

**Teaching Parenting Project:  
Adolescent Parenting Knowledge and Attitudes Survey**

**Final Report**

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## **Purpose**

Parenthood is one of the most important social roles and yet very little guidance or support is given to individuals to prepare them for that role. Instead parenting knowledge and skills are assumed to “come naturally” as part of an evolutionary instinct or through informal socialization, including observation and experience (Larsen & Jaahsz, 1985). However, there is evidence that parenting styles differ across cultures and social class (Lareau, 2011), and that some parenting practices lead to better developmental outcomes for children (Hart & Risley, 2003; Rowe, 2008). Furthermore, parents who know more about child development and early learning tend to raise children who are better prepared for academic success in kindergarten (Rowe, Denmark, Jones Harden, & Stapleton, 2016; Yoshikawa et al., 2013). This is particularly important since there is a well-documented and pernicious achievement gap by socioeconomic class in the US, apparent as early as at three years of age (Heckman & Carneiro, 2003; Fryer & Levitt, 2006; Reardon, 2013; von Hippel & Hamrock, 2016). Moreover, children who start behind are more likely to stay behind relative to their more affluent and higher achieving peers (Stanovich, 1986), even despite such efforts as public pre-K (Samuels, 2018). Thus, it is vital to better understand what young people, most of whom will likely be parents in the future or will otherwise be able to influence childrearing within their circles of influence, know about parenting and child development to improve early childhood outcomes and close the early achievement gap in US schools.

The report examines what one thousand American high school students know and believe about parenting and child development. Many US states have at least one high school standard relating to parenting and child development, indicating that there is some recognition by education officials of the importance of parenting knowledge among adolescents for a healthy society. Yet, anecdotal evidence suggests that states are not very active in attempting to meet those standards, nor is progress on meeting those standards assessed in any systematic way. This study provides a preliminary understanding of what a broad sample of American high school students believes and has learned—through observation, direct experience caring for young children, school curricula, and other means—about parenting and child development.

## **Literature Review**

This literature review first summarizes research on the importance of a strong foundation in early childhood for later success in school and the healthy development of young children, including the important role that parents play in this process. Next, the link between parental beliefs and knowledge and childhood success is documented, followed by two theories related to the process by which individuals develop beliefs and theories of child development and parenting. We then examine the role that parenting experts have played in shaping American parenting beliefs and strategies, followed by programmatic efforts to teach parenting, especially to low-income and at-risk families. Next, we describe the research literature on the prior efforts to teach parenting and child development to high school students. Finally, we review existing questionnaires on parenting and child development and describe the content of the newly developed Adolescent Parenting Knowledge and Attitudes Survey (APKAS).

### *The importance of the early childhood years for later success*

The early childhood years are especially important for young children's brain development. Recent studies indicate that the income-based achievement gaps in cognitive skills such as math and reading are fully substantiated at the time children enter kindergarten (Reardon, 2013; von Hippel & Hamrock, 2016). Moreover, educational experiences including social and emotional learning in the early years have been found to be important for later success in school (Hartman, Winslet, & Manfra, 2017) and beyond (Janta, van Belle, & Stewart, 2016) further emphasizing the early years for building a foundation for future learning and life.

In the United States, more than half of all young children aged 0-5 are solely in the care of their parents or relatives (Corcoran & Steinley, 2017) indicating there is significant opportunity for parental and familial contributions to children's learning in these years. This is not a new idea, as consistent robust associations have been found between parents' practices with children and children's development and school readiness skills (e.g. Bater and Jordan, 2017; Jahromi, Guimond, Umana-Taylor, Updegraff and Toomey, 2014; Koblinsky, Kovalanka, & Randolph, 2006; Quirk, Dowdy, Goldstein, and Carnazzo, 2017; Quirk, Grimm, Furlong, Nylund-Gibson and Swami, 2016; Rich, Spielberger and D'Angelo, 2012).

### *The importance of attitudes and knowledge of parenting and child development*

Multiple studies have indicated that both caregivers' knowledge of child development<sup>1</sup> and attitudes about parenting are important for children's cognitive outcomes, healthy development, and overall well-being (Durand, 2011; Grusec, Rudy, & Martini, 1997; Piotrkowski, Botsko, & Matthews, 2000). Some studies have questioned the correlation between parental beliefs and actions (Bloomstra, van Dijk, Jorna, & van Geert, 2013; Holden & Edwards, 1989), and have doubted whether parental beliefs are a stable construct (Bloomstra, van Dijk, Jorna, & van Geert, 2013). Yet other research has demonstrated the ways in which parental beliefs can impact their behaviors as well as child outcomes (Bornstein & Cheah, 2006; Rowe & Casillas, 2010). Bubić and Tošić (2016), for example, found that parents' attitudes about education were a significant predictor of parents' modeling behaviors for children. Studies have reported associations between parents' knowledge and attitudes towards parenting and the quality of the home environment (Benasich & Brooks-Gunn, 1996), a decrease in child behavior problems (Benasich & Brooks-Gunn, 1996; Thompson et al., 2014), higher IQ scores (Benasich & Brooks-Gunn, 1996), higher pre-literacy or early reading skills (Bloomstra, van Dijk, Jorna, & van Geert, 2013; Jung, 2016; Rowe et al., 2016), mathematical performance (Carmichael, 2014; Missall, Hojnoski, Caskie, & Repasky, 2015), and school involvement (Eng, Szamodis, & Muslow, 2014). It is clear that caregivers' knowledge and attitudes can play an important role in children's early learning.

Other studies have investigated how knowledge and attitudes differ by specific groups. There is evidence that immigrant groups may hold different beliefs than multigenerational Americans about child development (Bornstein & Cote, 2004), and that knowledge of child development

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<sup>1</sup> Children's developmental patterns can differ according to sociocultural context. In this study, references to "child development" refer to mainstream American understandings of the developmental process.

milestones may differ by ethnic group (Roopnarine, Logie, Davidson, Krishnakumar, & Narine, 2015). In addition, for some groups, more knowledge of child development has a greater effect on child outcomes than for others, such as for Latino parents (Rowe et al., 2016), and families from lower socioeconomic groups (Anderson & Minke, 2007). One study showed that while there were no significant gender differences in parental beliefs, the effects of those beliefs (in terms of parent behaviors) did differ for mothers versus fathers (Murphey & Alexander, 1991). Therefore, there is reason to believe that high school students' beliefs may vary by subgroup, including ethnicity/race, gender, and immigrant status in the present proposed study.

Unfortunately, however, parenting knowledge is not typically available in any formal way to US citizens, and evidence suggests that most adults do not have general knowledge of child development. For example, a recent study has attempted to understand what a national sample of American adults knows about child development, revealing that more than half of the sample of US voters reported that they know little or nothing about child development, while at the same time nine out ten believe that knowledge of the topic is important (Zero to Three & Robert Wood Johnson Foundation, 2017). These findings will be interesting to compare with the results of the proposed study, including providing the opportunity to see if the trends in knowledge and attitudes for adults are similar among high school students.

### *The development of parental attitudes and belief systems*

Belief systems are “socially shared yet constructed in the minds of individual parents” (Harkness & Super, 1996, p. 6). As socially mediated constructs, these belief systems are influenced by the social, policy, and cultural contexts in which they reside (Durand, 2010; LeVine, Dixon, LeVine, Richman, Keefer, Leiderman, & Brazelton, 2005). Furthermore, according to McGillicuddy-De Lisi and Subramanian (1996), parental beliefs about children and child development are developed through three means: (1) beliefs come directly (and unquestioned) through the culture; (2) beliefs are formed through the holder's own childhood, family, and parenting experiences; and (3) beliefs are influenced by the exchange of ideas and assumptions of people from different cultures. Both parents and adolescents develop their parental beliefs systems through similar processes, but, unlike parents, adolescents (most of whom are not yet parents) cannot draw upon their own parenting experiences to in their belief system development process. In addition, previous research has found that while many adolescents may hold beliefs about child development, upbringing, and education similar to those of their parents, many, particularly boys, are “uncommitted” in their beliefs and attitudes, frequently expressing “I don't know” when asked about their parenting ideas (Palacios & Moreno, 1996). This suggests that there is a developmental trajectory where during adolescence beliefs are continuing to be formed, through experience and the exchange of ideas and knowledge.

In a similar way, according to developmental niche theory (Super & Harkness, 1986), children's cognitive development is believed to be the result of the influences of three interrelated yet distinct subsystems within the “ecology” of the child's experience:

1. **Settings:** The physical and social settings in which the child finds him- or herself, such as whether child care occurs in the home or outside the home, the person(s) caring for the child, and the neighborhood context.

2. Customs: The customs of the caregivers, including their customs regarding feeding, nurturing, play, etc.
3. Psychology: The psychology and ethnotheories<sup>2</sup> of the caregivers, including their belief systems regarding childcare, parenting, and child development (Gauvain, 1995; Super and Harkness, 1986).

This theory is useful as a framework for both understanding *how* high school students develop their own ethnotheories and beliefs about parenting and child development, and also for understanding *why* it might be useful for high school students to know about and hold particular beliefs about parenting and child development to promote the well-being of the children in their present or future lives (once they themselves become parents).

### *Sources of information and parenting “experts”*

For generations of American parents, experts have shaped parents’ understanding of what the role required. However, there is evidence that their influence was never as strong as it may have seemed. As Dr. Spock’s influence declined toward the end of the 20<sup>th</sup> century, no one expert has taken his place (Holden, 2010; Hulbert, 2003). Instead, a proliferation of parenting gurus in every flavor has given parents a variety of philosophies to choose from: William and Martha Sears (attachment parenting), Harvey Karp (the “happiest” baby), Rebecca Eanes (positive parenting), Daniel J. Siegel (mindful parenting), to name a few. Moreover, parents today need not just choose among the “experts” that one who suits their needs and styles, but they can also choose from a vast array of lay “experts,” including peers in online discussion forums (such as [babycenter.com](http://babycenter.com)), popular “mommy” bloggers (such as [dooce.com](http://dooce.com) and [scarymommy.com](http://scarymommy.com)), and through extended networks on social media (Facebook mom groups, etc.). While this decentralization and de-professionalization of sources of information for parents may seem as though it could result in less accurate or scientific advice for parents, in reality, parenting advice has rarely been grounded in research. Even the famed Dr. Spock admitted that his recommendations were based on his own professional experience and intuition, and not on research. In fact, it was only towards the end of his career, in part to address the critiques of his lifetime of work (including from his longtime rival, Bruno Bettelheim), that he conducted a longitudinal study of twenty-two mother-child dyads in order to provide a research backing for the recommendations he had been making for decades. Not only was the experimental design of the study flawed (lack of a control group; no standardized measures or procedures; poor recordkeeping), but the limited evidence generated from the study seemed to show that parents frequently ignored expert advice (Hulbert, 2003).

Instead, many parents rely on an ad-hoc combination of books, doctors (pediatricians in particular), peers, family, and their own childhood experiences to inform their parenting practices and their knowledge of child development (Holden, 2010). The findings of Rowe et al. (2016) echo this: “Mothers were most likely to report that they would ask their own mothers/fathers (61%) for advice or help in the care of their child, followed by partner/spouse (46%), family doctor (27%), sister/brother (25%), mother/father-in-law (23%), aunts/uncles (10%), grandmother/grandfather (8%) and nurse (6%)” (p. 208). Another study found that while all parents in the sample mentioned their own childhoods and parents as influencing their parenting

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<sup>2</sup> Ethnotheories are parents’ cultural belief systems, or “culturally organized understandings” (Harkness & Super, 1996, p. 2) of the nature of children and how adults relate to them.

style, middle class parents were more likely—compared with Head Start qualifying parents—to leverage social networks for answers to parenting questions (O’Donnell, 2018).

### *Efforts to teach parenting*

Efforts to teach parenting are not new. There are numerous intervention programs targeting parenting knowledge and practices in low-income families and they have been successful (Jones-Harden, Chazan-Cohen, Raikes, & Vogel, 2012). Among the oldest and most well-known programs still in use, the thirty-five-year-old Triple P Positive Parenting Program has been effective at increasing parental self-regulation and decreasing emotional, physical, and developmental problems in their children (Sanders, 2008). Other validated programs include Reach Out and Read, which employs pediatricians to coach parents on the benefits of reading to their children during regularly-scheduled office visits (Reachoutandread.org, 2014); Zero to Three, which offers a suite of programs to support parents and early childhood caregivers in creating healthy environments for young children (Zerotothree.org, 2017); and Providence Talks, a program which equips parents with a “word pedometer” along with bi-weekly coaching to help parents understand how the language they use with their young children effects their oral language development (Providencetalks.org, 2015). While many such programs exist, the proportion of parents who participate in parenting programs is very small (Sanders, 2008).

Despite the potential of parenting programs to diminish the early achievement gap and better equip children, especially the most vulnerable, for success in school (Hart & Risley, 2003; Olds, Sadler, & Kitzman, 2004; Sime & Sheridan, 2014), programs for parents have lacked traction. Such intervention programs are often done on a case by case basis or for small groups, have limited scope, can be costly, and are available for only a small proportion of families (St. Pierre, Layzer, and Barnes, 1995). Another approach, one that is more preventative in nature, and potentially more cost effective and far-reaching, is to provide parenting knowledge to individuals before they become parents while they’re still in school. Schools are already the main apparatus for preparing students for civic life, such as through courses in social studies and government, and as a key site of socialization. In addition, schools prepare youth on public health issues including substance abuse, drunk driving, and smoking behaviors, and promote sexual and reproductive health, nutrition, and personal hygiene.

### *Efforts to teach parenting and child development in high schools*

A review of state education standards has shown that more than half of US states include at least one high school standard related to child development, parenting, or both in either their regular academic or vocational strands (or both) (see Appendix D). For example, California’s health education content standards include “Explain how conception occurs, the stages of pregnancy and the responsibilities of parenting” (Standard 1.2G) and “Explain responsible prenatal and perinatal care and parenting, including California’s Safely Surrendered Baby Law” (Standard 1.6G) (California State Board of Education, 2009). In a similar way, Virginia has a “Family Life” curriculum strand that includes: “The student will analyze the skills and attitudes needed to become a competent parent” (Standard 10.4<sup>3</sup>) (Commonwealth of Virginia Department of

<sup>3</sup> Descriptive statement associated with standard 10.4: “Attitudes toward parenting styles are examined. Instruction also includes various parenting strategies described by authorities. Students have opportunities to identify parenting skills they wish to develop. Students will understand the importance of the parenting

Education, 2017, p. 37). While it is clear that while adolescents' knowledge relating to these topics is considered an important component of the preparation of high school students for adult life, it is likely that the differences in the standards result in different pedagogical strategies for meeting those standards, which might also be reflected in adolescent attitudes and knowledge.

Despite the majority of states having relevant standards, studies investigating adolescents' knowledge and beliefs about parenting and child development have been limited and primarily targeted towards high school students believed to be at risk of teen pregnancy or students who are already teen parents (e.g. Larsen & Juhasz, 1985; Meyer, Jain, & Canfield-Davis, 2011; Rispoli & Sheridan, 2017). One study conducted with at-risk adolescent students (in 7<sup>th</sup> through 12<sup>th</sup> grade) at an alternative high school where the experimental group completed a 16-week parenting program found that compared to a control group, students who participated in the parenting program were better able to judge their preparedness for parenthood (Meyer, Jain, & Canfield-Davis, 2011). Another study sought to determine the effectiveness of a school-based parenting education program for teen parents and found that school can be an effective site for teaching adolescents about parenting (Rispoli & Sheridan, 2017). This finding is important because it suggests teaching high school students about parenting can be efficacious, yet it is also interesting considering the fact that many US high schools, if they are adhering to their state standards, *should* already be teaching about parenting and child development.

#### *Existing questionnaires for understanding knowledge and beliefs about parenting and child development*

While there exist many questionnaires related to parenting attitudes and approaches, knowledge of child development, and other related topics, there are three key reasons why none are suited to be used for the study at hand. First, very few of the instruments have been used (or validated for use) with adolescents. Second, many of the instruments are designed for purposes unrelated to knowledge and attitudes associated with children's learning outcomes, a motivating focus of this study. Finally, very few of the existing instruments are considered to be of high quality. We expand on these three limitations of existing questionnaires below.

Many of the instruments used to understand parenting beliefs or attitudes and knowledge of child development are designed for use with parents, caregivers, or other adults—not adolescents. Of the twenty-eight questionnaires we reviewed (see Appendix B), six have been used with adolescents. While it is possible that a questionnaire validated for use with adults could be used with adolescents, because adolescents are at a different developmental stage compared with adults, questionnaires should be designed with their needs in mind. For example, deLeeuw (2011) suggests that early adolescents' susceptibility to peer pressure and still-immature memory capacity should lead researchers to design surveys that can be taken in private (away from peers) and which are written using very concrete language (to avoid overtaxing memory with ambiguity). Moreover, many of the questionnaires are worded for use with parents, not

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responsibilities of both the mother and father. Students will understand the benefits, challenges, responsibilities, and value of marriage in parenting. The student will be able to identify community and familial support systems that are available to parents. Students will understand the positive and negative effects of parenthood on mental health” (Commonwealth of Virginia Department of Education, 2017, p. 37).



individuals who are not yet (nor may ever be) parents. For these reasons, it was necessary to design a questionnaire specifically for adolescent respondents.

Among those questionnaires and surveys that have been used with adolescents, none focus specifically on many of the topics that are believed to promote children's cognitive development and learning that are included in the questionnaire proposed here. The Adult-Adolescent Parenting Inventory (AAPI), for example, is primarily used in studies related to child abuse and neglect (e.g. Thompson et al., 2014). The AAPI includes four abusive-parenting constructs, two of which are relevant to the study proposed here (appropriate developmental expectations for children and empathy toward children and their needs), and two of which are not (rejection of physical punishment and appropriate family roles<sup>4</sup>) (Bavolek & Keene, 2010; Larsen & Juhasz, 1985). Other questionnaires used with adolescents focus on testing retention of knowledge from a course (e.g. Pennsylvania Child Development Knowledge Test [PCDKT] (McCombie, 2005)) or are normative in nature, with "right" and "wrong" answers (e.g. the popular Knowledge of Infant Development Index [KIDI] (MacPhee, 1981)). Instead, the goal of this study is to develop and administer an instrument to uncover whether the respondents hold beliefs and knowledge associated with children's social and cognitive development, but not test whether they can recall specific facts about children's developmental milestones.

Finally, Holden and Edwards (1989) note in their review of 83 parent attitude questionnaires that virtually all of the instruments suffer from low levels of reliability and questionable validity. In our own review of questionnaires related to parenting and child development, we have noticed what appears to be unquestioned normativity (those that have "right" and "wrong" answers, such as the KIDI and the Knowledge of Child Development Index (KCDI)) or a lack of clear theorization of the constructs being tested. However, despite the fact that these instruments are not well suited for use in the present study, many of them have been useful in informing the constructs and wording of items included in the APKAS (see Appendix B for a list of questionnaires reviewed).

### *The features of parenting and early learning included in the questionnaire*

#### Growth mindset

Holding a growth mindset (the belief that abilities and intelligence are not innate and can be developed through hard work, persistence, and encouragement) has recently gained prominence for its impact on the academic success of learners (Dweck, 1986), particularly at-risk students (O'Brien, Fielding-Wells, Makar, & Hillman, 2015; Saunders, 2013; Yeager et al., 2016). However, beyond the importance of children holding a growth mindset, there is also evidence parents' own growth orientations can lead to parenting practices that promote positive social and academic outcomes among their children, including increased resiliency and perseverance on academic tasks (Gunderson, Gripshover, Romero, Dweck, Goldin-Meadow, & Levine, 2013; Kim, Fung, Wu, Fang, & Lau, 2017). Conversely, the more parents believe abilities are fixed, the less they engage in math and literacy activities with their young children (Meunks, Miele, Ramani, Stapleton, & Rowe, 2016).

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<sup>4</sup> The APKAS includes a category on the role of parents, but it emphasizes the parent's role in children's learning. By contrast, the AAPI "appropriate family roles" category is focused on determining if the "role reversals or parentification" (Thompson et al., 2014, p. 237) are taking place.

### Oral language

There are well-known associations between both the development of early oral language skills and early numeracy and later academic success (Fernald & Weisleder, 2011; Missall, Hojnoski, Caskie, & Repasky, 2015; Snow & Van Hemel, 2008), as well as the role of the caregiver in promoting oral language development (Hart & Risley, 2003; Hoff, 2003; NICHD Early Child Care Research Network [ECCRN], 2003). Children whose caregivers speak to them frequently and using a variety of words develop larger vocabularies at earlier ages, compared with children whose caregivers use fewer words (Weizman & Snow, 2001).. Parents who engage their young children in more back-and-forth conversations have children with greater language skills and enhanced brain processing for language (Romeo et al., 2018). Thus, helping adolescents understand the value of engaging young children in conversations about a variety of topics is warranted.

### Early learning

Parents who see their role as including encouraging their child's academic success and being an educator for their child (the concept of "parent as teacher") tend to raise children who do better in school (Durand, 2011; Sime & Sheridan, 2014). Similarly, parents who hold certain types of expectations for children's abilities and their academic success tend to be more involved in their children's education (Loughlin-Presnal, & Bierman 2017a) and their children tend to have higher early literacy skills (Loughlin-Presnal, & Bierman 2017b). Similarly, parents who talk with their children more about numbers and quantities have children with better early numeracy skills (Levine et al., 2010)

### Active learning

Children learn best when they have an opportunity to play an active role in their own learning process (Dewey, 1902; Shonkoff & Phillips, 2000). Caregivers can play a vital role in giving children opportunities to learn through play and hands-on activities (Bulotsky-Shearer, McWayne, Medez, & Manz, 2016). Play-based and active learning practices can lead to improved socio-emotional regulation, increased language development, and improved overall cognitive development among young children (Cohen & Mendez, 2009; Fisher, 1992).

### Parent knowledge and efficacy

Numerous studies have indicated that parents' knowledge and attitudes towards parenting has an impact on child behavior problems (Benasich & Brooks-Gunn, 1996; Thompson et al., 2014), can result in higher IQ scores (Benasich & Brooks-Gunn, 1996), higher pre-literacy or early reading skills (Bloomstra, van Dijk, Jorna, & van Geert, 2013; Jung, 2016; Rowe et al., 2016), and mathematical performance (Carmichael, 2014; Missall, Hojnoski, Caskie, & Repasky, 2015). Furthermore, studies on parents' self-regulation and sense of efficacy show that parents who are better able to control their negative emotions and parents who feel a greater sense of efficacy have lower incidents of child maltreatment, a prerequisite for children's healthy development and early learning (Caldwell, Shaver, Li, & Mizenberg, 2011; Meyer, Jain, & Canfield-Davis, 2011).

### Empathetic awareness and socio-emotional learning

In addition, there has been recent research on the importance of socio-emotional skills, including empathy, for both caregivers and children. For parents, empathy or empathetic awareness is

associated with responsive parenting (Dix, 1992; Gordon, 2002; Rose, McGuire-Snieckus, & Gilbert, 2015) and the raising of more empathetic children. Children who are more empathetic are less likely to exhibit problem behaviors and are more likely to succeed in school (Christopher, Saunders, Jacobvitz, Burton, & Hazen, 2013). For example Durlak et al. (2011) found improved empathy, stress management, and other social and emotional skills, fewer conduct problems, reduced emotional distress and improved academic performance including grades and test scores. In addition, research indicates that children from low income backgrounds profit at least as much and often more from socio-emotional learning and growth mindset programs than others (O’Conner, De Feyter, Carr, Luo, and Romm, 2017). Finally, the relationship between responsive parenting and academic success is well-documented (Rosenzweig, 2001; Steinberg, Elmen, & Mounts, 1989).

### Knowledge of child development

As noted in the introduction, parents who know more about child development and early learning tend to raise children who are better prepared for academic success in kindergarten (Rowe, Denmark, Jones Harden, & Stapleton, 2016; Yoshikawa et al., 2013). While this study is not focused on whether adolescents can recall discrete facts about the child development process or specific developmental milestones, the APKAS includes several items that would suggest whether the respondent has a general idea of what young children are capable of doing.

### Sources of knowledge

Since this study is likely the first to poll a large population of high school students about their knowledge and attitudes about parenting and child development, it is useful to include questions about where their beliefs and knowledge come from. Very little is currently known about the process by which adolescents develop their theories of parenting, and it is possible that this study will help to elucidate that process.

### Demographic information

By including demographic information (including parental education, family composition, gender, zip code, high school type, and experience caring for children) and sources of knowledge and attitudes as the final subcategories, we hope to begin to understand some of the settings, customs, and psychology (Super & Harkness, 1986) that have contributed to differences in high school students’ views of parenting and child development. Previous research has suggested that sociocultural factors have a large impact on parents’ practices (Hill, 2001), and that sociocultural factors, rather than direct experience with children, may have a larger impact on mothers’ knowledge of child development (MacPhee, 1983).

## **Research Questions**

- What does a population of 1,000 American high school students know and believe about several aspects of parenting and child development, particularly relating to those aspects of parenting and child development that are believed to promote early learning?
- Do students with different characteristics (e.g. gender, cultural, geographic, or socioeconomic), or students who have had different experiences (who have more

experience caring for young children or who have taken a babysitting class) hold different attitudes about parenting and child development?

## Methods

### *Sample*

This research was conducted using a survey developed specifically for this study, the *Adolescent Parenting Knowledge and Attitudes Survey* (APKAS). The APKAS was administered to 1,000 American high school students recruited by Qualtrics, a leading survey research company, and completed online on the Qualtrics platform. The participants were recruited in proportions that approximately mirrored the US population of high school students, including by race/ethnicity, socio-economic status, gender, and region. We also collected information on the participants' family background, child care education and experience, high school type, and academic achievement.

Table 1  
*Participants' demographic information*

	N	%
Grade		
9 <sup>th</sup> grade	84	8.33
10 <sup>th</sup> grade	187	18.55
11 <sup>th</sup> grade	369	36.61
12 <sup>th</sup> grade	368	36.51
Age		
13	16	1.59
14	38	3.77
15	88	8.73
16	371	36.80
17	275	27.28
18	204	20.24
19	16	1.59
Gender		
Female	545	54.07
Male	463	45.93
Race		
African-American	150	14.88
White	702	69.64
Asian or Pacific Islander	89	8.83
More than one race	34	3.38
Other	33	3.27
Hispanic		

Yes	263	26.09
No	745	73.91
Maternal education		
Did not graduate from high school	156	15.48
High school diploma	316	31.35
Associate's degree	222	22.02
Bachelor's degree	173	17.16
Master's degree	92	9.13
Doctoral or professional degree	49	4.86
Geographic Region		
Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, or WI)	228	22.62
Northeast (CT, MA, ME, NH, NJ, NY, PA, RI or VT)	156	15.48
Pacific (AK or HI)	7	0.69
South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, or WV)	424	42.06
West (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, or WY)	193	19.15

The APKAS consists of 86 items to understand what high school students know and believe about the role of parents in childrearing, especially related to early learning, and what they know and believe about the child development process. The items are grouped into 12 categories:

- Preliminary (9 questions/statements): Qualifying questions, parental permission/minor child assent questions, and preface statements.
- Biographical Information (25 questions): Gender, age, grade, academic achievement, parents' educational attainment.
- Growth Mindset (5 questions): This series of questions aims to uncover the extent to which the respondent believes that intelligence is innate versus can be nurtured, especially by parents.
- Developing Oral Language (6 questions): These questions are related to the respondents' beliefs about how children acquire oral language, and the role that parents can play in this process.
- Role in Early Learning (5 questions): Like the category above, these questions seek to understand whether the respondents believe that parents should play an active role in children's early learning, including in developing literacy and math skills.

- Active Learning (6 questions): These questions are about whether the respondent believes that children’s learning is an active process, where children should have the opportunity to have freedom and be able to try things themselves.
- Parenting Knowledge and Efficacy (6 questions): These questions relate to what the respondent thinks are important parenting skills, and whether they think they will be able to be a good parent.
- Empathetic Awareness and Socio-Emotional Learning (7 questions): An understanding of children’s emotional needs is important to be an effective parent and it is important for parents to promote their child’s socio-emotional development.
- Knowledge of Child Development (7 questions): Most of the other categories relate to the respondents’ beliefs, whereas this category is meant to see whether the respondents know about typical patterns of child development in the United States. Respondents may overestimate or underestimate (or “correctly” answer) questions about what children can be capable of at different ages.
- Sources of Information (5 questions): We are interested in where high schoolers believe they have learned about parenting and child development, and where they think they will go for information in the future. Adolescents likely have not been exposed to parenting “experts” (except in the ways that their parents have used expert advice in order to raise them), and do not have their own parenting experience to draw upon. It will be interested to find what they see as their most valuable resources for parenting.
- Final Questions (5 questions): The few final questions ask whether we missed anything (open), whether the questionnaire made the respondent think differently (open), whether the respondent feels ready to be a parent yet (y/n), the most important thing a parent should do (open), and what the hardest part of being a parent is (open).

The AKPAS uses four substantive<sup>5</sup> question/statement types: simple agree-disagree statements, vignette agree-disagree statements, true-false statements, and open-ended response questions. The majority of the survey items use the agree-disagree statement form where the participant is given a statement such as “Talking to babies—even if they can’t talk yet—is important” and can respond to the statement with “Don’t know,” “Strongly Disagree,” “Disagree,” “Neutral,” “Agree,” or “Strongly Agree.” This question form, one of the most used question types, is sometimes not recommended for reasons such as the acquiescence tendency (Fowler, 1995) but it is well suited to this research and its focus on attitudes. We have included the possible response of “Don’t know” since the APKAS may prompt adolescents to answer questions on topics they have not had the opportunity to consider before. A small number of questions include a short (1-2 sentences) vignette that is intended to place the adolescent in the role of caring for a child. Questions about participants’ knowledge of child development are in a true-false (or “Don’t know”) answer format. While patterns of child development differ across cultures, the “correct” answers to these questions conform to the commonly agreed upon developmental milestones in

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<sup>5</sup> Respondents were also asked to provide demographic information through questions that are multiple choice or free-response.

the United States. Finally, I have included several open-ended questions designed to uncover unanticipated answers to key questions (such as, “What do you think is the hardest part of being a parent?”). Since this questionnaire is the first of its kind to survey a large sample of adolescents, it will be useful to “learn the unexpected” (Fowler, 1995, p. 95).

### **Limitations**

As noted above, one of the key limitations of this study is the challenge of interpreting results given the tendency for individuals, especially those with low levels of education (which could include high school students), to agree to opinion questions. There has been much debate regarding the impact this tendency has on opinions research, with some scholars arguing that the impact is minimal and need not be considered a serious flaw, and others arguing that measures should be taken to minimize the impact (see Rorer, 2016 and Schuman & Presser, 1981). This challenge was considered carefully during the design of the study and the creation of the questionnaire. However, after careful review of both the drawbacks of agree-disagree question forms and alternative question forms, we determined that it is well-suited for this study. First, agree-disagree questions are useful for determining respondents’ attitudes and opinions, a primary goal of this research. Second, as agree-disagree questions are among the most commonly used, it is likely that adolescents will have some familiarity with the question format. Third, alternative question formats tend to be unwieldy and difficult to interpret by participants, and therefore may raise other issues that would undermine confidence in the results.

In order to address this limitation, the initial design of the survey included several negatively worded questions (where an answer in the “disagree” range would indicate a high score (relative to attitudes associated with successful outcome for young children). However, during the pilot phase of the study, all but three of these questions were eliminated or rewritten to be positively worded due to their poor fit with other items in the measure. This was determined using confirmatory factor analysis, as well as considering the modification indices which indicate a correlation between two items that is not explained by the factor.

In addition, we conducted cognitive pre-testing of the survey with two high school students asking them to discuss with us any questions that seemed ambiguous, difficult to understand, or otherwise unclear. This method is recommended to ensure that respondents are answering the question you intend for them to answer (Gelbach, Artino, & Durning, 2010). I raised the issue of acquiescence bias with them, and they assured me that their responses reflected their beliefs, and not a desire to answer “correctly.” While this is an imperfect and anecdotal strategy, it lends some confidence to us that the participants responses are accurate.

Finally, to mitigate misinterpretation of the implications of this study based on the possibility of acquiescence bias, we have attempted to be clear that the summary statistics are interesting, but that the most important results are those that emerge from difference in responses by demographic category, including between participants of different levels of childcare experience, gender, and socio-economic status.

### **Results**

Overall, it appears that approximately two-thirds to four-fifths of high school students in the sample hold beliefs that are associated with healthy development and cognitive benefits for young children. These results may be somewhat higher than expected due to the risk of an acquiescence bias among the research participants. However, for most items, fewer than 50% “Agree Strongly” with statements consistent with beliefs associated with positive outcomes for young children. This indicates that there is much room for a shift in attitudes and beliefs among high school students.

Table 2

*Percentage of participants' answers regarding their beliefs within each category*

	Don't Know	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>Growth Mindset</b>						
Praisegood	3.17	1.59	2.18	11.31	34.52	47.22
Parentsmatter	2.88	1.49	2.38	9.23	32.94	51.09
Alwaysencourage	1.69	1.09	2.08	6.65	27.38	61.11
Learnparent	2.28	1.09	1.88	10.62	36.31	47.82
Vignette*	4.07	33.13	36.81	14.68	7.34	3.97
<b>Oral language</b>						
Allkindsofwords	4.56	2.48	8.04	21.92	36.61	26.39
Readoften	2.38	1.59	1.79	15.58	41.17	37.50
Fullexplanation	3.17	1.49	4.46	35.42	33.63	21.83
Talktobabies	3.90	1.79	1.29	10.71	34.72	47.62
Twentyquestions	6.55	1.19	5.16	22.82	40.77	23.51
Childrentalk	2.38	1.49	1.49	8.23	40.48	45.93
<b>Role in early learning</b>						
Highexpectations	3.47	3.77	13.79	36.61	26.19	16.17
Play	3.77	1.09	1.95	10.22	41.96	41.07
Beforeschool	2.58	1.19	2.48	16.17	41.17	36.41
Teachalphabet	4.56	1.49	5.16	29.07	34.33	25.40
Everydaymath	3.08	1.19	2.58	17.26	46.43	29.27
<b>Active Learning</b>						
Learnbytrying	3.08	1.19	1.29	11.61	45.34	37.50
Curious	2.19	1.09	2.19	12.20	36.61	45.73
Dothemselves	2.18	1.79	2.98	25.40	40.28	27.38
Explore	2.68	1.39	3.27	19.35	43.85	29.46
Vignette*	3.57	11.81	35.02	25.60	17.36	6.65
Learninterested	2.08	1.09	0.89	8.93	33.23	53.80
<b>Parenting knowledge &amp; efficacy</b>						
Controltemper	2.18	1.49	2.28	11.41	35.22	47.42



Patient	2.08	0.79	1.19	8.04	31.94	55.95
Nurtureself	13.69	1.49	5.36	35.42	28.47	15.58
Goodjob	9.14	1.23	2.46	17.76	34.50	34.91
Hard	8.43	1.49	4.37	19.15	29.96	36.61
Knowalot	2.98	1.59	5.85	20.93	39.29	29.37
Empathetic awareness & socio-emotional learning						
Vignette	2.98	1.19	2.58	10.02	43.65	39.58
Maketrouble	4.07	2.38	2.78	12.70	33.53	44.54
Parentssensitive*	6.75	4.96	15.87	30.95	25.99	15.48
Playnicely	1.98	0.99	2.18	7.54	31.25	56.05
Feelingsothers	2.58	1.29	2.38	9.03	36.81	47.92
Responddifferently	6.25	1.59	3.08	14.19	46.43	28.47
Otherperspectives	2.09	1.29	1.98	10.81	39.58	44.25

\*Note: For these items, answers of “Disagree” or “Strongly Disagree” would indicate beliefs that are typically associated with healthy development and children’s academic success.

### *Growth mindset*

In general, high school students in the sample seem to believe that holding a growth mindset—including strong beliefs that 1) praising hard work and 2) encouraging children to try their best are valuable (82% and 88%, respectively, “Agree” or “Strongly Agree”)—is important for both parents and children. Similarly, high school students in the sample also believe that parents can play a big role in children’s learning, no matter how smart the child is (84% “Agree” or “Strongly Agree”) and believe that people can learn to be better parents (84%). Interestingly, while the majority of students seemed to hold a growth mindset, around 10% of respondents felt neutral about whether a growth mindset is important.

### *Oral language development*

Participants indicated that they have strong beliefs regarding the importance of parents speaking to infants (82% “Agree” or “Strongly Agree”), giving children opportunities to speak as well as to listen (86% “Agree” or “Strongly Agree”), and reading to children (79% “Agree” or “Strongly Agree”). They are less sure about the value of games such as “Twenty Questions” in promoting language development and using both simple and complex words when talking to young children. It is also interesting to note that over a third of high schoolers in the sample reported that they felt “Neutral” about the importance of giving full explanations to young children. Overall, these results seem to indicate that while high school students believe that parents should speak to their children often, they are unsure of how, including what kind of words to use and what kinds of activities to use to promote discussion.

### *Role in early learning*

While in general participants indicated that they have strong positive beliefs regarding the importance of the parent’s role in promoting early learning, it is interesting that 10-37% feel

neutrally about what role parents should play. For example, while 83% of respondents “Agree” or “Strongly Agree” that it is good for children’s development if parents play with them, 10% feel neutral. Even more stark, 29% of participants feel neutral about whether it is the parent’s job to teach the alphabet and how to count to ten before school starts and 37% feel neutral about whether parents should have high expectations for their children. Overall, participants felt less strongly about this category than the importance of holding and promoting a growth mindset or the importance of empathy and socio-emotional learning (discussed below), and there were differences in beliefs about the role of parents by socio-economic status, as will be discussed further below.

### *Active learning*

Participants appear to believe that parents should promote active learning practices in their children. In particular, most believe strongly that children should have opportunities to learn about things they are interested in (54% “Strongly Agree” and 33% “Agree”). Respondents also seem to believe that children learn well when they have a chance to try things for themselves and that parents should encourage their children to be curious, explore, and question things (83% and 82% “Strongly Agree” or “Agree” respectively). However, a quarter of high school students in the sample feel neutrally about whether parents should teach children to do things for themselves and almost 50% either believe that a three-year-old is too young to help make his or her own sandwich or feel neutrally.

### *Parenting knowledge and efficacy*

Only about two-thirds of participants in this study believe that parenting is hard, it helps to know a lot to be a good parent, and that they are capable of being good parents someday. Participants feel more strongly that parents should control their temper and that parents should be patient (83% and 88%, respectively, “Agree” or “Strongly Agree”). It is very surprising to note that only 44% “Agree” or “Strongly Agree” that parents who nurture themselves make better parents, 35% feel neutrally and 14% report that they “Don’t know.” This seems to indicate that high school students are not sure of the role of self-care in parenting.

### *Empathetic awareness and socio-emotional learning*

For the most part, participants in the study believe that empathy is an important learned skill and that socio-emotional learning is important for young children. 87% of participants “Agree” or “Strongly Agree” that learning to play nicely with others is very important for young children and slightly fewer “Agree” or “Strongly Agree” that it important for children to learn to recognize feelings in others (85%).

On the other hand, participants were less sure about the importance of parents being empathetic toward their children: nearly a fifth of participants either feel neutral, don’t know, or disagree that a good way to comfort a four-year-old is to ask what is wrong and try to make him or her feel better. In addition, 41% of high school students in the sample believe that parents who are sensitive to their children’s feelings and moods often spoil them (and 7% “Don’t know” and 31% feel “Neutral”).

### *Knowledge of child development*

Overall, it seems that high school students have limited knowledge of many of the commonly agreed upon developmental milestones. They are unsure of what infants and toddlers are capable of at different ages and seem not to ascribe much agency to young children. For example, a large proportion of respondents “Don’t Know” whether babies as young as 2-months-old can get bored (34%) and whether children typically say their first word at around 6-months-old (44%).

Approximately half of high school students in the sample don’t think that 4-year-olds are capable of doing much themselves. However, approximately 75% of high school students believe that toddlers’ pointing is meaningful, which is heartening.

Table 3

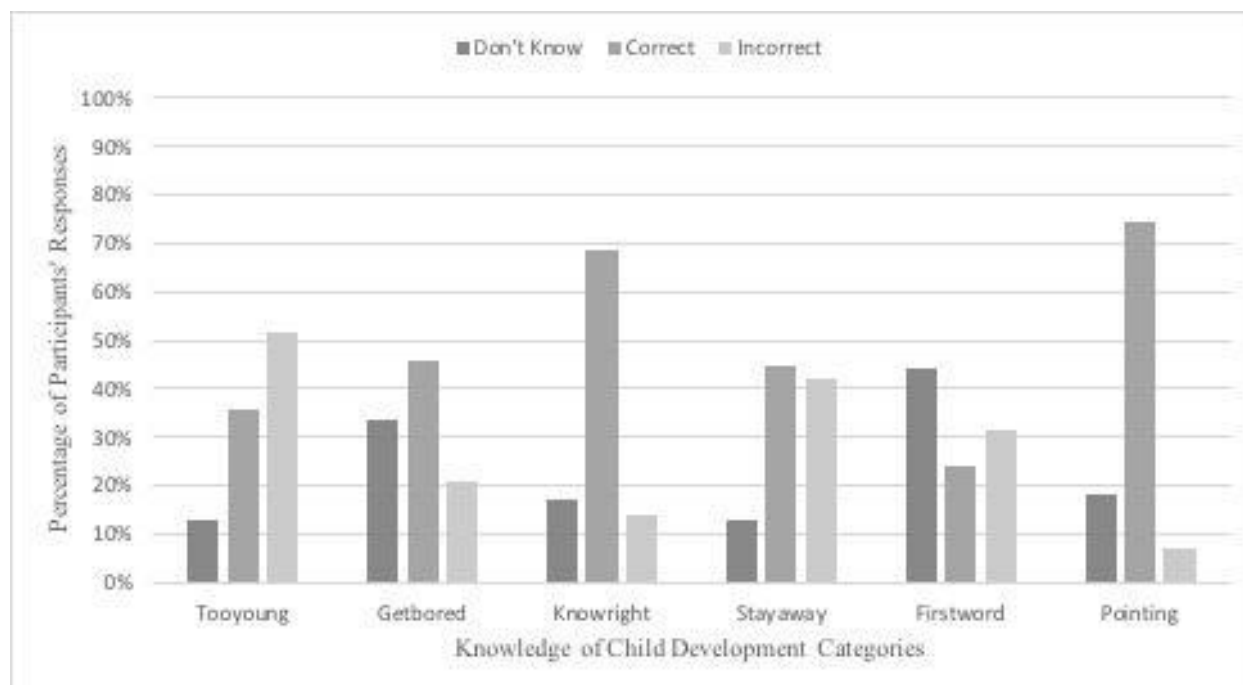
*Percentage of participants’ responses to questions about their knowledge of child development*

	Don’t Know	True	False	Correct Answer
Tooyoung	12.70	51.39	35.91	F
Getbored	33.73	45.63	20.63	T
Knowright	17.36	13.99	68.65	F
Stayaway	13.10	42.26	44.64	F
Firstword	44.44	31.35	24.21	F
Pointing	18.35	74.60	7.04	T

As shown in Figure 1, fewer than half of respondents answered correctly on four out of six of the questions, which is particularly interesting since the participants had a fifty-fifty chance of choosing the correct answer (assuming they didn’t pick “Don’t know) if they simply guessed.

Figure 1

Participants’ responses to knowledge of child development questions



### *Sources of knowledge and beliefs*

Participants were asked where they learned what it means to be a parent. They were able to select one or more responses including “From a class,” “From books,” “From television or movies,” “From watching my own parents,” or “Other.” By far, students report learning about what it means to be a parent from their own parents. Only 13% of responses included learning about parenting from a class, less than those who report learning from television or movies (16%).

Table 4

*Participants' responses of where they have learned what it means to be a parent*

	N	%
From a class	203	13.14
From books	168	10.87
From television or movies	247	15.99
From watching my own parents	746	48.28
Other	181	11.72

*Note: Participants were able to select more than one response. Percentages are a percentage of total responses.*

Importantly, high school students in the sample also don't have much confidence that they will “just know what to do” when they become a parent, indicating that many in the sample don't have a strong belief that parenting knowledge and skills will come naturally to them.

Table 5d

*Responses to “When I'm a parent, I'll just know what to do”*

	Don't know	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
When I'm a parent, I'll just know what to do.	9.33	7.54	18.65	35.42	19.94	9.13

### *Gender effects*

There were slight-to-small negative associations between being male and a belief in the importance of holding a growth mindset, the importance of the caregiver's role in promoting oral language development, and the importance of socio-emotional development. There did not appear to be any significant associations between a belief in the role that parents and caregivers play in early learning, the importance of active learning for children, and what it takes to be a parent.

In terms of knowledge of child development, boys were more likely to answer incorrectly and to answer "Don't know" (except for whether 4-year-olds were too young to do many things for themselves), although some of these differences were not statistically significant. This indicates that boys may be more in need of instruction about developmental milestones and children's capabilities compared with girls.

Table 6

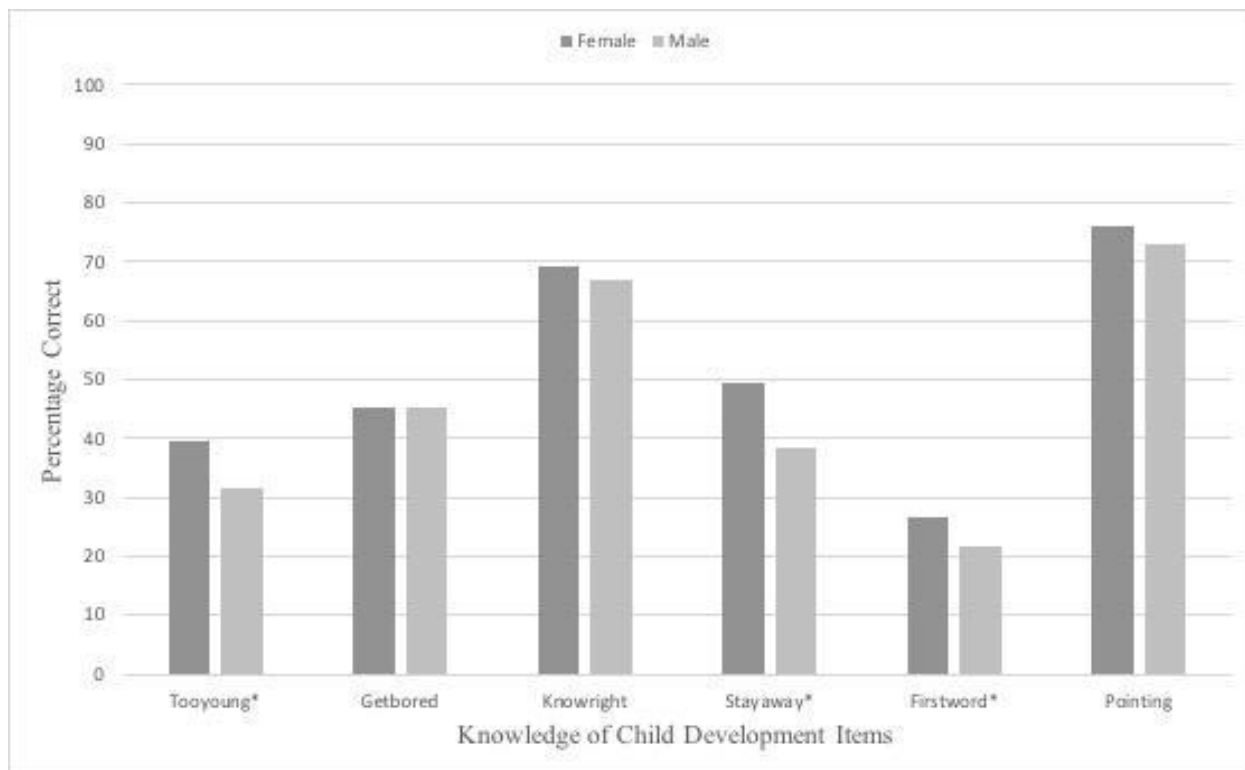
*Percentage of participants' responses to questions about their knowledge of child development by gender*

	Female			Male			Correct Answer
	Don't Know	True	False	Don't Know	True	False	
Tooyoung*	13.08	47.29	39.63	12.61	55.75	31.64	F
Getbored	32.52	45.35	22.24	36.06	45.35	18.58	T
Knowright	17.20	13.46	69.35	18.14	14.82	67.04	F
Stayaway*	13.27	37.20	49.53	13.27	48.23	38.50	F
Firstword*	41.12	32.15	26.73	48.23	30.09	21.68	F
Pointing	16.82	76.07	7.10	20.35	72.79	6.86	T

\*The differences between females and males is statistically significant.

Figure 2

*Males' and females' knowledge of child development questions percentage correct*

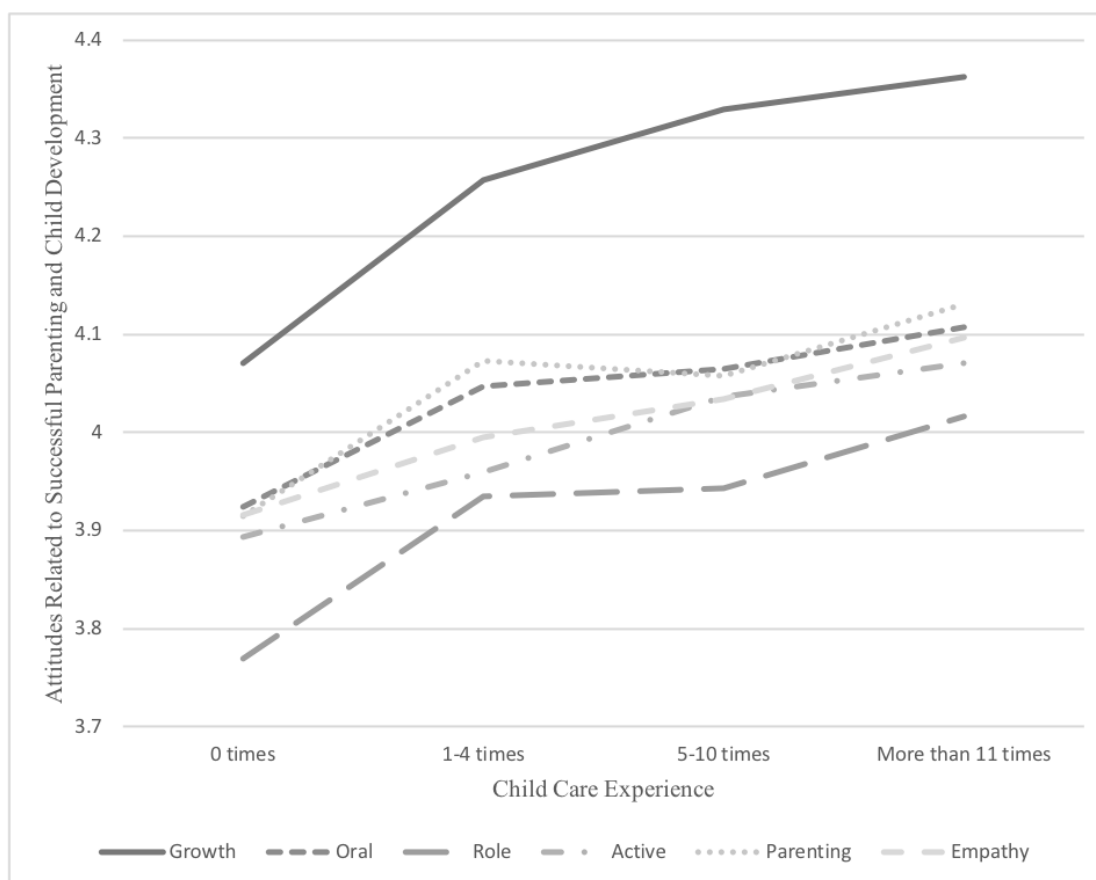


### *The impact of having experience caring for young children*

Respondents reported, in the past year, how many times they had cared for a child younger than themselves (0 times, 1-4 times, 5-10 times, more than 11 times). Most notably, we found that high schoolers who had more child care experience were more likely to hold beliefs consistent with positive outcomes for young children and their learning in all attitude categories, compared with those with no experience or less experience, and the biggest differences were between those who had no prior childcare experience and those who had even the smallest amount (1-4 times in the past year) (see Figure 2). This echoes prior research that shows that hands-on experience with young children is useful for ensuring that instruction related to parenting and child development “sticks” (Grindal et al., 2016; McCombie, 2005).

Figure 3

*The effect of child care experience on attitudes*



\*Note: On the y-axis, the higher the value, the more the respondent's attitude reflects attitudes associated with successful outcomes for young children.

### *The impact of having taken a class on parenting or child development*

Approximately one-third of respondents reported having taken a babysitting class or a class on child development. It is interesting that there did not appear to be any associations between respondents having taken a class and any of the categories of beliefs. This is not surprising, however, since it is likely that babysitting or child development classes focus on topics that are not related to children's early learning, but instead focus on children's development stages, prenatal care, and parental responsibilities—the likely topics of a school-based parenting class based on our analysis of state standards related to parenting and/or child development. However, it is important to note that of those respondents who reported taking a class, only a about a third said they took it at school (either during school hours or outside of school hours).

### *The effects of socio-economic status*

We used two measures to estimate the high school students' socioeconomic status: maternal educational attainment and median income for their zip code. It was very interesting to find very few significant associations with maternal education, but some associations emerged with being middle class (versus low-income or upper middle class or higher).

Respondents noted whether their mother did not finish high school (16%), received a high school diploma (33%), received an associate's degree (22%), received a bachelor's degree (17%), received a master's degree (8%), or received a professional or doctoral degree (5%). Despite substantial previous research which shows the role that parental education and socioeconomic class can play in parenting style and parenting beliefs (see, for example, Lareau 2011; Rowe, 2008; Rowe, Denmark, Jones Harden, & Stapleton, 2016), we found few associations between maternal education and any of the categories. When all mothers' education levels were considered with each category, we only found significant associations with beliefs related to children's active role in their own learning, such that the higher the mother's education level, the more likely the respondent was to express holding beliefs associated with successful outcomes for young children. However, when we looked for associations between specific maternal education levels, we found some additional differences. For example, we found that participants with a mother with a bachelor's degree hold significantly different beliefs about the role of parents than participants with mothers with all other levels of education, and participants with mothers with either a bachelor's degree or master's degree were more likely to hold beliefs about the importance parenting knowledge and parenting self-efficacy associated with successful outcome for young children, compared with participants with mothers of all other education levels, including those with doctorates. When comparing the results of participants with mothers with less than an associate degree or less with those with a bachelor's, master's, or doctoral degree, the differences disappeared. These findings suggest that there may be a "middle class effect," which was confirmed by looking at the median income of the zip codes participants reside in.

We used the median income for participants' zip codes using data from the 2016 American Community Survey from the US Census Bureau. Respondents were assigned to six income categories, and we looked for associations between attitudes and these income levels: \$0-\$24,999; \$25,000-\$49,999; \$50,000-\$74,999; \$75,000-\$99,999; \$100,000-\$199,999; and \$200,000 and higher<sup>6</sup>. Once again, we found that there are significant differences associated with attitudes about children taking an active role in their learning and different median income levels. This is true across almost all income categories. We also found that the higher the income level, the more the respondents tended to agree that empathy and socio-emotional learning is important for children. In addition, there were possible "middle class effects" associated with holding a growth mindset (individuals living in a zip code with a median income of \$50-75K are more likely agree with statements about the importance of parents and children holding growth mindsets) and beliefs about the role of parenting in early learning (those making \$25K to \$50K tend to hold beliefs associated with success compared with those in other income categories). As you can see in Figure 3, the "middle class effect" is most pronounced within the growth and role categories of attitudes.

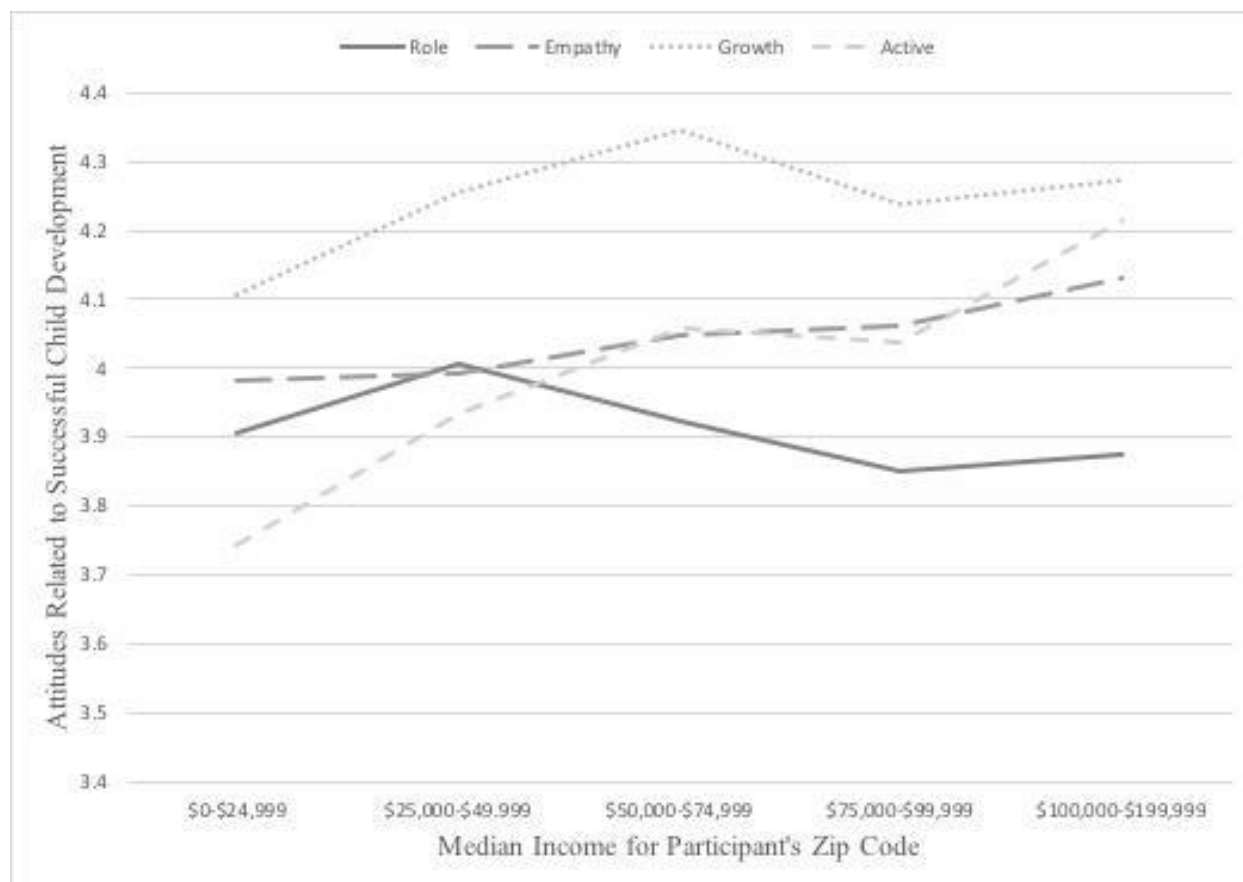
Figure 4

*The effect of median income of participants' zip code on attitudes*

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<sup>6</sup> No participants reported living in zip codes with a median income of \$200,000 or more.





*\*Note: On the y-axis, the higher the value, the more the respondent's attitude reflects attitudes associated with successful outcomes for young children.*

## Summary and Implications

The purpose of this report is to answer, “What do American high school students know and believe about parenting and child development?” We have learned that while many high school students seem to hold beliefs consistent with young children’s success in school and later in life, there is much room for improvement, and these results may be somewhat higher than expected due to acquiescence bias. Students who are not from middle class backgrounds are less likely to hold attitudes that would set up their future for success, and boys may need more information and instruction than girls. Overall, knowledge of child development is very low among this population, with more than half of respondents answering most questions about children’s development incorrectly or responding that they don’t know the answer. Children who have had more child care experience tend to hold different beliefs from those who have had less child care experience, and more than 40% of students reported that, to their knowledge, their school did not offer any classes on parenting or child development. In general, high school students are not sure about the role that parents can and should play in their child’s early learning and how to best promote oral language and early numeracy development, but they seem confident that a growth mindset is important for both parents and their children. Furthermore, high school students report that, by far, they have learned the most about parenting from watching their own parents, and from television and movies next. This is especially troubling, since it is likely that media

depictions of the realities of parenthood and of best strategies for promoting healthy development and academic success are lacking.

Thus our recommendations for future efforts would include:

- Providing high school students with more information about children's development and basic developmental milestones.
- Building upon students' already fairly strong beliefs about the important role that parents and other adults can play in children's early learning but giving them information about *how* adults can promote early literacy, numeracy, and socio-emotional development in young children.
- Provide high school students with reliable sources of information for learning about parenting and child development, and ideas for who to turn to if they have questions about children they look after or who they can ask when and if they are parents someday.

It is our hope that this this research provides a first glimpse into a broad sample of American adolescents' views on parenting and child development, including what they know, how they have come to learn about the parenting and child development, and their attitudes. The results of this study show that there is much room for improvement in educating adolescents about parenting and child development.

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## **Appendix A: Development of the Survey**

### *Step 1: Gathering Existing Questionnaires*

We conducted a search for existing questionnaires. Our search included permutations of the following terms: “parent\*” “child development” “adolescent\*” “high school\*” and “questionnaire.” We used the ProQuest PsychTests database to narrow our search to instruments. Through this search, we were able to find twenty-eight non-unique measurement instruments.<sup>7</sup>

### *Step 2: Review of Existing Questionnaires:*

We reviewed all of the questionnaires to get a sense of what they were trying to achieve, their audience, and their structure (Multiple choice questions? What kind of scale? How many items?). We then noted all of the items that seemed relevant to our purpose of learning about what high schoolers know and think about aspects of parenting and child development related to early learning. See Appendix B for details.

### *Step 3: Compiling Questions from Existing Questionnaires*

We compiled selected questions/items from the initial review. We then reviewed the compiled list and eliminated duplicates, removed questions that didn’t seem to fit our purposes, reworded questions to more closely align with our goals. We documented where each question came from, and whether we edited it.

### *Step 4: Determining Initial Concept Groupings*

We initially grouped the questions into four categories: questions related to growth mindsets, the role of parents, expectations for children, and questions related to empathy and socio-emotional awareness. These four groupings represent key areas of knowledge necessary for caregivers to support young children’s learning. These were later revised based on the results of the pilot.

### *Step 5: Adding New Questions*

Once we had a sense of what the categories to be included in the questionnaire would be, we reviewed the entire questionnaire—and each category of questions—to determine what was missing. We ended up adding new questions as a result of this review. In addition, we had initially decided on an impersonal question structure “Parents should...”, but upon reviewing the draft of the questionnaire, decided to include some “vignette” questions that create a hypothetical situation for the respondent “Imagine you are helping a child with his homework...”

### *Step 6: Sharing and Revision/Expert Review*

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<sup>7</sup> There was some overlap between the instruments. For example, one study conducted in Jordan used a modified version of the KIDI (Knowledge of Infant Development Index) (Safadi, Ahmad, Nasser, Alashhab, AbdelKader, & Amre, 2016).

The APKAS was shared with two high schoolers and two “experts,” a pediatrician and a researcher. The high school students each completed the questionnaire and discussed any questions that seemed confusing, ambiguous, or irrelevant, or difficult to answer. We made minor revisions based on their feedback.

In addition, we have received feedback from two experts who evaluated the APKAS and provided suggestions for improvement:

Name	Title	Rationale
Barry Zuckerman, M.D.	Professor of Pediatrics, Boston University School of Medicine	Dr. Zuckerman’s research interests focus on promoting early learning and resilience, and maternal mental health—both of which are relevant to the APKAS.
Joan Kelley, Ed.M.	Researcher, Language Diversity and Literacy Development Research Group, Harvard Graduate School of Education	Joan has been a researcher with the Language Diversity and Literacy Development Research Group for more than ten years. She is currently developing an online tool for parents of children 0-9 as part of the Parent Uptake Project. Her expertise in the parent’s’ role in early learning makes her well-suited to review the APKAS.

They were asked to respond to the following questions:

- Is the content appropriate for a questionnaire that seeks to understand adolescents' parenting attitudes and knowledge of child development?
- Is there anything missing?
- Do you think that the results of the questionnaire will uncover differences in adolescents' parenting attitudes and knowledge of child development?
- Do you have any additional thoughts or comments?

The feedback from two of the experts led to the following changes:

- Adding a question about parents’ primary language as a proxy for culture, since we know this matters for parenting and childrearing attitudes. (BZ)
- Adding a question about the number of younger siblings the respondent has. More younger siblings may mean more experience caring for children. (BZ)
- Changing the word “development” to “learning” in Q6.5. (BZ)
- Moving the question about ethnic background so that it doesn’t follow the question asking if the respondent is a parent. (JK)
- Asking for more detailed information about parents’ education. (JK)
- A few minor wording edits. (JK)

### *Step 7: Preliminary Testing*

The draft *Adolescent Parenting Knowledge and Attitudes Survey* was administered to 50 individuals via Qualtrics and recruited via Amazon’s Mechanical Turk service. This pilot of the instrument was useful since it revealed several flaws in the administration and recruitment process. First, we had not specified that respondents must be US citizens and/or residing in the US. Second, although we had included several questions and recruitment specifications in order to ensure that the respondents were high school students (and not their parents or other adults), it became clear within the first ten responses that some respondents were ignoring that information or misunderstood the recruitment criteria. We have adjusted the language, added questions that—if answered “incorrectly”—will end the survey immediately, and set more specific respondent recruitment criteria (so that many ineligible candidates are not even shown the survey opportunity, such as non-US candidates).

As a result of the preliminary testing, we have also been able to improve the survey flow by providing clearer transitions between the parent permission portions of the survey and the sections that must be completed by the high school respondent. In addition, we were able to test the randomization of the question blocks as well as randomization within the blocks, as well as troubleshoot other logistic and flow issues.

Beyond revealing flaws in the recruitment, the preliminary testing, as well as the expert review, was been useful for refining the measures. We also conducted confirmatory factor analysis with each of the categories measured by the APKAS to determine fit. This led to significant reorganization to the instrument (but not substantive changes to the items).

#### *Step 8: Pilot Testing*

Following the preliminary testing, we conducted a pilot with 100 respondents to further refine the measures. We conducted exploratory factor analysis and confirmatory factor analysis with each category to make revisions to individual items.

### Appendix B: Review of existing questionnaires

NAME	ACRONYM	For	NOTES
Active Parenting: First Five Years Survey	FFY	Ages 15-50+ (parents)	Primarily focused on emotions/emotional regulation/responsive parenting.
Adult Adolescent Parenting Inventory - Versions 1 & 2	AAPI & AAPI/2	Adolescents & Adults	pp. 9-12. Relevant, but mostly focused on measures related to child abuse prevention. See Sasso et al. article.
Alabama Parenting Questionnaire		Parents	For parents of children aged 6-18. Constructs: involvement, positive parenting, poor monitoring/supervision, inconsistent discipline, corporal punishment.
Carolina Parent Support Scale		Parents	Probably not relevant. Don't have the measure. "Measure the number of perceived helpful sources of social support at the individual, family and neighborhood and community level." See Katz article.
Child-rearing Practices Report	CRPR	Mothers	pp.26-37; some items relevant. For mothers' self-report.
Concepts of Development Questionnaire	CODQ	Parents	Used in the Benasich article. Tests the "level of complexity at which the parent interprets the developmental behavior of his or her child" (Benasich & Brooks-Gunn, 1996, p. 1190). Parent thinking can be: symbiotic, categorical, compensating, or perspectivistic.
Early Development Questionnaire		Other	For caregivers about child's abilities. Not sure if it will be helpful.
Ecological Momentary Assessment Parenting Scale		Parents	Interesting format. ("bipolar")

Field's Developmental Milestones Scale		Parents	Used in Benasich article. Asks specific ages at which a child reaches particular developmental milestones.
Field's Maternal Expectations and Childrearing Attitudes Scale		Mothers	Includes: parental support, satisfaction with parenting, involvement, communication, limit setting, autonomy, and role orientation.
Iowa Child Development Test		Adolescents	normal child development, child health maintenance factors (e.g. Includes information about immunization, nutrition, etc.), child discipline approaches, and demographic variables.
KIDI - Knowledge of Infant Development Inventory (KIDI)	KIDI	Various	Agree-disagree. Has correct and incorrect answers. Constructs not clear.
Knowledge of Child Development (Roopnarine)		Parents	p. 8
Knowledge of Child Development Inventory	KCDI	University & junior high	A multiple-choice test of 56-items consisting of four sections dealing with emotional, cognitive, physical, and social development.
Knowledge of Child Development Test		Parents	pp. 87-91
Knowledge of Effective Parenting Scale	KEPS	Parents	The AUs consider it an improvement on the KIDI.
Law Enforcement Officers' Child Development Knowledge Questionnaire		Law enforcement officials	Kind of interesting.

Parent-Child Relationship Inventory	PCRI	Parents	Parenting skills and styles.
Parental Authority Questionnaire	PAQ	Adolescents / Adults	About how adolescents feel about THEIR parents. Places parents into Baumrind's typology of parenting styles.
Parental Authority Questionnaire - Modified	PAQ-M	Adolescents / Adults	About how adolescents feel about THEIR parents.
Parental Authority Questionnaire - Revised	PAQ-R	Adults	This one is about adults and their parenting styles (using Baumrind's typology).
Parenting Questionnaire	PQ	College students & parents	pp. 9-10; Primarily about child abuse prevention
Parenting Readiness Checklist		Other	This one is used by professionals to assess parents' readiness for caring for their child.
Parenting Style Scale		Parents	
PARYC	PARYC	Parents	Self-report on parenting.
Parenting Styles and Dimensions	PSDQ	Parents	Typology of parenting styles.
Pennsylvania Child Development Knowledge Test	PCDKT	Adolescents	pp. 83-93
Positive Parenting Attitude Measure		Parents	pp. 85-86

### Appendix C: Review of state standards

State	In HS standards	In career training standards	In both standards	In neither	Standards
Alabama	X		X		Health Education 4: 4
		X			Career Training - Child Development / Early Childhood Development 1-2 / Infant and Toddler Development
Alaska				X	"Skills for a Healthy Life"
Arizona				X	
Arkansas	X		X		Health and Wellness: Human Growth & Development strand - HGD.1.HW.1
		X			Occupational Training - Family & Consumer Sciences - Child Development
California	X		X		Health Education - Standards 1.2.G/1.6.G/1.10.G/1.11.G
		X			Career Technical Education - Education, Child Development, and Family Services - Child Development Pathway
Colorado	X				Comprehensive Health: Standard 2: Physical and Personal Wellness in Health (DOK 1-4)
Connecticut					Comprehensive Health?
		X			CTE: Family and Consumer Sciences
Delaware				X	
Florida				X	
Georgia				X	
Hawaii				X	
Idaho	X				Health: Growth, Development, & Family Life
Illinois				X	
Indiana		X			CTE: Family and Consumer Sciences: Adult Roles and Responsibilities: ARR-3.3
					CTE: Family and Consumer Sciences: Advanced Child Development
					CTE: Family and Consumer Sciences: Early Childhood Education 1



					CTE: Family and Consumer Sciences: Early Childhood Education 2
Iowa	X		X		Health
		X			Home economics education programs
Kansas				X	
Kentucky				X	Practical Living
Louisiana				X	
Maine	X				Health: A5: Students describe the characteristics of human growth and development throughout the various stages of life.
					Health - Family Life
Maryland				X	
Massachusetts	X		X		Growth&Dev 1.12
	X				Family Life - Social and Emotional Health
		X			VTEC - Early Education and Care (VEEC)
Michigan		X			Education and Training Strand of CTE
Minnesota				X	
Mississippi	X				Unit 4: Competency 3: a. Identify physical, mental, and emotional changes that occur from childhood through adolescence.
Missouri				X	
Montana				X	
Nebraska		X			Human Sciences and Education CTE Strand
Nevada					
		X			CTE: Education, Hospitality, and Human Services: Early Childhood Education
New Hampshire				X	
New Jersey	X		X		Two progress indicators in Comprehensive Health and Physical Education: Standard 2.4 Strand C
		X			CTE: Human Services Career Cluster: Early Childhood Development and Services Pathway

New Mexico				X	
New York	X		X		Health, Physical Education, and Family and Consumer Sciences
		X			CTE: Human and Public Services
North Carolina		X			CTE: Family and Consumer Sciences Education Strand
North Dakota	X		X		Health Education - Standard 1.3
		X			CTE: Family and Consumer Sciences: Area of Study 4: Education and Early Childhood
Ohio				X	
Oklahoma				X	Health
Oregon	X		X		Health Education
		X			CTE: Human Resources: Education and Training: Early Learning
Pennsylvania	X				Child Development
Rhode Island	X				Comprehensive Health
South Carolina	X		X		Health and Safety Information
		X			CTE: Human Services: Education and Training; Family and Consumer Sciences
South Dakota		X			CTE only
Tennessee	X		X		Lifetime Wellness
Tennessee		X			CTE: Education and Training
Texas	X		X		Health Education
Texas		X			CTE: Training and Education; Human Services
Utah	X		X		Health Education
		X			CTE: Family and Consumer Sciences Education

Vermont		X			CTE: Human Services: Early Childhood Development & Services; Family & Community Services
Virginia	X		X		Family Life
		X			
Washington		X			
West Virginia	X		X		Parenting Education Curriculum
		X			
Wisconsin		X			CTE: Family and Consumer Sciences
Wyoming					Health Education
		X			CVE: Human Services and Education & Training
	22	26	15	18	

## Appendix D: Adolescent Parenting Knowledge and Attitudes Survey

### APKAS (Full Sample)

#### Start of Block: Qualifying

Q1.1 Are you:

- A high school student under the age of 18
- A high school student age 18 or over
- The parent/legal guardian of a high school student under the age of 18
- The parent/legal guardian of a high school student over the age of 18
- Other

#### End of Block: Qualifying

#### Start of Block: Child Assent

Q2.1 **High school student:** Please read the following information about this research study.

**Principal Investigator:** Meredith Rowe

**Additional Researcher:** Eleanor O'Donnell Weber

**Institution:** Harvard University, United States

**What is the purpose of this research?** The goal of this research is to understand adolescents' attitudes and knowledge related to child development and parenting.

**Participation is voluntary.** You can choose not to participate. You can withdraw your participation at any time prior to submitting your survey. If you change your mind about participating while answering the survey, you may simply exit the survey. Once you submit your responses, we will be unable to remove your data later from the study because all data is in aggregate and we will not know which data belongs to you.

**How long will I take part in this research?** This study will take 15-20 minutes of your time.

**What can I expect if I take part in this research?** If you agree to participate in this study, you will be asked to fill out a survey about your attitudes and beliefs related to child development and parenting. No questions of a sensitive nature, including questions about sexuality, teen parenting, or your own experiences of being parented, will be asked. The survey will also include some demographic questions regarding age, gender, type of school attending, ethnic/cultural background, family composition, and experience babysitting or caring for younger children. We will not collect any information that could identify you, such as your name or address.

**What are the risks and possible discomforts?** We do not anticipate any risks or discomforts as a result of participating in this research.

**Are there any benefits from being in this research study?** You will not benefit directly from participating in the research, but information may be gained to help researchers better understand what adolescents know and think

about parenting and child development.

**Will I be compensated for participating in this research?** You will be compensated as per Qualtrics' compensation policy.

**If I take part in this research, how will my privacy be protected? What happens to the information you collect?** You may take this survey at a time and place your own choosing. We do not intend to gather, and will not publish, data that could be used to identify you. The survey includes a few open response questions; if you provide identifying information when answering those questions, that could compromise your confidentiality. The data we collect will be stored on a password-protected computer that only the research team can access.

**If I have any questions, concerns or complaints about this research study, who can I talk to?** You can contact Meredith Rowe (Meredith\_Rowe@gse.harvard.edu) or Eleanor O'Donnell Weber (Eleanor\_ODonnell@gse.harvard.edu). This research has been reviewed by the Committee on the Use of Human Subjects in Research at Harvard University. They can be reached at 617-496-2847, 1414 Massachusetts Avenue, Second Floor, Cambridge, MA 02138, or cuhs@fas.harvard.edu for any of the following: · Your questions, concerns, or complaints are not being answered by the research team · You cannot reach the research team · You want to talk to someone besides the research team · You have questions about your rights as a research participant

**Requirements:** You must be enrolled in high school to participate in this study.

**Please save or print a copy of this form for your records.**

**Do you agree to participate in this research?**

- Yes, I agree to participate in this research.
- No, I do not agree to participate in this research.

**End of Block: Child Assent**

---

**Start of Block: Parent of high schooler message 2**

Q3.1 Please ask your high school student to complete the rest of the survey.

**End of Block: Parent of high schooler message 2**

---

**Start of Block: Parent of high schooler message 1**

Q4.1 You have indicated that you are the parent of high school student. Please read the next page to indicate your permission for your child to participate in this survey.

**End of Block: Parent of high schooler message 1**

---

**Start of Block: Parent Permission**

Q5.1 **Parents:** Please read the information below about this questionnaire. We would like your consent to allow your high school-aged child to participate. If you give your consent, and your child also agrees to join the study, then please ask your child to complete this questionnaire.

**Principal Investigator:** Meredith Rowe

**Additional Researcher:** Eleanor O'Donnell Weber

**Institution:** Harvard University, United States

**What is the purpose of this research?** The goal of this research is to understand adolescents' attitudes and knowledge related to child development and parenting.

**Participation is voluntary.** You and your child can choose not to participate. You or your child can withdraw his or her participation at any time prior to submitting your survey. If you change your mind or your child changes his or her mind while answering the survey, your child may simply exit the survey. Once your child submits his or her responses, we will be unable to remove your data later from the study because all data is in aggregate and we will not know which data belongs to your child.

**How long will my child take part in this research?** This study will take 15-20 minutes of your child's time.

**What can I expect if I take part in this research?** If you agree to allow your child to participate in this study, your child will be asked to fill out a survey about his or her attitudes and beliefs related to child development and parenting. No questions of a sensitive nature, including questions about sexuality, teen parenting, or their own experiences of being parented, will be asked. The survey will also include some demographic questions regarding age, gender, type of school attending, ethnic/cultural background, family composition, and experience babysitting or caring for younger children. We will not collect any information that could identify your child, such as his or her name or address.

**What are the risks and possible discomforts?** We do not anticipate any risks or discomforts as a result of participating in this research.

**Are there any benefits from being in this research study?** You and your child will not benefit directly from participating in the research, but information may be gained to help researchers better understand what adolescents know and think about parenting and child development.

**Will my child be compensated for participating in this research?** Your child will be compensated as per Qualtrics'/mTurk's compensation policy.

**If my child takes part in this research, how will my child's privacy be protected? What happens to the information you collect?** Your child may take this survey at a time and place of his or her own choosing. We do not intend to gather, and will not publish, data that could be used to identify you or your child. The survey includes a few open response questions; if your child provides identifying information when answering those questions, that could compromise his or her confidentiality. The data we collect will be stored on a password-protected computer that only the research team can access.

**If I have any questions, concerns or complaints about this research study, who can I talk to?** You can contact Meredith Rowe (Meredith\_Rowe@gse.harvard.edu) or Eleanor O'Donnell Weber (Eleanor\_ODonnell@gse.harvard.edu). This research has been reviewed by the Committee on the Use of Human Subjects in Research at Harvard University. They can be reached at 617-496-2847, 1414 Massachusetts Avenue, Second Floor, Cambridge, MA 02138, or cuhs@fas.harvard.edu for any of the following: · Your questions, concerns, or complaints are not being answered by the research team · You cannot reach the research team · You want to talk to someone besides the research team · You have questions about your rights as a research participant

**Requirements:** Your child must be enrolled in high school to participate in this study.

**Please save or print a copy of this form for your records.**

**Do you give your child permission to participate in this research?**

Yes, my child has permission to take part in this research.

No, my child does not have my permission to take part in this research.

**End of Block: Parent Permission**

---

**Start of Block: Minor high schooler message**

Q6.1 You have indicated that you are a high school student under the age of 18. Please find a parent to read the next page. We need your parent's permission for you to continue.

**End of Block: Minor high schooler message**

---

**Start of Block: Biographic information preface**

Q7.1 The next set of questions will ask you about your background and your experience looking after children younger than yourself.

**End of Block: Biographic information preface**

---

**Start of Block: Biographical Information**

Q8.1 Are you (the person taking this survey) a current high school student?

Yes

No

-----

Q8.2 What is your gender?

Male

Female

Another gender \_\_\_\_\_

-----

Q8.3 What region of the country do you live in?

- West (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, or WY)
- Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, or WI)
- South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, or WV)
- Northeast (CT, MA, ME, NH, NJ, NY, PA, RI or VT)
- Pacific (AK or HI)
- Puerto Rico or other U.S. territory
- 

Q8.4 What is your zip code?

\_\_\_\_\_

---

Q8.5 What racial background(s) do you identify with? (check all that apply)

- African-American/Black
- Caucasian/White
- Asian/Pacific Islander
- Other \_\_\_\_\_
- 

Q8.6 Are you hispanic?

- Yes
- No
-



Q8.7 How old are you?

- 13
  - 14
  - 15
  - 16
  - 17
  - 18
  - 19
  - Other \_\_\_\_\_
- 

Q8.8 What grade are you in?

- 9th grade
  - 10th grade
  - 11th grade
  - 12th grade
  - Other
- 

Q8.9 How many times in the past year have you looked after children younger than yourself? (This could include babysitting, caring for own child, caring for a younger sibling/family member, working in a childcare setting, etc.)

- 0
- 1-4
- 5-10
- More than 11 times

---

Q8.10 If you have looked after children younger than yourself in the past, how old were they? (Select all)

- 0-2 years old
- 3-5 years old
- 6-10 years old
- Older than 10 years old
- Not applicable
- 

Q8.11 Are you a parent?

- Yes
- No
- 

Q8.12 Do you have younger siblings?

- Yes
- No
- 

Q8.13 What is your family makeup?

- Both biological parents in the home.
- Mix of biological and non-biological parent(s)
- Single parent family
- Foster family
- Other \_\_\_\_\_
-

Q8.14 Did either of your parents go to college?

- Yes
- No
- 

Q8.15 What is the highest degree your mother received?

- Did not graduate from high school
- High school diploma
- Associate degree
- Bachelor's degree
- Master's degree
- Doctoral degree (MD, PhD, EdD, etc.) or professional degree (JD, CPA, etc.)
- 

Q8.16 What is the highest degree your father received?

- Did not graduate from high school
- High school diploma
- Associate degree
- Bachelor's degree
- Master's degree
- Doctoral degree (MD, PhD, EdD, etc.) or professional degree (JD, CPA, etc.)
-

Q8.17 What kind of school do you go to?

- Public
- Private
- Church-affiliated or religious school
- Other \_\_\_\_\_
- 

Q8.18 What kind of high school program are you attending?

- Regular academic
- Technical/Vocational
- 

Q8.19 Are you enrolled in an early childhood education/care vocational program?

- Yes
- No
- 

Q8.20 How many students are in your high school?

- 100 or fewer
- 100-500
- 500-1,000
- More than 1,000
-

Q8.21 Which of the following best describes your high school grades so far overall?

- Mostly A's
  - A's and B's
  - Mostly B's
  - B's and C's
  - Mostly C's
  - C's and D's
  - Mostly D's or below
  - I don't know
- 

Q8.22 Have you ever taken a babysitting course or a class that teaches about child development?

- Yes
  - No
- 

Q8.23 If so, where did you take it?

- At school during school hours
  - At school not during school hours (over the weekend, after school, during the summer, or during another vacation)
  - Through a community organization (such as a Boys & Girls Club or community center)
  - Other \_\_\_\_\_
-

Q8.24 Has your school offered opportunities to learn about parenting or child development (whether or not you have taken advantage of these opportunities)?

Yes

No

---

Q8.25 Have you ever taken a course in psychology?

Yes

No

---

Q8.26 Do you think you would like to have children someday?

Yes

Maybe

No

**End of Block: Biographical Information**

---

**Start of Block: Beliefs questions preface**

Q9.1 The next series of questions will ask you about your beliefs about parenting and children.

**End of Block: Beliefs questions preface**

---

**Start of Block: Growth Mindset**

Q10.1 Praising children's hard work is a good way to build their self-esteem.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q10.2 Parents can make a big difference in a child's learning, no matter how smart the child is.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q10.3 Parents should always encourage their children to try their best, even if they might fail.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q10.4 People can learn to become better parents.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-



Q10.5 Imagine that you are helping a five-year-old child learn to tie his shoes . The child is struggling. A good way to help him is to let him give up and to tie the shoes for him.

- Don't know
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

**End of Block: Growth Mindset**

---

**Start of Block: Developing Oral Language**

Q11.1 Parents should use all kinds of words - big and small - with children, even if the children aren't yet talking.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q11.2 Parents should read to their children often.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q11.3 When a child asks a question, the parent should give a full explanation.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q11.4 Talking to babies--even if they can't talk yet--is important.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q11.5 Playing a game like "20 questions" is not only fun but can also help young children learn new words.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q11.6 Children should be given the opportunity to talk as well as to listen.

- Don't know
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

**End of Block: Developing Oral Language**

---

**Start of Block: Role in Early Learning**

Q12.1

Parents should have high expectations for their children.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q12.2 It's good for children's development if parents play with them.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q12.3 Children learn a lot before they even start school.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q12.4 It is the parent's job to teach the child the alphabet and how to count to ten before school starts.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q12.5 There are lots of everyday opportunities to practice math skills with young children.

- Don't know
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

**End of Block: Role in Early Learning**

---

**Start of Block: Active Learning**

Q13.1

Children learn well when they have a chance to try things for themselves.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q13.2 Parents should encourage their children to be curious, explore, and question things.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q13.3 Parents should teach young children to do things for themselves.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q13.4 Children need to be allowed to explore their world.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-



Q13.5 Imagine you are left in charge of a three-year-old who wants to make his own sandwich. A good way to handle this is to tell him he's too young and you will make it for him.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q13.6 Children should be given opportunities to learn about things they are interested in.

- Don't know
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

**End of Block: Active Learning**

---

**Start of Block: Parenting Knowledge and Efficacy**

Q14.1 It is important for parents to control their temper when their kids are misbehaving.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q14.2 It is important for parents to be patient.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q14.3 Parents who nurture themselves make better parents.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q14.4 When I'm a parent one day, I will do a good job.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q14.5 Parenting is hard.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q14.6 It helps to know a lot about children to be a good parent.

- Don't know
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

**End of Block: Parenting Knowledge and Efficacy**

---

**Start of Block: Empathetic Awareness**

Q15.1 Imagine that you are babysitting a child of four years old. She keeps crying. A good way to react is to ask her what is wrong and to try to help her feel better.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q15.2 Babies aren't trying to make trouble for their parents when they cry for a long time or poop in their diapers.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q15.3 Parents who are sensitive to their children's feelings and moods often spoil them.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q15.4 Learning how to play nicely with others is very important for young children.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q15.5 It is important for children to learn to recognize feelings in others.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
- 

Q15.6 Young children will respond to someone differently if the person is happy or upset.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly agree
-

Q15.7 It is important to help children understand others' perspectives.

- Don't know
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

**End of Block: Empathetic Awareness**

---

**Start of Block: Knowledge of Child Development**

Q16.1 In this section, we are going to ask what you know about typical patterns of child development.

.....

Q16.2 Children age four and under are too young to do many things for themselves.

- Don't know
  - False
  - True
- .....

Q16.3 Children as young as two months old can get bored.

- Don't know
  - False
  - True
- .....



Q16.4 A one-year-old knows right from wrong.

- Don't know
  - False
  - True
- 

Q16.5 Children who are one-year-old should be able to stay away from things that could harm them.

- Don't know
  - False
  - True
- 

Q16.6 Babies usually say their first real word at six months.

- Don't know
  - False
  - True
- 

Q16.7 When 18-month-old children point at things, they are trying to show others something that they find interesting.

- Don't know
- False
- True

**End of Block: Knowledge of Child Development**

---

**Start of Block: Sources of Information**

Q17.1 We will now ask a few questions about where you have learned about parenting and child development.

---

Q17.2 Where have you learned what it means to be a parent?

- From watching my own parents.
  - From television or movies.
  - From books.
  - From a class.
  - Other.
- 

Q17.3 When I'm a parent, I'll just know what to do.

- Don't know
  - Strongly disagree
  - Disagree
  - Neutral
  - Agree
  - Strongly Agree
-

Q17.4 Where have you learned the most about children, their needs, and how to take care of them?

- From watching my own parents.
- From television or movies.
- From books.
- From a class.
- From children I babysit.
- Other.
- 

Q17.5 Imagine you are a parent of a four-year-old. You want to make sure she is ready to start kindergarten when she is five. Who do you ask for advice?

\_\_\_\_\_

**End of Block: Sources of Information**

---

**Start of Block: Final Block**

Q18.1 What do you think is the most important thing that a parent should do?

\_\_\_\_\_

---

Q18.2 What do you think is the hardest part of being a parent?

\_\_\_\_\_

---

Q18.3 Do you feel ready to be a parent now?

- Yes
- No
- Not sure
-

Q18.4 Did this questionnaire make you feel differently about parenting? How?

---

---

Q18.5 Is there anything we didn't ask about that you think is important?

---

**End of Block: Final Block**

---