind to the hypotheses of the study would also help in eliminating potential bias.

Critics of home-schooling suggest that removing children from institutional schools and the social contacts available in those schools is isolating. If this were true, then home-schooled children would have scored significantly lower than all traditionally schooled children on measures of social skills. That was not the case in this study. Instead, in this study home-schooled children differed in several ways from the private-schooled children but not from the public-schooled children. This suggests that school experiences in and of themselves do not affect children's social skills. However, the fact that private-schooled children scored significantly better on several measures of social skills suggests that some particular school experiences—such as that provided by the private school in this study—may influence some areas of children's social skills, such as improving their cooperation, assertiveness, and self-control and reducing their loneliness. In addition, these school experiences may decrease children's feelings of loneliness.

It is important, however, to note that the quasi-experimental nature of this—and, by necessity, all studies comparing home-schooled with traditionally schooled children—makes it impossible to conclude that school-related variables caused the social skills differences noted in this study. Rather, it may be that the groups differed in other ways. Results indicated that there was no significant differences between the groups in terms of parental education or household income. However, the groups may have differed on other unrelated variables, such as the amount of time that parents spend with their children or how they model social skills to their children.

Further studies must examine why the home-schooled group differed from one traditionally schooled group but not the other. This must include examining both how the families of all groups differ, as well how schools differ from each other and how these school differences affect the child. For example, it may be that parents who send their children to private schools value social interactions more than both parents of home-schooled and public-schooled children. Alternatively, some schools, such as the Catholic school involved in this study, may inculcate pro-social values more than other schools. Finally, longitudinal studies should examine the stability of the differences among the group that were observed in this study.

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