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The Social Competence of Homeschooled and Conventionally-Schooled Adolescents: A Preliminary Investigation

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Abstract

Homeschooling is a controversial educational option that has grown dramatically during the past two decades. Socialization concerns contribute strongly to this controversy. Research in this area is sparse, but it indicates that homeschooled students do well academically and socially. Many homeschooling studies suffer, however, from serious methodological issues. This investigation sought to discover whether differences in social competence existed between sample populations of homeschooled and conventionally-schooled students; research in the arena of competence and resilience served to guide the methodology. Where differences were found, specifics were elucidated and factors contributing to these differences were isolated.

Forty-seven homeschooling and conventionally-schooling families participated ($N = 47$). Parents completed the Family Characteristics questionnaire, the parent version of the Social Involvement Report (SIR-P), and the Parent Rating Scales (PRS) which is part of the Behavior Assessment System for Children (BASC). The students completed

the adolescent version of the SIR (SIR-P), the Self-Report of Personality (SRP) of the BASC, and a Friendship Task. Teachers provided information on thirty-two students by completing the Teacher Rating Scales (TRS) of the BASC. Results indicated that there were differences in the social competence of homeschooled and conventionally-schooled adolescents, particularly on the BASC scales. Mean scores on the PRS and TRS for homeschooled and conventionally-schooled students were in the average range on all adaptive and maladaptive scales, but homeschooled students were consistently rated higher on measures of social skills and on measures that support academic competence. Ratings for conventionally-schooled students were consistently higher on measures of school and social maladjustment.

The significantly different family characteristics of homeschooling and conventionally-schooling families impacted several of the research findings. Parental employment status, family structure, father's education, and religious involvement were factors that were particularly influential. Adolescents from complex step-families where parents worked full-time had the highest scores on measures of maladjustment. This study represented a strong first step towards increasing the available information concerning homeschooling and its impact on social competence. Additional studies are needed to further explore the development of competence in both homeschool and conventional school settings to understand the impact of educational environments on the development of social competence.

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Chapter 1

Introduction

It is estimated that 50,000 children in the United States were educated at home in 1985 and that by 1990 the number of homeschooled children had likely grown to approximately 250,000 to 355,000 (Lines, 2000). The most recent data available from the National Home Survey (Bielick, Chandler & Broughman, 2001) determined that the homeschooled population is between 709,000 and 992,000 children. These figures indicate that this population has experienced dramatic growth and that just under 2% of school-aged children are currently being educated at home. While still a small percentage, the rising number of children whose development is occurring outside the context of the public school setting has resulted in widespread concern regarding the academic and social competence of these children (Hedin, 1991; Murray, 1996; Tillman, 1995).

Home education, or "homeschooling," is the "education of school-aged children under their parents' general monitoring, and it replaces full–time attendance at a campus school" (Lines, 1998, p.1). The academic and social competence of homeschooled children is squarely in the purview of many psychological subfields as is the functioning of these children as they become adults and assume various roles in their communities. Yet, there is a glaring lack of attention given to this subject in the psychological literature which suggests that the home education movement has been growing and evolving

beneath the radar screen of the psychological establishment. In 1996, Murray introduced homeschooling to the psychological community through the *APA Monitor* and outlined some of the controversies that surround this practice (Murray, 1996). Murray's coverage of the homeschooling movement, however, did not critically address the issues that she identified. The opinions expressed by the few psychologists interviewed simply mirrored prevailing beliefs regarding the socialization of homeschooled children without offering theoretical or empirical evidence in support of their positions. Furthermore, Murray's introduction did not serve as a catalyst for research or further discussion. Instead, there has been a paucity of research in this area and the validity of prevailing criticisms has not been explored.

As the homeschooling movement continues to grow, psychologists will increasingly be called upon to address issues associated with this educational practice and responses based on opinion will not be sufficient. It is imperative that empirically-sound investigations be conducted, particularly in the area of psychosocial development, and that psychologists become familiar with the history, values, and practices of what has essentially become a subculture within the United States. The purpose of this paper is threefold: (a) to provide psychologists with a brief historical overview of the homeschooling movement with a specific focus on socialization concerns, (b) to summarize the research that has addressed home education, and (c) to investigate the issue of socialization by examining the social competence and social involvement of a sample population of homeschooled and conventionally-schooled adolescents.

Historical Context

Some understanding of the history of public schools and home education in the United States is necessary in order to place the current debate between homeschooling proponents and opponents in context. Common concerns regarding the socialization of homeschooled children are rooted in the historical role ascribed to the public schools in this country. The public school system is certainly the dominant form of education in the United States, but this has not always been the case. Home education was the prevailing model until the 1800s when the creation of "common schools" and the subsequent passage of compulsory attendance laws nearly extinguished this practice (Ray, 2000a). Homeschooling re-emerged as a viable educational option in the 1970s and is viewed by some as a direct outcome of the dissatisfaction with public schools voiced by educational reformers in the 1960s and 1970s (Knowles, Marlow, & Muchmore, 1992). Although homeschooling was chosen by a relatively small number of families, this resurgence was accompanied by significant controversy, the intensity of which can be seen in the number of court cases brought against homeschooling families, the threats of imprisonment, and in the attempts of state legislatures to severely restrict or prohibit this practice (Klicka, 1993). In turn, these legal challenges prompted the creation of state and national organizations, such as the Home School Legal Defense Association, that have successfully defended parents in court and have been effective in protecting and expanding the rights of parents to educate their children at home.

It is no longer illegal for parents to homeschool, nevertheless this choice remains controversial. The number of homeschooling families continues to increase dramatically, yet 98% of school-aged children are enrolled in public or private schools. The degree of

concern regarding this practice appears to be out of proportion to the size of the population engaged in it. Ray (2000a) asserts that this is because homeschooling "goes to the core of the centuries-old debate over who should be in the primary position of influence in the educational lives of children and what effect the answer has on society" (p. 272).

Philosophically, the debate is centuries old indeed. Lines (1994) traces it back to the Greek philosophers Plato and Aristotle who differed in their perspectives on the role of parents versus the political state in the education of children. Plato held that whether or not children attended school should not be a decision made by fathers. Instead, school should be compulsory for all because children belonged to the state first and to their parents second. In fact, Lines points out, Plato advocated separating children from their parents and giving primary caretaking responsibility to the state. Aristotle viewed Plato's vision of society as one that would dilute the natural affection that exists between parents and their children. He placed greater confidence in the power of parental love and commitment for ensuring that children were well-educated.

Lines brings this debate to relatively more recent times in her depiction of the conflict that existed between the Federalists and the Antifederalists during the framing of the United States Constitution. Lines explains that both the Federalists and the Antifederalists regarded human beings as capable of good and evil; where they disagreed concerned which groups of people they trusted least. The Federalists doubted the ability of the uneducated and lower classes to sustain a democracy, while the Antifederalists were concerned about those who held power, believing that even the best of men were susceptible to its corrupting influence. The Antifederalists sought a balance between

individual liberty and majority rule and placed their confidence in the relationships among community members as the source of restraint on selfish uses of power. Lines asserts that homeschoolers, religious or secular, tend to adopt many of the views that were held by the Antifederalists and are acting on their individual rights to educate their children as guaranteed by the Constitution.

Although the terminology has changed, these historical tensions between the power of the majority and individual liberty and between the responsibilities of the state and the rights of parents are echoed in the current conflict between proponents of public education—today's "common schools"—and advocates of home education. Knowledge of these historical tensions is critical for understanding the intensity that surrounds the homeschooling movement and they provide insight into the motivations behind the choice to abstain from the public school system. There are few scholarly journals that address the topic of homeschooling, but in the educational literature strong convictions on both sides of this issue can be found. Juxtaposing these positions elucidates relevant issues and captures the gestalt of the homeschooling debate.

Rob Reich, Ph.D., an assistant professor of political science at Stanford University, acknowledges that the role of public schools from the beginning was not just to provide an education for all children, but to cultivate democratic citizenship (Reich, 2002). He states that citizenship is the social glue that binds people together. He argues that homeschooling potentially compromises both citizenship and freedom since homeschooling parents "serve as the only filter for a child's education, the final arbiters of what gets included and what gets excluded" (Reich, 2002, p. 58). Citizenship is jeopardized, according to Reich, when children are not exposed to materials, ideas, and

people that they or their parents have not selected. It is endangered because children will not learn how to engage people who have different beliefs and convictions than their own. Reich believes that democratic freedom is at-risk for homeschooled children, because freedom requires that individuals be exposed to the vibrant diversity of a democratic society. It demands that individuals have the liberty to construct and possibly revise beliefs and preferences in order to live a life of their own design.

Brian Ray, Ph.D., is the founder and president of the National Home Education Research Institute and is the editor of the academic journal *Home School Researcher*. He describes arguments such as those presented by Reich as genteel and resourceful language and rationales that are simply a continuation of the struggle over who will control the hearts and minds of children (Ray, 2000a). Ray maintains that many individuals know that by controlling what is taught in state-controlled schools it is possible to ensure that the population will accept and espouse particular definitions of liberty, justice, the common good, and correct social-theory. Ray states that this is accomplished simply by giving the state the power to create and enforce a system that appears to be non-coercive, but effectively guarantees that the state will control the majority of the population. To support his contention, Ray cites Michael Apple, Ed.D., as an example.

Michael Apple, a professor of education at the University of Wisconsin-Madison, charges that conservative attacks threaten to dismantle gains that have been made in social welfare; in women's control of their bodies; in relations of race, gender, and sexuality; and in whose knowledge is taught in schools. He contends that it is important to make certain that these gains are defended against conservative assaults. Ray

highlights Apple's position in order to illustrate how Apple and others who claim to desire the elimination of coercion and manipulation are the same individuals who would like to use public schools to teach children many specific attitudes and beliefs that parents with different worldviews or religious persuasions strongly oppose.

Michael Farris, J.D. and Scott Woodruff, J.D., lawyers with the Home School Legal Defense Association, argue that homeschooling seeks to preserve liberty and to protect citizens from manipulation and coercion (Farris & Woodruff, 2000). They posit that the nature and existence of our republic depend on the ability of citizens to think independently of the government. They argue that all genuine education is potentially subversive in that it may result in individuals disagreeing with the government and that this subversive tendency is necessary in order to safeguard liberty. Furthermore, they claim that it is a potential, if not an actual, conflict of interest for the government to control education and that the extent of the conflict increases in direct proportion to the degree of governmental control. They contend that because homeschooling is not controlled by the government, those that practice it are in a unique position to foster the continuation of what they consider to be the rich and honorable tradition of civil opposition that serves to preserve what is valued in a free society and to eliminate that which threatens the foundation of liberty.

Apple (2000) does not share this perspective on liberty, rather he sees in the homeschooling movement dangerous threats to our society. Apple views homeschooling as part of the suburbanization of everyday life. He charges that homeschooling is essentially the equivalent of gated communities that provide a physical and ideological security zone. This isolation from "the Other," or "cocooning" threatens to undermine

the strength and cohesion of local communities. Apple claims that one of the ways that local communities are weakened relates to the politics of redistribution and the ability of home educators to manipulate loopholes in charter school regulations in order to siphon money away from the public schools. Apple contends that this threatens schools, especially in urban communities, because criticism of public education has already fostered anti-tax attitudes that have resulted in reduced school funding.

Chris Lubienski, Ph.D., is a professor of education at Iowa State University who also criticizes homeschoolers for harming the public school system. Lubienski charges that homeschoolers indeed remove capital from the public schools; however, it is social capital that concerns him (Lubienski, 2000). He believes that homeschooling is detrimental to the students that are left behind. He states that homeschooling parents tend to be active, articulate, and interested in their children's education and that this is social capital from which other students could benefit. Consequently, when parents choose to abstain from public schools, they deprive the remaining students of access to this social capital to the detriment of the common good.

Ray rejects arguments such as this and describes them as polemics about groups. He maintains that homeschooling is done out of intense care and concern for today's children. He insists that parents do not engage in home education to aid a particular group regardless of whether they belong to the majority, a minority, the disadvantaged, or the advantaged (Ray, 2000a). Instead, he insists that many parents who homeschool do so because of the opportunity to customize their children's education. Ray (2002) states that because parents know their children intimately, they can respond to their children's individual talents and needs. Homeschooling allows the process of teaching and learning

to be more thoughtful and personal. Ray concludes that homeschooling is done to benefit children and if children benefit, then society as a whole will ultimately benefit and the common good will be served.

Reich (2002) acknowledges that homeschooling allows for the customization of education, but strongly disagrees that parents should have this power. He complains that homeschooling parents view the education of their children as a matter solely under their control. To his dismay, he reports that homeschooling parents feel entitled to procure the educational environment for their children from the marketplace of learning materials with no intermediary between them and their child. For Reich, this represents a victory for the consumer mentality which he believes fosters the idea that the only purpose of education is to satisfy consumer preferences.

Lubienski (2000) also believes that homeschooling epitomizes the elevation of individual choice in relation to academic setting. He views the right to choose as harmful to the public good because it limits the purpose of schools to the academic arena and denies their use for other socially defined ends such as assimilation, desegregation, cohesion, or "whatever we collectively value" (Lubienski, 2000, p. 216). Furthermore, he charges that parents who homeschool are choosing to exit the debate rather than to give voice to their concerns and desires while remaining in the public school system. His view of democracy is that it is a social contract with an implicit agreement to carry on a meaningful debate, to work towards consensus rather than to flee.

Patricia Lines, J.D., Ph.D., a senior research analyst for the U.S. Department of Education, acknowledges that critics like Reich and Lubienski see homeschoolers as isolationist and possibly undemocratic (Lines, 1994). In response she asks:

> Is community consensus the overarching goal? Does failure to join this consensus destroy our democracy? Have homeschoolers withdrawn from the debate about what is best for all children? Must one patronize the local public school in order to engage in this debate? To answer, one must consider what is community and what is "our democracy?" (Lines, 1994, p.10).

It is reasonable to assume that Lines would also question how "what we collectively value" would be measured and, therefore, how other socially defined goals for public schools would be determined.

Lines maintains that homeschoolers, like the Antifederalists, have as members individuals that occupy opposite ends of the political and religious spectrum; many are highly religious and conservative, while others are secular and liberal. What they have in common is the decision to "turn their backs on the widespread and hallowed practice of sending children to a school located in a particular building, adhering to a particular schedule and program" (Lines, 1994, p. 21). But this decision, she continues, is not based on selfish individualism, rather it is for the sake of belonging to a self-selected community so that members may form meaningful bonds with their families and with their communities. Lines asserts that while they may have turned their backs on the public school system itself, homeschoolers have not turned their backs on the "broader social contract as understood at the time of the Founding. . . . they are not abdicating from the American agreement. To the contrary, they are affirming it" (Lines, 1994, p. 21).

The issues raised in educational journals regarding the impact of homeschooling on the "common good" are strikingly different from the challenges homeschoolers

encounter in their daily lives. Homeschoolers are not regularly confronted with concerns such as the impact of homeschooling on our democracy. However these philosophical issues are foundational to the assumptions held by many community members as to the role of public schools and are, consequently, foundational to the criticisms leveled at homeschooling parents. Parents who "turn their backs" on the local public schools can expect to be challenged by professional educators, acquaintances, neighbors, and even friends and family members concerning the potentially negative impact of homeschooling. Although court cases have generally focused on legality and certification (Kitchen, 1991), the question that trumps all others is "What about socialization?" (Francis & Keith, 2000; Hedin, 1991; Kitchen, 1991; Medlin, 2000; Miller, 2000; Ray, 1999; Taylor, 1986; Tilman, 1995).

What about socialization? This may be the ubiquitous question, but what is the questioner truly seeking to know? Social activities; social skills; social values, attitudes, and beliefs, and social exposure to diverse cultures and worldviews are all possible facets of socialization that could be at issue. Ray (1999) summarizes many of the reactions that homeschoolers have to this question. He states:

> Of course the questioner presupposes a number of unspoken assumptions. For example, she assumes that a conventional-school classroom is the best setting for learning how to get along with others, that a child in such a classroom will learn best how to stand on his own, that an age-segregated situation with a government-certified teacher is best for learning how to function and think in society, and that the conventional setting is the healthiest setting for the psychological

development of a child who is trying to become a mature adult in a democratic republic (Ray, 1999, p.13).

Assumptions regarding the superiority of public schools as socializing agents are rooted in evolutionary changes in the role of public schools. Medlin (2000) and others assert that schools have been given increasing responsibility for socializing activities that historically were the responsibility of other social institutions such as the family. Consequently, socialization has become subconsciously linked to education and it is assumed that public schools offer socialization opportunities that are critical to the development of children; opportunities that are not available to homeschooled children.

Although the public school system in the United States is relatively young, Ray (2000a) suggests that it has become the default setting. It is now the natural, normal, unchallenged choice. So entrenched is the notion that attending school is the only way by which children can be properly socialized that it is not unusual for public school teachers and principals to view homeschooling as a personal attack on their profession and on their abilities (Romanowski, 2001). Many teachers and administrators view homeschoolers as inadequate both professionally and academically and they view the homeschool environment as one that does not promote positive social development.

Examining various components of socialization is useful for elucidating and addressing the specific concerns raised by teachers, administrators, and other community members. In relation to social opportunities, there is a strong belief that homeschooling deprives children of the natural social contact that is unique to traditional schooling (Hedin, 1991; Murray, 1996). Ray (2000a) addresses this concern with a reminder that homeschooling is *home-based* education which simply means that the parents are the

primary decision makers about daily social and academic activities. He stresses that homeschooled children engage in a wide array of activities with a wide range of people, groups, and environments outside the confines of the home. Homeschoolers frequently report that there are so many activities and opportunities for peer interaction that children need to be selective to avoid being overextended (Johnson, 1991).

Some families contend that homeschooling offers its own unique social opportunities. For example, Feldman and Gray (1999) identify numerous benefits of age-mixing and this is an aspect afforded to homeschoolers that parents highly value (Miller, 2000). According to Miller, homeschooling parents appreciate the importance of both positive and negative interactions with same-aged peers, but they also strongly emphasize the importance of children's interactions with people from all points along the age spectrum. Johnson (1991) adds that homeschooled children are involved in many real-life situations and that this promotes more contact with people of all ages. Thus, the point is made that it is public schooling, where children are age-segregated and isolated from the rest of society, which deprives children of natural social contact and opportunities.

Some psychologists believe that educating children at home impedes the development of social skills and the ability to get along with others (Murray, 1996). Murray interviewed child and adolescent psychologist Neil Bernstein, Ph.D., a consultant for the Virginia Public Schools, who asserts that school encourages children to cooperate with each other and teaches skills such as self-control, accountability and timeliness. In addition, children learn to respect others, wait their turn, share their textbook and check impulses to shout out answers. Farris and Woodruff (2000) maintain that it is not logical

to assert that the social skills a child will need as an adult are best taught in a classroom where the child is surrounded only by students of his or her own age. They contend that if the goal of socialization is to produce adult social skills then it makes little sense to use classmates as teachers.

Farris and Woodruff overlook the fact that the teacher in the classroom is in a position to utilize the situations that arise to teach the social skills that are desirable in adults. The pertinent question is whether this is actually occurring. Unfortunately, there is a common belief that public schools struggle in this area. According to the 31st Annual Phi Delta Kappa/Gallup Poll of the Public's Attitudes Toward the Public Schools (Rose & Gallup, 1999), "lack of discipline/more control" topped the list of the biggest problems facing the public schools. The Poll also indicates that from 1969 to 1985 lack of discipline has been the top concern in every poll except one. From 1986 on, lack of discipline has competed for the top spot with drug abuse and lack of financial support. It is difficult to imagine adults adequately teaching social skills in an environment where overall discipline is at issue. Apparently, homeschoolers do not view public schools as the best arena for teaching social skills as "poor learning environment" was the third most common reason given in 1999 for choosing to homeschool and "student behavior problems" ranked ninth.

Kitchen (1991) points out that while many critics claim that children schooled at home do not receive the benefit of the socializing influence of conventional schools, researchers have not spent much time looking at how the socialization of homeschooled students compares with the "norm" or even if falling within the norm is necessarily desirable. He expresses concern that the overcrowded, artificial environment of

conventional schools has left students in the position of socializing themselves. Even if teachers in the classroom are successful in their attempts to teach social skills, the time students spend in the cafeteria, hallways, and playground are not supervised to the same degree. Kitchen claims that in the school yard children quickly learn the importance of "identifying with the strong, and conforming to the norm, no matter how abnormal the norm is" (Kitchen, 1991, p. 7). In contrast, Tilman (1995) states that homeschooling parents seek to provide their children with a safe, secure, positive environment where they can grow and learn and where they are encouraged to apply their skills in the larger world as preparation for adulthood.

In the case of social skills, the question is which environment, homeschooling or conventional schooling, is best suited for teaching these skills. Shifting focus to the issue of social values, the concern relates to which values, attitudes, and beliefs should be taught. Ray (2000a) states that the value system or worldview that is taught is a quintessential issue in any child's education, but Americans no longer agree as to which values or character traits are fundamental. Ray (1999) reports that multiple studies have shown that the desire of parents to teach their children a particular set of values and beliefs and to transmit a particular worldview is the most frequent reason cited for homeschooling. This is a concern to Carole Rayburn, Ph.D., who is a consultant to the Maryland public schools. She asks, "What if parents are teaching a narrow view that goes against what society values?" (Murray, 1996, p. 43) Rayburn asserts that the values learned in public schools are more likely to represent those of society in general. This is what concerns many homeschoolers. The work of Warren Nord, Ph.D. (1995) indicates that schools also transmit a particular worldview. Despite claims of being "value-

neutral," he found that through textbooks and formal curricula, students are indoctrinated into a modern worldview that is anti-religion.

The idea that schools may indoctrinate students into a secular worldview would not likely an issue for Bernstein (Murray, 1996). He contends that children need to be reared according to the culture in which they will live. Homeschoolers argue that children need to be protected from a peer culture that leads to premarital sex, drug and alcohol use, swearing, and laziness (Murray, 1996). Reich (2002) believes that conventional schools are one of the few remaining social institutions in which children might learn common values such as decency, civility, and respect. Many homeschoolers, however, describe conventional schools as institutions that are rigid and authoritarian. They claim that passive conformity is rewarded and peer interactions are too often hostile, derisive or manipulative (Medlin, 2000). In contrast to passive conformity, some homeschoolers view the product of healthy socialization to be an ability to stand up for one's beliefs (Miller, 2000). Other homeschoolers are concerned that conventional schooling places their children in a situation where they feel compelled to either conform to the group or to live in opposition to the group. These parents express a desire to provide a setting where their children can learn without having their developing belief systems unduly challenged. Some of these parents believe that removing their children from the peer pressure in school enabled their children to think for themselves (Johnson, 1991).

Many critics of homeschooling charge that homeschooling parents do not want their children to think for themselves, that they want to isolate them from individuals from different backgrounds, cultures, or belief systems (Murray, 1996; Reich, 2002).

Rayburn (Murray, 1996) states that instead of being exposed to the differing philosophies of their teachers, children who are homeschooled have little chance to form their own views. Wright (1988) warns of the need to consider how a multicultural society will be impacted by children who are raised in a setting with "monolithic" views and beliefs. These concerns echo those expressed by Maarse Delahooke in spite of her research that showed that homeschooled children performed well both academically and socially when compared to a traditionally-schooled sample population (1986). Farris and Woodruff (2000) charge that it is the government that controls the values taught in schools and states that because the government does not control the views that homeschooled students are taught, these students will be able to develop independent views of how society should be reformed.

Homeschoolers interviewed by Miller (2000) maintain that their children, in fact, are not denied exposure to different values, ideas, and beliefs. These parents contend that they specifically enroll their children in activities where they will be with children from different backgrounds. They are aware that their children will naturally be exposed to differing beliefs and values through the media, through associations with friends and family, and through social activities in their community. Homeschooling parents, according to Miller, desire to act as "gatekeepers." That is, they want to maintain some control over what their children are learning and to what ideas they are being exposed. In addition, they want this exposure to be determined by their particular child's level of development and maturity.

Murray (1996) concludes her presentation of homeschooling with Bernstein's concern that homeschooling may tap into only one part of a person's emotional and

intellectual growth. He states that "we must ensure that we are raising children to become complete people" (Murray, 1996, p. 43). Miller (2000, pp. 11-12) provides an overview of how many homeschooling parents view their role in the socialization of children. From his interviews, he concludes that homeschooling parents believe that parents need to spend time with their children in order to provide moral or religious teaching, to train their children how to relate to others, and to model the behavior they want in their children. They maintain that spending more time with their children than they would if they were being conventionally-schooled allows for the development of deeper relationships, it helps parents to be more aware of their children's needs and of the influences in their environment, and it allows them to support their children as they negotiate both positive and negative social interactions. Parents stress the value of being available to help their children understand the moral implications of behavior and to reinforce good decision making. Because of their high degree of involvement with their children's academic development, homeschooling parents assert that they can highlight their children's strengths and protect them from the negative labeling that so frequently arises from weaknesses. Finally, parents contend that homeschooling more accurately mirrors "real life."

The nature of the debate between proponents and opponents of homeschooling underscores Ray's (1999) contention that education, which has been a crucial concern of parents and society since the genesis of culture, is still passionately debated in America today. He notes that it has become clear that homeschooling is not a fad as many thought it would be. Instead, it has become a viable educational option that will play "an ever-

increasing role in the fracas that surrounds educational debates, reforms, and choices" (Ray, 1999, p. 2).

The critics of homeschooling did not incorporate research findings into their discussions of homeschooling although some did acknowledge the substantial need for outcome research that investigates the impact of home education on students' chances for success in life (Murray, 1996, p. 43). While the need for outcome studies in this area is significant, there exists a growing body of research in the educational literature that addresses both the academic and social competence of homeschooled children.

Research Findings

Academic Competence. A wide range of studies examining the academic performance of homeschooled children have been conducted. Some studies have a broad focus, such as comparing the scores of homeschooled children on standardized achievement tests, while others have focused on performance in specific academic areas. One of the first to examine the competence of homeschooled students was Jon Wartes, a public high school counselor in Washington State (Wartes, 1987). His study analyzed the test scores of 426 students from kindergarten through grade twelve on the Stanford Achievement Test. Wartes found that with the exception of one subtest (at the 49th percentile) all subtests and subscales were above the 50th percentile, with the 68th percentile as the median score. Wartes obtained similar results when he collected the Stanford Achievement Test scores for 877 homeschooled children in Washington State from 1987 to 1989. Wartes also found that these scores showed no relationship or a weak, insignificant relationship to selected parent variables including family income, education level of the primary teaching parent, and whether it was a two-parent or single-

parent household. Wartes concluded that these homeschoolers scored as well or better than their peers across the nation regardless of family demographics.

Ray (1990) also examined the scores of homeschooled students on national achievement tests. Ray collected data from 1,516 families nationwide which were homeschooling 4,600 children. Performance on various achievement tests resulted in scores that placed homeschooled students at or above the 80th percentile in all tested subject areas. Families participating in this study were recruited from the membership list of the Home School Legal Defense Association. More recently, Ray (1997) expanded his study to include a more representative homeschool sample. Ray again obtained achievement scores from homeschoolers through the Home School Legal Defense Association, but also through other homeschool support organizations and through personal networks. Of the 5,402 students from 1,657 families involved in this study, achievement scores were available for 3,466 children. Achievement scores were obtained from several testing sources including the Iowa Test of Basic Skills (37.3%), the Stanford Achievement Test (29.8%), and the California Achievement Test (15.6%). Similar to his previous study, Ray found that homeschoolers scored at or above the 80th percentile in all academic areas addressed by these achievement tests. Furthermore, Ray found no significant relationship between achievement and family variables such as certification of parents, family income, and money spent on education. A weak relationship was found for several variables, including parents' educational level, but Ray concluded that the small degree of variance ascribed to these variables rendered them insignificant.

Rudner (1999) conducted the largest study of homeschooled children when he obtained achievement scores for 20,760 children from 11,930 families. Students in kindergarten through eighth grade were assessed using the Iowa Test of Basic Skills (ITBS) and students in ninth through twelfth grade used the upward extension of the ITBS, the Test of Achievement and Proficiency. The lowest percentile score reported for this population was 62, the highest was 92 and the median percentile score was 81. Rudner concluded that the achievement test scores of this group of homeschooled students were exceptionally high and that homeschooled students do quite well in their educational environment. While these results are impressive, they are significantly compromised by the methodology involved in the test administration. Rather than utilizing standardized test administration procedures, Rudner reports that the ITBS is sent to certified testers who are frequently the students' parents. Ray (1997) reported that his study also included some test data from students whose parents administered the test. He concluded, however, that the individual who administered the test did not significantly impact scores.

The Academic Competency Test (ACT) utilizes standardized administration procedures thus protecting the reliability of scores. It provides an opportunity to compare college-bound homeschooled students with conventionally-schooled counterparts. A 2003 report on homeschooled students' performance on the ACT revealed that homeschooled students did well on this college entrance examination (ACT, 2003). They had an average ACT composite score of 22.8 which placed the typical college-bound home school student in the 65th percentile of all ACT test takers.

Additional studies have been conducted that have examined specific areas of academic proficiency among homeschooled students. For example, Russell (1994) investigated numerous variables for their power to predict the academic achievement of homeschoolers. Medlin (1994) and Galloway and Sutton (1995) focused on the relationship between aptitude and achievement. Medlin and Blackmer (2000) measured the degree of homeschoolers' intrinsic motivation; and de Oliveira, Watson, and Sutton (1994) focused on the differences in critical thinking skills between homeschooled students and conventionally-schooled students. Creativity among homeschooled students was another research area (Medlin, 1996) as was the impact of homeschooling on achievement in mathematics (Sande, 1995) and on the physical fitness and activity levels of homeschooled students (DeVoie, Kennedy, & Lloyd, 1996). Reviews of this existing literature has lead to the general conclusion that homeschooled students perform as well or better than conventionally-schooled students regardless of the subject or grade level (Kitchen, 1991; Lines, 2001; Ray, 2000b; Russell, 1994).

Social Competence. Most studies investigating the academic competence of homeschooled children measure the performance of these students on one of many standardized achievement tests. Regardless of the particular test used, achievement, and therefore competence, is determined by comparing the scores of homeschooled students with the norms of a given test or with the scores obtained by a traditionally-schooled comparison population. Researching the socialization of homeschooled children is a more difficult proposition. Socialization is a term that is vaguely defined. A typical textbook definition of socialization is that it is "the process by which children acquire the beliefs, values, and behaviors considered appropriate for people in their society and

culture" (Berndt, 1992, p. 429). Yet there is no clear consensus as to how to determine whether a child is adequately socialized.

The most prevalent method for examining the socialization of homeschooled students has been to measure their self-concept. Taylor (1986) is credited as the first to utilize this variable as a means to address socialization. He chose the Piers-Harris Children's Self-Concept Scale (PHCSCS) to measure the self-concept of 224 children in grades four through twelve. He found that the self-concept of homeschooled children was significantly higher than that of a conventionally-schooled comparison population on the global scale and on all six subscales of the PHCSCS. He also found that half of the homeschooled students scored at or above the 91st percentile. He concluded that to the degree that self-concept reflects socialization, homeschooled students are not, as a group, socially deprived.

Following Taylor's lead, several other investigators used the PHCSCS to address socialization. Hedin (1991) compared the self-concept of 257 fourth through sixth grade students who attended public schools, Christian schools, or were homeschooled. Hedin used membership in large Baptist churches in Texas as her means to control differences in spiritual and educational values. She found no significant differences in self-concept across all three educational settings.

Kelley (1991) administered the PHCSCS to 67 homeschooled children in suburban Los Angeles in grades four through ten. He compared their scores with the normative scores for this instrument. Half of the homeschooled students (50%) were at or above the 80th percentile and most (84%) were at or above the 50th percentile on the global scale. Kelley reports that more than half of the homeschooled students were at or

above the 80th percentile on four of the six subscales. One third of these students were above the 80th percentile on the Physical Appearance and Attributes subscale. Results for the Popularity subscale, however, showed these students hovering around the 50th percentile. Kelley suggests that the Popularity subscale questions relate specifically to conventional school settings and this may account for the difference in the homeschooled students' lower scores on this subscale. Overall, Kelley discussed the similarity of the results on the PHCSCS with those from Taylor's study and concluded that those who criticize homeschooling should not target self-concept and socialization as these factors tend to favor homeschooled children.

Medlin (1994) also employed the Piers-Harris Children's Self-Concept Scale in his research on homeschooled children. He used this instrument to determine whether the positive self-concept that apparently prevails among homeschooled children predicts academic achievement. He administered the PHCSCS to 36 homeschooled children along with the Stanford Achievement Test to measure academic achievement and the Otis-Lennon School Ability test to assess scholastic aptitude. The mean PHCSCS scores for these students placed the average homeschooled student in the 72nd percentile. While his results indicate that the strongest correlation existed between scholastic aptitude and academic achievement, he concluded that the high self-concept among homeschooled students was also a contributor to academic achievement.

Kitchen (1991) addressed the issue of socialization by measuring self-concept using the Self-Esteem Index (SEI) as his assessment tool. Kitchen compared the SEI scores of 22 homeschooled children with those of 25 students from public and private schools. He found that homeschooled students obtained higher scores on all aspects of

the SEI with the exception of the Peer Popularity subscale. Furthermore, Kitchen found a moderate inverse correlation between self-esteem and peer popularity. He concludes that these results warrant further investigation with a larger population.

Like Kitchen, Tillman (1995) used the Self Esteem Index (SEI) in her research, but extended her study beyond self-concept to include an assessment of social activity. She designed the Socialization Opportunities Questionnaire (SOQ) specifically for this study. Out of the 259 families that returned the SOQ, 59 students aged 11 to 14 years old also completed the SEI. The mean Self-Esteem Quotient for was 73.05 which placed them in the above average range. Scores on the four subscales of the SEI were also above average. Family Acceptance (70.3) obtained the highest score followed by Perception of Academic Competence (70.0), then Perception of Personal Security (67.9), and finally Peer Popularity (64.2). It is worthwhile to note that the inverse relationship between Peer Popularity and overall Self-Esteem that Kitchen found was not apparent with this sample of homeschooled children. The 259 families who returned the SOQ revealed a wide array of activities in which homeschooling families were involved on a weekly or monthly basis. Tillman concluded that if socialization can be measured by good self-esteem, then homeschoolers appear to be doing well. She also concluded that homeschoolers are not isolated from their communities. Instead, parents and children from these families appear to be active, contributing members of society.

The level of social involvement of homeschooled children and their families has been the focus of other research in the homeschooling arena. Wartes (1987), as part of his research with 219 homeschoolers in Washington state, found that 20-29 hours per month was the median amount of time that children were engaged in a variety of

organized community activities with same-aged peers or peers who were no more than two years older or younger. Ray (1997) collected data from 1,657 families regarding 5,200 students. A collation of this data revealed that these children spent on average 10 hours per week in contact with non-family adults and 11 hours per week with non-sibling children. Most children (87%) engaged in play activities with people outside the family, participated in field trips (84%), and attended Sunday School (77%); a smaller number participated in organized sports (48%), attended music classes (47%) or other classes outside their home (42%); other families were involved with Bible clubs (35%), or engaged in volunteer work (33%). In addition, a sizeable number of homeschooled children in this study were only minimally involved in solitary activities such as playing video games, computer games, or watching television. Many parents (46%) reported that their children spent no time playing video games or computer games during weekdays and a similar number (42%) played them less than one hour per weekday. The majority of these homeschooled children (62%) watched television or videos for less than two hours per day and some parents (18%) reported that their children did not watch television at all on weekdays. This level of interaction with others and the minimal use of electronic entertainment lead Ray to conclude that these homeschooled students were not socially isolated.

Chatham-Carpenter (1994) turned her attention to the size and quality of the social networks of homeschooled and public schooled students who were 12-18 years old. Her sample of 21 homeschooled and 20 public schooled adolescents recorded for one month the details of any of their interactions with members of their peer networks that lasted more than two minutes. The homeschoolers had contact with 49 different

individuals while public-schoolers interacted with 56 different individuals. The difference in the size of these networks was not statistically significant. The notable differences between the homeschoolers' social network and those of the public schooled students were that the majority of the individuals that met with the public schooled students were same-aged peers. The homeschoolers' social networks, however, were comprised of younger children, older adolescents, adults and same-aged peers. The public schooled and the homeschooled adolescents were similar in terms of the degree to which they rated the people on their lists as understanding and accepting, but the public schooled students were more likely to share their feelings with the individuals on their list and to seek their advice. Chatham-Carpenter concluded that although the total number of contacts indicated that homeschoolers are not at risk socially, the findings raise the question as to the degree of contact and closeness that is necessary in order for adolescents to acquire good social skills and to develop good friendships with peers.

Maarse Delahooke (1986) was one of the first to the address the social adjustment of homeschooled children in relation to peers and to other adults. She utilized the Roberts Apperception Test for Children (RATC) to assess the social and emotional functioning of homeschooled and private-schooled children. This assessment was administered to 28 homeschooled students and 32 private schooled students who were between the ages of 7 and 12. The RATC norms indicate that the social and emotional functioning of both the private schooled students and the homeschooled students were in the well-adjusted range. An analysis of the *Interpersonal Matrix,* however, revealed significant differences in the following categories: *Reliance on Others, Limit Setting, Problem Identification,* and *Unresolved.* The differences Maarse Delahooke found

suggest that homeschooled students are more likely to rely on parents for support than on other adults, that homeschooled students see their parents as primary authority figures more than do private-schooled students, that private schooled students appeared to be more influenced by or concerned with peers than were homeschooled students, and that private school students were more adept at resolving problematic situations on their own than were homeschooled students.

Resolving situations between people requires specific social skills. Smedley (1992) and Shyers (1992) directed their research towards assessing these social skills. Smedley utilized the Adaptive Behavior Composite (ABC) derived from the Vineland Adaptive Behavior Scales (VABS) to compare the observable maturity of a homeschooled sample with that of a public-schooled sample. The VABS assesses communication skills (including receptive, expressive, and written skills), daily living skills (including personal, domestic, and community skills), and socialization skills (including interpersonal relations, play and leisure time, and coping skills). The parents of 20 homeschooled and 13 public schooled children completed the VABS which resulted in mean scores of 115.55 for the homeschooled children and 93.0 for the public-schooled children. The national mean on the VABS is 100, which indicates that the homeschooled students, as a group, were somewhat above average in their overall adaptive behaviors while the public schooled students, as a group, exhibited somewhat below average adaptive behaviors. Statistical tests of significance revealed that these two populations were distinct. Smedley concluded that this sample of homeschooled students was more mature and better socialized than those who were sent to public school.

Shyers (1992) addressed social skills using a three-pronged approach. He posited that in order for an individual to respond appropriately in a given social situation, he or she must first have knowledge of the appropriate response. Second, the individual must be sufficiently comfortable in social situations to exhibit the appropriate response. The final measure of adjustment is whether or not the appropriate response is, indeed, exhibited. To measure these facets of social adjustment, Shyers utilized the Child's Assertive Behavior Scale (CABS) to measure knowledge of appropriate social responses, the Piers-Harris Children's Self-Concept Scale (PHCSCS) to measure social comfort, and the Direct Observation Form (DOF) of the Child Behavior Checklist to measure the degree to which children exhibited appropriate social behavior. Shyers obtained a matched sample of 70 homeschooled and public schooled students between the ages of 8 and 10 who completed the CABS and the PHCSCS. From each group of 70 students, 35 students participated in a videotaped play session. The play sessions included a 20-minute free play session and a 20-minute organized play session. Trained observers then rated each child using the DOF without knowledge of the educational setting from which each student came.

Shyers' data analysis revealed the self-concept scores of both the homeschooled and public-schooled students were above the national average. Scores on the CABS reflect responses that occur along the spectrum of very passive, passive, assertive, aggressive, and very aggressive. The CABS scores indicated that both groups of students tended toward slightly passive responses to social situations. Shyers suggested that 8- to 10-year-olds are rarely given much power or credibility, therefore these students as a group may not yet feel socially competent. The most notable finding from this study

related to the scores that the two groups of children obtained on the DOF. While none of the observers rated the behaviors as atypical for the age and gender of the subjects, the results revealed that the traditionally schooled children were considerably louder, more aggressive and more competitive than were the homeschooled children.

Montgomery (1989) highlighted one specific social skill as a critical area in relation to homeschooling: leadership skills. Based on literature reviewed, Montgomery concluded that it is not intelligence, socioeconomic status, nor grade point average that predicts which students will assume leadership roles in adulthood. Instead, leadership skills are fostered through extracurricular activities and opportunities to take on leadership roles while in school. Montgomery sought to determine whether homeschooling environments offer activities that sufficiently compensate for the lack of extracurricular and leadership opportunities that are available in a conventional school setting. To answer this question, Montgomery interviewed 55 homeschooling parents and 87 homeschooled students who ranged in age from 10 to 21 years. She also interviewed a random sample of conventionally-schooled children in grades five through twelve who represented a college-bound sample of students. Results from interviews revealed that there were no significant differences in the degree to which homeschooled and conventionally-schooled students were involved in church youth group activities, jobs or other paid work, music lessons and recitals, and clubs such as Scouts and 4-H. Montgomery concluded that there is no indication that homeschooling represses a student's leadership potential and that homeschooling may, in fact, nurture leadership skills at least as well as the conventional school environment.

Related to the issue of the development of leadership skills is the application of these skills. Smith and Sikkink (1999) investigated the degree to which families who homeschool or choose private schools are likely to be socially isolated and withdrawn from participation in civic life. Using data from the 1996 National Home Education Survey (Nolin, Chapman, & Chandler, 1997), Smith and Sikkink found that homeschooling families and families who choose private schools demonstrate higher levels of civic involvement than families whose children attend public schools. Homeschooling and private schooling families were more likely to vote, contribute money to political causes, contact elected officials about their views, attend a public rally or meeting, or belong to volunteer organizations or community groups. Furthermore, Smith and Sikkink found that even after controlling for several potentially related social factors, homeschoolers, Catholic private schoolers and other Christian private schoolers, but not non-religious private schoolers, were significantly more likely than public schoolers to be involved in a wide array of civic activities. Smith and Sikkink suggest that that there is something in particular about religious schooling and homeschooling that fosters a greater sense of community thereby encouraging greater participation within that community.

Much of the socialization research on homeschooling has addressed the development of children and adolescents. An additional area worthy of attention concerns the social adjustment of adults who were homeschooled. Ray (2004) investigated the degree to which these adults were active in their communities. His study involved 5,524 adults who had been homeschooled for at least 7 years and who had completed their secondary education. Ray also used data from the National Home

Education Survey to compare the responses of homeschooled adults to survey questions written by Nolin et al. (1997). Ray reported that 79% of homeschooled adults were involved in some type of on-going community service such as coaching a sport, volunteering at a school, or working with a church or a neighborhood association. Among similarly-aged adults nationwide, only 37% were engaged in community service activities. While 88% of these homeschooled subjects were members of an organization such as a church, a union, a homeschool group, or a professional organization, only 50% of similarly-aged adults across the U.S. were members of organizations.

Ray's study also suggests that homeschooled adults are more politically active than other adults in the general population. He found that 13% of the 18- to 24-year-olds in his sample population had either worked for a candidate, a political party, or a political cause during the preceding year, while only 1% of 18- to 24-year-olds across the nation were similarly engaged. Along the same lines, 74% of the homeschooled, but only 29% of the general population voted in a national or state election during the previous five years. In keeping with this trend, he found that the homeschooled expressed greater confidence in their understanding of and ability to influence society and the government than did the general population. Ray concludes that there is no basis to support the charge that homeschooling interferes with the participation of homeschooled adults in essential societal activities.

General Conclusions. The available research addressing the practice of homeschooling indicates that homeschooled students are doing well both academically and socially. Examinations of prevailing research methods, however, illuminate significance weaknesses in this young research arena. One of these weaknesses is the

infrequency with which investigators identify the limitations of their studies. The limitations that have been identified typify the problems that generally exist within this developing field. Some of the overarching concerns include the lack of a guiding theory, (Cizek & Ray, 1995; Medlin, 2000), inconsistent definitions (Tillman, 1995) and, consequently, poorly designed research questions and methodologies (Medlin, 2000). Experimental designs are frequently limited by non-representative, non-random samples (Maarse Delahooke, 1986; Kitchen, 1991; Medlin, 2000; Ray, 1999, 2004; Romanowski, 2002; Wartes, 1987, 1990), and small sample sizes (Medlin 2000; Wartes, 1987). Measures have been weak or untried (Kelley, 1991; Medlin, 2000) and there is an over-reliance on single measures (Francis & Keith, 2000; Russell, 1994; Wartes, 1990) or measures that rely on parental reports with no means to test reliability (Medlin, 2000) or to allow for clarification of responses (Wartes, 1990). Medlin charges that data is frequently treated or presented in unorthodox ways and conclusions are often based on subjective judgments. The comparison of homeschooling data against norms only rather than against comparison groups is a common practice (Medlin, 2000; Russell, 1994; Wartes, 1987) and there is an absence of longitudinal studies with homeschooled populations (Chatham-Carpenter, 1994).

A specific weakness that seriously compromises conclusions concerning the social competence of homeschooled students is the preponderance of studies that utilize self-concept or self-esteem measures. It is presumed that a strong self-esteem correlates with the behaviors, attitudes, or beliefs that are indicative of adequate socialization. Francis and Keith (2000) provide a historical presentation of the genesis and evolution of this construct in order to illustrate the inappropriateness of this strand of research. Their

first criticism of the construct is that self-concept and self-esteem lack standard definitions and that their meaning varies depending on context and on the theoretical orientation of the researcher. Francis and Keith claim that one of the shortcomings of the self-esteem construct was apparent even to William James, its creator, who noted that because it has a tendency to rise and fall it is difficult to measure. This begs the question: can conclusions about self-esteem be drawn when it is measured at only point in time? Additionally, Francis and Keith point out that the way in which an individual answers questions on a self-concept measure may be dramatically different than their observed social behavior. In addition, self-esteem scores do not necessarily predict peer acceptance or teacher ratings of social skills. Francis and Keith criticize the Piers-Harris Children's Self-Concept Scale in particular. They point out that the norms of this test were established in 1966 with subjects from a single school district in one state.

In light of the criticisms of self-concept measures, Francis and Keith take a second look at the homeschool studies where they have been used. For example, they concede that the above average self-concept scores found by Kelley (1991) and Tillman (1995) are impressive initially, but they suffer from the fact that only test norms were used for comparison. Francis and Keith also highlight the findings of Shyers (1992) where both homeschooled and traditionally-educated students received higher self-concept scores than the national average. When the social behavior ratings of each group were compared, however, the traditionally-schooled students were rated to have been engaged in more aggressive, loud, and competitive play. In this case, the high self-concept scores of the traditionally-educated students did not correlate with their social behavior. Francis and Keith reiterate that homeschooling research would be strengthened

by better methodology in general including the use of measures that are better normed, standardized, and theoretically appropriate for use in both home and school settings.

Clearly, homeschooling represents new research territory. It is uncharted land. Initial forays into this field have yielded some useful information, but conclusive results can hardly be claimed. What might be discovered there could be valuable to researchers involved in numerous educational and psychological fields. In turn, guidance into this new field can be obtained through following the lead of those engaged in related fields. One area of research that holds particular promise for shaping preliminary investigations is the research related to competence and resilience. Researchers in this area have been seeking to uncover the processes that enhance positive adaptation in the face of serious threats to adaptation or development. They seek to know what processes or characteristics promote successful outcomes for individuals who are considered to be at risk. While many would take umbrage at the notion that homeschooled children are somehow at risk, the prevailing arguments against homeschooling indicate that critics of this practice would support this assertion. This reason alone justifies an examination of the resilience literature when arguing for or against homeschooling. The more powerful argument, however, is one put forth by Ann Masten of the University of Minnesota. Her work in this area has lead her to conclude that:

> Resilience does not come from rare and special qualities, but from the everyday magic of ordinary, normative human resources in the minds, brains, and bodies of children, in their families and relationships, and in their communities. This has profound implications for promoting competence and human capital in individuals and society (Masten, 2001, p. 235).

It is reasonable to assume that what promotes competence and human capital in individuals and society, and especially in at risk individuals, would also promote competence among homeschooled or conventionally-schooled children.

Competence Research

Competence has been described in various ways in the psychological literature. Masten, Coatsworth, Neeman, Gest, Tellegen, and Garmezy (1995) place it within a family of constructs that include the ego, self-efficacy, intelligence, intelligent functioning, and developmental tasks. They note that each of these constructs represents attempts to describe or explain the effectiveness with which an individual adapts to his or her environment. A major difference between these constructs relates to whether they focus on internal processes or observed behaviors. While internal processes are certainly important in understanding factors that impede or promote the development of competence, it is observed behaviors that indicate levels of competency that have been achieved.

Masten and Coatsworth (1998) state that evaluations of how a child is doing generally reflect expectations about child development that are culturally transmitted from one generation to the next. They contend that while these expectations are reflected in the concerns of various elements within a community including parents, teachers, significant others in a child's life, and even in the popular culture, there is a small set of criteria that is common among these societal elements. These criteria reflect the developmental tasks by which adaptation within a society is measured. Roisman, Masten, Coatsworth, and Tellegen (2004) have concluded that the degree to which a child successfully performs the tasks of a specific developmental period is associated with

adaptation in the next period even though the specific tasks will be different. Masten et al. (1995) state that by late childhood there are three distinct dimensions of competence: academic achievement, conduct, and peer social success. Studies have shown that academic and social competence in childhood predict success in adulthood (Roisman et al., 2004). Masten and Curtis (2000) have found that the presence of these various forms of competence is a better predictor of freedom from adult mental illness than is the absence of pathology. Conversely, Masterpasqua (1989) has argued that the presence of symptoms of maladjustment in childhood per se is not a good predictor of later pathology, rather it is the deficits in adaptational competencies that more accurately predict the emergence of maladjustment.

Research points to the importance of three adaptive systems in the development of competence: parenting skills, self-regulation skills, and cognitive functioning (Masten & Coatsworth, 1998). Masten and Coatsworth state that there are certainly other protective processes that promote competence, but that research consistently points to the importance of parent-child relationships as a crucial context for the development of competence both with children with ordinary lives and for children facing extraordinary challenges. Weissberg, Caplan, and Harwood (1991), identify some of these additional factors that promote competence. They include: a positive self-esteem, adaptive coping skills, a positive social orientation, a good parent-child relationship, a cohesive family, ongoing contact with a caring adult, and peer models for conventional behavior. They state that children are most likely to to feel competent and function effectively when they have opportunities to be actively involved and to contribute meaningfully to their family and school, when they have the skills, motivation, and information necessary to succeed

in these settings, and when their social systems and their socializing agents—their parents teachers and peers—consistently reinforce their positive, adaptive behavioral performance.

Masten and Coatsworth (1998) contend that since it is vital to the future of a society that its children become competent adults and productive citizens, society and parents share a stake in the development of competence. It is critical, then, for parents and other members of a community to understand the processes that facilitate and undermine the development of competence. Roisman et al. (2004) highlight the need for society as a whole to prepare children and adolescents for adulthood by devoting attention and financial resources to the promotion of academic and social competence long before children reach maturity.

Application of the competence literature to the issue of homeschooling in the United States underscores the importance of moving beyond the contentious nature of the debates between proponents and opponents of homeschooling in order to address the need for empirical evidence regarding the social competence of homeschooled and conventionally-schooled students. This study represents an attempt to shift the focus away from the philosophical discussions and personal opinions and to direct attention toward examining the social competence of adolescents in relation to their educational environment. To that end, the purpose of this study will be to compare the social competence of homeschooled students to that of conventionally-schooled students. Specifically, three questions will be addressed:

1. Does the social competence of homeschooled and conventionally-schooled students differ?

2. In what ways do the social competence of homeschooled and conventionally-schooled students differ?
3. What factors contribute to these differences?

Chapter 2

Method

Participants

Participants in this study were homeschooled and conventionally-schooled adolescents between the ages of 12 and 14. A power analysis indicated that a sample size of 60 homeschooled students and 60 conventionally-schooled students would give adequate power to detect a medium effect size. The recruitment of homeschooled participants involved brief presentations at a church, a university, and a school-district sponsored homeschool school program that all offer a variety of academic classes for homeschooled students; announcements concerning the project were also posted in various homeschooling newsletters and websites along with an electronic mail address and a telephone number.

The presentations at the church and the university involved visiting classes and distributing to students informational flyers with a contact number. Questionnaire packets were delivered to interested parents who were present and they were oriented to the materials. Other parents contacted the researcher to arrange a meeting time to obtain their study materials. The presentation at the school district-sponsored homeschool program occurred during a fall orientation meeting for parents. Following the orientation, parents had the opportunity to ask questions about the project, receive a flyer

with information, or to sign up to participate. Follow-up telephone calls were made to arrange a time to meet and discuss the materials in the packet. Interested parents who received a flyer, read an announcement, or learned about the project through personal networks used the telephone number or electronic mail address to contact the researcher and meeting times were arranged.

Many of the conventionally-schooled participants were recruited during a fall open house at a middle school. An informational table was available in the lobby of the middle school and parents and adolescents had the opportunity to sign up to participate, ask questions about the project, take home an informational flyer, or leave their name and telephone number in order to discuss the project further. An announcement describing the project was also delivered to parents through the middle school's website; an electronic mail address and telephone number were provided as well as the principal's name, telephone number, and electronic mail address for parents who wanted to discuss the project with the principal. Additional participants were recruited during local sporting events where middle school parents were in attendance. One-to-one contacts were utilized rather than a formal presentation. Interested parents were given a questionnaire packet at the event or a follow-up telephone call resulted in a meeting time to discuss the materials. Some parents chose to meet individually with the researcher to obtain their packets, others preferred to have the packets sent home from school with a follow-up telephone call to discuss the materials.

As part of the orientation process, each parent was asked to identify a teacher who might be willing to participate in the study by completing a form that assesses the behaviors of the participating student in a classroom setting. Arrangements were made

for the delivery and retrieval of the form. Some parents chose to personally deliver and retrieve the form while others provided the necessary information and consent that would allow the form to be delivered and retrieved by the researcher. For most of the middle school students, a middle school teacher completed the form; for some of the 7th grade students, a 6th grade teacher from their elementary school was chosen. Most of the homeschooling parents selected a teacher who taught classes in the church, university, or school-district sponsored program. Others chose Sunday school teachers or instructors from music or art classes.

Measures

Family Characteristics. A consistent issue concerning homeschooling relates to the potential influence of family factors on the competence of homeschooled students. Income, family composition, number and age of homeschooled siblings, religious affiliation, ethnicity, and the educational level of the parents, particularly the primary teaching parents, are the factors that are assumed to be the most relevant when examining differences between homeschooled and conventionally-schooled students. This accentuated the need to gather comprehensive information concerning the family characteristics of all participants in this study. The Family Characteristics demographic questionnaire was constructed for this purpose.

Social Involvement Report (SIR). The literature addressing the socialization of homeschooled students is concerned not only with the social skills of these children, but raises issues regarding social activity levels, social attitudes and beliefs, and exposure to people from different cultures, races, and beliefs systems. The Social Involvement Report (SIR) was developed specifically for this research study in order to gain a sense of

the varying degrees to which homeschooled and conventionally-schooled adolescents are socially engaged. Both the adolescent form (SIR-A) and parent form (SIR-P) of this questionnaire used a 4-point Likert scale to assess the frequency with which adolescents engaged in a variety of socially-oriented activities. The s*ocial activity* portion of the questionnaire addressed how often adolescents typically spent time with friends and peers in formal and informal activities such as going to movies, sleeping over at a friend's house, and participating in activities arranged by youth organizations. *Social skills* were measured by how often adolescents exhibit specific behaviors such as introducing themselves or another person to someone new, resolving a problem with someone who is older or younger, and sharing materials and belongings with others.

It is difficult to measure attitudes and beliefs through specific behaviors; however, what can be measured is the frequency of activities that may be indicative of a developing personal values system and an emerging sense of social responsibility. The *social responsibility* section included positive community activities such as participating in food drives or clothing collections, giving time to people in need, and refusing to participate in activities that violate parental or personal values. The *social exposure* portion of the questionnaire measured how often students engaged in activities that exposed them to cultural influences or different worldviews. These activities included such things as watching television or going to movies; reading books or newspapers; visiting places such as museums; and participating in activities with individuals from other cultures, religions, or races.

Behavior Assessment System for Children (BASC). Research addressing competence and resilience emphasizes that competence is more than the absence of

pathology; it is the presence of adaptive skills or social competence that is the most reliable measure of future success (Roisman et al., 2004). An instrument that specifically measures the component skills of competence was necessary in order to draw reliable conclusions concerning the general social competence of participants in this study. The Behavior Assessment System for Children (BASC) is a strengths-based child assessment instrument which measures adolescent adjustment through the use of both adaptive and maladaptive scales.

The BASC was an appropriate choice for this study for a number of reasons. First, while no instrument sufficiently measures all aspects of social competence, the BASC scales address specific competencies that have been identified as important when determining the social adjustment of adolescents in general. Second, critics of homeschooling have consistently asserted that homeschooled students are more likely to be socially maladjusted. Given the prevalence of this concern, it was useful to employ a measure such as the BASC that screens for adjustment problems. Third, the BASC is an assessment instrument that is used not only in mental health settings, but it is also commonly used in schools as well; this enhanced the utility of the BASC in that it has the respect of psychologists and educators. Finally, the prevalence of single measure studies or single reporters was an identified deficit in previous research in the homeschooling arena. The use of the BASC addresses this deficiency in that it includes several report forms: the Parent Rating Scales (PRS), the Teacher Rating Scales (TRS) and the Self-Report of Personality (SRP).

The PRS is a 126-item inventory filled out by a parent or primary caregiver that measures an adolescent's adaptive or maladaptive behaviors in the community and at

home. The TRS is a 136-item inventory that measures adaptive skills and problem behaviors in the school setting. Both parents and teachers rate specific behaviors on a 4-point frequency scale ranging from *never* to *almost always.* The validity of individual PRS and TRS protocols can be ascertained as this assessment includes a consistency index. "Faking bad" profiles and protocols with omitted items or patterned responding are also easily identified.

The adaptive scales of the PRS are *social skills* and *leadership skills* which combine to create the *adaptive skills* composite. The TRS *adaptive skills* composite includes *social skills* and *leadership skills* as well as *study skills.* The *social skills* scale measures aspects of social adaptation such as admitting mistakes, complimenting and encouraging others, and engaging in conversations appropriately. *Leadership skills* assesses behaviors such as participation in clubs and extracurricular activities and it measures problem solving behaviors including having many ideas, giving good suggestions, and making decisions easily. The TRS *study skills* scale asks teachers to rate students' academic motivation, their organizational skills, and their use of learning strategies. The utility of the *adaptive skills* composite, then, is based on its ability to provide a summary of prosocial, organizational, and achievement-oriented behaviors and skills.

The BASC consists of numerous maladaptive scales which yield several composite scores. A*ggression, hyperactivity,* and *conduct problems* comprise the *externalizing problems* composite. The *aggression* scale measures an adolescent's tendency to do physical or emotional harm to others as well his or her tendency to argue, blame, and threaten. The *hyperactivity* scale addresses over activity including feet or

pencil tapping and the inability to sit still. It also addresses impulsive behaviors such as acting without thinking, hurrying through assignments, and exhibiting difficulty waiting for a turn during a game or activity. *Conduct problems* is an assessment of behaviors associated with delinquency such as cheating, stealing, lying, using drugs, truancy, and running away from home. All together, the *externalizing problems* composite is characterized by disruptive behaviors that are readily apparent to parents and teachers. Adolescents with high scores on this composite tend to be unresponsive to adult direction and are likely to have problems in their relationships with peers. The authors note that the behaviors measured by the *externalizing problems* composite are generally more obvious than those of the *internalizing problems* composite and that this likely accounts for higher interrater agreement on this dimension.

The *internalizing behaviors* composite is comprised of the *anxiety, depression,* and *somatization* scales. The anxious behaviors included in this measure are excessive worry, fears, phobias, and self-deprecation. The depressive symptoms assessed are dysphoric mood, suicidal ideation, withdrawal from others, and self-reproach. The items on the *somatization* scale focus on the frequency with which an adolescent complains about physical symptoms for which no physical explanation can be found. Overall, high scores on the *internalizing problems* composite is indicative of a distressed individual who is not disruptive and who may, in fact, be very compliant over overcontrolled. This tendency can make it especially difficult for teachers to detect problems in these adolescents.

The *school problems* composite focuses on behaviors that are related to academic achievement. The *attention problems* scale measures distractibility while the *learning*

problems scale addresses difficulty with academic domains such as reading, writing, mathematics, and organization. Together, high scores on these scales are indicative of academic difficulties in the areas of motivation, attention, learning, and cognition.

Two additional maladaptive scales, *atypicality,* and *withdrawal* are not incorporated into a composite scale and one additional composite scale, the *behavioral symptoms index*, does not include individual scales, rather it is comprised of specific items from many scales. The *atypicality* scale measures odd behaviors that are usually associated with psychotic symptoms. However, a high score on this scale, depending on the particular items endorsed, may also reflect social alienation, a highly individualistic personality, a tendency towards disruptive behavior, or immaturity. Similarly, a high score on the *withdrawal* scale may reveal a tendency to avoid social contact or it may be the result of neglect or rejection. Finally, the *behavior symptoms index* provides an overall measure of the frequency of general problem behaviors. A high score on this composite is a global indicator of serious behavioral problems.

The SRP is a 186-item, true/false self-report inventory that provides insight into the thoughts and feelings of an adolescent. It includes several means for assessing validity including the *F* Index which may identify several problems with a given protocol including reading difficulties, failure to follow directions, random responding, or "faking bad." The *L* Index similarly may identify random responding or difficulties in reading or comprehension, but it also serves as a social desirability scale therefore identifying "faking good" profiles. The *V* Index focuses on nonsensical responding patterns and can signify carelessness, lack of understanding, or lack of cooperation. Like the PRS and TRS, the SRP provides several composite scores. These composites are derived from

combinations of the various adaptive and maladaptive scales of the SRP. The adaptive scales are *relations with parents, interpersonal relations, self-esteem,* and *self-reliance.* The maladaptive scales are *anxiety, atypicality, locus of control, social stress, somatization, attitude to school, attitude to teachers, sensation seeking, depression,* and *sense of inadequacy.*

The *emotional symptoms index* is a general indicator of serious emotional disturbance and is particularly reflective of internalized disorders. This composite is comprised of both adaptive and maladaptive scales. Low scores on interpersonal relations and self-esteem contribute to high scores on this scale. Low scores on the *interpersonal relations* scale are indicative of an adolescent's difficulties relating to others. Problems may be the result of withdrawn behavior, intrusive behavior, or insufficient energy for social engagement. The *self-esteem* scale assesses an adolescent's self-satisfaction with both physical and global characteristics. Low scores reflect a pervasive sense of dissatisfaction with the self and shyness and tension often accompany low scores on this scale.

High scores on *social stress, anxiety, depression,* and *sense of inadequacy* contribute to high scores on the *emotional symptoms index. Social stress* is a measure of the tension and pressure associated with interactions with others and it detects a general lack of coping resources. This stress is likely to be chronic and pervasive rather than acute and transient. The *anxiety* scale addresses generalized fears, oversensitivity, and worries that tend to be irrational or poorly defined. The *depression* scale measures feelings of loneliness, sadness, and an inability to enjoy life; a sense of hopelessness, pessimism and dread are undercurrents of many of the items. High scores on the *sense of*

inadequacy scale are indicative of an adolescent that lacks a belief in his or her ability to achieve at expected levels. Whether the level of expectation is set by himself or herself or by someone else, this lack of achievement is accompanied by a perception of being unsuccessful and a tendency to lack persistence. Clearly, a high score on this composite is indicative of an adolescent with significant internal distress.

The *personal adjustment* composite is an adaptive composite that is comprised of *relations with parents*, *interpersonal relations*, *self-reliance*, and *self-esteem*. The *relations with parents* scale assesses an adolescent's perceptions of his or her importance to the family, the status of the parent-child relationship, and the degree of parental trust and concern. The *self-reliance* scale measures self-confidence, the ability to face challenges, and self-assurance when it comes to making decisions. Combined with high scores on the *interpersonal relations* and *self-esteem* scores, high scores on this composite are indicative of an individual who enjoys relating with others and feels successful in his or her relationships.

The *clinical maladjustment* composite is a particularly important measure in that an individual who does not have a significant elevation on individual SRP scales may have a high *clinical maladjustment* score as a result of the cumulative effect of his or responses on all of the scales. *Anxiety*, *atypicality, locus of control*, *social stress*, and *somatization* comprise this composite. As with the PRS and TRS, high scores on the *atypicality* scale may be have several interpretations. *Somatization*, again, refers to the tendency to report physical symptoms that are relatively minor and appear to have no physical explanation. A high score on the *locus of control* scale reveals an adolescent's sense that success or failure is determined by external forces that are beyond his or her

control. This leads to a sense of hopelessness and high scorers are likely to blame others for their problems and they tend to believe that they will not be rewarded when they behave according to expectations.

The final SRP composite to be considered is *school maladjustment*. High scores on this composite reveal a pervasive pattern of dissatisfaction with school personnel as well as with the school and the structure of the educational process. High scores on *attitude to teacher* scale, one of the three scales that comprise this composite, indicate a perception that teachers are unfair, uncaring, and unmotivated to help their students. The *attitude to school* scale assesses an adolescent's general opinion of the utility of school and his or her comfort level at school. High scorers on this scale are unlikely to find school worthwhile with the exception that it affords them the opportunity to be with peers. It is important to note that high scores do not necessarily correlate with academic deficiencies, yet adolescents with these scores are at risk for dropping out; this is especially true if they also have high scores on the *sensation seeking* scale which is the third component of this composite. This scale measures an adolescent's desire to engage in potentially hazardous or exciting behaviors. Sensation-seeking adolescents tend to have a high energy level and they get bored easily. The risk of drug use and delinquent behaviors are associated with significant elevations on this scale. Low scores on this scale are also cause for concern as they are associated with individuals who are cautious, anxious, and inhibited. These attributes can contribute to a low level of comfort in a school environment. The *sensation seeking* scale is part of the *school maladjustment* composite due to its high correlation with behavior problems at school and with negative attitudes toward teachers and the process of schooling in general.

The psychometric qualities of the BASC are quite good and are delineated in the detail in the Behavior Assessment System for Children Manual (Reynolds & Kamphaus, 1992). The coefficient alpha reliabilities for the TRS range from .77-.95, the PRS range is from .67- 87, and the range for the SRP is .66-.89. The test-retest reliabilities for subscales of the adolescent form of the TRS range from .70-.89, for the PRS the range is .42-.78, and the range for the SRP is .67-.89. Finally, the construct validity of the TRS has been well-established through comparisons with the Teacher Report Form, the Conners' Teacher Rating Scales, the Burks Behavior Rating Scales, and the Behavior Rating Profile. The PRS correlates well with the Child Behavior Checklist, the Personality Inventory for Children, the Conner's Parent Rating Scales, and the Behavior Rating Profile. The validity of the SRP is based on its good correlations with the Minnesota Multiphasic Personality Inventory, the Youth Self-Report, and the Behavior Rating Profile.

Friendship Task. The amount of time spent with friends is an important variable in determining the social activity level of adolescents, but it does not reveal specific information concerning a child's level of skill in developing and maintaining friendships. A modified version of a friendship competence task developed by Rose and Asher (2004) was used to assess aspects of children's social skills within friendships. This assessment sought to measure the ways in which children were likely to offer help to friends and to seek help from friends. It is also designed to provide insight into the motivations that influence adolescents' behaviors within friendships by asking them to identify the goals behind their strategies.

To complete this task, children were provided with three vignettes in which they could give help to a friend and three vignettes where they could seek help from a friend. Each vignette presented a stressful situation with peers and ended with an opportunity for the adolescent to give or seek help. After reading a vignette, the participant rated a list of help-giving or help-seeking strategies using a Likert scale that ranged from 1 (definitely would not do) to 5 (definitely would do). The help-giving strategies included: *initiating discussion, sympathizing, giving advice, reassuring, suggesting social activity, behavioral denial, dismissing, avoidance,* and *blaming*. The help-seeking strategies include: *self-disclosing, advice-seeking, seeking social activity, behavioral denial, solitude seeking,* and *refusal to disclose*. After identifying help-giving and help-seeking strategies, the participants read the first set of vignettes again. This time, adolescents identified what their goals would be if they were in the situation. Next to each goal was a Likert scale ranging from 1 (really disagree) to 5 (really agree). The goals presented for each help-giving vignette included: *help friend to feel better, express caring, help to solve problem, respect privacy, avoid involvement,* and *assign responsibility*. The goals presented for the help-seeking vignettes reflected a desire to: *feel better, solve the problem, present self in favorable light, maintain privacy,* and *keep friend out of personal business*.

Procedure

Parents and Students. The parent questionnaire packets included an instruction letter, the Family Characteristics demographic questionnaire, the SIR-P, the PRS, the TRS form with a cover sheet, informed consent forms, a prize ticket for the parent and for the teacher, and pre-addressed envelopes for consent forms and for TRS forms that were

to be returned by mail. Adolescent packets included an instruction letter, the SIR-A, the SRP, the Friendship Task, informed consent forms, and a prize ticket. Parents and students found a convenient time to complete their questionnaire packets and most returned them to the offices at the middle school, church, or the school in which the district-sponsored homeschooling program was housed. For some parents, it was more convenient to arrange a meeting time to hand-deliver the packets or to return them through the mail. To ensure confidentiality, all questionnaires in the parent and adolescent packets were coded with the same number for a given family. The time to complete the packets varied, but most parents reported that it required approximately 30 minutes to complete the parent questionnaire packet and 45 minutes to complete the adolescent packets.

Teachers. The teachers received the TRS with a cover sheet that included the student's name, a brief set of explanations and instructions, and a contact number to use in case of questions. The instructions requested that the cover sheet be removed before returning the form in order to protect the student's confidentiality. Teachers reported that 10-15 minutes were required to complete the form.

Data Analysis

Analysis of Variance (ANOVA) was first used to determine whether there were significant demographic differences between the families who homeschool and families who utilize conventional schools. ANOVA was then used to determine whether homeschooled students and conventionally-schooled students differed on the measures of social competence. Where there were differences, covariate analyses were conducted to

discern whether these differences were the result of demographic variables or whether they were more likely due to differences in educational setting.

ANOVA with the SIR involved the *social activities, social skills, social responsibility,* and *social exposure* categories. Given that this study emphasized the competence of adolescents, each individual maladjustment scale of the BASC was not analyzed separately. Rather, a general assessment of maladjustment was made using the *externalizing problems* composite, the *internalizing problems* composite, the *school problems* composite, and the *behavior symptoms index.* The *atypicality* and *withdrawal* scales provided information that was not available through analysis of composite scales, therefore both of these scales were analyzed individually. The adaptive scales, on the other hand, were central to this study. Therefore, all adaptive scales were analyzed as well as the composite scales that include them.

The Student Report of Personality (SRP) included scales and composites that are not found on either the PRS or the TRS, many of which are particularly relevant to the issue of adolescent competence and adjustment. Similarly, many of the PRS and TRS composite scales are not included on the SRP. For example, there are no SRP composites that specifically address internalizing and externalizing behaviors. Overall, the scales and composites of the SRP address aspects of competence and maladjustment that are quite different from the PRS and the TRS. In light of these considerations, it was reasonable to examine all of the SRP scales and composites to gain as complete a picture of adolescent competence and adjustment as the SRP could provide.

The ANOVA procedure with the Friendship Task utilized all the factors that emerged in Rose and Asher (2004) with the exception of the avoidance/blaming factor

which did not have an adequate alpha correlation. For the help-giving strategies task these were: *verbal support, reassuring, suggesting social activity, behavioral denial,* and *dismissing*. For the help-seeking strategies task, the factors were: *self-disclosure/advice-seeking, seeking social activity, behavioral denial,* and *excluding friend*. For the goals in help-giving task the factors were: *prosocial support, not getting involved,* and *assigning responsibility* and the goals in help-seeking task factors were: *resolution, self-presentation,* and *maintaining privacy.* The amount of homeschooling or conventional-schooling was compared with the scores from the scales and factors of each assessment instrument in order to detect differences in individuals apart from the groups into which they have been placed. This allowed the data to be analyzed both continuously and categorically.

Chapter 3

Results

Participating Families

Participants were a convenience sample of homeschooled and conventionally-schooled adolescents ($N = 47$) between the ages of 12 and 14 ($M = 12.83$, $SD = .79$) including 23 boys. Twenty-four students, 13 boys, were homeschooled ($M = 12.79$ years, $SD = .80$) and 23 students, 10 boys, were conventionally-schooled ($M = 12.87$ years, $SD = .82$). On average, homeschooled students were schooled at home for 7.3 years ($SD = 1.72$) and spent 0.9 years ($SD = 1.58$) in public schools, and 0.3 years ($SD = .86$) in private schools. Conventionally-schooled students spent an average of 7.2 years ($SD = 2.48$) in public schools, 0.9 years ($SD = 2.01$) in private schools and 0.5 years ($SD = 1.16$) in home schools. The age and gender of homeschooled and conventionally-schooled students did not differ significantly. There was also no significant difference in the number of years that homeschooled students were homeschooled and the number of years conventionally-schooled students were educated in conventional schools. Where a significant difference was found was in the average number of hours that homeschooled and conventionally-schooled students spent in traditional classroom settings, $X^2 (5, N = 47) = 28.27$, $p < .000$.

Almost all students (92%) in the sample were white, two were Hispanic (6%) and one family did not report on race. Mothers were reporters for all but two families; one homeschooling father and one conventionally-schooling father provided information for their families. Intact families predominated (87%) in this sample as most families were headed by married parents who had never been divorced; therefore, step/half-siblings were not part of the child composition for most of the families. Four households (9%) were headed by divorced, remarried parents; one family was headed by a divorced single mother (2%); and one family was headed by a widowed single father (2%). Only seven families (15%) were complex step-families which included half/step siblings or other children not from the family living in the home. Homeschooling families differed significantly from conventionally-schooling families in that all families were intact, X^2 (1, $N = 47$) = 7.18, $p = .007$ and there were no other children living in these homes. The number of children per family ($M = 3.0$, $SD = 1.19$), did not vary significantly and most students (72%), whether homeschooled or conventionally-schooled, were either first- or second-born children.

Parental work status differed markedly between homeschooling and conventionally-schooling families, X^2 (2, $N = 47$) = 10.65, $p = .005$. The source of the significance concerned the disproportionate ratio between the number of families where both parents worked full-time compared to families where a second parent worked part-time or was not employed outside the home. One parent working full-time and one parent not employed was the predominant arrangement for homeschooling families (63%); both parents working full-time occurred for only one homeschooling family (4%). For conventionally-schooling families, both parents or a single parent working full-time was

common (35%) and one parent working full-time and the other not employed was less frequent (22%). The number of families in which one parent worked full-time and one parent worked part-time did not differ significantly between homeschooling (33%) and conventionally-schooling (44%) families.

Family income and parental education did not vary relative to educational setting. Most parents reported incomes between $20,000 and $50,000 (34%) or $50,000 and $70,000 (36%) per year. Many fathers in this study had a bachelor's degree or higher (55%) and nearly equal numbers had either post-high school education or training (19%) or a high school diploma or GED (21%). Maternal education was more evenly divided between a bachelor's degree or higher (38%), post high school education or training (32%), and a high school diploma or GED (28%).

Religious identification did not vary between parents of homeschooled and conventionally-schooled parents, but religious involvement did. Most parents (85%) identified a religious preference, some parents (11%) did not report a preference, and an even smaller proportion (4%) identified themselves as atheist or agnostic. Levels of religious involvement were loosely defined with the aim of identifying families for whom religious activity was a regular feature of their lives. Parents were identified as *highly religiously active* if they attended religious services on a regular basis, generally once per week, and if they were involved in religious programs once a month on average. Other religiously-oriented activities that happened less regularly, such as volunteering time on a specific project, served to increase a *moderate* designation to "high." The majority of homeschooling families (75%) reported high levels of religious involvement and only one family (4%) reported little or no participation in religiously-oriented activities. This

was quite different from the conventionally-schooling families where less than half (39%) reported high levels of religious involvement and many (26%) reported little or no involvement in religious practices or activities, X^2 (2, N = 39) = 6.23, p = .044.

Interactions Between Family Variables and Measures

Analysis of family factors against parent and adolescent responses on the Social Involvement Report (SIR); student (SRP), parent (PRS), and teacher (TRS) scores on the Behavior Assessment System for Children (BASC), and student responses to the Friendship Task reveal a variety of statistically significant interactions (all p values less than .05 unless otherwise specified). Age and gender interactions were revealed on both the BASC and the Friendship Task. Adolescent scores on the *attitude to school* scale of the SRP showed that 13-year-olds had a generally more favorable opinion of school than did either 12- or 14-year-olds, F (2, 44) = 3.69, p = .033, eta^2 = .14. Girls' SRP self-ratings resulted in higher sensation seeking scores than boys' ratings, F (1, 45) = 7.79, p = .008, eta^2 = .15 and teachers' ratings indicated that girls were more socially skilled than boys, F (1, 30) = 6.67, p = .015, eta^2 = .18 and exhibited stronger leadership skills, F (1, 30) = 4.63, p = .040, eta^2 = .13. On the Friendship Task, girls were more likely to choose *verbal support* as a help-giving strategy, F (1, 45) = 10.09, p = .003, eta^2 = .18; they endorsed *self-disclosure* as a help-seeking strategy, F (1, 45) = 17.89, p < .000, eta^2 = .28 more frequently than did boys. In terms of goals, girls were more likely to want to help a friend feel better or feel cared for, F (1, 45) = 12.00, p = .001, eta^2 = .21 and boys were making likely to have "maintaining privacy" as a goal, F (1, 45) = 9.42, p = .004, eta^2 = .17. In relation to age, 14-year-olds were more likely to

pretend an event did not happen than were either 12- or 13-year-olds, F (2, 44) = 3.34, p = .045, eta^2 = .13.

The birth order of participating students did not impact scores on any of the study measures, however family cohesion and child composition factors showed several interactions, especially with BASC scales. Compared to adolescents with several siblings, students with only one brother or sister received higher ratings by their parents on the *internalizing problems* composite, F (5, 41) = 2.96, p = .023, eta^2 = .27. Regardless of whether parents remarried or whether there were or were not step/half-siblings in the family, students with parents who had divorced rated themselves higher on the *school maladjustment scale,* F (1, 45) = 4.13, p = .048, eta^2 = .08 and *attitude to teacher* scale, F (1, 45) = 8.25, p = .006, eta^2 = .16 than did students from families whose parents had never divorced.

Adolescents who lived with step/half-siblings received lower ratings by their parents on leadership skills, F (2, 44) = 4.28, p = .020, eta^2 = .16 and lower overall ratings on the adaptive skills composite (of which the *leadership skills* scale is a part), F (2, 44) = 3.54, p = .038, eta^2 = .14. They also had higher, marginally significant *school maladjustment* scores, F (2, 24) = 3.16, p = .052, eta^2 = .13 and their teachers rated them higher on the *school problems* composite F (2, 29) = 5.51, p = .009, eta^2 = .28. Teachers rated students whose parents had never divorced as having stronger overall adaptive skills including social skills, F (1, 30) = 5.36, p = .028, eta^2 = .15, leadership skills F (1, 30) = 6.03, p = .020, eta^2 = .17, and study skills, F (1, 30) = 6.61, p = .013, eta^2 = .18. Adolescents from these families were also less likely to endorse *dismissing* as a help-giving strategy on the Friendship Task, F (1, 45) = 4.18, p = .047, eta^2 = .19 and their

parents rated them as more involved in socially responsible activities as measured by the SIR-P, F (1, 45) = 4.21, p = .046, eta^2 = .09.

Like family cohesion factors, parental employment status revealed numerous significant interactions with the study variables; the most noteworthy interactions were the scores that resulted from teacher and adolescent ratings on the BASC. Students from homes where a single parent or both parents worked full-time received significantly higher scores on teacher ratings on the *atypicality* scale, F (2, 29) = 3.87, p = .032, eta^2 = .21, the *school problems* scale, F (2, 29) = 6.25, p = .006, eta^2 = .30, the *externalizing problems* composite, F (2, 29) = 4.52, p = .020, eta^2 = .24 and the *behavior symptoms index*, F (2, 29) = 5.92, p = .007, eta^2 = .29; teacher ratings were nearly significant on the *internalizing problems* composite as well, F (2, 29) = 3.22, p = .054, eta^2 = .18. This finding is underscored by adolescent responses to the SRP where adolescents from homes in which a single parent or both parents worked full-time exhibited significant elevations on the *attitude to school* scale, F (2, 44) = 5.56, p = .007, eta^2 = .20, the *attitude to teachers* scale, F (2, 44) = 6.27, p = .004, eta^2 = .22, and the *sensation seeking* scale, F (2, 44) = 4.43, p = .018, eta^2 = .17. Taken together, these scores resulted in a significantly higher composite score on the *school maladjustment* scale for students whose parents worked full-time, F (2, 44) = 4.70, p = .014, eta^2 = .18.

The impact of parental employment status on adolescent functioning was not limited to the context of school. Adolescent reports on the SIR-A reveal that adolescents from families where parents worked full-time were also much less likely to be involved in positive community activities than were adolescents from families where at least one parent was home some of the time, F (2, 44) = 3.78, p = .031, eta^2 = .15; while they do

not reach the threshold of significance, parent reports on the SIR-P supported this finding. Both parent reports, F (2, 44) = 4.67, p = .015, eta^2 = .17 and adolescent reports, F (2, 44) = 4.85, p = .012, eta^2 = .18 reveal that adolescents from homes where both parents or a single parent worked full-time were also significantly more involved in formal and informal activities with friends. One additional finding concerning parents' employment status is that adolescents from homes where one parent works full-time and the other parent is not employed were less likely to choose prosocial help-giving goals such as *express caring* or *help solve the problem*, F (2, 46) = 4.15, p = .022, eta^2 = .16.

Parental employment is a family variable that clearly impacted assessments of adolescent functioning in this study, especially in the context of school. The educational level attained by fathers exhibited a similar impact as evidenced by the significance levels of three TRS scales: the *externalizing problems* composite, the *internalizing problems* composite, and the *behavior symptoms index.* The *externalizing problems* composite scores were significantly lower for students whose fathers had a bachelor's degree or higher compared to those whose fathers' education was limited to high school, F (3, 27) = 3.14, p = .041, eta^2 = .26; the *internalizing problems* composite scores were significantly lower for students whose fathers had a bachelors degree or higher compared to those whose fathers had received some post-high school education or training, F (3, 27) = 3.24, p = .038, eta^2 = .27; and the *behavior symptoms index* was lower for students whose fathers had a bachelors degree or higher compared to students whose fathers had earned anything less than a bachelor's degree, F (3, 27) = 3.14, p = .041, eta^2 = .26. This finding is likely an artifact of employment status as families where one parent worked full-time and the other parent was not employed were significantly more likely to have

fathers with bachelor's degrees or higher than were families where a single parent or both parents worked full-time, or where one parent worked full-time and the other worked part-time, X^2 (6, N = 46) = 18.79, p = .005.

Three additional interactions between family variables and the BASC and the SIR must be noted. First, teacher adaptive skill ratings were lower for students from families earning $20,000-$50,000 than they were for students from families from all other income brackets, but significantly so when compared with families that earn $50,000-$70,000 per year or families with incomes above $100,000, F (3, 27) = 3.13, p = .042, eta^2 = .26. Second, student scores on the SRP showed that students whose parents were not religiously active had higher scores on the *anxiety* scale than did students whose parents were moderately or highly religiously active, F (2, 36) = 3.81, p = .031, eta^2 = .18. Finally, both adolescent and parent scores on the SIR revealed that religious involvement also interacted with involvement in socially responsible activities. Parents who were identified as highly religiously involved rated their adolescents as more involved in positive community activities than did parents who were not religiously active or who were only somewhat active, F (2, 36) = 13.42, p < .000, eta^2 = .43. Adolescent ratings supported this finding, with self-ratings on the *social responsibility* category that were higher for students whose parents were considered highly religiously active relative to students whose parents were either not religiously active, or who did not identify with a religion at all, F (2, 36) = 3.58, p = .038 eta^2 = .17.

Impact of Educational Setting on Measures

Social Involvement Report (SIR). Parents' responses on the social skills portion of the SIR-P resulted in higher scores for homeschooled students, F (1, 45) = 5.50, p =

.024, eta^2 = .11. Conventionally-schooled adolescents rated themselves as marginally higher on these skills than did their homeschooled counterparts, F (1, 45) = 4.02, p = .051, eta^2 = .08. Parent ratings of adolescent exposure to media and other cultural influences were somewhat higher for homeschooled adolescents F (1, 45) = 4.26, p = .045, eta^2 = .09; a comparison between homeschooled and conventionally-schooled adolescents did not show a significant difference, F (1, 45) = 3.79, p = .059, eta^2 = .08, but the difference was in the same direction as the parent ratings. Parents' scores on questions that address social responsibility were also higher for homeschooled students, F (1.45) = 7.81, p = .008, eta^2 = .15, but a covariate analysis revealed that marital status and religious involvement are the significant determinants of this score rather than educational setting, p = .667. No significant relations were found between the SIR and the amount of time students spent in the classroom settings.

Behavior Assessment System for Children (BASC). Correlations between parent and teacher ratings on the PRS and TRS varied considerably. As expected, the highest correlations were found with the *externalizing problems* composite with a range of correlations from r = .39, p = .028 (*withdrawal)* to r = .81, p < .000 (*conduct problems*). Consistent with the more problematic task of identifying internal distress, the *internalizing problems* composite showed considerably less agreement between parent and teacher reports with the *anxiety* scale showing very little correlation (r = .004, p = .984). The *depression* scale, however, did show a moderate correlation between reporters (r = .46, p = 008). *Atypicality* (r = .49, p = .004) showed moderate agreement between raters, while agreement on the *withdrawal* scale (r = .37, p = .037) was weak. The moderate correlation found with the *behavioral symptoms index* (r = .49, p = .005) is

consistent with the fact that his scale is a blend of internalizing and externalizing symptoms. In terms of adaptive skills, the correlations between parent and teacher ratings were weak on the individual scales as well as on the composite scale in general (r = .38, p = .034). Variations between parent and teacher reports may be due to a number of factors including differences in adolescent behaviors at home compared to school. Nevertheless, the number of scales that exhibit moderate to strong correlations between parent and teacher reports suggests that some confidence that these raters are reporting on similar behaviors is justified.

All scale score means for homeschooled and conventionally-schooled students on the PRS adaptive scales and on the adaptive skills composite were in the average range and there were no significant differences in the number of students who had above average or high scores on adaptive skills. However, while not significant, all mean scale scores were higher for homeschooled students (See Table 1).

Table 1

Means Scores on PRS Adaptive Scales by School Condition

	Homeschooled (N = 24)		Conventional (N =23)	
	Mean	*SD*	*Mean*	*SD*
Social Skills	52.3	7.4	49.6	8.1
Leadership Skills	54.1	7.5	50.6	8.2
Adaptive Skills Composite	53.3	7.3	50.0	8.1

$^{+}p < .10$

Parent reports for the maladaptive scales showed similar results. Again, all scale score means were in the average range and there were no significant differences in the number of homeschooled and conventionally-schooled students who were in the at-risk or clinical range on any maladaptive scale. A comparison of mean scale scores, however, reveals that all mean scores for the maladaptive scales were higher for conventionally-schooled students (See Table 2). For the scales that were the focus of this study, the mean differences on the *internalizing problems* composite and the *behavior symptoms index* were significant.

Parents of students who were conventionally-schooled observed higher levels of internalizing behaviors, $F\,(1, 45) = 4.75$, $p = .035$, $\text{eta}^2 = .10$.. The analysis of demographic variables, however, revealed that children with only one sibling were rated by their parents as exhibiting more internalizing behaviors than were children with no siblings or with more than one sibling. A covariate analysis using this factor revealed that the difference in the parent scores on the internalizing scale was attributable to this family factor rather than to factors related to conventional schooling, $p = .667$.
The *behavioral symptoms index* did not interact with family variables, thus the higher parent ratings for conventionally-schooled adolescents on this scale, $F\,(1, 45) = 5.49$, $p = .024$, $\text{eta}^2 = .11$, is related to aspects of conventional schooling.

Teacher report forms (TRS) were submitted by 32 teachers. Of these, 17 were provided by teachers in conventional schools and 15 were provided by teachers who taught classes that included homeschooled students. No significant differences were found between the TRS scales and the amount of time that students spent in classroom settings. Like the PRS, all scale score means were in the average range, but the scale

score means were higher for homeschooled students on all adaptive scales (See Table 3). In the case of the *adaptive skills* composite scale, the difference was significant. Family

Table 2

Means Scores on PRS Maladaptive Scales by School Condition

	Homeschooled ($N = 24$)		Conventional ($N = 23$)	
	Mean	*SD*	*Mean*	*SD*
Individual Scales				
Hyperactivity	46.7	8.3	53.0	12.8
Aggression	49.2	8.8	51.5	11.4
Conduct Problems	46.7	6.2	51.5	12.4
Anxiety	49.3	10.7	53.2	7.3
Depression	45.0**	8.9	52.4	9.8
Somatization	46.0	7.6	47.9	10.3
Atypicality	47.8	8.2	51.2	11.3
Withdrawal	48.1	8.4	47.5	6.4
Attention Problems	48.3*	8.3	56.5	14.1
Composite Scales				
Externalizing Problems	47.1	8.0	52.4	12.4
Internalizing Problems	46.2*	8.5	51.5	8.3
Behavioral Symptoms Index	46.8*	9.2	54.0	11.8

$^{+}p < .10$, $*p < .05$, $**p < .01$

Table 3

Mean Scores on TRS Adaptive Scales by School Condition

	Homeschooled (N = 15)		Conventional (N =17)	
	Mean	*SD*	*Mean*	*SD*
Social Skills	58.1*	9.2	50.1	8.7
Leadership Skills	54.6	8.3	49.2	8.5
Study Skills	52.8	8.0	46.9	10.0
Adaptive Skills Composite	55.7*	8.3	48.4	9.1

$^{+}p < .10$. $^{*}p < .05$. $^{**}p < .01$

income is associated with higher *adaptive skills* scores, but a covariate analysis clearly showed that the influence of this factor did not eliminate the significance of educational setting, F (2, 30) = 12.56, p = .001, eta^2 = .31. Indeed, Chi-square analysis suggests that the higher number of homeschooled students whose scores were in the "above average" category on the *adaptive skills* composite is largely responsible for the difference in mean scores between homeschooled and conventionally-schooled students, X^2 (1, N = 31) = 4.38, p = .036.

. The apparent trend in scale score means between homeschooled and conventionally-schooled students is repeated on the TRS in that all maladaptive scales were higher for conventionally-schooled students (See Table 4). On the TRS, however, the mean differences between homeschooled and conventionally-schooled students were significant on nearly all scales used in this study. Conventionally-schooled students received significantly higher ratings on all maladaptive composites as well as on the *atypicality* scale.

Table 4

Mean Scores on TRS Maladaptive Scales by School Condition

	Homeschooled (N = 15)		Conventional (N =17)	
	Mean	*SD*	*Mean*	*SD*
Individual Scales				
Hyperactivity	42.7**	5.1	53.7	13.4
Aggression	43.1**	2.7	54.4	15.3
Conduct Problems	43.7*	1.0	54.5	18.5
Anxiety	47.1	7.6	52.4	10.5
Depression	43.2**	1.9	53.6	13.9
Somatization	44.9	1.5	46.8	4.2
Attention Problems	41.7**	5.4	53.4	12.4
Learning Problems	40.1**	3.9	50.2	9.3
Atypicality	45.1**	4.4	56.2	14.2
Withdrawal	46.3	5.8	49.0	11.8
Composite Scales				
Externalizing Problems	42.5**	2.7	54.8	16.8
Internalizing Problems	44.3*	3.1	51.1	10.1
School Problems	40.5**	4.1	51.9	11.3
Behavioral Symptoms Index	42.4**	3.5	55.0	14.5

$^{+}p < .10$. $^{*}p < .05$. $^{**}p < .01$

The significant mean differences on the e*xternalizing problems* composite and the *behavioral symptoms index* must be analyzed against the findings for parental employment status and fathers' education. Covariate analyses indicate that in spite of the contributions of these family variables, educational setting remained significant for both the *externalizing problems* scales, F (3, 30) = 4.29, p = .048, eta^2 = .14 and the *behavioral symptoms index,* F (3, 30) = 5.58, p = .022, eta^2 = .18. Further Chi-square analyses revealed that the impact of the school setting is likely due to the higher number of conventionally-schooled students whose scores were in the at-risk or higher categories for both the *externalizing problems* composite, X^2 (1, N = 31) = 3.78, p = .052 and the *behavioral symptoms index,* X^2 (1, N = 31) = 6.13, p = .013.

The higher mean score for conventionally-schooled students on the *school problems* composite was associated with several family factors: parental employment status, father's education, and factors associated with complex families. After covariate analyses with these factors, it is clear that educational setting remains a significant contributor to this higher mean score, F (4, 30) = 6.42, p = .018, eta^2 = .20. Parental employment status was also identified with higher teacher ratings for conventionally-schooled students on the *atypicality* scale, F (1, 31) = 8.58, p = .006, eta^2 = .22. In this case, the covariate analysis revealed that parent employment status is the source of variance, p = .096, rather than educational setting.

Student SRP forms resulted in scores for all students on all scales with the exception of one homeschooled female student who did not provide enough responses to compute a score for the *attitude to teacher* scale. For students who spent time in classroom settings, the total hours per week in these settings did not significantly impact

means scores on any SRP scales. Like the PRS and TRS, all mean scores were in the average range, and for most scales there were no significant differences in the number of students in the above average or high categories or in the at-risk or clinical categories. The mean scale scores on the SRP adaptive scales, however, did not follow the trend that was found for the PRS and TRS. Here, while no mean score differences were significant, all but the self-esteem scale had mean scale scores that were higher for conventionally-schooled students (See Table 5).

SRP scores on the maladaptive scales were similar to those for the PRS and TRS; again, all maladaptive mean scale scores were higher for conventionally-schooled students (See Table 6). The *attitude to school*, *sensation seeking*, and *somatization* scales, as well as the *school maladjustment* composite had mean scale scores that reached significance.

Table 5

Mean Scores on SRP Adaptive Scales by School Condition

	Homeschooled ($N = 24$)		Conventional ($N = 23$)	
	Mean	*SD*	*Mean*	*SD*
Relations with Parents	50.6	11.9	52.0	8.6
Interpersonal Relations	51.7	6.3	52.5	8.8
Self-Esteem	49.6	9.9	48.0	11.0
Self-Reliance	48.4	8.6	50.5	9.6
Personal Adjustment Composite	50.2	9.7	51.1	9.3

$^{+}p < .10$

The higher scores for conventionally-schooled adolescents on the *attitude to school* scale, F (1, 45) = 5.01, p = .030, eta^2 = .10, and the *somatization* scale, F (1, 45) = 4.24, p = .045, eta^2 = .09, indicates that conventionally-schooled students viewed school less favorably than did homeschooled students and were more likely to complain about vague physical symptoms. These findings were not impacted by family factors, therefore they appear to relate specifically to variables associated with school settings. Furthermore, Chi-square analyses indicate that the number of homeschooled students with quite favorable attitudes towards school is markedly different than the ratios for conventionally-schooled students. Rather than an even spread between students with favorable, neutral, or unfavorable attitudes towards school, there were more conventional students than was expected that had either neutral attitudes towards school, X^2 (1, N = 38) = 4.97, p = .026, or whose negative attitudes towards school put them at risk for school failure, X^2 (1, N = 24) = 7.73, p = .005.

The conventionally-schooled students' higher scores on the *sensation seeking*, F (1, 45) = 4.10, p = .049, eta^2 = .08, and on the *school maladjustment* composite, F (1, 45) = 8.52, p = .005, eta^2 = .16, were impacted by family variables. *Sensation seeking* was higher for girls than it was for boys and it interacted with parental employment status. Covariate analyses indicate that gender differences and parental employment status were the source of the significance in the *sensation seeking* variance rather than educational setting, p = .351. In the case of *school maladjustment*, not only is it impacted by marital status, parental employment status, and child composition, but is also impacted by the already-elevated *sensation seeking* subscale score which, in turn, is also impacted by parental employment status. Covariate analyses with these family factors clearly

Table 6

Mean Scores on SRP Maladaptive Scales by School Condition

	Homeschooled (N = 24)		Conventional (N =23)	
	Mean	*SD*	*Mean*	*SD*
Individual Scales				
Attitude to Teacher	42.5	9.9	48.4	11.0
Sensation Seeking	49.5*	9.1	55.1	9.9
Atypicality	46.8	8.9	50.1	9.2
Locus of Control	47.8	11.7	50.7	10.9
Somatization	45.6*	7.3	51.0	10.5
Social Stress	47.5	8.8	51.0	10.3
Anxiety	45.4	8.8	48.5	9.3
Depression	48.0	9.5	50.3	9.7
Sense of Inadequacy	47.0	10.5	48.0	8.6
Composite Scales				
School Maladjustment	43.2**	11.2	52.6	10.8
Clinical Maladjustment	45.9	9.6	51.1	9.3
Emotional Symptoms Index	47.2	9.0	49.8	9.1

$^{+}p<.10$; *$p<.05$; **$p<.01$

indicates that this scale score is so intertwined with family factors that the higher mean score among conventional students cannot be attributed to educational setting, $p = .209$.

Friendship Task. ANOVA with the friendship task in relation to school setting revealed differences between homeschooled and conventionally-schooled students'

strategies on both the help-giving and help-seeking tasks, but no significant differences related to either help-giving or help-seeking goals. *Suggesting an activity* and *dismissing* were help-giving strategies that conventionally-schooled adolescents endorsed more frequently than did homeschooled students. *Suggesting an activity* as a help-giving strategy did not vary with family factors, thus the significance of this finding, F (6.10, p = .014, eta^2 = .12, is specifically related to educational setting. Adolescents from families where a parent had gone through a divorce were more likely to use *dismissing* as a help-giving strategy, but this factor did not eliminate the significantly greater use of this strategy among conventionally-schooled adolescents, F (2, 46) = 4.03, p = .025, eta^2 = .16.

Both *self-disclosure* in help-seeking, F (1, 45) = 4.08, p = .049, eta^2 = .08, and *excluding friends* in help-seeking, F (1, 45) = 4.65, p = .036, eta^2 = .09, were strategies endorsed more frequently by conventionally-schooled students than by homeschooled students. After accounting for gender differences in relation to self-disclosure, educational setting was no longer significant, p = .064. Scores on *excluding friend* as a help-seeking strategy did not interact with family variables. This suggests that it is factors related to conventional schooling that impacted the higher frequency with which conventionally-schooled adolescents endorsed this strategy. This finding is particularly salient as the *excluding friends* strategy was found by Rose and Asher (2004) to be negatively correlated with number of friends.

The strength of this study's findings was confirmed by the numerous large effect sizes. The impact of family variables on the measures of this study was underscored by the fact that the largest effect sizes were in relation to these variables. In particular,

parental employment status, family cohesion variables, and father's education were responsible for many of the largest effects and they resulted from comparisons with various scales on the BASC. The signficantly higher degree of religious involvement among homeschooling parents, however, was responsible for the largest effect size (eta^2 = .43). Analysis of the study measures against educational setting revealed that the largest effect sizes here concerned the higher *adaptive skills* composite score reported by teachers of homeschooled students (eta^2 = .31) and the higher ratings that the teachers gave to conventionally-schooled adolescents on the *school problems* scale (eta^2 = .20).

Chapter 4

Discussion

The manner by which children are educated holds significance for any society and its importance stretches far beyond the levels of academic achievement that are attained. Transmitting cultural values and training children to behave according to a society's social mores are goals that are imbedded in educational systems and are viewed as critical for the well-being of the society in general and for the child in specific. It is understandable, then, that when families choose to abstain from an accepted system, their actions are viewed with suspicion and concern. This is the reality faced by many parents in the United States who have chosen to homeschool their children.

Given that enrollment in public or private schools has been the convention in this country for more than one hundred years, it is reasonable to wonder how homeschooling impacts the social development of the children engaged in it. Specifically, how do the values and beliefs taught to these children equip them for dealing with life outside the confines of their own homes? On a developmental level, how does homeschooling affect a child's ability to get along with others? Is it likely that homeschooled children will become well-adjusted, productive adults? This study sought to answer these questions by investigating whether differences in socialization existed between a sample of homeschooled and conventionally-schooled students. If differences were found, the goal was to delineate these differences and isolate the factors that contributed to them.

The socialization of adolescents was examined through the use of several assessment instruments and several reporters. The research was organized around a broad definition of socialization as well as around the concept of social competence, a more psychologically-oriented construct. Although there was some overlap in the areas assessed by each instrument, the Student Involvement Report (SIR) was specifically designed to address the four general areas that are incorporated into the definition of socialization: the opportunity for adolescents to be involved in social activities, the development of social skills, the adoption of social attitudes and beliefs, and the degree of exposure to people with differing worldviews. Social competence was measured by employing the Behavior Assessment System for Children (BASC), which is a standardized instrument that measures adaptive skills and maladaptive behavior, and through the utilization of a revised form of a friendship task which allowed for an in-depth analysis of relational skills specific to friendships. The results of this study indicated that the homeschooled and conventionally-schooled students in this study differed on various measures of socialization and social competence and both educational setting and family characteristics contributed to these differences.

Weissberg, Caplan and Harwood (1991) identify a cohesive family as a protective factor that promotes competence. Family cohesion was one of several family characteristics that were significantly different between the homeschooling and conventionally-schooling families in this study. Some of the largest effect sizes, in fact, were associated with these differences. Most parents in this study had never been divorced and parents who had been divorced were from conventionally-schooling families. Consequently, all complex families, families with step-parents or step/half-

siblings, were also conventionally-schooling families. In terms of other family factors, most homeschooling families had one parent who worked full-time and one parent who was not employed. Less than one quarter of the conventionally-schooling families had this arrangement. In spite of the differences in employment status, neither income level nor parental education level varied significantly between the families in this study.

Religious identity also did not distinguishable between families as most identified a religious preference. Religious involvement, however, was clearly different. Most homeschooling families were highly religiously active while a much smaller number of conventionally-schooling families were active to this degree. Conversely, only one homeschooling family was inactive religiously, while over a quarter of the conventionally-schooling families were described in this way. The importance of these family factors in relation to adolescent social competence cannot be understated as they significantly impacted and confounded several of the relationships that were found between competence measures and educational setting.

The pervasive concern that homeschooling deprives adolescents of opportunities to be socially active with peers was not supported by this study as homeschooled and conventionally-schooled students were found engage in social activities with friends and peers outside of the confines of school to a comparable degree. Conventionally-schooled students certainly had the opportunity to interact with peers during the school hours, but this study investigated the frequency of participation in recreational activities that were less structured and were based on individual choice.

Although social activity levels were similar for homeschooled and conventionally-schooled students, adolescents were more socially active if their parents

were employed full-time than they were if one parent worked full-time and the other was either employed half-time or was not employed outside the home. Without knowledge of the degree of adult supervision associated with social activities, it cannot be said that higher levels of social activity indicated better socialization. To the contrary, adolescents who are highly active, but unsupervised may be at risk for the development of problem behaviors such as drug use, sexual activity, and delinquent behavior. Homeschooled and conventionally-schooled students did vary in terms of social skills and this was consistent across both parent and teacher measures. Parent responses on the SIR-P and teacher responses on the TRS indicated that homeschooled students in this study were more socially skilled than the conventionally-schooled students.

Social values, attitudes, and beliefs are not easy to measure. In addition, they are in the early developmental stages for most 12- to 14-year-old students. Examining behaviors that could be viewed as a reflection of a developing value system was less problematic and this was accomplished through the *social responsibility* portion of the SIR. Both parent and adolescent reports on this measure resulted in higher scores for homeschooled students. Parental religious involvement was the source of significance of this score, therefore it cannot be concluded that the homeschooled students had a more developed sense of social responsibility. Given the prevalence of religious involvement among the homeschooling parents, however, clearly indicates that these parents model socially responsible behaviors in their communities.

Measuring the degree of exposure to people from different races or ethnic backgrounds or with different religious orientations and worldviews relied on parent and adolescent reports on the frequency of attendance or participation in community events

and the frequency of exposure to media influences. Parent ratings indicated that homeschooled students were more likely to be exposed to cultural influences through television, movies, the internet, books, and participation in recreational and cultural events with individuals from different backgrounds. To the extent that these influences impact an adolescents' developing worldview, homeschooled students in this study were not isolated from cultures, ideas, beliefs, or worldviews that were different from their own or from those of their parents. In fact, none of the scores on the SIR suggest that homeschooling compromised the social development of the adolescents in this study.

The ubiquitous assumption that homeschooled students will be under socialized is rooted in philosophical, religious, educational, and political issues. The prevalence of this concern certainly suggests that the wisdom of homeschooling should be addressed from a psychological perspective. What ought to be of central importance for psychologists, though, is the overall social competence of these students. Research in the area of competence and resilience has determined that academic achievement, good conduct, and peer social success in late childhood predict successful future adaptation (Roisman et al., 2004). Examining the results of this study in light of these factors allows a cohesive picture of the social competence of the adolescents in this study to emerge.

Academic achievement was not specifically measured in this study, however the *school problems* scale and the *study skills* scale on the TRS as well as the *school maladjustment* composite on the SRP addressed processes involved in learning and assessed students' orientation towards school. Study skills scores were similar between homeschooled and conventionally-schooled students, but conventionally-schooled students were rated by their teachers as exhibiting more difficulties in the areas of

motivation and attention even after accounting for the significant contributions of parental employment status, father's education, and family cohesion variables. The SRP showed that the conventionally-schooled students' significantly higher *school maladjustment* scores, were associated with parental employment status, marital status, and child composition rather than educational setting. The *school maladjustment* scale was also impacted by the higher scores girls received on the *sensation seeking* scale. These findings underscore the impact of family factors in relation to promoting school competence. Intact homes where only one parent worked full-time and the majority of fathers had a bachelor's degree or higher were significantly more common among the homeschooling families and it is likely that these variables served as protective factors that encouraged the more positive attitudes that homeschooled students had towards school and their teachers and protected them against the development of sensation-seeking tendencies.

Measures of conduct are embedded in the *externalizing problems* composite and the *behavioral symptoms index* of the BASC. Teachers observed more hyperactivity, aggression, and conduct problems among the conventionally-schooled adolescents and both teachers and parents identified conventionally-schooled students as exhibiting more general behavior problems. Teacher ratings covaried with parental employment status and fathers' education, but did not eliminate the impact of educational setting. Parent ratings of behavior problems were not impacted by family factors, thus educational setting was the only identified source of significance on the *behavioral symptoms index.* The greater number of conventionally-schooled students whose behaviors placed them at risk for school failure further confirmed the strength of the association between higher

levels of problem behaviors and factors related to conventional schooling. Given that students who exhibit poor conduct serve as models for other students, identifying the variables in conventional schools that foster conduct problems is important for encouraging social competence for all students in this setting.

Peer social success is promoted by good social skills, leadership skills, and interpersonal skills and several measures used in this study addressed these competencies. Homeschooled students were more likely to be observed admitting mistakes, complimenting and encouraging others, and engaging in appropriate conversations according to both parent and teacher reports on the BASC. Relationships skills were measured by the *interpersonal relations* scale on the SRP and leadership skills were assessed by the *leadership skills* scale on the PRS and the TRS. The lack of significant differences between homeschooled and conventionally-schooled students on these scales indicates that homeschooled adolescents' perceptions of their ability to relate to others and the development of participatory skills such as problem solving, making suggestions, and contributing good ideas were not negatively impacted by homeschooling.

The Friendship Task allowed specific relational skills to be examined in the context of a hypothetical friendship. According to Rose and Asher's research, the meaningful difference between homeschooled students and conventionally-schooled students that emerged from this task was that in a personally stressful situation, conventionally-schooled adolescents were more likely to want to exclude their friends. Rose and Asher found that this worked against success with peers in that higher scores on this factor correlated with having fewer friends. If homeschooled students had fewer friends or were unsuccessful with peers in general, it is probable that they would have

been rated as more socially-isolated and withdrawn by their parents or their teachers. If this were the case, higher scores on the *atypicality* and *withdrawn* scales of the TRS and PRS would be expected. This did not occur as scores for homeschoolers were not significantly different than those of conventionally-schooled adolescents.

Clearly, there was no indication on any of this study's measures that homeschooling negatively impacted the development of peer social success. Nor were there findings that suggest that academic competence or the ability to form and maintain good relationships were jeopardized by homeschooling. The results of this study, taken together, suggest that homeschooled students were at least as competent if not more competent in these developmentally critical competencies. In fact, if academic achievement, good conduct, and peer social success in late childhood do, indeed, predict future successful adaptation (Masten & Coatsworth, 1998; Roisman et al., 2004), then it is likely that the homeschooled students in this study are on a positive trajectory.

The protective factors that promote social competence that were highlighted in the competence research (Masten & Coatsworth, 1998; Weisberg, Caplan, & Harwood, 1991), include a positive self esteem, adaptive coping strategies, a positive social orientation, good parent-child relationships, a cohesive family, ongoing contact with a caring adult, peer models for conventional behavior, and a neighborhood with informal resources and supports. While identifying the presence or absence of protective factors was not a specific goal of this study, several findings relate to a number of these factors, thus a cursory exploration into this arena is justified.

Information on the self-esteem, adaptive coping strategies of the adolescents in this study were provided by the SRP. The *self esteem* and *sense of inadequacy* scales

provided information concerning the degree of satisfaction with one's self and the level of confidence in one's ability to achieve goals; the s*ocial stress* scale measured the tension and pressure associated with social interactions and general coping resources. Homeschooled and conventionally-schooled students had similar scores on these scales.

The development of a positive social orientation is most likely to develop when adolescents have opportunities to be involved in their families and schools in meaningful ways, when they have the skills and information necessary for success, and when they believe that they will be consistently rewarded or recognized for their efforts (Weissberg et al., 1991). Both the homeschooled and conventionally-schooled students had mean scores on the *adaptive skills* composite that were in the average range. Nevertheless, teachers ratings for homeschooled students were significantly higher than those for conventionally-schooled students indicating that homeschooled students, overall, exhibited more prosocial, organizational, achievement-oriented behaviors and skills than did their counterparts in conventional schools.

Students' beliefs in their abilities to be successful were assessed by the *self-reliant* scale of the SRP and whether adolescents believed they would be rewarded for their efforts was reflected on the *locus of control* scale of the SRP. On both of these scales, homeschooled and conventionally-schooled students had mean scores in the average range and there were no significant differences in their scores. This indicates that the adolescents in this study, in general, were confident in their abilities and were self-assured when facing challenges and making decisions. They were also likely to believe that success or failure was determined by forces under their own control and that they

would be rewarded or recognized for their efforts to behave in prosocial and adaptive ways.

Family-related protective factors were addressed using the *relations with parents* scale of the SRP and the family cohesion data provided by the Family Characteristics demographic questionnaire. The scores of homeschooled and conventionally-schooled students did not differ significantly on the *relations with parents* scale. Homeschooled and conventionally-schooled students had similare perceptions concerning their importance to their families, their evaluations of the status of their relationship with their parents, and the degree of trust and concern they experienced from their parents. In terms of family cohesion, this study has clearly illustrated that the occurrence of divorce and the presence of step/half-siblings were negatively associated with several competence measures; conversely, intact families, which prevailed among the homeschooling families, served to protect adolescents from maladjustment, especially in the context of school.

The opportunity for adolescents to contribute meaningfully within their social contexts was evident in their scores on the *leadership skills* scales of the PRS and TRS as well as on the *social responsibility* portion of the SIR. On both the PRS and the TRS, the leadership skills of adolescents were not impacted by educational setting; thus, homeschooled students were judged to be involved in leadership-oriented activities to the same degree as were conventionally-schooled students. The adolescent and parent reports on the SIR, on the other hand, clearly show that homeschooled students had significantly more opportunities to contribute to their communities in meaningful ways.

This study was not designed to assess the presence of protective factors that promote competence and the information provided by these measures lacks sufficient depth to draw firm conclusions relationship between the presence of these factors and educational setting. The results that this study did provide indicates that there is no clear cause for concern that homeschooled students lack the person attributes and familial supports that encourage competence. In terms of extra-familial supports such as peer models for conventional behavior, ongoing support from other adults, and informal resources and supports in the neighborhood, there were no measures used in this study that assessed these factors Given that homeschooled and conventionally-schooled students operate in quite different contexts in the course of a typical day, assessing the degree to which protective factors are in place in the neighborhood and community is critical to a more thorough analysis of the impact of homeschooling and conventional schooling on the development of competence.

Overall, the homeschooled students in this study were more socially competent than were their conventionally-schooled counterparts. The family factors that exhibited the greatest influence on competence predominated among the homeschooling families and certainly accounted for some of the differences that emerged. But family factors alone did not account for all of the differences in social competence that this study revealed. Perhaps there are additional family dynamics that were not addressed in this investigation, or perhaps there are variables that relate to specific teaching methods, materials, and environments that can explain these differences. The challenge for future research will be to identify and explore salient family dynamics and educational variables

that are responsible for differences in homeschooled and conventionally-schooled students.

Elucidating the family processes and the educational components that impact social competence requires that future investigations move beyond the limitations of this study. The small number of families and the homogeneity of this sample limit the degree to which the findings from this study can be generalized. Furthermore, the recruitment process for homeschooling and conventionally-schooling families was somewhat different and may have resulted in a skewed conventionally-schooling sample.

Homeschooling families were recruited in such a way as various general types of families were involved in the research. Families who chose to enroll their students in classes outside of the home were recruited through schools and churches. Other homeschooling parents did not enroll their students in traditional classes. Parents may have preferred to be completely responsible for all academic teaching or they may have participated in less formal classes or lessons with smaller numbers of students. These families were recruited through electronic mail and through personal networks. Thus, different styles of homeschooling were captured by the recruitment methods

Many of the conventionally-schooling parents were recruited through an open house at a middle school; other families were recruited while attending football and soccer practices. These parents represent a sector of parents who are likely to be more involved in the education and activities of their children than many or possibly most of the other parents whose children attend the same schools. If this is the case, then data provided by these parents may not be representative of conventionally-schooling parents in general. The inclusion of parents who did not attend the open house or sports practices

would have diversified the conventionally-schooling sample and would very likely have impacted the results. Thus, an improved recruitment process is needed.

The use of multiple measures and multiple reporters were strengths in this investigation, but the addition of measures that involve observations of adolescents' with others would increase the validity of the findings as would studies that are longitudinal in nature. In addition, measures that assess the finer details of the components of competence would enhance the utility of the findings. The Friendship Task represents a step in this direction in that it addresses specific relational skills applied to specific situations. The SIR was designed to measure the component parts of socialization in general; however, aspects of socialization such as attitudes, values and beliefs, do not lend themselves easily to measurement. In addition, the lack of construct validity impacts confidence in what this instrument measured. For example, the finding that social activity was higher for adolescents whose parents worked full-time is an ambiguous finding; it is not clear as to whether this was conducive to positive development or whether it placed adolescents at risk. To provide another example, watching television or going to movies may expose adolescents to popular culture, but whether this is the same as exposing them to different worldviews cannot be assumed.

Studies that broaden the focus to include assessments of the home, school, neighborhood, and community environments is critical for gaining a broad look at the impact of conventional-schooling and homeschooling. This study primarily focused on specific competencies and symptoms of maladjustment that were present within the adolescents in this study. Research on competence and resilience emphasizes the importance of the various contexts in which adolescents function and the factors within

these differing contexts that promote the development of competence. For example, while *attitudes* toward teachers were assessed in this study, the opportunity to develop meaningful teacher-adolescent relationships was not. Similarly, a general measure of an adolescents' perceptions of their relationships with their parents was assessed, but specific activities or practices that were part of parent-adolescent relationships or family practices were not explored.

In spite of the weaknesses in its methods, this study represents a strong first step in moving past the stagnant arguments that have characterized the issue of homeschooling in the United States. The moderate to large effect sizes of the significant findings encourage confidence in the conclusion that homeschooling was positively associated with social competence in the adolescents in this study. By investigating the many ways in which homeschooling parents structure their children's education and by following the progress of the children involved, much may be learned about the educational processes and environments that facilitate or undermine the development of academic and social competence. It is reasonable to expect that promising methods that emerge from exploring homeschooling will be applicable to conventional schooling as well.

It may be true that philosophical debates concerning the education of children will always be passionate, but this is because the outcome matters. It is understood that society as a whole benefits when children become well-adjusted, productive, competent adults. Parents, educators, and psychologists may play different roles in fostering competence, but these roles ought to be complementary, rather than adversarial. Homeschooling parents believe it is primarily their responsibility to educate and socialize

their children and there is no evidence that this choice harms the common good. Instead, it represents an opportunity to improve the education and social competence of all students. When the posture towards homeschoolers changes from one that is antagonistic to one that is, at the very least, curious, then the door is open for homeschoolers to share their successes and failures, and their joys and frustrations. This is information that is beneficial to all who have the best interests of children in mind.

Conventional schools have their own difficulties when it comes to assisting all children in the quest for competence. As Masten (2001) states:

> The task before us now is to delineate how adaptive systems develop, how they operate under diverse conditions, how they work for or against success for a given child in his or her environmental context, and how they can be protected, restored, facilitated, and nurtured in the lives of children (p. 235).

If the task at hand is educating children, promoting good socialization, and transmitting the values of our society, then the first priority must be the establishment of collaborative relationships amongst all who are deeply committed to providing families with excellent educational options that include a myriad of opportunities for the development of broad-based social competencies. When all parents are able to choose from a variety of educational settings one that best fits the academic and social needs of their children and is compatible with the worldview of their family, then the common good will be served.

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Appendix A

Website Announcements for Linkup Homeschooling Program, Homeschooling Networking Sites, and Ogden Middle School

ANNOUNCING A RESEARCH OPPORTUNITY

"What about socialization?" This question is probably the most common question faced by homeschooling parents. The assumption is that because homeschooled children do not spend 6 to 8 hours daily in a traditional school setting, they will have problems socially. But what has research shown? Surprisingly, very little research has been done comparing homeschooled students to their traditionally-schooled peers. The Parent Advisory Committee has met with Denise Haugen, a graduate student from George Fox University who has homeschooled her two boys. Denise is conducting a research project comparing the socialization of homeschooled students with public schooled students in the Oregon City area. After explaining the goals of her research project, the Parent Advisory Committee has enthusiastically agreed to support this project by allowing her to recruit participants from among our Linkup families. Denise will provide an explanation of her project at our Orientation on September 13th. We encourage you to visit her booth to find out more and to lend your support to this project.

Aaron Smart

Ludmilla Praslova

General Psychology

18 April 2005

While one of the requirements of this paper was to discuss aspects of how we use to content covered in this course in a number of events that occur on a day-to-day basis. For this paper however I am choosing to discuss just one element of my day-to-day life. On a day to day basis I have found myself implementing and reflecting on the course material in regards to personality. I am employed by a residential treatment facility in Newberg, and I have seen how much an understanding of personality can be beneficial. By taking the word out of the pop culture genre and into a more psychological understanding, I have realized the value, no matter what my career choice may be, the benefit of having a basic understanding of personality.

As I stated above, I have an opportunity on a daily basis to work in a residential treatment setting, where I experience first hand some significant displays of personality. One particular personality disorder I find intriguing, that I come into contact with, is Borderline Personality Disorder. While I admit not having a strong grasp of what Borderline was before working in a residential setting, I now feel as though both through the material covered in this course and in my work experience, I have gained a more clear understanding of this particular disorder.

Some of my work experience involves working with adolescent girls. I have realized Borderline can be a very frustrating disorder to work with. One particular girl I work with, is so driven to receive attention, she will engage in petty cutting behavior or even make threats to commit suicide. I received quite a bit of training through work in regards to working with individuals who are borderline and I have gained a deeper understanding of the personality of

others.

I have come to the conclusion, all personality is driven by behavior. Since behavior is either reinforced or ignored, individuals will respond and repeat behaviors based on what is being reinforced. In regards to the girl I work with who is borderline, her childhood and early development was marked by a lack of reinforcement of positive behaviors she may have been exhibiting. As a result, she began to engage in negative attention seeking behavior as a means to get the attention she wasn't receiving for engaging in positive behavior. Sadly, she was reinforced through her actions, that receiving attention for negative behaviors was better than receiving no attention at all. Thus, the Borderline develops as a result of a lack of positive reinforcement.

Now she engages in behavioral acting out, or negative attention seeking because she has been reinforced, and that is the only way she can get attention. What I have learned in regards to personality in this course however, is there are often motivating factors behind why people engage in particular behaviors. Behind personality there are behaviors driving the individual to act in one way or another.

Having this insight or understanding has given light to the way I think about some of the other diagnoses we have covered in this course so far. I feel as though I have come to a place of viewing personality as having a very significant behavioral component.

My experiences working in a residential setting has provided me with daily opportunities to interact with varying personalities and personality disorders such as Borderline. I could have provided many more situations and different personality interactions for this paper, but taking a look at Borderline is a particular personality disorder was an area of particular interest for me. I have also found in reflecting on my work experience and in what I have learned in regards to

personality how much more empathy I have towards individuals who have not only different personalities in a pop culture sense, but also in the psychological sense of the word.