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The Effects of Divorce on Middle-Childhood and Adolescent Cognitive Development

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Contents

Abstract

Divorce is extremely common in the United States, we hold one of the highest divorce rates in the world. With this being said it can be understood that many children are caught in the middle of a divorce. Current research has looked at the difference between low conflict and high conflict divorces and the effects they may have on children, which is shown to only differ slightly. In this paper I will be looking at the effect divorce has on a child depending on their stage in development. By looking at Piaget's Developmental Stage Theory, I am able to dissect the developmental focus as well as internal crisis in order to analyze the struggles the child may have in the future. This study will entail surveying individuals 18 to 35 and asking them questions about their current state as well as their parents style of parenting, mental and educational abilities, as well as their abilities to maintain relationships after experiencing their parents divorce. By looking at this data we will be able to see that each stage of development causes a different struggle, or outcome, for the child because of the dysfunction and disequilibrium caused by the divorce of their parents.

Piaget Stages	
18 months - 2 years	Sensorimotor
2 - 7 years	Preoperational
7 - 11 years	Concrete operational
11 - 18 years	Formal operational

The Effects of Divorce on Middle-Childhood and Adolescent Cognitive Development

The idea of divorce in society, especially American society, is somewhat of an emerging concept. Even in the late 19th century divorce was shunned and rarely thought of as an acceptable practice (Furstenberg, 1994). There was speculation around if divorce was relatively necessary for families. In the past four decades the rate of divorce has increased by 600%, with the United States leading the global statistics with the highest divorce rate (Delongis & Zwicker, 2017). According to the CDC in 2019 alone there were 746, 971 divorces, out of this staggering number, 60% of divorces involve children in the United States, that is 448,176 divorces involving children in one year (Prevention, 2019). In many ways divorce is a good thing, it removes a child from an unhealthy situation, but this is not always the case. Sometimes divorce can cause children to have lasting negative effects due to the volatility of the given situation. In some cases, divorce can also contribute to lack of support or attention for children, depression, and lower economic status (Booth et al, 2000). Specifically with lack of support and attention for children, this can be a cause from the switching of homes and conflicting parenting styles.

I want to use a developmental lens to explore how divorce affects children at different ages. That is, could the age of the child at the time of the divorce be a predictor for the kinds of effects they may experience post-divorce. These disruptions in development can have lasting effects on different aspects of the child's life. In this paper I look at the possible effects on emotional and mental health, struggles in school, and future relationships. Each stage of development for a child has different levels of importance for social and emotional growth. By comparing Piaget, a prominent stage theorist, with current literature on divorce I plan to have a unique approach to the understanding of divorce and the family dynamic after the fact and the impacts that has on children.

Quite often divorce can cause major disruptions to children's emotional states through the course of development. The idea of using developmental stage theorists is not commonly done, although most research shows some of the indicators of struggle for children of divorce are age and gender (Eagan, 2004). A meta-analysis of research on children that have experienced divorce showed that divorce affects children's social adjustment skills and had more conduct problems than children that did not experience divorce, these results were found to be strong for both boys and girls (Amato, 2001 p. 365). This finding made me realize I wanted to focus on age as a predictor of struggle when going through a divorce. Incorporating a prominent stage theorist provides the background of highly respected developmental stages and attempts to find relationships between predicted outcomes for children of divorce and the age at which the disruption of divorce occurred. Piaget provides a new perspective to current research by finding a new way to look at the predictor of age for divorce outcome.

Although current research looks at age as just a number, Piaget looks at age in stages as developmental milestones and each stage has specific aspects of growth. A new light can be shed on the severity and types of effects children experience by looking at the timing of divorce in concurrence with Piaget's developmental stages. In previous findings researchers discuss how developmental levels according to age affect children's emotional growth after the divorce, although they did not discuss further what this kind of development is (Kalter & Rembar, 1981). Another researcher who goes deeper into this idea is Gardner, he discusses how between the ages of three and five divorce can be particularly difficult for a child (1977). Gardner then discusses how psychiatrists and psychologists alike agreed to these findings at the time (1977). Further research shows that during adolescence, which is around age 10 and could be all the way up to

19, female children of divorce struggle with forming attachments to males as they get older (Hetherington, 1972).

In addition to previously mentioned research there is a plethora of literature that looks at divorce for children based on their age and the effects it has later in life. Instead of looking at the child's growth through a developmental lens they look at it as a singular age with its own effect, an example of this is one paper that only looked at children ages 6-7 and found that if a divorce occurs at that time the child had more behavioral problems in middle childhood than that of a child whose parents did not divorce (Zill et al., 1993). According to other researchers, this idea of effects post-divorce on a child are commonly understood but only in the broad sense of the child's achievements and well being. One paper said that as a whole, there are negative outcomes with school performance and mental health as time passes after the divorce, the severity of these effects can differ based on the age of the child at the time of divorce (Chase-Lansdale et al., 1995). Although all the research I have found comes to the same conclusion, that divorce leaves a troubling mark on the child, there is little to no pattern found when it comes to developmental milestones and how to categorize these given effects on the child. My aim with this paper is to try and forge a different path with being able to decipher a pattern for children of divorce in order to better understand the negative effects on the way a child navigates social relationships, based on their developmental stage outlined by Piaget. The foundations for relationships are layed early on in life; the relationships I am discussing are any kind of ongoing interaction between individuals, this can be with a parent, teacher, peer, or friend.

Family Unit

Piaget believed a parental unit to be a 2 parent household, and he believed that an intact unit is necessary for a child to complete each stage of development. What happens when this

parental unit is disbanded, in say a divorce? Divorce in this sense is different than if it was just a single parent household. The type of divorce I am interested in for this research is where there is movement of the child from one home to another, on differing levels of consistency. This movement between homes may not allow for the child to have consistent and united guidance from two parents, instead it can create two completely separate homes with differing parenting styles. The idea of movement and switching is key in understanding how this is different from a single family household. Each stage of development values this consistency differently, this will be further discussed in a later section that breaks down each developmental stage.

It is evident throughout Piaget's writing that when referring to the family unit he is discussing a mother and father together as one. In one article written in 1957, when Piaget was quite active in the field, one researcher compared his thoughts on family to their own research on the Philippine family structure. Stoodley discusses the family structure in the Philippines during the 1950s and before. They described it as equal in opportunity for both male and female and having no severe differences, this means women could work and be away from the home just like the men (Stoodley H., 1957). In Piaget's time women were not equal to men and this affected the home life and the environment it created for the child. Stoodley believed that children who grew up in an environment that is gender equal may not develop on the same track as the children Piaget is writing about. In the end of the article Stoodley references Piaget and his ideas of structure and the theory of his developmental stages and how in this type of society they cannot necessarily be applied. This is because this society does not have the family unit Piaget is referring to, Piaget's sense of a more old school society, where the mother and father are together with unequal gender opportunities.

Sensorimotor Stage

Piaget looks at development through stages, he refers to some of them as Sensorimotor, Preoperational, Concrete Operational, and Formal Operational. Each stage is occurring at different times in the child's development, the Sensorimotor Stage occurs from ages 18 months to 2 years. During this stage the child is mainly focused on their own body and space and problem solving around it (Piaget, 1976, p. 21). The child begins to realize they are no longer the center of the universe but a part of the greater group and realizing relationships within this group (Piaget, 1976, p. 21). One may call the group the family unit, mother, father, child, and this is where said child begins to understand this dynamic of a family and become accustomed to it. In a replication study of Piaget's Sensorimotor Stage in his developmental theory, researchers found that this stage heavily emphasizes the importance of the environment with which the child is in, the idea that providing a nurturing space and encouraging of exploration and socialization in the home is beneficial for the child (Corman & Escalona, 1969). Corman and Escalona also discussed the idea of how these environments, the home and family dynamic, can foster a healthy completion of this developmental stage through exposure in social situations, and with the individuals being 18 months to two years old a lot of this socialization takes place in the home. They also discuss how individuals who do not complete this stage still move onto the next one but they just do not have the full set of fundamentals, these fundamentals being motor activities and the beginnings of sensory motor perception, they would have had if they had completed the Sensorimotor Stage (Corman & Escalona, 1969).

Some parents feel that this would be a stage where the child is least affected by divorce, in reality this is an important stage for children forming their sense of group belonging (Editors, 2020). They cannot actually remember the exact moment of divorce and the constant upheaval

from home to home, they grow up believing this is normal and do not have a traditional unit to compare it to. Research shows that children that young can actually remember parental disputes or fighting in the home (Editors, 2020). Due to the nature of the child beginning to develop a sense of grouping and belonging, when the family unit is deconstructed, I want to explore the idea of potential effects on their sense of belonging. This introduces the first hypothesis of the paper, if a child's parents divorce during the Sensorimotor Stage, then they would struggle with finding a sense of group belonging post divorce. This could be seen in school settings and future relationships, affecting grades and potential platonic and romantic relationships. I believe this struggle with a sense of belonging will occur if the divorce happens during this stage because the child is just beginning to understand who their family is and where they belong. When this initial idea of a family is fractured it could cause issues for the child with understanding who their group is because they struggle with understanding where they fit in, almost deciding between two separate families or even lives. The socialization that takes place in the home at this stage creates the foundation for the child to go out into the world in further stages and find a group of friends or people they can resonate with. Marschall discusses this topic as an idea called double-looping, this is referring to the separate households a child is growing up in with potentially different rules and expectations (2017, p. 3). She also mentions that when a child is split between two homes their own self-understanding and belonging no longer comes from the stable home, but is instead developed through relying on the larger social environment, and therefore becomes much more complicated for the child to figure out (Marschall, 2017, p. 3). Normally children in the Sensorimotor Stage are learning what their sense of belonging is and what they are a part of, for children of divorce this type of development is increasingly more

difficult as this sense of a familial unit is fractured and they may not have a traditional upbringing compared to peers who have not experienced divorce.

Preoperational Stage

The next stage is referred to as Preoperational and this occurs between the ages of 2-7. During this stage the child's main task is problem solving and finding pathways for these solutions (Bashrin, 2015, p. 6). This is also a time when the child is developing reasoning, as well as understanding the idea of presence and absence (Bashrin, 2015, p.7). This is basically when a child is beginning to understand that things exist when they are not with them. The problem solving children are doing at this time is rather elementary compared to later stages of life but being able to understand the difference between 5 coins in a row and 7 is fundamental for further learning, a child is able to understand that somethings are missing and they exist outside of this present moment. They also begin to understand make believe play as well as relationships and classification of people and objects (Lowenthal, 1975). These developmental milestones are key with divorce, the child is beginning to understand that there is inconsistent presence and absence with the parental figures. The child is able to understand that one of their parents are gone sometimes but also understand that the parent still exists in their life just that the parent is not physically present.

Piaget also believes that when there is a lack of parental guidance, especially around the age of three, there becomes this desire of assertion as well as independence from the child creating a sense of rivalry in many different facets, especially in relation to adults (Piaget & Inhelder, 1996, p. 115). Providing parental guidance shows the child how to problem solve and navigate situations by example, when there is a parental unit present the child does not feel the need to create this sense of independence and assertion because they are being helped by their

parents. Children do not feel the need to take on this role because someone else has already done so. The child experiencing divorce can feel like they need to assert themselves as a superior in situations with adults and undermine the authority they have over them.

Due to the lack of consistent and united guidance and authority, the child never learned to understand as well as respect these authority figures in the home that translate to the outer structures in society. By never having a united form of authority the child may not listen to authority and assert this dominance themselves. This can come from the lack of respect they have for the parent after they have become more detached in a divorce (not seeing them everyday, not as involved in everyday routine, etc.). In some research, children post divorce can be seen having a lack of respect to a parent they are no longer seeing as often due to the switching of homes (Wallerstein, 1984). Wallerstein later goes on to discuss how children will undermine their parents authority because they feel like they are not receiving enough attention and can blame them for inconveniences that happen in the child's life post-divorce (1984). It also presents an issue for the child in respect to the idea of a cohesive unit to abide by, when parents divorce the child loses this sense of a united front from their parents and now has two separate forms of authority in separate homes (Ricci, 1979). All of this presents an issue of respecting authority in schools as they have tried to replicate this dynamic by presenting a united front with authority and children of divorce may struggle to follow these rules in school (Ricci, 1979).

Piaget discusses this with his idea of moral realism, he believes a child can develop respect for authority as well as moral judgment when they are given a set environment with constructed rules to abide by. An example given by Piaget is when a family is at dinner and the child is told to finish their vegetables they may put up a fight but they follow the rules eventually and eat their vegetables. When a child is now for some reason *not* told to eat their vegetables,

when in the past they have, they feel a moral obligation to do so because they feel it is the right thing to do since it is a normal order given by a figure they were taught to respect and listen to (Piaget & Inhelder, 1996, p.125-126). This idea can translate into other environments as the child gets to an age where they are going to school. Research shows that a child's moral reasoning is oriented towards authority figures and following strict rules and respecting social norms (Smith & Hart, 2002 p.477). This shows how a child looks to this first idea of an authority figure (parents) and with switching homes there are different figures to listen to; it makes it difficult to set this foundation of adherence to social norms. When researching the topics of parental figures and teachers, findings show that students' attachment styles to teachers and to parents are highly correlated (Thaxton & Agnew, 2004). This is why I believe these notions about authority and rules started in the home will transfer to the classroom.

Continuing with this idea, all of these characteristics could be indicators for struggles in school and other settings where the child is not the superior. There could be a lack of respect for authority figures and this could present itself in the classroom or in a school setting in general. The moral feelings and judgements of a child are learned behavior from the parent, this includes a child's conscience and respect for authority. In a divorce this behavior may not be learned as well or at all due to separation and infrequency of parental contact, this is the idea of switching and inconsistency mentioned earlier. The child is constantly in a state of moving between two homes with two different sets of rules or lack thereof and this provides inconsistency for the child. Piaget states that the relationship a child has with their parents has a direct influence on the moral feelings in a child's conscience (Piaget & Inhelder, 1966, p. 122).

Another aspect of child development Piaget considers to be taught by a parental unit during this stage is respect and reciprocity (Piaget & Inhelder, 1966, p. 127). In this context

respect and reciprocity are referring to the attitude and the ability to interact with others while exchanging with respect, this is done by showing the child they need to listen to their parents and follow the rules established in the home. Research has found that parental relationships and interactions with parents directly affect the child's social relations later in life, in multiple facets whether it is with other adults or even peers (Smith & Hart, 2002 p. 161). It is also seen that the practice of a child exchanging with their parents using mutual respect, as well as practicing induction as a parent, helps develop the child's conscience and moral standards while creating a lower need for power assertion from the child (Berkowitz & Grych, 1998). Respect for authority figures is learned here because this is when a child is first introduced to school settings as well as the hierarchical system they have already learned at home. Reciprocity is also learned at this time because the idea of exchanging kind regards, like saying please and thank you, was normally only seen at home until this stage. Now these lessons can be reinforced at school, children can be rewarded and given positive affirmations. Piaget believes respect and reciprocity are taught by a parental unit and with divorce, these lessons are not fully taught and understood by the child, and are not then carried over into a school setting.

When the divorce occurs the child has a new found sense of physical and emotional uncertainty and does not have a parental unit to learn these key traits, respect and reciprocity, for adult life. One research article discussed this concept in regards to teachers in the classroom and looking for ways that they can navigate this developmental stage in the child. An aspect of the article talks about how the child views relationships during this stage and how difficult it can be, they mentioned that the child can only focus on one relationship at a time and struggle with deciphering who some new individuals are because the child is struggling with being immersed in an environment with a number of new children (Lowenthal, 1975). The aforementioned

research could show how a child may struggle with forming relationships in the classroom post divorce, they have many different relationships at separate homes. In another study researchers asked pre-school teachers (children attend preschool between the ages of 3-5) to rate the conduct of children of divorce and found that they had more behavioral problems than the other children in the classroom (Leon, 2003 p. 259). With individuals whose parents divorced during this developmental stage I hypothesize that they will have a lower sense of membership with school and more likely to struggle with forming successful relationships with superiors post divorce. I believe this to be the case because when children experiencing divorce are first entering a school setting, they may struggle to make friends and feel like they belong. These children are trying to navigate many different, and ever changing, types of relationships in different homes so going to school for the first time and trying to make friends may be more difficult. Relationships with peers are being developed during this stage of development as this is when most children are first leaving the home and entering school settings with other children. While authority figures have been present in the home, most children are being presented with a new form of authority on school arrival. For children of divorce, this *additional* authority style could challenge their ability to learn respectful interactions, and these *additional* new peers could be overwhelming for children already going through a difficult transition period in their life.

Concrete Operational Stage

The next stage according to Piaget is Concrete Operational, this takes place from ages 7-11. During this stage the child is beginning to understand more logical operations as well as hierarchies (Feldman, 2004, p. 207). The operations they learn in this stage are built off of the previous stages, the idea of understanding to respect authority and the completion of that stage allow for the further attempt of completion in understanding social hierarchies. These concepts

are very important in regards to divorce because in a traditional household the child has a better understanding of hierarchies in family units and that unit creates a model for the world outside of the home i.e. in the classroom. When a child is constantly switching between homes it may pose a struggle for the child to understand the extent to which authority figures operate. The child is left to have different homes with potentially different levels of hierarchy, the mother may demand more respect than the father or vice versa. When this structure is disrupted by divorce this system may be harder to understand creating a difficulty for the child to learn these hierarchical structures. Shaw found that children who have experienced divorce have a higher level of defiance towards teachers compared to children that have not experienced divorce (1991). Some research for teachers and school counselors talks about how difficult it can be for children to process divorce because we always think it is important to stimulate children mentally and provide them with cognitive challenges, but we cannot assume children during the Concrete Operational Stage can understand everything an adult explains to them (Bernard, 1978 p. 191).

In this study I wanted to explore this idea of a fragmented understanding of the hierarchical system. In peer commentary for previous divorce literature, Cordero believes that a child's sense of attachment and relationship is formed through the child's observations of other relationships and attachments, whether they know it or not (2004). I hypothesize that if a divorce occurs during the Concrete Operational Stage, then the child will struggle with close emotional relationships. These struggles could be with trust, being able to open up fully with the other person, and more. Parenting style could also play a role in how the child treats others during this developmental stage because they are learning levels of hierarchical respect through the respective parenting styles and this can be translated into later relationships as well. The way a

child understands social hierarchies can directly translate into friendships, they need to understand who their equals are and how to treat them accordingly, one does not treat their boss or teacher the same way they treat a friend. A child that is not experiencing divorce during the Concrete Operational Stage is navigating the early years of school and making friends as well as fully understanding who their superiors are outside of the home and getting a view of society that is not centered around their parents. For a child experiencing divorce, this struggle with understanding hierarchies can sometimes translate into different types of relationships because the individual that went through divorce may struggle with different emotional obstacles making it hard for them to fully espouse a relationship.

Formal Operational Stage

The final stage of Piaget's idea of development is Formal Operational. Although this is the final stage and contains the largest age range of all of Piaget's developmental stages it is one of the least researched (Kuhn, 1979). During this stage children develop the tools and social mechanisms needed to interpret situations and experiences (Feldman, 2004, p. 212). In this stage the individual is becoming more specialized and applying the common social structures of the world outside of the home and specializing into different fields while becoming functioning adults and members of society. During this stage is when deductive reasoning comes in as well as being able to solve complex problems (Feldman, 2004, p. 213). Kuhn describes it further as the thinking from reality to possibility instead of possibility to reality, as children did in the Concrete Operational Stage (1979). This idea of reality to possibility is the understanding of what is realistically achievable to then thinking of what else could be possible, like making the varsity soccer team and then realizing the possibility of working hard and becoming a starter. In

contrast, before the Formal Operational Stage an individual thought of all the possibilities before thinking of what is realistically achievable.

The child is beginning to understand the logical way of thinking in calculating what is actually possible in a scenario and assessing it from that point on, this means understanding what is actually feasible in a situation and not just imagining things that are unattainable. A great example given by Kuhn about this stage is that when an individual is in this stage they are able to follow an argument from both sides and are able to think outside of their own argument but also understand the perspective of the other person in this regard (Kuhn, 1979). Further research has shown that individuals in this stage also begin to understand what their version of a perfect guardian is, also figuring out what they believe the best version of a parent is for them (Ahmad et al., 2016). This line of thinking comes into play because the child is understanding optimal forms of reasoning and observing what they want out of a guardian and contrasting that with what they currently have (Ahmad et al., 2016). During this stage, divorce may not have the same effects as previous ones but it can cause disruption with the individual's sense of reasoning and reality (Feldman, 2004, p. 213). These findings can be seen in further research where in a follow up study children whose parents divorced during this stage reported to have a fear of repeating the marital struggles their parents faced and in return being scared to express love as well as be in love (Wallerstein, 1983, p. 241) I hypothesize that if an individual experiences a divorce during the Formal Operational Stage then they will have higher feelings of anxiety.

I believe this to be the case because the individual has a better understanding of the world around them but when trying to understand the divorce and exude their developing sense of reasoning they may feel like the ideas of marriage and family structure are not what they had thought all along. I also believe that the parents involved in the divorce will believe that, due to

the child's higher stage of development, they can be seen as a friend versus a child in this process. In an article on how to cope with divorce for families with children in this developmental stage they reiterated that the wrong way to cope is by involving your child as a peer (Morin & Janssen, 2021). Morin and Janssen go on to discuss how some parents vent to their children about the divorce and even the other parent, they later go on to say this is something parents should actively avoid doing (2021). All of this is because in this developmental stage parents may feel the child is advanced enough to experience the divorce in a different light than if they were in a younger developmental stage. In reality they are still struggling with the process of divorce like any other child would, they are not the parents' peer, which may cause the child heightened anxiety about the situation. Some current research has supported this assumption, suggesting the children can be thrown into the role of another parent, becoming somewhat of an emotional provider for the family and this has been seen to lead to increased risk for anxiety disorders as well as oppositional behaviors (Costa-Nunes et al., 2009 p. 388). Children in the Formal Operational Stage are all going through an important stage of development, this stage consists of the middle school and high school years for a child, and these are unarguably difficult times no matter what. In *addition* to these difficult times in life, children of divorce are grappling with the disruption of their family unit they have known all their life and potentially being looked at as additional emotional support for parents.

Considering the ideas of development that Piaget brings to the table it is also important to recognize this research was done in the mid 1900s, the idea and acceptance around divorce as well as the definition of a family has changed. When Piaget was living and writing his theories a normal household in Switzerland was a mother, father, and children. Divorce was not as common as it is now, so it can be inferred that when Piaget is discussing a family "unit" he is talking

about the mother and the father as a whole. Merging the parenting styles of two individuals to create unity. Divorce provides a unique lens with which one can explore Piaget's theories. What happens during his proposed stages of development when there is not a single family unit, there are two separate sets of standards for the child's upbringing, how does this play into the child's development and completion of these stages of development? Although Piaget's idea of a family unit is so outdated, it is still extremely relevant today. With divorce being as common as it is and having families split custody the idea of developmental stages, and the incompletion of them, are still relevant today.

Home Switching and Dynamic

According to current research the idea of inconsistency with parental figures and the switching between homes poses struggles with children's development. Eagan found that children of divorce lose a certain degree of contact with one of the very few attachments they make at an early age (2004). This inconsistency of contact is different from going to daycare or having a stay-at-home parent because in those scenarios you still spend time with both parents as a unit. When parents are divorced the child no longer has exposure to the parental unit, and only sees them as individuals with differing viewpoints or parenting approaches/styles. In previous research it is seen that conduct problems, like having a disregard for others and not respecting authority, can be a direct result of inconsistent discipline (Lengua et al., 2000 p. 238-239). This inconsistent discipline can be seen with divorce because of this idea of switching homes and conflicting parenting styles.

Along with age, parenting style is also a large part of the divorce process and determinant for the child's outcome. For the parent with the child it is extremely important to have good parenting skills, this is positive and healthy communication between parents and a more

authoritative style of parenting (Booth et al, 2000). Booth and others also found that it is perhaps more important to have good parenting skills than a traditional family structure, this has a greater impact on the child than marital status (2000). This segues into the importance of good parenting skills and a cohesive approach between parents during a divorce, making sure the child is not receiving drastically different sets of rules and styles of parenting because they are switching between different homes. When a child is constantly switching between homes with opposing or differing parenting styles this can contribute to the child's incompleteness of the developmental stages introduced by Piaget. These opposing rules and guidelines make it difficult for the child to understand authority and this can translate into other aspects of their lives.

Effect of Parenting Styles on Children

Parenting style plays a large role in the development of a child as well. This can be disrupted with divorce because in a home with both parents, they tend to parent as a team. While in a divorce the child can sometimes have two separate homes with completely different rules and parenting styles making the child's development more difficult. The first style of parenting is *authoritarian*, this is when a parent tries to control and heavily evaluate their child's attitudes with a set of absolute rules. In Baumrind's research he found that children that received this style of parenting had low levels of independence as well as social responsibility (Dornbusch et al., 1987, p. 1245). The next style of parenting is referred to as *permissive*, this is when the parent allows for the child's impulses with little to no punishment. In other words the child is expected to self-regulate and there is little expectation for mature behavior at all (Dornbusch et al., 1987, p. 1245). In follow up studies, Baumrind found that children that experienced this type of parenting had low social and cognitive competence, these children also were seen as immature and lacked impulse control (Dornbusch et al., 1987, p. 1245).

Another style of parenting is *authoritative*, this is when the parent expects behavior in accordance with the developmental competency of the child as well as a concrete set of rules from the parents, these rules are strictly enforced (Dornbusch et al., 1987, p. 1245). With this style, the parents encourage the child to have more independence and responsibility, there is also open communication between the child and parents allowing for a greater sense of mutual respect in a parent child relationship. When the children of authoritative parents were studied later on in life these children were more socially and cognitively competent as well as independent (Dornbusch et al., 1987, p. 1245). The final style of parenting is *neglectful*. This type of parenting is when the parent is not demanding but also not responsive to the needs of the child as a whole (Maccoby & Martin, 1983). The easiest way to describe this type of parenting is just fully uninvolved and hands-off. These parenting styles play vital roles in the outcome of children and a disruption in the guidance from parents can affect the child in many ways, especially depending on the stage of development the child is experiencing at that time.

Different Attachment Styles and How They Manifest

Attachment style, in addition to parenting style, can also be a factor in the child's struggle as a result of divorce. Some individuals struggle with attachment after divorce in different ways. The three attachment styles are anxious, avoidant, and secure. Secure attachment is when at an early age a child recognizes they can rely on their parental figures during times of difficulty or hardship (Simmons et al., 2009). Secure attachment is known as the healthy form of attachment and manifests itself in future relationships, whether it be romantic or platonic, in a multitude of ways. An individual with secure attachment would be able to have autonomous activities outside of the relationship and work well with others in a flexible way (Simmons et al., 2009). Ideally, this is the type of attachment individuals would strive to have in their adult life because it allows

you to have a relationship where you can be your own person but also rely on individuals in a way that does not make you dependent on that other person.

In contrast with secure attachment there are insecure forms of attachment. Insecure attachment is the umbrella term for anxious attachment and avoidant attachment styles. Anxious attachment is when an individual is nervous about forms of attachment because they are scared of being abandoned or unwanted/loved (Wu, 2019). Wu also found that individuals with anxious attachment reported having fathers that were less supportive, this could play into the importance of parenting styles as well as the separations of families (2019). As discussed previously some parents rely too heavily on the child as a peer or they spend less time with the child which could make them feel as if they are less supported than if the family were together as a unit. This is different from avoidant attachment because when an individual has avoidant attachment they are physically and emotionally wary about being close to others as well as depending on them (Wu, 2019). According to Wu, individuals with avoidant attachment reported having more frequent separations with their mother as a child (2019). Although Wu did not define what ages they signify as childhood so assumptions can not be made on what developmental stage this may have taken place, this research aims to try and bring some clarification to that statement as well.

As previously mentioned, these attachment styles can manifest themselves into different relationship's one has in life, whether it be with a friend, a romantic partner, or a teacher/boss figure. My hypothesis in this paper is that divorce during that time frame of child development could be a precursor for attachment issues later in life. These issues could be struggling with trust or feeling insecure in a relationship, the names for these types of attachment are insecure, anxious, and avoidant. The absence of a key parental figure on a constant basis could create a problem for the child later. Each developmental stage looks at both parents for different reasons

to help guide them, and when they miss one of these key figures it could pose problems for the completion of the developmental stage.

Overall this research aims to try and navigate the effects of divorce through the Developmental Stage Theory introduced by Piaget. There are many factors that play into diovrce as well as development and by looking at it through this specific lens it brings a new way of thinking about the effects of divorce and how they may differ for each child in a family and beyond. This research is looking at the struggles a child may face if they do not fully complete the stage of development, it still allows them to move onto the next stage. The struggles a child could face due to incompletion of one of these stages could be a multitude of things. In this paper I will look at the effects on emotional and mental health as well as future relationships. By looking at divorce in this way it allows for a way to target different aspects of development for children in the divorce process.

When going through this major change for a child this research could help families and schools provide proper support for these children based on their developmental needs. Some research, mostly informal, on this topic is available, but not much empirical research is done on this niche situation. This research could provide important findings on this group of individuals which is quickly becoming a growing number of children and families. While I do believe divorce can play a role in the incompleteness of these developmental struggles, this does not mean that every child going through divorce will not successfully complete these psychosocial developmental cruxes.

Method

Participants

Participants in this study were individuals recruited through Amazon Mechanical Turk (MTurk), they were between the ages of 18 and 35. Each participant was compensated for their completion of the survey, they received $1.50. All of this was filtered within the MTurk database and the survey was presented by Qualtrics and then distributed via MTurk. Through MTurk, 110 participants were recruited and began the survey. The requirements for being considered for the research were that the participants' parents had to have divorced when the child was between the ages of 0-18. Within the survey the participant was asked how old they were at the time of their parents divorce as well as if they were 18 or younger at the time of the divorce. The question "Did your parents divorce when you were between the ages of 0-18?" was transferred from the consent form into its own question. The inclusion of this as a free standing question helped with the exclusion of 4 individuals. The question was introduced in the third batch launched on MTurk, but was not showing up as mandatory until the fourth and fifth batches. If the participants answered that they were over the age of 18 when their parents divorced they were excluded from analysis (47 excluded individuals). In the end I had 63 participants that could be used in the analysis. The 47 participants that were excluded were paid for their time in completing the survey.

Design and Procedure

Before beginning data collection of any kind this project and survey received IRB approval from the Bard College IRB (Appendix I). I compiled and coded the survey on Qualtrics. Qualtrics is a platform that allows users to make surveys and launch them however they like. Bard College has an account with Qualtrics and I was able to generate my survey

through the school's existing account. Through Qualtrics I was able to input the questions mentioned previously as well as adding in the consent form (Appendix H). Once the survey was created in Qualtrics it was then transferred into Amazon Mechanical Turk (MTurk). When I entered the survey into MTurk it was a requirement to put a short description of the kind of survey the participant can take. For this description I wrote: “This is a survey about your emotions and feelings after your parents divorced. We are trying to understand how it may have affected you. Select the link below to complete the survey. At the end of the survey, you will receive a code to paste into the box below to receive credit for taking our survey”. The information regarding age and qualifications for taking the survey were listed on the consent page of the survey. Each participant was paid $1.50 within three days of completing the survey, whether their data was usable or not.

When the participant entered MTurk they could see a brief description of the survey, mentioned previously. If they decided they wanted to take part, they clicked a link which took them to the Qualtrics survey. Next, they had to read through the consent form and agree to the terms of the survey. Once they completed the survey each participant was given a randomized code through the survey on Qualtrics. This link was then used by the participant to enter into the page on MTurk which allowed them to receive payment for their completion on the survey.

The survey was also launched in sections. The first section of participants were recruited in a 70 person batch. The next four batches were done in rounds of 10. In the original batch of 70, 39 participants were consenting and saying they were 18 or younger when their parents divorced but later on disclosing that they were actually older. This concept of smaller batches allowed for control of participants and managing exclusions since almost half of the participants were not able to be used in analysis. By using smaller batches I was able to manage bug fixes

within the survey. i.e. exclusion questions not appearing as mandatory, that had originally contributed to the large number of exclusions. Upon completing the survey the participants were paid within three days of survey completion through Amazon MTurk as mentioned prior.

Each participant received their money through an Amazon account attached to their MTurk account which allows them to participate in the survey. MTurk also charges an extra 40% for using their platform to launch your survey, this money goes directly to the company and not the participants. Each payment for the participant was done through the Bard College credit card which had been uploaded to the MTurk account for this project. It is an account that is used solely for the purpose of this senior project and each payment was approved prior through a proposal form for all Bard Psychology seniors running an experiment in need of funding.

Materials

This research utilized multiple platforms to create as well as launch the survey. The survey itself was created through Qualtrics. It comprised 59 questions which were gathered from multiple pre-existing scales. After researching different scales and inventories I decided to use four pre-existing and well respected questionnaires, the first questionnaire being the *Beck Anxiety Inventory* (Beck & Steer, 1993). This survey was shortened in order to accomodate for other questions and keeping the survey to a reasonable time commitment for participants. These questions also targeted how the participant was currently feeling in real time, not directly after the divorce. Next is the *Psychological Sense of School Membership Scale* (Ye & Wallace, 2013). This scale was used in order to find out how participants felt about their school and whether or not they felt they fit in and belonged. The questions targeted both feelings towards teachers and students. Unlike the Beck Anxiety Inventory, participants answered based on their feelings directly after the divorce. The third scale used was called the *Adult Attachment Inventory*

(Collins & Read, 1990). This scale asked participants questions about the current feelings towards different kinds of relationships in their life. The final pre-existing scale used was called *Attitude Towards Institutional Authority Scale* (Rigby, 2011). This scale asked questions based on how the participants felt towards authority figures, like teachers, directly after the divorce.

Beck Anxiety Inventory

The *Beck Anxiety Inventory* (Beck & Steer, 1993) was used because it is widely accepted and respected by the psychology field in measuring physical and cognitive anxiety **(**Appendix A). Only seven questions from the original questionnaire were used in this study. Some of the questions felt repetitive, like asking multiple questions about current moods and emotional states just worded differently each time. Some questions were omitted because they were not targeting the mental states that this study is looking at, the questions from the original that are used in this survey were 1, 5, 8, 10, 14, 18, and 19 (Appendix B). The questions used in this survey were enough to understand the participants' current state. When scoring this questionnaire I had to modify the way of scoring due to the fact that the inventory was shortened as a whole. Each participant's responses for this section were added up into one sum, the original scoring is 0-21 equals a low level of anxiety, 22-35 is a moderate level of anxiety, while a score of 36 or higher is a concerning level of anxiety (Beck & Steer, 1993). Since I only used 7 of the 21 questions I adjusted the scoring by using the same proportions, just out of a lower number. For this survey, if a participant scored between 0-9 it indicated low levels of anxiety, 10-15 indicated moderate levels of anxiety, and 16 or higher are concerning levels of anxiety.

Psychological Sense of School Membership Scale

The *Psychological Sense of School Membership Scale* **(**Appendix C) was used because of its ability to address relationships between motivation and achievement outcomes in educational

settings (Ye & Wallace, 2013). This inventory looks at the students' perception of peer relationships, generalized connection with teachers, and participation in school activities. I used all questions included in the original inventory, which is 18, and used the same scoring method. These questions were also altered slightly in order to make the inventory more relevant to the study. The tense of each question was changed from present to past tense so individuals could answer the questions according to how they felt directly after the divorce. There was no drastic change to the meaning of the questions by altering the tense. Each question was answered using a five point likert scale and five questions were reverse coded. The overall score for this questionnaire was the mean of all 18 questions. I had to change some of the wording due to the circumstances of students taking this survey and being at different schools but that should not have been an issue as it just replaced the school name with the word school. For scoring this scale, all 18 responses were summed up and then divided by 18 to reveal the overall mean score. For individuals that did not answer every question within this inventory, they had their overall sum score divided by whatever number of questions they did complete (i.e. 17 questions not 18).

Adult Attachment Inventory

The entire *Adult Attachment Inventory* (Collins & Read, 1990) was used in the survey for this paper. It consisted of 18 questions and each question addresses either secure (questions 3, 4, 7, 13, 14, 17), anxious (questions 6, 8, 9, 10, 11, 12), or avoidant (questions 1, 2, 5, 15, 16, 18) attachment styles **(**Appendix D). When calculating the participants score, the average is calculated for each group of questions, secure, anxious, and avoidant. The highest average out of the three attachment styles indicated which attachment style the participant related to most. When searching for attachment style inventories, there were many to choose from but the *Adult Attachment Inventory* had been previously researched to test its accuracy and validity. It was

found that the inventory was both reliable and valid when measuring secure, avoidant, and anxious attachment styles (Besharat, 2011). The entire questionnaire was used due to the fact that it is short enough to fully include and each question felt important to getting a full picture of the participants attitude toward relationships. To score this section, an average score was taken for each attachment subscale.

Table 1

Attachment Styles of Participants in Study

Breakdown of Attachment Style

Levels	Counts	% of Total	Cumulative %
AV/Anxious	4	6.3 %	6.3 %
AV	11	17.5 %	23.8 %
Anxious/Secure	6	9.5 %	33.3 %
Secure	22	34.9 %	68.3 %
Anxious	19	30.2 %	98.4 %
AV/Anxious/Secure	1	1.6 %	100.0 %

Note: "AV" stands for avoidant attachment style. If there are two attachment styles that means the participant had a tie for highest score for those two styles.

General Questions

The next section was general questions, they were created for the purpose of this study in targeting specifics about the participants' experience with their parents divorce (Appendix E). They targeted emotions directly regarding the divorce of the participants' parents as well as identifying what age the divorce occurred and living status at that time. This section was only six

questions long. The questions in this section gave more clarity on the type of divorce the child experienced and assessed their feelings towards the type of divorce they lived through.

Attitude Towards Institutional Authority

This scale in its entirety was 32 items long **(**Appendix F). My research on the scale showed that many people shorten the scale as the original is targeting people's feelings to school authority (teachers), government authority (laws), law enforcement (police), and military (army) (Rigby, 2011). The questions I used for this survey are the questions targeting authority towards teachers and the law (Appendix G). I chose to add the questions about authority towards the law so it did not feel as targeted to teacher situations, I emitted a couple questions that used more vulgar language such as question 21, all questions omitted from my survey have a red X over them (Appendix F). It allowed me to target the authority figures related to this research without making the survey unmanageably long. This scale was scored on a 1-5 likert scale, one being strongly disagree and five being strongly agree. Out of the 10 total questions asked in this scale, five of them were reverse coded. To score this scale, the mean was calculated for each participant and this was seen as their overall score for this inventory, the higher a participant's overall score the more respect for authority they were seen to have.

Results

Sensorimotor Stage

The first hypothesis I introduced was if a child's parent divorces during the Sensorimotor Stage, then they will struggle with finding a sense of group belonging post divorce. I was not able to get any participants for this stage of development. If I was able to get participants for this stage of development, I would have compared the average scores on the Psychological Sense of School Membership Scale with each developmental stage. I hypothesized that individuals whose

parents divorced during the child's Sensorimotor Stage would have a higher score on the Psychological Sense of School Membership Scale showing they struggled with finding a sense of belonging while in school.

Preoperational Stage

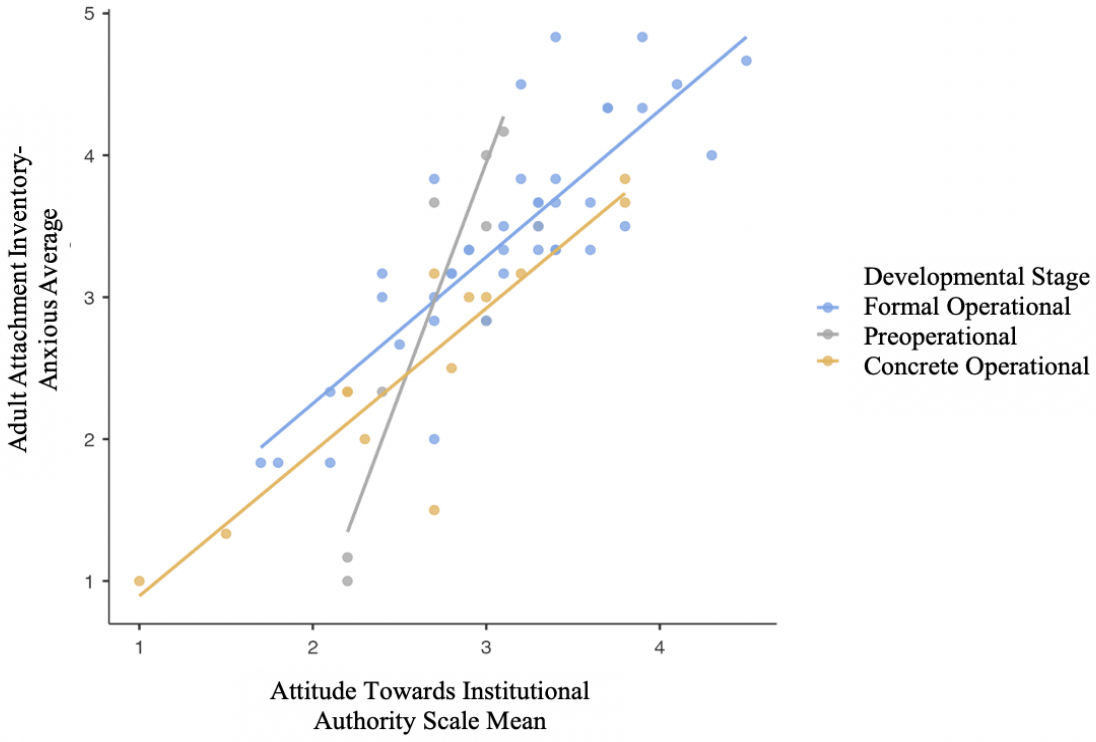
The next hypothesis I introduced was individuals whose parents divorced during the Preoperational Stage will have a lower sense of membership with school and more likely to struggle with forming successful relationships with superiors post divorce. As previously mentioned, I measured the participants' feelings towards superiors with the *Attitude Towards Institutional Authority Scale* and compared the participants' scores on this inventory with their scores on the *Adult Attachment Inventory*. I hypothesized that these scores would be indicative of an individual's feelings towards someone they are subordinate to, specifically in a school setting. When analyzing and scoring the *Adult Attachment Inventory* each participant had three separate attachment style scores, there was either a tie with two of the attachment styles or a frontrunner (Table 1). After seeing each of the attachment style scores, I decided to run a Pearson's correlation with each attachment style and the average scores on the *Attitude Towards Institutional Authority Scale*.

The first correlation I ran was between each person's average on the anxious attachment subscale of the *Adult Attachment Inventory*, and their mean score on the *Attitude Towards Institutional Authority Scale*, $r(61) = .839$, $p < .001$. A positive correlation indicates that when one variable increases so does the other, in this instance it means the higher a participant scored on the *Adult Attachment Inventory* for an anxious attachment style the higher their score was on the *Attitude Towards Institutional Authority Scale*. In addition to this correlation, JAMOVI produces a best fit regression line for each developmental stage (see Fig 1). Best fit lines suggest

that the relationship between anxious subscale score and authority scale score is strongest for people in the Preoperational Stage (that is, for people who were in this stage when their parents divorced, higher anxious attachment behaviors positively correlate with higher rates of respect for authority). Then I decided to run an ANOVA looking at the anxious attachment style average scores and the mean scores for the *Attitude Towards Institutional Authority Scale* for participants in the Preoperational Stage ("true") versus everyone else ("false") - these two groups did not differ on the *Attitude Towards Institutional Authority Scale* mean: $F(1, 11.4) = 4.119$, *ns*, nor score on the anxious attachment subscale: $F(1, 6.66) = .501$, *ns*.

Figure 1

Anxious Attachment and Attitude Toward Authority between Developmental Stages

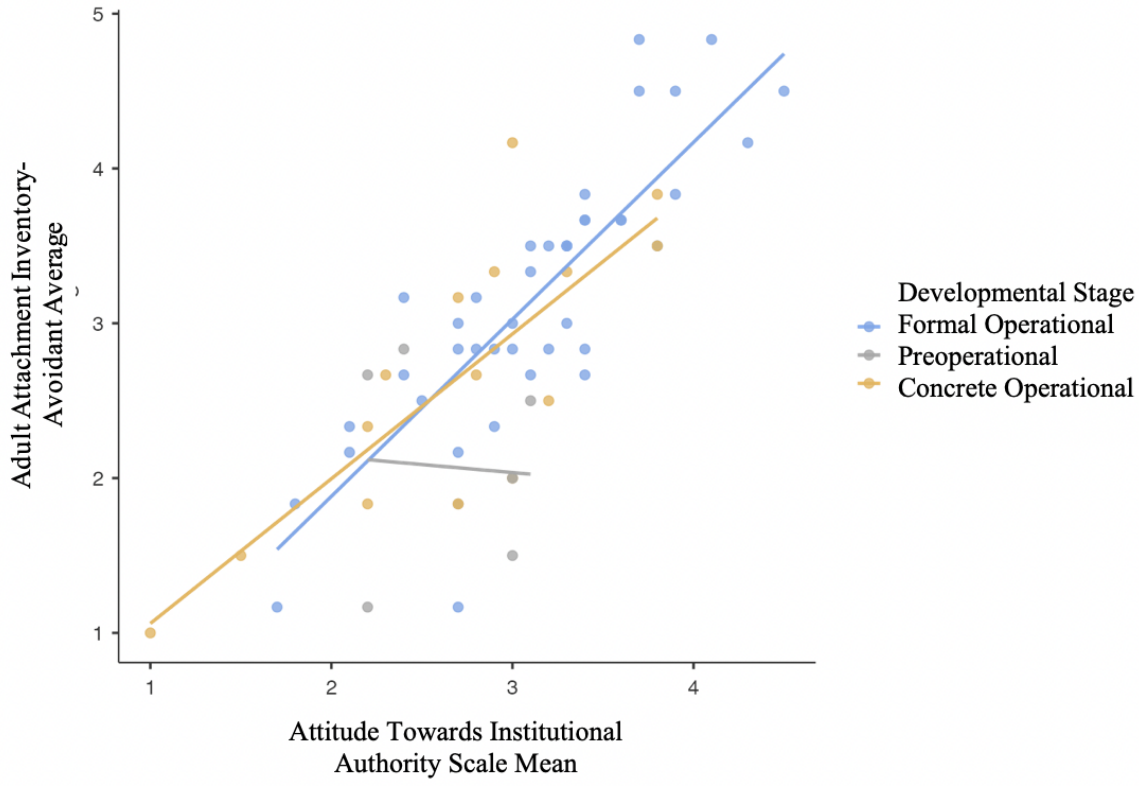


The next correlation I ran for the second hypothesis was between each person's average on the avoidant attachment subscale and their mean score on the *Attitude Towards Institutional*

Authority Scale, $r(61) = .797$, $p < .001$. A positive correlation indicates that when one variable increases so does the other, in this instance it means the higher a participant scored on the *Adult Attachment Inventory* for an avoidant attachment style the higher their score was on the *Attitude Towards Institutional Authority Scale*. In addition to this correlation, JAMOVI produces a best fit regression line for each developmental stage (see Fig 2). Best fit lines suggest that the relationship between avoidant subscale score and authority scale score is somewhat strong for people in the Preoperational Stage (that is, for people who were in this stage when their parents divorced, higher avoidant attachment behaviors positively correlate with higher rates of disrespect for authority). This attachment style seems to support my hypothesis the most as the line for the Preoperational Stage is slightly pointed downward indicating a negative relationship.

Figure 2

Avoidant Attachment and Attitude Toward Authority between Developmental Stages



These findings would indicate that a participant whose parents divorced during the Preoperational Stage may score higher on the avoidant subscale and lower on the *Attitude Towards Institutional Authority Scale*. This would be a negative relationship, indicating that these individuals respect authority less. Upon further analysis, I ran an ANOVA, Table 2, comparing the three developmental stages and their scores on the avoidant subscale of the *Adult Attachment Inventory,* this ANOVA showed they differed: $F(2, 17) = 8.38$, $p < 0.01$. The individuals in the Preoperational Stage scored lowest on the avoidant average subscale ($M = 2.07$) compared to the other two developmental stages, while the Formal Operational scored the highest ($M = 3.17$) and Concrete Operational had the middle score ($M = 2.64$). This ANOVA also showed that comparing the scores on the *Attitude Towards Institutional Authority Scale* with developmental stages, the scores for this inventory also differed: $F(2, 18.2) = 4.25$, $p < .05$. When looking deeper into the data I noticed that individuals in the Preoperational Stage scored lowest on the *Attitude Towards Institutional Authority Scale* ($M = 2.66$), while once again the Formal Operational Stage scored the highest ($M = 3.13$) and Concrete Operational had the middle score again as well ($M = 2.66$). Having the lowest score for the *Attitude Towards Institutional Authority Scale* does show that individuals in the Preoperational Stage had the least respect for authority compared to the other groups. The Preoperational Stage also had the lowest score for the avoidant attachment style as well.

Table 2

Avoidant Attachment Style and Attitude Towards Institutional Authority Scale Descriptives Table

Group Descriptives

	Dev Stage	N	Mean	SD	SE
AV Average	formal	41	3.17	0.860	0.1343
	preoperational	7	2.07	0.623	0.2353
	concrete	15	2.64	0.908	0.2345
ATIAS Mean	formal	41	3.13	0.630	0.0985
	preoperational	7	2.66	0.391	0.1478
	concrete	15	2.69	0.768	0.1982

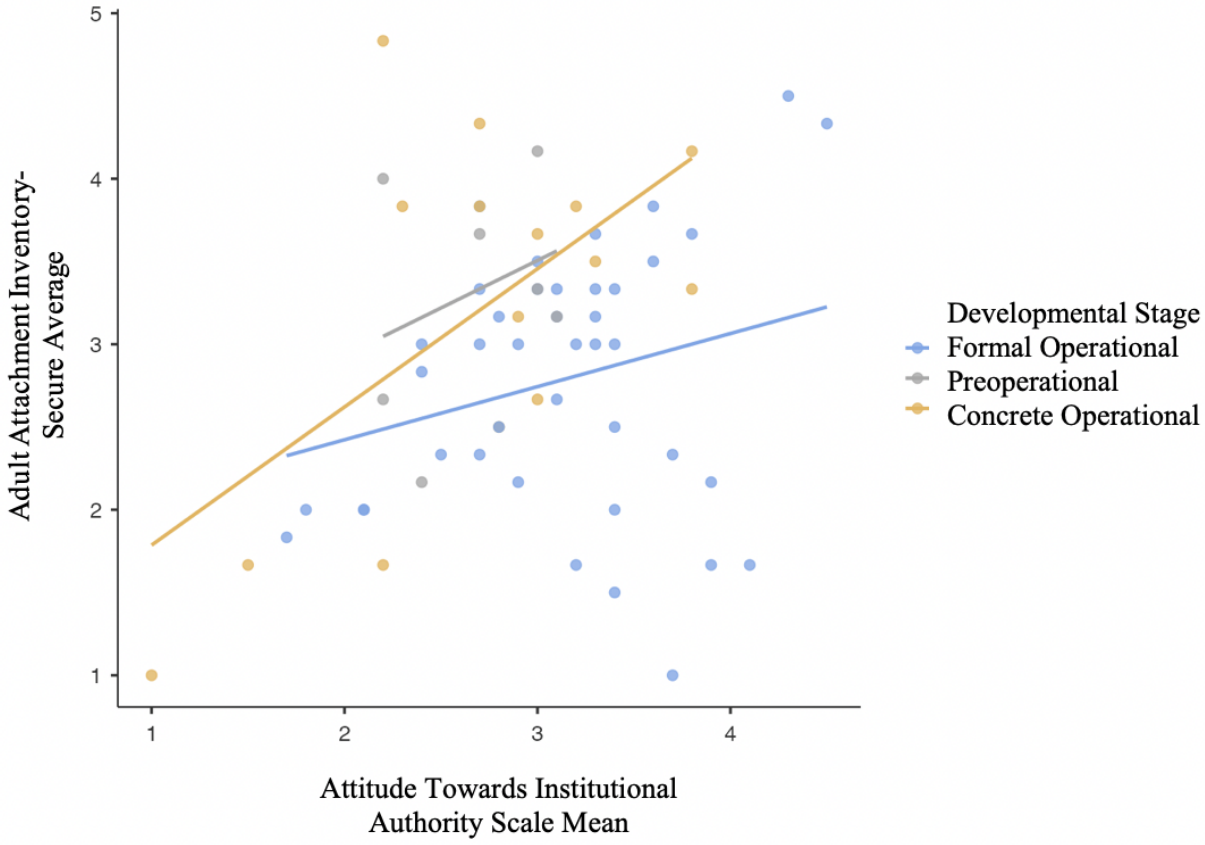
Note: AV Average is referring to the average score for avoidant attachment in the *Adult Attachment Inventory*. The title ATIAS is referring to the mean scores for participants on the *Attitude Towards Institutional Authority Scale*. Lastly, Dev Stage is showing the developmental stages represented in the results, Formal Operational, Preoperational, and Concrete Operational.

In addition, I decided to run a correlation analysis between the Preoperational Stage of development and *Attitude Towards Institutional Authority Scale* means. In order to do this, I created a new variable and assigned everyone in the Preoperational Stage a 1 and all the others a 0, and then ran a correlation between these two variables since I made the developmental stage a continuous variable. This correlation showed a negative correlation between the two variables: $r(61) = -.167$, $p < ns$, meaning that when the participants scored lower on the *Attitude Towards Institutional Authority Scale* they had a higher assigned number for developmental stage (this means they were in the Preoperational Stage). Although the p-value is not significant there is still a relationship seen between the two variables.

The final attachment style analyzed for this hypothesis is secure attachment. A secure attachment is when people have what is considered to be the healthiest of the attachment styles. Based on the hypothesis, I believe I would find a correlation between peoples' secure attachment subscale scores of the instrument and find a higher mean score on the *Attitude Towards Institutional Authority Scale* (this would mean that someone with a score indicating they have a secure attachment style would score highly on the authority scale because they have more respect for authority). The data analysis showed another significant correlation between these two variables, $r(61) = .261$, $p < .05$. Figure 3 shows a scatter plot of the data indicating the positive correlation with a best fit line JAMOVI generated.

Figure 3

Avoidant Attachment and Attitude Toward Authority between Developmental Stages



The data for this section reveals that there is a relationship between individuals whose parents divorced during the Preoperational Stage to have avoidant attachment styles as well as difficulty respecting authority in a school setting. An interesting finding that occurred after data collection in this data was that insecure attachment styles revealed a relationship with higher scores on the *Attitude Towards Institutional Authority Scale* no matter what the developmental stage was. The only attachment style to not have a strong relationship in this finding was secure attachment, and I hypothesized that to be the case from the beginning. Although my hypothesis was not directly supported by these findings it is encouraging to see that the avoidant attachment style produced a somewhat negative best fit line indicating there was some relationship there.

Concrete Operational Stage

I hypothesized that if a divorce occurred during the Concrete Operational Stage, then the child will struggle with close emotional relationships. In this paper I looked at three different attachment styles that can manifest into many different kinds of relationships in a person's life, whether it be platonic, romantic, or something else. When cleaning the data I averaged each participant's score for each of the three attachment styles: avoidant, anxious, and secure. This allowed me to break down the analysis for each attachment style and see if there was a correlation between that score and the participants score on the *Beck Anxiety Inventory* (see Table 3).

Table 3

Comparing Concrete Operational Stage scores on Beck Anxiety Scale Sum and Adult Attachment Style Averages Against Other Stages

One-Way ANOVA (Welch's)

	F	df1	df2	p
NumAnxietyScale	14.66	1	60.6	< .001
AV Average	1.85	1	23.5	0.186
Anxious Average	7.84	1	24.1	0.010
Secure Average	1.23	1	19.0	0.281

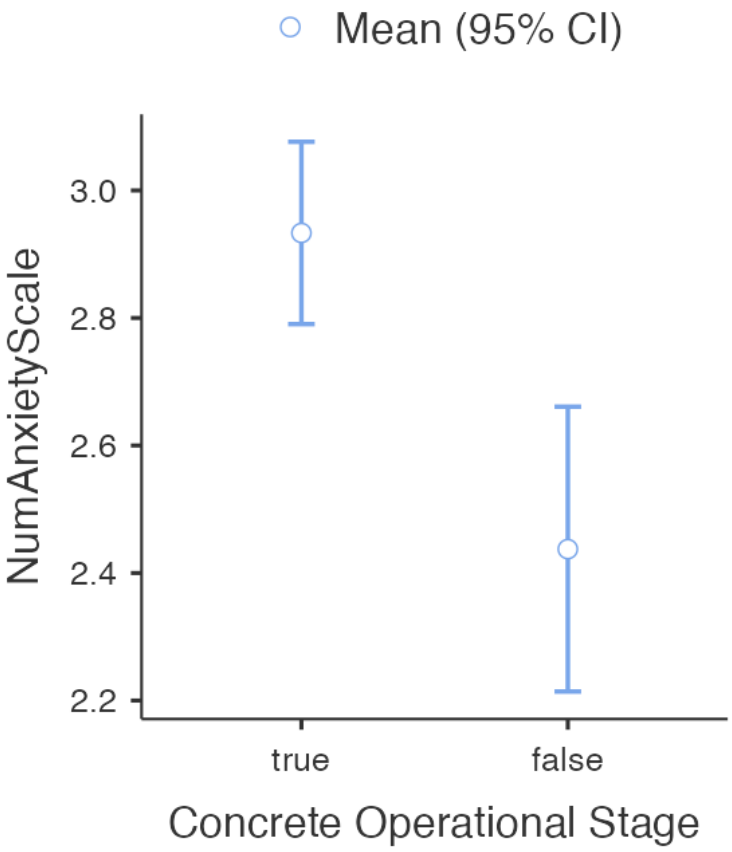
Note: This data is comparing participants who were in the Concrete Operational Stage, with participants who were not (i.e., participants in the Preoperational and Formal Operational Stages). "NumAnxietyScale" is referring to the level of anxiety calculated by the *Beck Anxiety Scale*, 1 being a low level, 2 moderate, and 3 being a concerningly high level. The term "AV Average" is referring to the average score for participants on the questions targeting avoidant attachment style.

People who were in the Concrete Operational Stage when their parents divorced had less anxious attachment behavior than people who were in another stage ($M = 3.33$), F (1, 24.1) = 7.84, $p < .05$. This comparison between people who were and were not in the Concrete Operational Stage was not significant for either avoidant subscale average ($F(1, 23.5) = 1.85$, *ns*.) nor secure average ($F(1, 19) = 1.23$, *ns*). I analyzed the data for this hypothesis and looked at the anxious attachment style and average scores on the *Beck Anxiety Inventory*. The data collected in the ANOVA showed that the scores for the levels of anxiety differed within this

developmental stage, this could indicate a difference depending on the attachment style as well, which is seen in the analysis above. Overall, individuals whose parents divorced during the Concrete Operational Stage had, on average, higher scores on the *Beck Anxiety Inventory* than other developmental stages (Fig. 4). The higher scores on the anxiety inventory did not seem to correlate with attachment style, therefore not supporting my hypothesis.

Figure 4

Anxiety Score Number for Concrete Operational Stage Compared to Others



Note: The term "true" is used to group all the participants that are in the Concrete Operational developmental stage while "false" is referring to anyone outside of that stage during their parents divorce.

Formal Operational Stage

The final hypothesis introduced for this paper was that if an individual experiences a divorce during the Formal Operational Stage then they will have higher feelings of anxiety. For this hypothesis I ran a correlation between the sum scores for the *Beck Anxiety Inventory* as well as participants' developmental stage, if the participant was in the Formal Operational Stage they were given the number 1 and everyone else was given a 0. This analysis revealed a negative correlation between participants' age, in this case ages 11-18 (i.e. Formal Operational Stage), and their sum score on the *Beck Anxiety Inventory*, $r(61) = -.211$, *ns*. The Formal Operational Stage was the only developmental stage to have people in each of the high, moderate, and low categories. Individuals from the Formal Operational Stage also possessed the highest numerical scores on the *Beck Anxiety Inventory* (though they did not, as a group, show the highest mean score, see Table 4). The Formal Operational Stage had the largest standard deviation, showing how wide the range of scores were within this developmental stage.

Table 4

Anxiety Sum Scores for Each Developmental Stage

Group Descriptives

	Dev Stage	N	Mean	SD	SE
Anxiety Sum Score	formal	41	16.3	5.23	0.817
	preoperational	7	15.7	4.42	1.672
	concrete	15	19.7	2.92	0.754

Thus, the hypothesis that those in the Formal Operational Stage would show the highest mean score on anxiety was not supported. Although, the individual highest score (26 out of a

possible 32) was indeed in this group. This data shows that, to some extent, divorce during the Formal Operational Stage can lead to high levels of anxiety for the child in their lifetime but this is not the case for everyone.

Exploratory Analyses

Looking through the data during analyses I noticed how there were an array of responses for individuals and their rate of switching households post-divorce. I did not actively use the rate of switching for any of my hypotheses but this variable seemed like something to take a closer look at. I decided to run a Pearson's correlation between the rate of switching and attachment styles. This seemed interesting because the attachment styles were used so heavily in the analysis process it might be interesting to see what comes up when running an exploratory analysis with rate of switching. It turns out that there were no significant relationships between mean score on the avoidant attachment questions and switching rate ($r(61) = .101$, $p < ns$) or mean score for secure attachment questions and switching rate ($r(61) = .194$, $p < ns$), but there was a significant correlation between anxious attachment and switching rates: $r(61) = .281$, $p < .05$. This would mean that an individual who scored highly for an anxious attachment style also reported being with just one parent more than both at a given time.

I also chose to run a correlation between the participants' mean score on the *Attitude Towards Institutional Authority Scale* and their responses for rates of switching. This data showed a significant correlation with participants' attitude towards authority and the switching between homes: $r(61) = .254$, $p < .05$. This means that the individuals who experienced less switching of homes, and experienced a more consistent style of parenting, scored higher on their respect towards authority figures in a school setting. This being said, individuals who experienced more switching and less consistency of parenting styles showed less respect for

authority than the others. I chose to run this analysis because in this research, previous analyses done with the *Attitude Towards Institutional Authority Scale* showed interesting results and I had done research on the concept of switching and wanted to see if there was a relationship between these two variables.

Discussion

Substantive Content

This research shines a light on the multiple different impacts divorce can take in a child's life. By looking through a developmental lens using Piaget's Developmental Stage Theory, I was able to see the effects of divorce depending on a child's age when the divorce occurred. This research came up with many interesting and compelling findings when it comes to the effects of divorce. The most significant finding was with the second hypothesis I introduced in the paper in regards to the Preoperational Stage: individuals whose parents divorced during the Preoperational Stage had lower scores on the *Attitude Towards Institutional Authority Scale*, indicating a lower respect for authority but this could not be correlated with attachment style, this means we could not find a relationship between lower respect for authority and the different types of attachment. Another finding was that individuals in the Formal Operational Stage did seem to have high levels of anxiety, although the hypothesis was not supported some individuals from this group recorded the highest scores on the scale out of all the developmental stages analyzed in this research. I believe these high scores in the Formal Operational Stage could be due to the fact that parents relied on the children as if they were their peers, not children. As previously mentioned in the paper, sometimes children are inadvertently given this role as another parent when they are in the Formal Operational Stage of development because they are in this later stage of development. Giving the child this tolling emotional role at a young age

increases risk for anxiety disorders as well as oppositional behaviors (Costa-Nunes et al., 2009 p. 388).

I was not able to test the Sensorimotor stage in this research because I did not have any participants that were in this age group. I still believe this would be an interesting group of individuals to gather data from about divorce because they were so young when it happened. My prior research for this paper suggested how the children of this age group may be malleable but they still face effects from a divorce. Previously mentioned in the paper, children who experience divorce during the Concrete Operational Stage struggle with the concept of divorce. I hypothesized that because of their developmental stage at that time, they would struggle with close emotional relationships meaning they would score higher on the anxious and avoidant attachment styles being targeted in the *Adult Attachment Inventory.* A closer look reveals that 34.9% of participants in this research were scored as having secure attachment. This is interesting because when looking at a larger group of the greater population (British individuals in 2006) the percentage is significantly higher. A study done by British psychologists found that 69.9% of the participants had scores indicating they have a secure attachment style (Daniel, 2006 p. 977). The finding shows that there were significantly less individuals as a whole in this study with secure attachment compared to the average person. Although this hypothesis was not supported, individuals from the Concrete Operational Stage possessed the highest mean score on the *Beck Anxiety Scale.* First, data had to be cleaned and organized. One step was creating an overall score for each of the pre-existing scales used in the survey. The first score created was for the Psychological Sense of School Membership Scale, this was the scale that featured 18 questions asking about the participants feelings towards school (Appendix C). In this section participants were able to skip a question if they did not feel comfortable answering, as the

questions may be difficult for some to answer. There were three participants who did not answer all of the questions, one skipped two questions while the other two participants only skipped one question. When calculating these scores I had to manually sum up their scores and divide it by the number of questions they successfully answered. This was a difficult thing to deal with, trying to figure out how I would analyze the data in a way that all participants' scores are still equivalent to one another, whether they answer all the questions or not. In the future I would remove any participants from the data set if they did not complete the entire inventory. By removing these participants instead of manually summing up their averages, I remove the potential risk of human error due to calculating scores on my own, as well as ensuring all average scores are equivalent. Each question in the *Psychological Sense of School Membership Scale* is targeting different aspects of a participants attitude towards school as well as their relationships with teachers and students. When someone has not answered the full inventory it is hard to compare the scores evenly because the participants have not actually answered *all* of the same questions..

Another interesting finding was the anxiety scores from the *Beck Anxiety Inventory* used in the survey (Appendix A). This inventory was shortened due to the length of the original as well as containing some questions that did not necessarily pertain to what the overall survey was asking. The original scoring for this inventory was done in a way that breaks down the score into low, medium, and concerningly high levels of anxiety. Since I had shortened this survey I had to use the same ratios for each level of anxiety. After doing this and analyzing the data I noticed an alarmingly high rate of participants scoring in the concerning level of anxiety section. These high levels of anxiety for individuals in the Concrete Operational Stage could be attributed to the idea that individuals believe children in that stage need to be cognitively stimulated, but we cannot

assume they understand everything an adult explains to them in regards to the divorce (Bernard, 1978 p. 191). Parents may have overestimated the child's ability to comprehend the information regarding the divorce causing the child to experience higher levels of anxiety as this is a traumatic experience in a child's life, especially if you are expected to understand things you cannot quite grasp. The *Beck Anxiety Scale* can only measure levels of anxiety and does not target what the anxiety is caused by. In one study consisting of students at a large university in the Midwestern US, the average score on the Beck Anxiety Inventory was 12.32, according to the original scoring that is a low level of anxiety (Leyfer et al., 2005). I then realized that these scores could be reflecting not only the effects of divorce but also the ongoing global pandemic. It is important to take into account outside circumstances that could affect the scores for some of the inventories in this survey. The pandemic put high levels of stress on lots of American families, as of early 2022 it is estimated that 3 million more families are experiencing unemployment compared to before the COVID-19 pandemic (CBPP, 2022). This could cause higher levels of anxiety for individuals whether they have experienced a divorce or not. In the future a different kind of anxiety inventory could be used that helps target more emotions regarding a divorce that could cause anxiety for the children involved.

When I was analyzing data I noticed the responses for the frequency of switching homes to be interesting. I decided to run some correlations on this data and found significant results. There seemed to be a correlation between home switching and respect for authority, the less switching that occurred the more respect was given to authority figures. In addition, there was also a correlation between anxious attachment style and less switching, this meant that a child that spent more time with just one parent instead of two scored higher on the anxious attachment subscale questions. These findings show that there is a relationship between home switching and

child development, these effects can manifest in different parts of their lives. Attachment style plays into relationships with friends and romantic partners while respect for authority is important in a school setting as a child is growing up. Although these analyses were not outlined in my hypothesis I believe they should be noted as potential avenues of research in divorce literature and should be further explored to test their reliability.

One key aspect of this research as well as background literature is the demographics of the subjects involved. A lot of the research I have compiled was done in the mid to late 20th century. In this research it has been noted that large portions of the population are white individuals. This is also the case with Piaget and his research at the time, he was predominantly in Switzerland where the population is mostly white middle class children.

Participants

The purpose of this research was to create a generalizable observation of the effects on children through four separate developmental stages introduced by Piaget. Unfortunately, I was only able to recruit participants from three of the four developmental stages. I believe this was a result of not being able to recruit as large of a quantity of participants as needed, maybe if more participants were recruited I could have gotten individuals who were between 1.5-2 years of age during their parents divorce. The age range for this developmental stage was the smallest of all stages looked at in this paper being only six months. This made it difficult to find participants that would fit into this small and niche category. MTurk provided a unique opportunity to recruit participants that are not just college aged individuals, unlike at Bard where I would have had to use snowball sampling, the platform allowed me to expand into the greater community of the United States, and other English speaking countries. For future research, the number of participants could be expanded on. I was only able to recruit 110 participants in total, and from

this only 63 participants had usable data. By recruiting more participants the researcher has a greater chance of getting individuals whose parents divorced during the Sensorimotor Stage. Also, by trying to achieve a greater budget I could have used some of the advanced settings on the MTurk platform, this would have allowed me to only have my survey made eligible for MTurk users that specified their age to be 18-35. If I were to do this research again I would have tried to ask for more money to allow myself to use these advanced settings, and maybe this could have allowed me to obtain more usable data.

With this expanded group of individuals comes variability in participants. Many individuals were not honest about their age at the time of their parents divorce, or even if their parents were divorced at all. I am unable to tell if the age they gave was true or not but because they consented to participate in the study, part of this being that they were between the ages of 0-18 when their parents divorced as well as being between 18-35 at the time they took the survey, I need to trust that the age they responded with was the real age they were at their parents divorce. Also some of these individuals were the same age, at the time of divorce, as the end or beginning of a developmental stage, if this was the case I rounded down and had them as a member of the younger developmental stage. Talking about participants also brings to light the population of MTurk users as these are the individuals that represent the sample in this survey. The demographic of MTurk workers is not extremely diverse for users in the United States. In the time frame that my survey was distributed the highest portion of male users was 64.29% and the highest concentration of female users one day was 65.63% (Appendix J) (Difallah et al., 2018).

For my own research I chose not to ask about gender, even though in previous research they found it as another predictor of struggle for individuals that experience divorce. In literature

about children it was common to see researchers saying boys have more conduct problems than girls, which is a proven statistic. Looking back, it would be beneficial to ask about gender in this research to see how the responses differ. For questions that were about respect for authority and sense of school membership it would have been interesting to see if the responses for these inventories were different between genders. A previous study highlighted in the introduction of this paper found that conduct problems, such as a disregard for others and not respecting authority, can be a direct result of inconsistent discipline from a parent, which can be experienced in divorce due to home switching (Lengua et al., 2000 p. 238-239). This finding makes me believe the difference in conduct problems between genders could affect things that were looked at in this study such as school membership and respect for authority. Looking at MTurk, the percentage of user genders fluctuated slightly but never exceeded the previously mentioned percentages for the respective genders. Upon further research into the MTurk demographic I found that 79.9% of users were white as of 2020 (Moss, 2020). This shows low variability when it comes to race within the platform and similarly, in my survey. In this research specifically I did not ask questions about race or ethnicity but this could have played a role in how each individual processed the divorce as well as the family dynamic afterwards. Some cultures put emphasis on multi-generational households, as well as having a more equal role for the mother and father when it comes to work outside of the house.

Even with the other three developmental stages there was not an even split between the participants in each group. The Preoperational Stage only had seven participants, this can make it hard to generalize these findings because there are so few people representing this age group. The Concrete Operational Stage only had 15 participants while the Formal Operational Stage had 41. Obtaining more participants for the Sensorimotor, Preoperational, and Concrete Operational

Stages could have helped with this research by allowing for more generalizable results, and in the case of the Sensorimotor Stage, being able to run analyses as a whole.

Qualtrics and Distribution

In the survey there were multiple points when the participant was asked their age when their parents began the process of divorce. The first of these questions was in the consent page at the very beginning of the survey, in order to move forward you are saying your parents divorced between the ages of 0-18 and as a participant you are between 18 and 35 (Appendix K). Next is question 27, "How old were you when your parents first separated to become divorced?" This question marks the separation of households and the very beginning of the divorce process. Some participants responded saying they were older than 18 when their parents divorced or that their parents actually are not divorced at all. The deceitfulness of participants originally made it difficult to get at least a medium effect size and higher power but the concept of releasing it in small batches helped to achieve the goal of this effect size and high power, $d = 0.42$, Power = 0.95. Due to the struggles in recruitment I had to launch the study more than I had originally anticipated. I had launched the survey on MTurk for the first time with a batch of 70 hits, this is the term in MTurk for participants.

Out of those 70 participants only about half were usable because of the age they responded with in the survey. As a result of this, I ran the survey four more times in batches of 10 hits. There were programming errors within Qualtrics that made it so participants could bypass questions regarding their age or just being deceitful about their age in general. In the second and third batches I struggled with making sure the question about age after the consent form was mandatory. I remedied this by changing the formatting and making questions regarding age mandatory, and asked these questions more than once within the survey. By using smaller

batches of participants I was able to see if the coding was correct on that aspect of the survey before launching it to a large number of people again. In the end these questions became their own attention check for the survey.

After the struggles I had with individuals being deceitful about age until half way through the survey I decided to pull out and reinsert the question about age in the consent form. I started to worry that people were not fully reading the consent form so I inserted another question pertaining to the participants' age at the time of their parents divorce. This new question was "Did your parents divorce when you were between the ages of 0-18?", and this question was introduced in the third, fourth, and fifth batches of the survey (Appendix L). This was not a new question, it was just copy and pasted from within the pre-existing consent form. If a participant answered yes to the question they immediately began the survey, if a participant answered no then they were immediately funneled to the end of the survey and directed back to MTurk with their anonymous code.

Upon running this new question in the survey for the first time I had noticed that participants were skipping the question and continuing on. These participants would go on only to reply to the other age question saying they were older than 18 when their parents divorced. In Qualtrics I had realized that even though in that platform I had made the question mandatory there was a glitch when publishing. Not only was the question not mandatory when providing the anonymous link for people to test the survey on Qualtrics but it was also not coming up as mandatory on MTurk. This was the case for the third batch published in MTurk. After discussing this with my advisor we decided it was best to re-enter the entire survey into an empty Qualtrics interface in order to recode the survey fully. From here I re-input each question, including the question on the participants' age at the time of the divorce. After re-inputting the survey I had my

advisor test it and the question “Did your parents divorce when you were between the ages of 0-18?” was finally showing up as mandatory. This survey was launched as the fourth and fifth batches on MTurk and helped navigate individuals who were not within that age group during the time of divorce out of the survey, I had four people answer that they were not within the proper age range and were immediately sent to the end of the survey, it proved useful in the end.

Future Directions

The research collected within this study has presented interesting developments when it comes to how divorce affects children. Future research on this topic could benefit from this paper as it has taken a new look at the effects of divorce based on a child’s developmental stage presented by Piaget. Piaget mostly conducted his research on middle class white families, America is a country that is made up of many different cultures and socioeconomic statuses. I would recommend framing questions on what the dynamics of the family were like pre and post divorce. I did not ask how many siblings each participant had, or whether or not they lived in a multi-generational household. If participants lived in a home with their grandparents as well as one of their parents, this may have compensated for some of this idea of a fractured family unit. Although switching of homes may still be involved they would still have the desired family unit Piaget discussed in his research. I also think shifting the direction of research to be focused on how switching homes frequently due to a divorce can affect their development may be useful. There were interesting findings in regards to the frequency of switching homes when it came to respect towards authority as well as anxious attachment style. Overall, there are many different routes that can be taken for the future of this kind of research on divorce.

When analyzing the data by running correlations and ANOVA’s it began to be clear that many of my hypotheses were not supported. I saw that some aspects of the hypothesis were

noteworthy but the hypothesis as a whole was not supported. I believe that these findings are still important and relevant to divorce literature today. There is not much current day literature on what I am doing and by running new experiments and testing new hypotheses, people can find answers to some of the tricky questions that surround divorce. It may not be data that sheds light on a groundbreaking new finding but it allows parents to begin to understand what may or may not affect their child when they go through a divorce. For instance, with my findings in reference to the Preoperational Stage of development there may not have been a correlation between attachment style and lower respect for authority, but it was clear that this developmental stage had the lowest scores when it came to respecting authority over all. No matter, if a hypothesis is supported by your research, the research is important nonetheless and the honesty surrounding these findings is what is going to make the field of psychology stronger throughout time.

Conclusion

Divorce is exceedingly more common in the United States, with 448,176 divorces involving children in 2019 alone. The importance of divorce literature is rapidly growing due to the prevalence of it in our society today. Children are adaptive but these major life changes can be difficult for a child to process and live with. This research was conducted with the hope that by looking at children's development through Piaget's Stage Theory, a new understanding could be reached to figure how to help these children. By being able to predict particular outcomes for a child based on their developmental stage at the time of the divorce, parents and teachers alike can provide better help and guidance for these children.

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Appendix A

Beck Anxiety Inventory (BAI)

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

	Not at all	Mildly, but it didn't bother me much	Moderately – it wasn't pleasant at times	Severely – it bothered me a lot
Numbness or tingling	0	1	2	3
Feeling hot	0	1	2	3
Wobbliness in legs	0	1	2	3
Unable to relax	0	1	2	3
Fear of worst happening	0	1	2	3
Dizzy or lightheaded	0	1	2	3
Heart pounding / racing	0	1	2	3
Unsteady	0	1	2	3
Terrified or afraid	0	1	2	3
Nervous	0	1	2	3
Feeling of choking	0	1	2	3
Hands trembling	0	1	2	3
Shaky / unsteady	0	1	2	3
Fear of losing control	0	1	2	3
Difficulty in breathing	0	1	2	3
Fear of dying	0	1	2	3
Scared	0	1	2	3
Indigestion	0	1	2	3
Faint / lightheaded	0	1	2	3
Face flushed	0	1	2	3
Hot / cold sweats	0	1	2	3

Appendix B

Beck Anxiety Inventory
Indicate, if at all, these prompts apply to you.

Feeling	Not at all	Mildly, but it didn't bother me much	Moderately- it wasn't pleasant at times	Severely- it bothered me a lot
Fear of worst happening				
Nervous				
Fear of losing control				
Faint/ light headed				
Indigestion				
Numbness or tingling				
Unsteady				

Appendix C

		EF
PSSM1	I felt like a real part of (name of school).	
PSSM2	People notice when I'm good at something.	
PSSM3	It is hard for people like me to be accepted here. [Rev]	
PSSM4	Other students in this school take my opinions seriously.	
PSSM5	Most teachers at this school are interested in me.	
PSSM6	Sometimes I don't feel as if I belong here. [Rev]	
PSSM7	There's at least one teacher or other adult in this school I can talk to if I have a problem.	
PSSM8	People at this school are friendly to me.	
PSSM9	Teachers here are not interested in people like me. [Rev]	
PSSM10	I am included in lots of activities at this school.	
PSSM11	I am treated with as much respect as other students.	
PSSM12	I feel very different from most other students here. [Rev]	
PSSM13	I can really be myself at this school.	
PSSM14	The teachers here respect me.	
PSSM15	People here know I can do good work.	
PSSM16	I wish I were in a different school. [Rev]	
PSSM17	I feel proud of belonging to (name of school).	
PSSM18	Other students here like me the way I am.	

Appendix D

Adult Attachment Scale Items and Factor Loadings

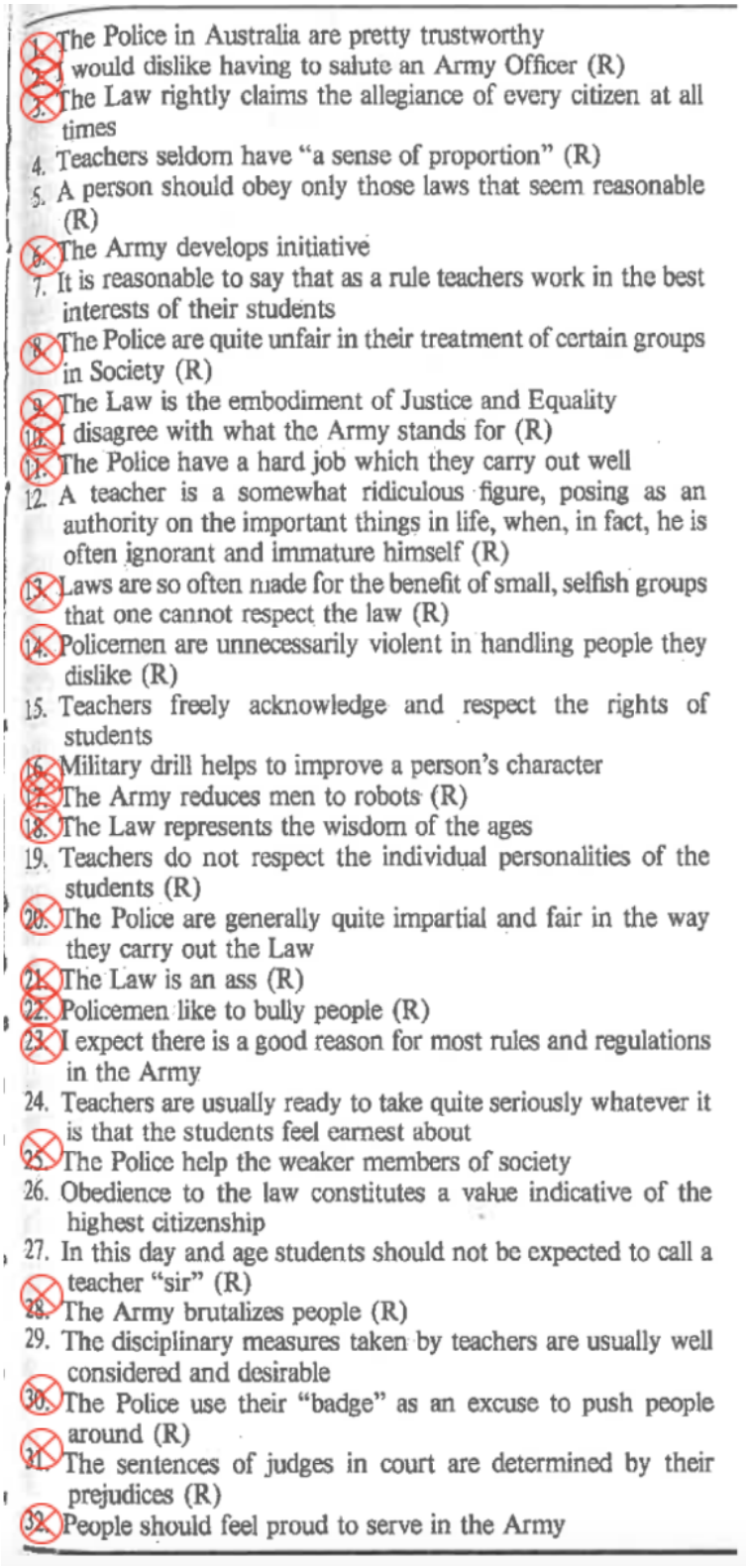
Item
Depend
1. I find it difficult to allow myself to depend on others.[a] (Av)
2. People are never there when you need them.[a] (Av)
3. I am comfortable depending on others. (S)
4. I know that others will be there when I need them. (S)
5. I find it difficult to trust others completely.[a] (Av)
6. I am not sure that I can always depend on others to be there when I need them.[a] (Ax)
Anxiety
7. I do not often worry about being abandoned.[a] (S)
8. I often worry that my partner does not really love me. (Ax)
9. I find others are reluctant to get as close as I would like. (Ax)
10. I often worry my partner will not want to stay with me. (Ax)
11. I want to merge completely with another person. (Ax)
12. My desire to merge sometimes scares people away. (Ax)
Close
13. I find it relatively easy to get close to others. (S)
14. I do not often worry about someone getting too close to me. (S)
15. I am somewhat uncomfortable being close to others.[a] (Av)
16. I am nervous when anyone gets too close.[a] (Av)
17. I am comfortable having others depend on me. (S)
18. Often, love partners want me to be more intimate than I feel comfortable being.[a] (Av)

Appendix E

General Questions:
For this section please answer these questions pertaining to your parents divorce.

1. At what age were you when your parents began the process of divorce? Written response
2. Does your parents divorce occur to you often? LIKERT 1= yes, virtually everyday and 5= no, not at all
3. Did you switch between different parental households? LIKERT 1= yes, every other day and 5 = less than once a year
4. Did you have contradicting rules with these households? LIKERT 1= yes very much so and 5= no, not at all
5. Was the time split evenly between parents after the divorce? LIKERT 1= yes, very much so and 5= No, not at all)
6. Was an income disparity obvious between the households? LIKERT 1= yes, very much so and 2 = No, not at all)

Appendix F



1. The Police in Australia are pretty trustworthy
2. I would dislike having to salute an Army Officer (R)
3. The Law rightly claims the allegiance of every citizen at all times
4. Teachers seldom have "a sense of proportion" (R)
5. A person should obey only those laws that seem reasonable (R)
6. The Army develops initiative
7. It is reasonable to say that as a rule teachers work in the best interests of their students
8. The Police are quite unfair in their treatment of certain groups in Society (R)
9. The Law is the embodiment of Justice and Equality
10. I disagree with what the Army stands for (R)
11. The Police have a hard job which they carry out well
12. A teacher is a somewhat ridiculous figure, posing as an authority on the important things in life, when, in fact, he is often ignorant and immature himself (R)
13. Laws are so often made for the benefit of small, selfish groups that one cannot respect the law (R)
14. Policemen are unnecessarily violent in handling people they dislike (R)
15. Teachers freely acknowledge and respect the rights of students
16. Military drill helps to improve a person's character
17. The Army reduces men to robots (R)
18. The Law represents the wisdom of the ages
19. Teachers do not respect the individual personalities of the students (R)
20. The Police are generally quite impartial and fair in the way they carry out the Law
21. The Law is an ass (R)
22. Policemen like to bully people (R)
23. I expect there is a good reason for most rules and regulations in the Army
24. Teachers are usually ready to take quite seriously whatever it is that the students feel earnest about
25. The Police help the weaker members of society
26. Obedience to the law constitutes a value indicative of the highest citizenship
27. In this day and age students should not be expected to call a teacher "sir" (R)
28. The Army brutalizes people (R)
29. The disciplinary measures taken by teachers are usually well considered and desirable
30. The Police use their "badge" as an excuse to push people around (R)
31. The sentences of judges in court are determined by their prejudices (R)
32. People should feel proud to serve in the Army

Appendix G

Attitudes Toward Authority Scale

In this section please respond to the following questions using the scale below.

(1-5 Likert scale 1= strongly disagree 5= strongly agree, R=reverse coded)

1. Teachers seldom have a sense of proportion R
2. A person should obey only those laws that seem reasonable R
3. It is reasonable to say that as a rule teachers work in the best interest of their students
4. A teacher is a somewhat ridiculous figure posing as an authority on the important things in life when in fact he is often ignorant and immature himself R
5. Teachers freely acknowledge and respect the rights of students
6. Teachers do not respect the individual personalities of the students R
7. Teachers are usually ready to take quite seriously whatever it is that the student feels earnest about
8. Obedience to the law constitutes a value indicative of the highest citizenship
9. In this day and age students should not be expected to call a teacher sir R
10. The disciplinary measures taken by teachers are usually well considered and desirable

Appendix H

Overview: I am a student at Bard College and I am conducting a research survey for my Senior Project. I am studying how divorce may affect the children who go through it at the age of 18 or younger. This research is targeting the question of how age plays a part in the effects of a divorce on a child. I want to see if age is a factor in how the divorce affects an individual and if it varies by age. I will be asking questions about different aspects of your life and how you felt about them during the time of your parents divorce. During this study, You will be asked to answer questions regarding your current mood, feelings post divorce, and some general questions about your parents divorce This survey is designed to last approximately 10 minutes and you will be compensated $1.50 for your time.

Potential Risks: Potential risks of participation include feelings of discomfort when recalling the time of the divorce as this may have been a difficult time for you. If I ask any questions that you do not want to answer or feel uncomfortable answering, you may move on to the next question or stop the survey altogether.

Benefits: There are no direct benefits from completing this study.

Confidentiality: All the information you provide will be confidential. I will use randomly assigned ID numbers when I write about this research. Only my faculty adviser and I will have access to this information.

Participants Agreement: I understand the purpose of this research. My participation in this survey is voluntary. If I wish to stop the survey for any reason, I may do so without having to give an explanation.

I am aware of the potential risk this study could cause for me, emotional discomfort, and wish to participate knowing I could potentially experience this emotion. I am aware the analysis will be used in a Senior Project that will be publicly accessible online and at the Stevenson Library of Bard College in Annandale, New York. The information gathered in this study is confidential with respect to my personal identity.

If I have questions about this study, I can contact the researcher at eh7096@bard.edu or the faculty advisor at sdl@bard.edu. If I have questions about my rights as a research participant, I can contact the chair of Bard's Institutional Review Board at irb@bard.edu.

Upon completing the survey please remember to use the random ID code you are given and return to MTurk to enter this code in order to receive compensation.

Please answer the next question about your age and consent in order to begin the survey. By consenting you are saying you are between the ages of 18 and 35, and the divorce of your parents occurred when or before you were 18.

A. I am 18 years or older and consent to participation
B. I am not 18 years or older and/or I do not consent to participation

Appendix I

1. **Describe research project:**
   In this project I plan to look at several particular effects of divorce on a child depending on the age of the child at the divorce. I believe that (1) the stage of development a child is going through and (2) the proportion of time the child spends with each parent will have an effect on the child's sense of group belonging, emotional development, and future relationships. I will conduct a survey for people between the ages of 18 and 35 whose parents divorced before they were 18, asking them questions about their emotions, school experience, and relationship attachment style (romantic and platonic). These questions would be based on questionnaires validated in previous published research. I have also created 6 general questions to ask information about the divorce.
2. **Describe the population you plan to recruit and how you plan to recrui**t.
   The population I plan to target for my survey are individuals aged 18-35 years that have parents that divorced before they were 18. I will recruit participants by posting my survey made on Qualtrics to Amazon Mechanical Turk, this will allow for a larger and more diverse sample population.
3. **How many participants would I expect:**
   My goal is to collect 75 participants through Amazon Mechanical Turk. They will be reimbursed the MTurk platform and will receive $1.50.
4. **Describe the procedures you will be using to conduct your research. Include descriptions of what tasks your participants will be asked to do, and about how much time will be expected of each individual. NOTE: If you have supporting materials (printed surveys, questionnaires, interview questions, etc.), email these documents separately as attachments to IRB@bard.edu. Name your attachments with your last name and a brief description (e.g., "WatsonSurvey.doc").**
   For this research I will be using Qualtrics to form a survey of 59 questions and then sharing it to Amazon Mechanical Turk. Participants will be asked to answer the questions shown in the survey and it will not take more than 10 minutes to complete. I will be emailing a copy of the survey for reference. The questions are taken from existing inventories, Beck Anxiety Inventory, Psychological Sense of School Membership Scale, Adult Attachment Inventory, Attitude Towards Institutional Authority Scale, and a few general questions I generated myself. The Psychological Sense of School Membership Scale and I have made some wording changes to allow participants of any age to answer questions regarding their feelings towards school.

5. **Describe any risks and/or benefits your research may have for your participants.**
   A potential risk of this experiment could be that, though the questions being asked do not target emotions felt during the divorce specifically, or negative consequences of it, thinking carefully about this time may nonetheless cause some negative feelings to resurface. There are no direct benefits from participation.

6. **Describe how you plan to mitigate (if possible) any risks the participants may encounter.**
   I plan to mitigate the risks by providing a url to a site that can provide a free consultation with a counselor that is specifically trained to help families of divorce and how to cope with the emotions. The site also provides resources they can read on the website in regards to their feelings about the divorce. Participants are also informed that the topic of the survey is divorce, ensuring they will not be surprised about the context of the study.

7. **Describe the consent process (i.e., how you will explain the consent form and the consent process to your participants):**
   I plan on explaining consent through a brief paragraph describing what this survey is for, a senior project at Bard College, and the answers given will be completely anonymous. Overview: I am a student at Bard College and I am conducting a research survey for my Senior Project. I am studying how divorce may affect the children who go through it at the age of 18 or younger. This research is targeting the question of how age plays a part in the effects of a divorce on a child. I want to see if age is a factor in how the divorce affects an individual and if it varies by age. I will be asking questions about different aspects of your life and how you felt about them during the time of your parents divorce. During this study, You will be asked to answer questions regarding your current mood, feelings post divorce, and some general questions about your parents divorce This survey is designed to last approximately 10 minutes.

   Potential Risks: Potential risks of participation include feelings of discomfort when recalling the time of the divorce as this may have been a difficult time for you. If I ask any questions that you do not want to answer or feel uncomfortable answering, you may move on to the next question or stop the survey altogether.

   Benefits: While no direct benefits to participants are expected, compensated participants may receive indirect benefits from learning about the research process, as well as about the background motivating the present work.

   Confidentiality: All the information you provide will be confidential. I will use randomly assigned ID numbers when I write about this research. Only my faculty adviser and I will have access to this information.

   Participants Agreement:
   I understand the purpose of this research. My participation in this survey is voluntary. If I wish to stop the survey for any reason, I may do so without having to give an explanation.

I am aware of the potential risk this study could cause for me, emotional discomfort, and wish to participate knowing I could potentially experience this emotion. I am aware the analysis will be used in a Senior Project that will be publicly accessible online and at the Stevenson Library of Bard College in Annandale, New York. The information gathered in this study is confidential with respect to my personal identity.

If I have questions about this study, I can contact the researcher at eh7096@bard.edu or the faculty advisor at sdl@bard.edu. If I have questions about my rights as a research participant, I can contact the chair of Bard's Institutional Review Board at irb@bard.edu.

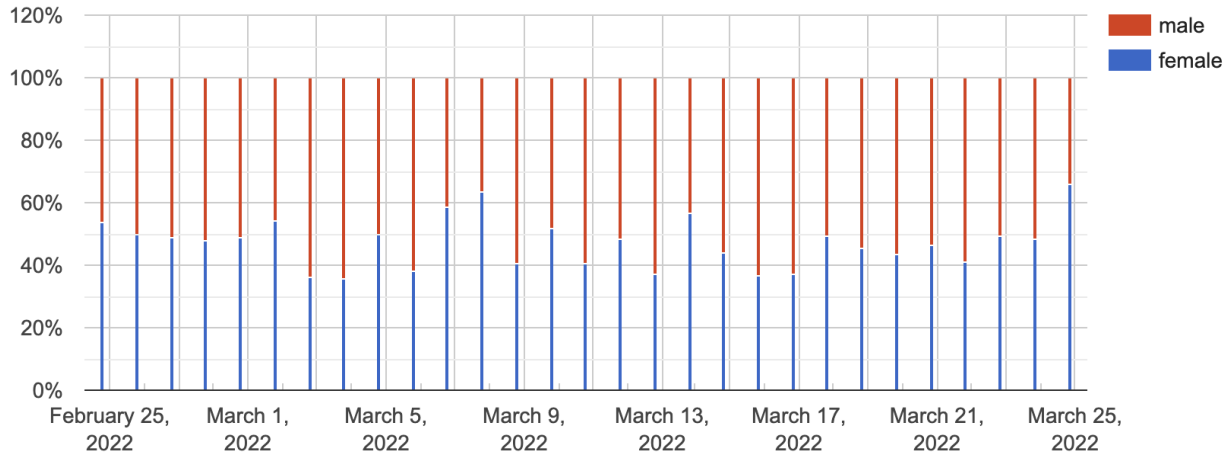
Upon completing the survey please remember to use the random ID code you are given and return to MTurk to enter this code in order to receive compensation.

Please answer the next question about your age and consent in order to begin the survey. By consenting you are saying you are between the ages of 18 and 35, and the divorce of your parents occurred when or before you were 18.

A. I am 18 years or older and consent to participation
B. I am not 18 years or older and/or I do not consent to participation

8. **What procedures will you use to ensure that the information your participants provide will remain confidential and safeguarded against improper access or dissemination?**
   I will make sure every participant is anonymous by having Qualtrics and MTurk create a random ID number at the end of every survey. Responses will be attached to this random ID and I will have no way of identifying the individual but they can use this number to still receive reimbursement.
9. **For all projects, please include your debriefing statement. (This is information you provide to the participant at the end of your study to explain your research question more fully than you may have been able to do at the beginning of the study.) All studies must include a debriefing statement. Be sure to give participants the opportunity to ask any additional questions they may have about the study.**
   Thank you for completing this survey! Your responses will be used in research looking at child outcomes of divorce depending on the age of the child at the time of the divorce. Once again, your responses are entirely anonymous to the researchers. To ensure you receive your payment from Amazon, return to the MTurk page and enter this code: ___
   If you have any questions or concerns feel free to contact the student, eh7096@bard.edu, or her advisor sdl@bard.edu as well as IRB@bard.edu. If you experience emotional discomfort due to this study please feel free to use this link: https://divorceandchildren.com/ . It is a website that provides assistance and guidance for people affected by divorce, no matter the age.

Appendix J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100%
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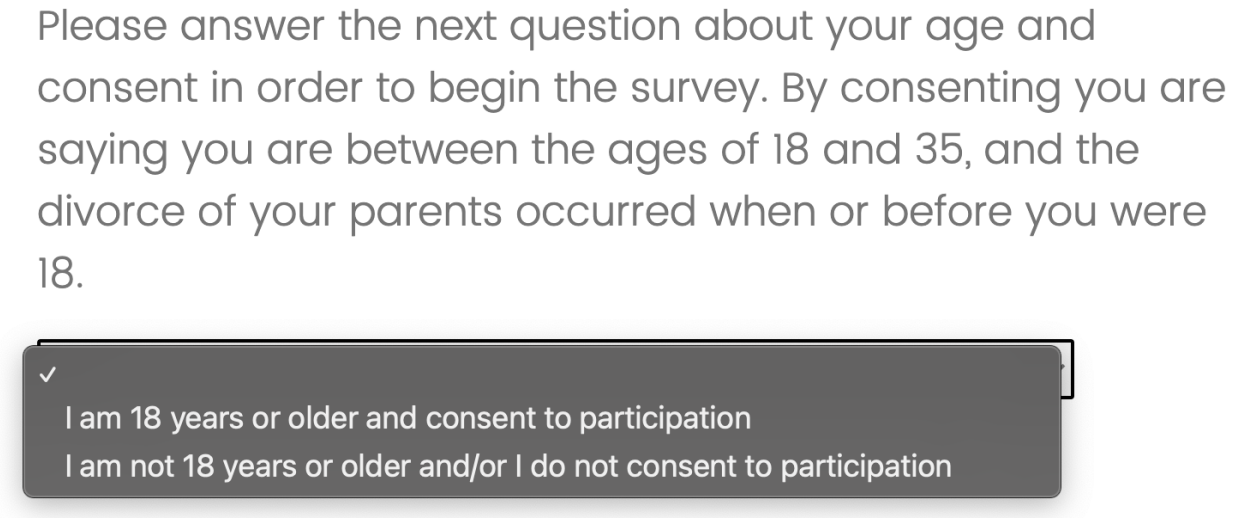
60%
40%
20%
0%
male
female
February 25, 2022
March 1, 2022
March 5, 2022
March 9, 2022
March 13, 2022
March 17, 2022
March 21, 2022
March 25, 2022

Appendix K


Please answer the next question about your age and consent in order to begin the survey. By consenting you are saying you are between the ages of 18 and 35, and the divorce of your parents occurred when or before you were 18.
I am 18 years or older and consent to participation
I am not 18 years or older and/or I do not consent to participation

Appendix L

Did your parents divorce when you were between the ages of 0-18?

- ◯ Yes
- ◯ No, I was older