

Parental Attachment and Internalizing and Externalizing Problems of Israeli School-Goers and Homeschoolers

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The increased scope and percentage of children being homeschooled raise questions about the impact of this framework on the child's world. One of the issues that has not been adequately studied with regard to homeschooling is whether the emotional and personal problems of parents have greater impact on children who are homeschooled. The present research, conducted in Israel, examined this question from the perspective of attachment theory, which focuses on how people relate to intimate relationships. Previous research has shown an association between the attachment of parents and emotional and behavioral characteristics of their children. Against this background, the present research compared a group of homeschooling mothers and children with a group of mothers who sent their children to school (a total of 101 children; mean age, 9.2 years). These groups did not differ in age and socioeconomic status. The comparison focused on variables beyond these and also considered the degree of structure of the homeschooling practiced. The findings indicated a correlation between mother's attachment anxiety and internalizing and externalizing problems of the child. However, no correlation was found between attachment avoidance and these problems, and no difference was found between the two groups in terms of these correlations. The results contribute, among other things, to understanding the association between homeschooling and behavioral and emotional problems.

Impact and Implications

The research, conducted in Israel, compared a group of mothers and children who homeschooled with a group of mothers who sent their children to school. The findings indicated a correlation between mother's attachment anxiety and internalizing and externalizing problems of the child. In light of the considerable expansion of homeschooling, it is important to understand the implications of this practice. This was a pilot study that examined the impact of homeschooling on the relationship between parental characteristics and the child's emotional and behavioral world.


Keywords: attachment theory, homeschooling, internalizing problems, externalizing problems, attachment anxiety

Although homeschooling is practiced in a variety of ways, it is generally defined as educating children within the home rather than sending them to school (Guterman & Neuman, 2017). In many Western countries, there has been a steady increase since the 1980s in the number and percentage of children who are homeschooled (Kunzman & Gaither, 2013; Redford, Battle, & Bielick, 2016). This is particularly notable in the United States, where it is estimated that 1,500,000 children, representing 2.9% of all students, are educated at home (Kunzman & Gaither, 2013). The practice is less widespread in Israel, but here, too, there has been an increase over the past decades in the number of children who are homeschooled, among other reasons, because of growing awareness of this option (Neuman & Guterman, 2013). In many

cases, the choice to homeschool is based on dissatisfaction or disagreement with the existing education system (Kunzman & Gaither, 2013).

The increased scope of homeschooling gives rise to several pedagogical, educational, and social issues. Homeschooling differs significantly from the conventional education of most children in the Western world. The lack of connection to a school is expressed, among other things, in detachment from the peer group, the professional learning frameworks in the schools, holiday celebrations, school trips, social events at the school, and more (Guterman & Neuman, 2017; Murphy, 2014; Vigilant, Anderson, & Trefethren, 2014). In addition, homeschooling affects the family considerably. In most cases, it is the parents who are responsible for the education at home (Barson, 2015); therefore, the relationship between homeschooling parents and their children is likely to be more intensive and cover more spheres of life.

Most of the research published to date on homeschooling has compared the cognitive and academic achievements of homeschooled children with those of their school-going peers. For example, in an analysis of the SAT results of homeschooled

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children, Belfield (2005) found that graduates of this framework achieved relatively high total scores, mainly because of higher grades on the verbal tests and less because of grades in the field of mathematics, compared with children who attended public and private schools (Kunzman, 2009; Medlin, 2000). In that study, even when the demographic characteristics of the students were controlled, the difference between homeschoolers and school-going children remained, although it was reduced. Other researchers have also compared the academic abilities and achievements of children who were homeschooled with those of children who attended school (Martin-Chang, Gould, & Meuse, 2011).

In contrast to the wealth of studies on achievements, only a few studies have addressed other aspects, such as emotional and behavioral factors. Taylor (1986) found that children who were homeschooled had better self-image compared with children who attended school. Shyers (1992) employed a double-blind protocol of behavioral observations with 70 homeschooled children and 70 students of the public education system. He found less "behavior problems" among the 8-to-10 age group of children who were homeschooled. In research conducted by the authors of the present study with children aged 6 to 12, fewer externalizing problems were found among the homeschoolers compared with those who attended school (Guterman & Neuman, 2017).

Nevertheless, although homeschooling involves intensive interaction between parents and children, no study to date has examined the possible impact of the emotional and conceptual world of parents who homeschool on their children. In other words, there is no research on the possibility that the intensive time that children spend with their parents might result in comparatively greater impact of the parents' on the emotional and behavioral world of their children. For this purpose, comparison with children who attend school and interact much less intensively with their parents could be instructive (Craig, Powell, & Smyth, 2014; Merry & Howell, 2009). The lack of research in this field is particularly striking for two reasons. First, as noted, in light of the significantly greater exposure of homeschooled children to their parents, the influence of these parents might be expected to differ, in nature and/or intensity, from that of parents who send their children to school. Second, existing theoretical frameworks and a broad knowledge base enable in-depth examination of this impact.

The present research focused on this question from the conceptual perspective of attachment theory. This theory is particularly relevant to the question of the impact of the parent-child relationship, as it deals with the perception of intimate relations. Attachment theory is one of the leading theories regarding personality and developmental processes and research on interpersonal differences (Gillath, Karantzas, & Fraley, 2016).

John Bowlby developed attachment theory in Britain in the 1950s, 1960s, and 1970s (Bowlby, 1969, 1973). The theory focuses on the primary bond that infants form with a differentiated and preferred adult, and the implications of this relationship for the mental and emotional development of the child into adulthood. The central claim of attachment theory is that human infants have a primary, inborn need for intimacy, which is part of the foundation of the individual. Bowlby defined this as a need for attachment. According to attachment theory, infants demonstrate behaviors that are aimed at achievement intimacy, such as crying, smiling, and eye contact, whenever they are in danger or sense distress. Obtaining or preserving intimacy with a caregiving figure

is calming; it elicits protection and a sense of security, which are very important to the proper emotional development of the child.

According to Bowlby (1973), these significant experiences are internalized into working models of the world and the self, and are also incorporated into new relationships that individuals form. Bowlby saw these relationships as the building blocks of the individual's attachment—stable patterns of the person's cognition, emotion, and behavior within attachment systems (Fraley & Shaver, 2000).

Bowlby (1973, 1979) described a cognitive schema that each individual holds of him or herself, of others, and of the relationship between them. This schema is incorporated in later stages of development, when it extends from the specific relationship of the infant with the attachment figure to significant relationships of the adult with other people (Collins & Read, 1994). Hundreds of studies of the assumptions underlying attachment theory have shown a correlation between attachment orientations or styles—the systematic patterns of relational expectations, emotions, and behaviors—and the attachment history of the individual (Blalock, Franzese, Machell, & Strauman, 2015; Licata, Zietlow, Träuble, Sodian, & Reck, 2016; Sheinbaum et al., 2015; Wilhelm, Gillis, & Parker, 2016).

A long series of studies on attachment among children and adults has shown that interpersonal differences in attachment can be measured along two orthogonal axes: anxiety and avoidance (Cohen et al., 2017; Oshri, Sutton, Clay-Warner, & Miller, 2015; Paech, Schindler, & Fagundes, 2016; Richman, DeWall, & Wolff, 2015). The dimension of avoidance refers to the degree to which an individual tends to feel uneasy with intimacy with others and consequently avoids situations of intimacy. People who have a high level of this measure develop anxiety in response to situations that arouse intimacy. The dimension of anxiety refers to the degree of fear of abandonment. Several studies have indicated differences in the impact of parents' attachment on the emotional and behavioral world of their children (e.g., Bartholomew & Horowitz, 1991; Berthelot et al., 2015; Collins & Read, 1990; Cowan, Cowan, Pruett, & Pruett, 2019; Gedaly & Leerkes, 2016; Lyons-Ruth, 2015; Reck, Nonnenmacher, & Zietlow, 2016).

Crowell and Feldman (1988) found a correlation between mothers' adult attachment representations and the way they interacted with their preschool children during challenging play tasks. Secure mothers were able to support their children through the challenge, whereas insecure mothers were either confusing or overcontrolling and directive.

Steele, Steele, and Johansson (2002) reported results that are particularly relevant to the development of social maturity. They found that the capacity of 11-year-old children to devise resolutions to cartoon depictions of distressing emotional and social interactions was significantly related to their mothers' accounts of their attachment relationships on the Adult Attachment Interview (George, Kaplan, & Main, 1985). The use of path analytic models has revealed different outcomes of mothers' and fathers' behavior and of types of disorder outcome. The models showed that the attachment representations, quality of marital relationships, and parenting styles of the mothers best explained internalizing behavior of their children; in comparison, the attachment representation of the fathers followed a similar model, but for externalizing behavior (Bifulco, Moran, Jacobs, & Bunn, 2009).

These and other findings indicate a clear association between the attachment of parents and the emotional and behavior world of their children (Borelli et al., 2019). As discussed earlier, the question in the current study was whether the insecure attachment of a parent (attachment anxiety or attachment avoidance) is more significantly correlated with the emotional and behavior problems of children in families that homeschool than it is in families that send their children to school. In other words, is the more intensive relationship and extensive interaction between children and parents translated into greater correlation between the parent's attachment and the emotional world of the child?

This question is further clarified in the light of attachment theory. This theory does not refer necessarily to the mother figure, or to that of parents, but rather focuses on the most central figure for the child, the person with whom the child has the most interaction. Moreover, attachment theory addresses the possibility that a child might have several central figures. From this perspective, in the case of homeschooling, in which children interact with very few central figures, it seems likely that the parents, as almost exclusive central figures in the child's life, will have a particularly strong impact.

In even his earliest publications on this subject, Bowlby (1973) referred to the amount of time children are exposed to their parents. As noted, homeschooled children are exposed to their parents much more than their school-going peers are. Indeed, several studies have found a correlation between the period of time children are exposed to their parents and the impact of the parents' attachment on their children (see, e.g., Diener, Isabella, Behunin, & Wong, 2008; Nickerson & Nagle, 2005). Therefore, theoretically, it seems reasonable to expect the impact of parental attachment to be stronger among homeschoolers. In the present research, this issue was examined by comparing a group of parents and children who engaged in homeschooling with a group of parents and children in the school framework. The two samples did not differ from one another in terms of socioeconomic characteristics of the family or the age and gender of the children. In addition, to control for the effect of other variables that have been found to influence the relationship between the research variables (Guterman & Neuman, 2017), several demographic variables were also considered. The inclusion of these in the analysis of variance made it possible to examine the impact of the main research variables beyond them, that is, to establish that they were not the source of the correlations found.

Based on the research findings presented earlier, the present research examined the following hypotheses:

1. Family income will be correlated significantly with internalizing and externalizing problems, where the higher the income, the lower the level of problems.
2. Attachment avoidance and anxiety of mothers will correlate positively with the degree of internalizing and externalizing problems of their children
3. Type of education will correlate with externalizing problems, where the level of such problems will be lower among the children who are homeschooled.
4. Internalizing problems will be more common among boys compared with girls.
5. The correlation between parents' attachment avoidance and anxiety and children's internalizing and externalizing problems will be stronger in the families that engage in homeschooling compared with those in which the children attend school.

This contrast enabled comparison of the two groups. However, it should be noted that in light of the exploratory nature of the present research and the lack of previous data on this subject, it was not possible to calculate the effect size or stated strength of this relationship.

The purpose of the current study was to examine the associations between the attachment of parents and the internalizing and externalizing problems of their children among families that homeschooled and families that sent their children to school, in a sample comprised of two groups of research participants that shared similar characteristics.

Method

Participants

The research sample was comprised of 101 children; 65 of them were homeschooled and 36 attended schools. The sample size was determined according to the number of variables included in the research, in accordance with Tabachnick, Fidell, and Ullman (2007), who suggested, as a rule of thumb, that in the regression of any variable (with interaction also considered a variable), the sample should be comprised of at least 10 respondents.

The children who were homeschooled had always been in that educational framework, and those who attended school had done so from the beginning of their formal studies. An a priori power analysis was performed to determine whether or not the intended sample sizes would be sufficient to identify whether or not a moderate correlation was present and the expected effect size of the correlation as it related to the hypotheses (Cumming, 2014).

Forty-two (41.58%) of the participating children were girls; 59 (58.42%) were boys. In order to examine whether there were differences in gender composition between the groups of children in homeschooling and those who attended schools, a chi-square analysis was conducted. The results indicated no significant differences in gender composition, $\chi^2(1) = 0.01, p > .05$. The ages of the children ranged from 6 to 12 years, with a mean of 9.18 years and a standard deviation of 1.91. In order to examine the possibility of age differences between the homeschooled and traditionally schooled children, a *t* test for independent samples was performed. The results indicated no significant differences, $t(99) = 1.55, p > .05$.

The possibility of socioeconomic differences between the children who were homeschooled and those who attended schools was examined by means of a *t* test for independent samples that compared the education of the parents in the two groups. The results of the analysis indicated no difference between groups in mothers' education, $t(99) = 1.46, p > .05$, or fathers' education, $t(99) = 0.75, p > .05$. In addition, a *t* test for independent samples was employed to compare the family income of those that home-

schooled with those whose children attended school. The results showed no significant difference between the two groups in income, $t(99) = 1.07, p > .05$. An analysis was also conducted to compare the parents' ages; it indicated no significant difference between the groups in the ages of the mothers, $t(99) = 1.58, p > .05$, or the fathers, $t(99) = 1.12, p > .05$.

Procedure

The research participants who were homeschooled were recruited at meetings of homeschooling families that were held weekly in different regions of the country. The research aims and procedure and the relevant ages of children for the study (6 to 12 years) were presented to the people at the meeting. All the parents with children who met the age criterion agreed to participate, with the exception of three families that chose not to take part. The participants whose children attended schools were recruited by means of telephone contact with parents of children of the relevant ages (6 to 12 years). Their names were obtained from a list of parents in the places where the homeschooled children lived, in an effort to find families with similar characteristics (number of children, ages, and the like). The response rate was also very high in this group; only four of the parents contacted declined the invitation to participate in the research.

Research assistants who were master's degree students of education were trained to administer the questionnaires and given practice with families that did not participate in the research. The training process included a detailed explanation about the meetings with the families and administration of the questionnaires to children and parents and observation of questionnaire administration, followed by practice and feedback. The research assistants then phoned the families that had agreed to participate to arrange meetings. At these meetings, which took place in the family homes, the parent signed a document indicating his or her informed consent to participate and then completed the parent questionnaires. When the questionnaires were complete, the research assistants spoke with both participants (the parent and the child) to further emphasize the importance of the research and allow time for questions and comments.

Instruments

In the present research, two questionnaires were employed, one on internalizing and externalizing problems and the other on attachment.

Child Behavior Checklist. The Hebrew version (Zilber, Auerbach, & Lerner, 1994) of the normed questionnaire (Achenbach, 1991) contains 112 behavioral statements regarding the child that the parent is asked to rank on a 3-point scale, ranging from *not true* (0) to *very true* (2). The total score of the questionnaire was standardized according to child's gender and age to produce a score for several categories of emotional and behavioral problems, divided into the customary two axes of internalizing problems and externalizing problems. For each of these, a score was produced according to the norms of the Hebrew questionnaire (expressed in *T* scores). The externalizing problems included aggressive and/or delinquent behavior, violation of rules, and hurting others. The internalizing problems included symptoms of anxiety and depression, introversion and social detachment, and somatic complaints.

In the present research, the Cronbach's alpha reliability scores were 0.93 for externalizing problems and 0.91 for internalizing problems.

The Hebrew translation (Mikulincer & Florian, 2000) of the Experience in Close Relationships Scale (Brennan, Clark, & Shaver, 1998) was used to examine attachment. This is a self-report questionnaire composed of 36 items. Eighteen of the items examine the dimension of anxiety (e.g., "I want to get close to other people but I continue to withdraw from them"), and 18 examine the dimension of avoidance (e.g., "I distance myself when other people try to get close to me"). In all of the families, the mother was the dominant parent (the one who spent the most time at home); therefore, the mothers were asked to complete the questionnaire. For every item, they ranked the degree to which it described their feelings regarding close relationships on a 7-point scale, ranging from *strongly disagree* (1) to *strongly agree* (7).

Because this is an improved order scale, the variables can be considered as continuous. Accordingly, for every participant, a separate score was calculated for each of the two dimensions of attachment by averaging the items related to that dimension. This created two continuous variables, attachment avoidance and attachment anxiety, for each participant. In the present research, the Cronbach's alpha coefficients were .88 for anxiety and .83 for avoidance.

Demographic questionnaire. The parents completed a demographic questionnaire that included questions regarding personal characteristics of the family and the parents, such as mother's and father's education, mother's and father's ages, the dominant figure in the children's education, and family income, as well as personal characteristics of the children, such as gender and age. In addition, they ranked the degree to which the household followed a regular routine, on a scale ranging from *not at all* (1) to *to a very great degree* (7).

Analysis Plan

To examine the first research hypothesis, Pearson's correlations between parental attachment and behavioral and emotional problems of students were examined. In addition, in order to investigate these correlations beyond demographic variables, a hierarchical regression was performed. The second research hypothesis was also tested by means of hierarchical regression. This hypothesis referred to the difference between homeschooled and school-going children in the relationship between parental attachment and behavioral and emotional problems, an interaction that can be examined using hierarchical regression. The analysis was conducted according to Cumming's (2014) approach.

Results

Analysis Plan

Several analyses were conducted to test the hypotheses. First, correlations between variables were examined. This enabled a test of the first hypothesis, regarding the correlation between family income and internalizing and externalizing problems. It also served examination of the second hypothesis, regarding the correlation between parental attachment avoidance or anxiety and the internalizing and externalizing problems of their children.

Second, the differences between groups were examined. This enabled a test of the third hypothesis, regarding the correlation between type of education and internalizing and externalizing problems, and of the fourth hypothesis, regarding the correlation between gender and internalizing problems.

Third, a hierarchical regression was performed. This enabled examination of the combined effect of the variables and testing of the fifth hypothesis, regarding the combined effect of type of education and parental attachment avoidance or anxiety on the internalizing and externalizing problems of the children. Regarding the continuous variables, a normality test was conducted; it indicated skewness and kurtosis at a level between -1.96 and 1.97 .

Analysis of the Correlations

The research focused on the relationship between attachment avoidance and attachment anxiety of mothers and internalizing and externalizing problems of their children, as measured by the Child Behavior Checklist. First, the relationship between the independent variables and internalizing and externalizing problems was examined in the two groups together. The Pearson's correlations showed strong correlations between mother's anxiety and externalizing problems ($r = .47, p < .001$) as well as internalizing problems ($r = .43, p < .01$). Greater anxiety was associated with a higher level of internalizing and externalizing problems.

In comparison, the relationships of avoidance with internalizing and externalizing problems were weaker. No correlation was found between mother's avoidance and externalizing problems ($r = .17, p > .05$), and the relationship between avoidance and internalizing problems was $r = .25, p < .05$, where a higher level of avoidance was associated with a higher level of internalizing problems. The relationship of child's age, family income, and household routine with internalizing and externalizing problems of the child were also examined; the only significant negative correlations were between family income and internalizing problems ($r = -.28, p < .05$) and between family income and externalizing problems ($r = -.28, p < .01$).

Table 1 presents the correlations between the variables.

In order to examine the differences between the research groups, t tests for independent samples were employed. The comparison between the two groups of parents did not indicate a significant difference in levels of attachment avoidance, $t(99) = 1.64, p > .05$, or attachment anxiety, $t(99) = 0.65, p > .05$. The comparison between the children who were homeschooled and those who attended schools revealed no significant difference in internalizing problems, $t(99) = 1.85, p > .05$, and a significant difference

between the groups in externalizing problems, $t(99) = 2.11, p < .05$; the children who were homeschooled had lower levels of externalizing problems ($M = 45.58, SD = 9.38$) compared with those who attended school ($M = 50.14, SD = 12.03$). The comparison by gender revealed no significant differences in the parents' level of avoidance, $t(99) = 1.34, p > .05$, or level of anxiety, $t(99) = 0.71, p > .05$.

Hierarchical Regressions: Analysis of the Combined Effect of the Variables

After each variable had been examined separately, hierarchical regression analyses were used to evaluate the extent to which all the variables together contributed to the explained variance of internalizing and externalizing problems of the children in the two types of schooling. The regression included five steps: first, the demographic characteristics of the children—age and gender—were entered. In the second step, the socioeconomic characteristic—family income—was added. In the third step, the family educational variables—type of education and household routine—were entered. In the fourth step, the contribution of mother's attachment—*anxious or avoidant*—was examined. In the fifth step, the interactions of anxiety and avoidance with the other predictors were entered. In other words, this step examined the contribution of the interaction between each of the variables in the regression and attachment avoidance and anxiety. In the first four steps, the variables were force-entered; in the fifth step, which examined the contribution of the interaction to the explained variance, only those interactions that contributed significantly ($p < .05$) to the explained variance were entered. The sample was constructed according to the research question and the statistical analysis, that is, to enable a hierarchical regression with all the variables included in the study.

The regression regarding internalizing problems indicated an explained variance of 35%. Similarly, the regression regarding externalizing problems showed 28% explained variance. To avoid a Type 1 error, the relationships were studied by means of a hierarchical regression, enabling examination of the regression as a whole. It is noteworthy that the fifth step of the regression, which examined the interactions, showed no significant contribution to the explained variance of internalizing problems or externalizing problems. Therefore, only four regression steps are shown in Tables 1 and 2, which show the regressions for internalizing problems and externalizing problems. The beta (β) coefficients for the explained variance of internalizing problems are presented in Table 2.

As Table 2 shows, the demographic characteristics of the children (age and gender) were entered in the first step. At this point, the results showed a significant contribution of 6% to the explained variance. The results of this step indicated a significant negative correlation between gender and internalizing problems; there were more internalizing problems among the boys than among the girls. The results of the second step, in which family socioeconomic characteristic (family income) was entered, showed a significant contribution of another 6%. There was a significant negative correlation between family income and internalizing problems, where the higher the family income, the lower the level of internalizing problems. As shown, the first two steps in the regression referred to personal background, and therefore they

Table 1
Pearson Correlations of Socioeconomic Variables and Attachment With Internalizing and Externalizing Problems (N = 101)

Variable	Internalizing problems	Externalizing problems
Attachment anxiety	.43**	.47***
Attachment avoidance	.25*	.17
Family income	-.28*	-.28**

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2
*Hierarchical Regression of Explained Variance:
Internalizing Problems*

Variable	B	β	ΔR^2	R^2
Step 1			.06	.06
Child's age	.06	.12		
Gender	-4.42	-.20*		
Step 2			.06*	.12*
Child's age	.07	.16		
Gender	-4.20	-.21*		
Family income	-1.82	-.24*		
Step 3			.05	.17**
Child's age	.06	.13		
Gender	-4.65	-.22*		
Family income	-1.94	-.26*		
Type of education	6.07	.28		
Household routine	-1.94	-.23*		
Step 4			.18***	.35***
Child's age	.05	.10		
Gender	-4.42	-.21*		
Family income	-1.81	-.24**		
Type of education	4.53	.21		
Household routine	-1.31	-.16		
Anxiety	4.60	.42***		
Avoidance	.35	.03		

* $p < .05$. ** $p < .01$. *** $p < .001$.

were entered first. The third step dealt with type of education, and the fourth, with parental attachment, in order to examine the contribution of parental attachment beyond that of type of education.

In the third step, in which educational characteristics of the family (type of education and household routine) were added, a significant contribution of an additional 5% was found. The results of this step revealed a significant positive correlation between type of education and internalizing problems, where the children who attended schools had more internalizing problems than their homeschooled counterparts. In addition, this regression also revealed a significant negative correlation between household routine and internalizing problems, where the more fixed the household routine, the lower the level of internalizing problems. The fourth step, in which characteristics of the mother's attachment (anxiety or avoidance) were entered, showed a significant contribution of another 18%. There was a significant positive correlation between mother's attachment anxiety and internalizing problems, where the greater the mother's anxiety, the higher the level of the child's internalizing problems. It should be noted that the correlation tests revealed a significant correlation between avoidance and internalizing problems, which was not found in the regression analyses. It seems that this may be due to the correlation between avoidance and anxiety ($r = .37, p < .01$).

As noted, the regression regarding externalizing problems revealed a contribution to explained variance of 28%. The β coefficients for explained variance in externalizing problems are presented in Table 3.

As Table 3 shows, the first step, in which the demographic characteristics of the children (age and gender) were entered, did not indicate a significant contribution of the child's characteristics to the explained variance. The results of the second step, in which the socioeconomic characteristic (family income) was added,

showed a significant contribution of 5% to the explained variance. The results revealed a significant negative correlation between family income and externalizing problems, where the higher the family income, the lower the level of externalizing problems. The third step, in which the educational characteristics of the family (type of education and household routine) were entered, revealed a significant contribution of an additional 7%. The results of this step showed a significant positive correlation between type of education and externalizing problems, where the children who attended schools had more such problems than those who were homeschooled. The fourth step, in which characteristics of the mother's attachment (anxiety or avoidance) were entered, indicated a significant contribution of another 15%. There was a significant positive correlation between mother's attachment anxiety and externalizing problems, where the greater the mother's anxiety, the higher the level of the child's externalizing problems.

Discussion

The present research examined the correlation between parents' attachment and their children's internalizing and externalizing problems, in two groups: one comprised of children who were homeschooled and their parents, and the other comprised of children who attended school and their parents. Children who are homeschooled spend most of the day with at least one parent (in the present research, the mother), and children who attend school see their parents only in the afternoon and evening (Fox, Han, Ruhm, & Waldfogel, 2013). Therefore, the primary research question concerned the difference between these groups in the association of the mother's attachment with the internalizing and externalizing problems of the child.

Table 3
*Hierarchical Regression of Explained Variance in
Externalizing Problems*

Variable	B	β	ΔR^2	R^2
Step 1			.01	.01
Child's age	-.01	-.01		
Gender	2.27	.11		
Step 2			.05*	.06*
Child's age	-.01	-.02		
Gender	2.21	.10		
Family income	-1.61	-.22*		
Step 3			.07*	.13**
Child's age	-.01	-.01		
Gender	1.89	.09		
Family income	-1.75	-.24*		
Type of education	7.07	.33***		
Household routine	-1.81	-.22		
Step 4			.15***	.28***
Child's age	-.02	-.04		
Gender	2.00	.10		
Family income	-1.64	-.22*		
Type of education	5.76	.27*		
Household routine	-1.22	-.15		
Anxiety	4.23	.39***		
Avoidance	.02	.01		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Main Findings

The main findings are discussed here in terms of the research hypotheses.

The first hypothesis was confirmed; a negative correlation was found between family income and externalizing problems of children. This is consistent with the findings of previous research. The second hypothesis was also confirmed; the findings indicate a correlation between the attachment of mothers and the level of internalizing and externalizing problems of their children. Anxious attachment of the mother correlated positively with the child's internalizing and externalizing problems (children whose mothers had higher levels of anxiety exhibited higher levels of internalizing and externalizing problems). In comparison, avoidant attachment of the mother correlated positively with internalizing, but not externalizing, problems of the child.

The findings of the present research regarding the correlation between parent's attachment and children's internalizing and externalizing problems support those of previous research (e.g., Bifulco et al., 2009; Cooke, Racine, Plamondon, Tough, & Madigan, 2019; Crowell & Feldman, 1988; DeKlyen, 1996; Klemfuss, Wallin, & Quas, 2018). Both attachment anxiety and attachment avoidance of the parent were found to be associated with behavioral and emotional problems of the child, but attachment anxiety was associated with both internalizing and externalizing problems, and attachment avoidance was associated only with internalizing problems. This supports Bifulco et al.'s (2009) finding that mother's attachment mainly explained internalizing problems.

Consistent with the results of previous research, the present findings indicate that the level of externalizing problems was lower among the homeschooled children. In contrast, and contradictory to the findings of earlier studies, no difference was found between boys and girls in internalizing and externalizing problems.

The findings of this study confirmed the first, second, third, and fourth research hypotheses—that family income would be correlated significantly with internalizing and externalizing problems, where the higher the income, the lower the level of problems; that attachment avoidance and anxiety of mothers would correlate positively with the degree of internalizing and externalizing problems of their children; that type of education would correlate with externalizing problems, where the level of such problems would be lower among the children who were homeschooled; and that internalizing problems would be more common among boys compared with girls. However, they did not confirm the fifth hypothesis, that the correlation between parents' attachment avoidance and anxiety and children's internalizing and externalizing problems would be stronger in the families that engaged in homeschooling compared with those in which the children attended school.

It is interesting that, contrary to the hypothesis, the correlations between mother's attachment avoidance or anxiety and her child's internalizing and externalizing problems did not differ by type of education. It was expected that the relatively extensive time that homeschooled children spend with their parents and the more intensive involvement of parents who homeschool in different spheres of their children's lives, compared with parents of children who attend school, would be reflected in the strength of the correlation between mother's attachment and child's internalizing and externalizing problems. As mentioned in the introduction,

several studies have found a correlation between the period of time children are exposed to their parents and the impact of the parents' attachment on their children (see, e.g., Diener et al., 2008; Nickerson & Nagle, 2005). However, according to the results of the analyses, the correlation of the parental attachment to the children's problems was similar in both research groups.

Explanations of the Findings and Directions for Further Research

There are several possible explanations for the absence of a difference between groups in the correlation of parental attachment with the internalizing and externalizing problems of their children. First, it may be that attachment affects home climate beyond the interaction with the child, impacting, for instance, on the relationship between parents or the style of communication in the family (see, e.g., Girme, Overall, & Hammond, 2019). Such effects do not necessarily depend on the amount of time spent together or the spheres in which children and parents interact; therefore, they might not be reflected in a difference by group in the impact of the parents' attachment. Thus, it would be interesting to study the mediating role of home climate in the relationship between parents' attachment and their children's internalizing and externalizing problems.

Second, parental attachment most affects the internalizing and externalizing problems of relatively young children (see, e.g., Coppola, Ponzetti, Aureli, & Vaughn, 2016; Stefanović-Stanojević, Tošić-Radev, & Velikić, 2015). The children in the present research were 6 to 12 years old; the strongest impact of mother's attachment on the child may occur earlier in life. Therefore, it would be interesting to examine the differential effect of parents' attachment on homeschooled and traditionally schooled children of younger ages, such as 3 to 6 years.

Another possible explanation of the findings is that the effect of a parent's attachment reaches a "saturation point" after a relatively short amount of time spent together. This is consistent with research in other fields that has indicated threshold effects (Fichtenberg & Glantz, 2002; Oh, 2012). In other words, the effect of the parent's attachment may vary by time spent with the parent, but the main difference might be between parents and children who spend very little time together, such as half an hour or an hour a day, and those who spend more time, such as several hours, together. This possibility might be examined in a study similar to the present one, comparing families in which the parents work until late at night with those in which the parents get home at a relatively early hour.

Furthermore, the findings did not indicate a difference between the two groups of parents in levels of attachment anxiety or attachment avoidance; attachment was not correlated with the type of education chosen. Similarly, the two groups of children did not differ in level of internalizing problems but did differ in level of externalizing problems, where the level of externalizing problems was higher among those who attended school. Previous research (Guterman & Neuman, 2017) also found a higher level of externalizing problems among children who attended school compared with homeschooled children. In addition, as in other research (Zahn-Waxler, Shirtcliff, & Marceau, 2008), in this study, the girls were found to have more internalizing problems than boys.

A negative correlation was found between family income and both internalizing and externalizing problems. This supports the

results of previous studies that indicated an association between family socioeconomic status and various emotional and behavioral problems (Conger, Conger, & Martin, 2010; Mistry, Biesanz, Chien, Howes, & Benner, 2008; Scaramella, Neppl, Ontai, & Conger, 2008).

In the present research, children who were homeschooled were compared with children who attended school. Research of groups that do not differ in terms of mother's education, family income, and children's age and gender is important in enabling a more reliable comparison between groups. Such pairing is particularly important in comparative research of homeschooled and traditionally schooled children, in light of previous findings on differences between these two groups in socioeconomic status (Mackey, Reese, & Mackey, 2011).

Limitations and Future Research Directions

The present findings raise some salient questions for future research, but it is important to note some limitations of the research as well. A significant limitation of the present research was the relatively small sample. This was due to the small size of the population that engages in homeschooling in Israel. Based on the figures in the education ministry data, the present research included approximately 50% of the children of the ages relevant to the research (6 to 12) who are homeschooled in Israel. In light of the ongoing growth in homeschooling in Israel and other countries (Geary, 2011; Noel, Stark, & Redford, 2013), it would be interesting to conduct large studies with larger groups of children in the future. It would also be interesting to examine the same questions in other countries in which homeschooling is more widespread.

Furthermore, the groups were not selected randomly from their respective populations. This limitation, which is common to many studies that compare populations, is significant even though the possible effects of some variables (children's age, children's gender, age of fathers, age of mothers, education of fathers, education of mothers, and family income) were examined. The results of these comparisons do support the claim that the differences found between the groups were not associated with these aspects, but they do not dismiss the possibility of other differences between the groups of families.

Another noteworthy limitation of the research is that there may have been other differences between the groups associated with type of education. For example, homeschooling may affect the home climate and, thus, the level of children's internalizing and externalizing problems. If so, these effects may interfere with the understanding of the effect of parent's attachment on the internalizing and externalizing problems of their children. Accordingly, it would be interesting to examine the research question among other populations as well. In addition, a significant limitation was that the research examined the position of one parent in each family, and in all of the families, the mother was the dominant parent in homeschooling. In addition, it was based on self-report of parents, which makes the findings vulnerable to the bias of these parents. In further research, it would be interesting to examine the attitudes of both parents as well as investigating the research questions from the perspective of behavior, in comparison with the focus here on parents' views and not the actual behavior of the children.

Implications for Research and Practice

The present research focused on the relationship between parents' attachment and internalizing and externalizing problems of their children in families that homeschooled and those that sent their children to school. As discussed in the introduction, much research has indicated significant associations between parents' attachment and emotional and behavior aspects of their children. However, the impact of homeschooling on the relationship between parental characteristics and the child's internalizing and externalizing problems has not been examined.

Against this background, the research findings may have several theoretical implications, particularly because no difference was found between homeschooled and school-going children with regard to internalizing and externalizing problems. This gives rise to questions regarding the nature of the relationship between parental attachment and their children's internalizing and externalizing problems. Could it be that this relationship is limited to certain ages? Is it perhaps mediated by family climate or communication? The absence of a correlation between the variables also increases the likelihood that these factors are present.

Furthermore, the finding that homeschooled children have less externalizing problems, which was corroborated in this research, raises significant theoretical and practical questions. Does homeschooling help reduce such problems? Does the school environment increase them? Naturally, more studies are required to establish this finding, but it suggests very interesting questions and directions for further research.

In addition to the theoretical issues it raises, the research also has practical implications. There is some concern that homeschooling could be a catalyst for harmful influences of parents on their children (Rowe, 2011; White, Moore, & Squires, 2009), but the present research did not indicate this. In fact, the results do not suggest a stronger correlation of parental attachment avoidance or anxiety with the internalizing and externalizing problems of children in this group compared with their school-going peers.

The present research results may also elucidate previous findings that homeschooled children are better at developing relationships compared with peers (e.g., Muijs, 2006). Specifically, the finding of a difference between groups in externalizing problems may explain these differences.

In light of the considerable expansion of homeschooling, it is important to understand the implications of this practice; for this purpose, further examination is necessary.

Conclusion

Despite the shortcomings of the present study, it should be noted that it represents the first research of these questions. Hopefully, further research of these issues will add to the findings regarding the impact of homeschooling on broader aspects of the lives of the children involved. These findings are particularly important because homeschooling is becoming increasingly common; today's educational professionals need to offer parents well-founded answers and guidance regarding this practice. Furthermore, the present research also makes an important contribution to the research-based understanding about children who attend school. Among other things, it enables examination of the association between exposure to a parent and the impact of the parental attachment on the internalizing and externalizing problems of children.

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