

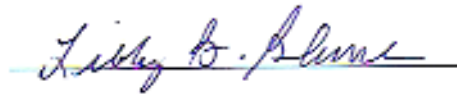
Children's Personalities and Responsibilities: Do Sex and Birth Order Matter?

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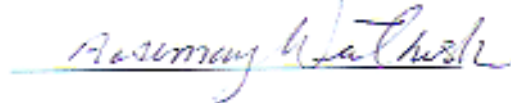
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## **Children's Personalities and Responsibilities: Do Sex and Birth Order Matter?**

For decades, psychology has recognized that both nature and nurture interact to influence development (Anastasi, 1957), yet many researchers have tried to explain personality development to reveal the influences on a person's characteristic way of responding to the expectations of others (Forer & Still, 1976; Sulloway, 1996; de Haan, 2010; Eckstein, et al., 2010). Personality researchers have examined such factors as gender, birth order, and relationships with family members, but previous research has been inconclusive. Many questions remain: To what extent do people display specific traits based on the order in which they were born, on their gender, on the relationship they form with their family, or on society itself? Does a person carry on or adopt specific traits because of their nature or because of the way they were raised and the expectations they face? Also, can personalities be modified? For instance, what would happen if parents raised their children based on their physical abilities for their age instead of their birth order and gender?

### **Historical Overview**

The concept of personality and its development has been of great interest to many early psychologists, such as Sigmund Freud who believed that early interaction influences a child's personality; however, an historical review by Forer and Still (1976) suggests that parental influence alone is not the only factor in shaping a child's personality. One of the most controversial explanations for personality differences is birth order (Forer, 1969; Nyman, 1995; Sulloway, 1996; Eckstein, et al., 2010; Herrera, et al., 2003).

Sir Francis Galton was the first to notice that first-born sons were treated differently than later-born children. Galton concluded that because first-borns were for a time the only children in their family, they developed a closer relationship with their parents in comparison to their

younger siblings, who did not have undivided adult attention (Forer & Still, 1976). Galton also observed that in most families in Victorian England, it was the first-born son the one who was given more responsibilities. Based on the custom of primogeniture, the first-born son would inherit the family fortune and thus be expected to look after the rest of the family members after the father's passing. Furthermore, because of gender bias in the system of primogeniture, first-born males often were given greater privilege, education, and responsibility even if the son had older sisters; he was still the 'first-born son' (Forer & Still, 1976).

Even though the system of primogeniture had declined in Western civilization in the early 20<sup>th</sup> century, Alfred Adler thought that family position still had a strong influence on the personality development of children (Forer & Still, 1976). Essentially, Adler's birth order theory states that children's personalities are influenced by the relationship they have with their siblings and their parents. In theory, because eldest children are singletons for a period of time, they have no one else to imitate or learn from than their parents, causing first-born children to want to pursue parental roles when younger siblings are introduced into the family (Forer, 1969; Sulloway, 1996). As a consequence, parents typically expect the older child to be more capable and responsible than a younger child; this parental expectation encourages the oldest sibling to help care for the younger ones. In turn, last-born children may develop an idea or mindset that sometimes people will be more capable than them, but they need not worry because someone will always be around to take care of them (Forer, 1969). This belief can lead them to be less responsible and more dependent on the people who surround them.

As the historical literature on the subject demonstrates, children were seen to develop distinct relationships with their parents and siblings depending on the order in which they were born. As a consequence, older siblings may tend to be more independent than their younger siblings.

## Review of Literature

### Early Research

Belmont and Marolla conducted a study in 1973 and found that the oldest children showed greater abilities than their later-born siblings. They noted that as the family size increased, the intelligence and ability of the children to be higher achievers decreased (Belmont & Marolla, 1973). Belmont and Marolla (1973) suggested that this finding could be due to a tendency for parents who have larger families to have less time and resources for each child.

Early researchers also found that birth order affects a person's stress response (Weiss, 1970). In a study conducted with 29 participants, Weiss (1970) observed that first-born children, as adolescents, tend to experience stress differently than later-born children. He observed that the heart rate of the first-born participants would significantly increase under stressful situations in comparison to the later-born participants (Weiss, 1970).

In a study conducted in 1976 with a sample of 32 mothers and their first- and second-born children, Jacobs and Moss found that most mothers spent significantly more time stimulating their first-born child than their later-born children (Jacobs & Moss, 1976). However, they observed that gender influenced the degree to which maternal attention decreased toward the second-born child. For instance, they found that there was less of a decrease in maternal attention if the second born was a male and/or was of a different gender than the first-born. A second-born male with an older sister received about the same degree of maternal attention as his older sibling in comparison to a second-born daughter with an older sister who evidently showed a decrement in attention (Jacobs & Moss, 1976).

Vanderkooy Vos and Hayden (1985) were interested in seeing to what degree birth order in marriages affected marital adjustment. They found that marital adjustment was not significantly greater for a couple with an oldest-born wife and a later-born husband (Vanderkooy

Vos & Hayden, 1985). This implies that, at least in terms of complementarity between couples, birth order may play as an important role as gender does. They noticed that due to the shift in traditional structure of a marriage to a more symmetrical and flexible structure, couples are able to learn and exercise their attitudes based on their personalities rather than an assumed traditional male dominant role (Vanderkooy Vos & Hayden, 1985).

Finally, Nyman (1995) conducted a study in which he asked college students to describe certain characteristics or personality traits of each birth order. He found that generally most students described the oldest child as being independent, intelligent, ambitious, responsible, caring as well as being leaders; the middle child as being sociable, thoughtful, responsible as well as insecure and neglectful and the youngest child as sociable, dependent and independent as well as dominant (Nyman, 1995). Paulhus, Trapnell and Chen (1999) found that the notion of personality as a result of birth order seems to be quite accurate. In a study they conducted in four different settings and groups, they found that across all four groups there was a consistency in rating the first-born as most achieving and conscientious and the later-born as rebellious, liberal, and agreeable (Paulhus, Trapnell, & Chen, 1999). Overall, there seems to be a conscientious agreement that first-born children share similar personality characteristics as well as later-born children who share a characteristic of rebelliousness (Paulhus, Trapnell, & Chen, 1999; Paulhus, Wehr, & Trapnell, 2000; Nyman, 1995).

### **Recent Studies**

To date, research conducted in the 21<sup>st</sup> century is mixed as to how much birth order influences personality (Herrera, Zajonc, Wieczorkowska, & Cichomski, 2003; Eckstein, et al., 2010; Saroglou & Fiasse, 2003). Although some studies assessed children's behaviors, others relied on parental perceptions.

### ***Personality***

Herrera, Zajonc, Wieczorkowska, and Cichomski (2003) found that there are, in fact, stereotypical behaviors for first-, middle-, and last-born children as well as for only children. They found that according to the siblings' and mothers' responses, the first-born is ranked to be the most intelligent, obedient, stable, responsible and the least emotional, the middle-borns are most envious and the least bold and talkative, whereas the last-borns are believed to be most creative, emotional, extroverted, disobedient, irresponsible, and talkative (Herrera, Zajonc, Wieczorkowska, & Cichomski, 2003). However, Saroglou and Fiasse (2001), found that contrary to popular belief, it is not the last-born who exhibits more rebellion but rather the second-born child. They noted that the last born, much like the first born, shows conscientiousness, religiosity, and educational achievement--unlike the middle born.

Even though there have been studies in which different personalities are identified and correlated to birth order, Keresteš (2006) found no significant differences in infant temperament based on birth order besides fear. She examined 120 mothers and allowed them to rate their infant's temperament and found that both the first and later-borns showed a similar temperament. The only difference the mothers mentioned is that their first-born children seemed to be less fearful than the later-born children (Keresteš, 2006).

Overall these studies do not support the idea that personality develops based on the order in which you are born. Most researchers agree that even though there are similar personality characteristics among people who share a similar birth order, it is not solely the birth order that determines their personality. It is not a 'one-size fits all' theory (Eckstein, et al., 2010).

### ***Relationships and Intelligence***

Salmon, Shackelford, and Michalski (2012) noted that in relation to the concept of birth-order, perceived parental favoritism can also influence children's personality. In a study

conducted with 306 college student participants, they found that they perceived fathers as favoring their daughters in comparison to their mothers. Also, there seemed to be greater favoritism from both mothers and fathers with their first- and last-born in comparison to middle-born children (Salmon, Shackelford, & Michalski, 2012).

Similarly, parents typically spend 40% more time with their first-born than their last-born (Black, Devereux, & Salvanes, 2005; Black, Devereux, & Salvanes, 2007; Conley & Glauber, 2006; de Haan, 2010; Price, 2008; Keller & Zach, 2002). Researchers have found that in many cases the youngest child shows lower academic performance. One possible reason is that the intellectual environment decreases in influence with birth order. That is to say, parents dedicate less time and resources to the younger children in comparison to the older children at the same age (de Haan, 2010). As a consequence, it is common to find that older or first-born children tend to be higher achievers academically in comparison to their younger siblings (Damian & Roberts, 2015).

In contrast to the previous research, Ejrnæs and Pörtner (2004) found that parents invest more time and energy into their youngest child's education. They inferred that there seems to be preference towards last-born children and therefore a greater emphasis on their education and success in families holding land, but this finding was less pronounced in families with educated parents (Ejrnæs & Pörtner, 2004; Kanazawa, 2012; Damian, Su, Shanahan, Trautwein, & Roberts, 2015). Kanazawa (2012) observed that families where the parents are well educated typically have more control over their fertility and therefore are able to dedicate more time to the younger children in comparison to poorly educated parents who do not typically control their fertility. Another factor to consider in families with educated parents is their socioeconomic status. Generally, parents with an education are higher in socioeconomic status and encourage their children to strive for success (Damian, Su, Shanahan, Trautwein, & Roberts, 2015).

Therefore, if one compares the effect birth-order has among different families to within-family data, it is clear that siblings in the same household with educated parents will show no significant difference in their level of intelligence based on their birth order, possibly due to the heritability of IQ.

### *Gender*

According to McHale, Dotterer, Kim, Crouter, and Booth (2009), a child's personality does not solely develop based on the order in which they were born or the relationship and quality time they had with their parents; the child's personality is also influenced by gender. For example, Nyman (1995) found that there seemed to be a difference in the characteristics associated with first- and later-born children based on their biological sex. The students in his study had higher ratings for the first-born males as self-centered, spoiled, dominant, and independent, whereas the females were rated as spoiled, nurturing, and responsible (Nyman, 1995). Similarly, a difference in characteristics described for each position in the birth order differed based on gender, mostly attributing the strongest characteristics, such as independence, irresponsibility, and laziness, to the males (Nyman, 1995).

McHale, Kim, Dotterer, Crouter, and Booth (2009) concluded that according to social learning and gender schema theories, adolescents learn and adapt to stereotypical masculine and feminine roles and characteristics by being exposed to stereotypical behavior within their families and society itself. Keller and Zach (2002) also observed that mothers prefer to spend more time with their daughters in terms of presence and primary care than with their sons. However, fathers showed a preference towards their sons in terms of presence, but preferred face-to-face interaction with their daughters (Keller & Zach, 2002). This early exposure and attachment to the parental figure of the same and opposite sex can lead the child to develop a relationship with the parent and adopt feminine or masculine characteristics.



In addition, Punch (2001) found that in many of the households studied, division of labor was divided by both age and gender. In all female-sibling households, household labor is genderless because of the need to get it done. In this case, typically the older sisters will do harder work than the younger sisters. However, when there are siblings of both sexes, the household division of labor is fairly genderless until they reach an age where they could handle new responsibilities. That is to say, in Bolivia, where Punch conducted her investigation, all of the children shared similar tasks and responsibilities regardless of their gender, but as they increased in age, their chores became more stereotypically masculine or feminine (Punch, 2001).

### **Research Questions**

Based on the above review of literature, further research is necessary to understand the influence of birth order on individual differences in children's behavior. Therefore, this study was designed to investigate three research questions: (1) Do children aged 10 to 13 years display specific behaviors during social interaction in a middle school classroom based on their birth order and gender?; (2) Are their at-home behaviors related to the maturity and gender expectations of their parents?; and (3) Are children's classroom behaviors related to parental expectations?

While most previous research looks at personality as the perception of self and others, this study examined actual behavior as an indicator of children's characteristic way of responding to situations. For this study, 'personality' was operationally defined as the frequency of observed behaviors as a response to outside expectations or interactions. Overall, I predicted that there would be differences in behavior between first- and later-born siblings as well as between boys and girls, as described below.

### **Birth Order**

Specifically, first-born children were expected to show more working and leadership behaviors, such as dedication to a task, having materials ready for the class, offering to help

classmates, volunteering to help the teacher when it is needed, and taking responsibility for their actions. First-born children also would tend to show more resistance in receiving help from other classmates, but they would be more accepting than the later-born children.

On the other hand, later-born children were expected to show more socializing and accepting behaviors, such as working on their homework while they talk and generally talking to their classmates, than first-born children. Later-born children would also more often accept help from other students, or from the teacher, on their homework. They also were expected to less often follow the rules set by the teachers, such as leaving the room without permission or talking when other people are talking.

### **Gender**

Girls were expected to more frequently socialize than boys, particularly in being talkative with students. Girls were expected to show more working behavior than boys, to generally be more prepared for the classroom with their materials, and to stay on task. Girls also were expected to show greater acceptance in receiving help from another student, unless the other student were the opposite sex. Boys were expected to engage in more leadership behavior by verbally reinforcing self or others, but would have a harder time accepting help from their classmates.

### **Parental Expectations**

Parents were predicted to expect more mature behavior for first-born children than for their later-born children and to expect gender-specific behavior based on their child's sex.

### **Hypotheses**

(1a) First-born children will engage in more working and leading behavior compared to later-born children.

(1b) Girls will engage more in working, socializing, and accepting behavior compared to boys, regardless of birth order.

(2a) Parents will report more mature expectations of working, leading, and accepting behavior for first-born children than for later-born children.

(2b) Parents will report gendered expectations for children regardless of birth order.

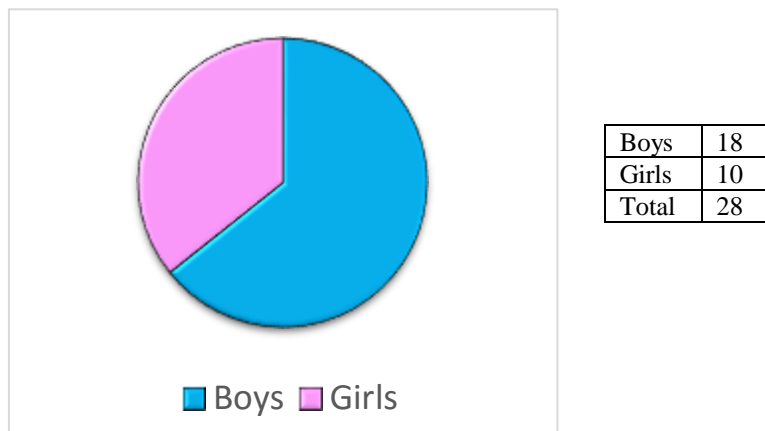
(3) Children's social behavior in the classroom will be positively related to parent expectations.

## Method

### Sample

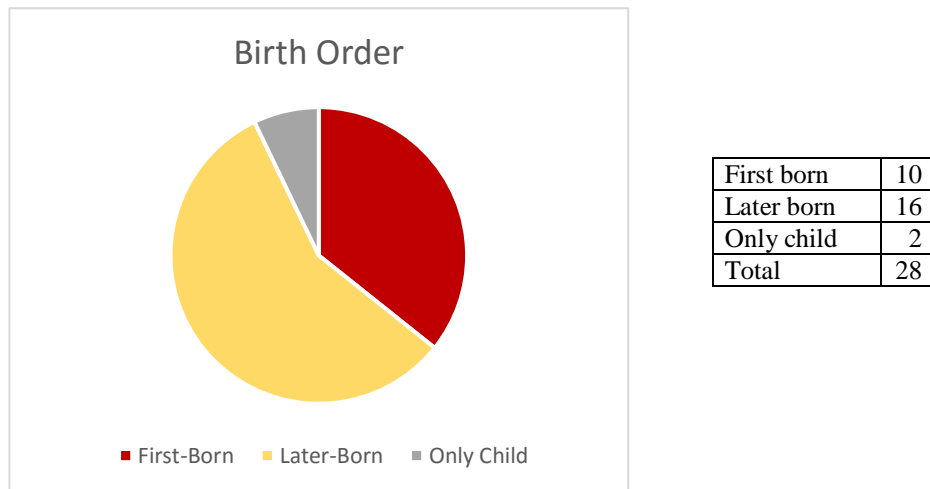
A total of 28 students were observed for this study, 18 boys and 10 girls, most whom were of Hispanic descent (see Figure 1). Observational and survey data was gathered in a Detroit Public Schools (DPS) elementary and middle school during a three-hour afterschool program that seeks to academically enrich students between the grades 5 through 8. Students typically have homework time, science, math, arts and crafts, board game, and fitness education. The program's goal is to provide a free, safe space for students who need to wait for their parents to get out of work and to enrich students in different academic and creative fields.

*Figure 1.*



The study divided birth order into two separate categories, first-born and later-born (see Figure 2). There were two students who were only children; their observations were not used in the birth-order analysis, but they were used in the gender analysis. Out of the 9 girls, 5 were first-born and 4 were later-born. From the 18 boys that were used to evaluate birth order, 5 were first-born and 12 were later-born

*Figure 2*



## Measures

Behavioral observations used event sampling to determine differences in frequencies of positive and negative behaviors between first- and later- born children as well as between children of different sexes.

Parent surveys were intended to measure parental expectations and child's behavior and personality characteristics based on birth order and sex. See sample observational coding sheet and survey questionnaire in the Appendix.

## Procedure

Students were observed in the after-school classroom over a period of three weeks. Each student was assessed on how many times they exemplified the positive behaviors of working, socializing, leading, and/or accepting and the negative behaviors of resisting and/or disrupting.

They were observed one at a time for a period of 20 continuous minutes each. Each student had a total of two observations in different activities, such as homework time, math, and creative arts. To avoid bias and to reduce error, a second observer was invited to conduct observations three times along with the first observer. This reliability coder had the same coding sheet and observed the children for the same period of time as the primary researcher.

A parent survey, which was translated into Spanish and then back-translated to ensure accuracy, was sent home for one parent or guardian to fill out. Each respondent was asked to evaluate the tasks and expectations they had placed on each child based on their birth order and gender. In addition, respondents were asked to write three words describing the personality of each child.

## Results

### Inter-Observer Reliability

A reliability coder blind to children's birth order status conducted 21 observations to show that there was no coding bias towards children in part of the primary researcher. Overall, inter-observer agreement ranged from 84.48% to 100%. The average agreement across the positive behavior categories (working, socializing, leading, and accepting) was 94.14%. The negative behavioral categories (resisting and disrupting) had an average agreement of 93.79%. See Table 1 for inter-observer reliability by behavior categories.

*Table 1.*

<b>Working</b>			<b>Socializing</b>		
	Observer 1	Observer 2		Observer 1	Observer 2
Total:	215	206	Total:	187	180
Agreement:	<b>95.81%</b>		Agreement:	<b>96.26%</b>	

<b>Leading</b>			<b>Accepting</b>		
	Observer 1	Observer 2		Observer 1	Observer 2
Total:	58	49	Total:	45	45
Agreement:	<b>84.48%</b>		Agreement:	<b>100%</b>	

Resisting			Disrupting		
	Observer 1	Observer 2		Observer 1	Observer 2
Total:	14	15	Total:	87	82
Agreement:	93.33%		Agreement:	94.25%	

**Behavioral Differences by Birth Order**

Hypothesis 1a stated that first-born children would engage in more working and leading behavior compared to later-born children. The analysis showed that later-born children averaged higher mean frequencies on leading, accepting, resisting, and disrupting for about half of the behaviors in each category (see Figure 3). First-born means were slightly higher on working and socializing behaviors (see Table 2 for frequencies of each behavior.)

Figure 3

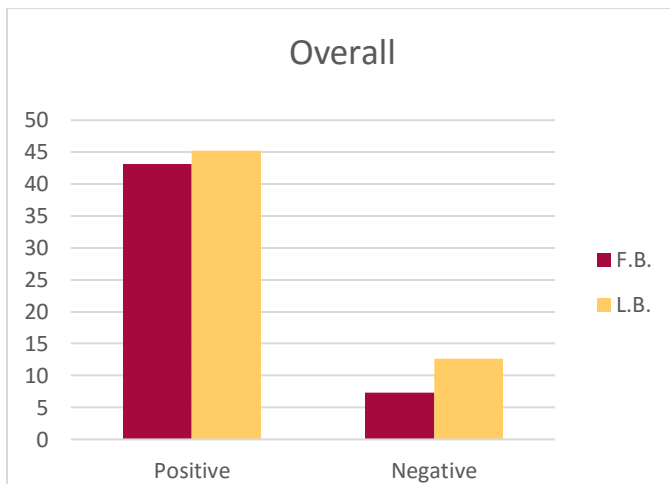


Table 2.

Working			Socializing		
	First born	Later born		First born	Later born
Total:	176	271	Total:	198	260
Average:	17.6	16.94	Average:	19.8	16.25

Leading			Accepting		
	First born	Later born		First born	Later born
Total:	26	97	Total:	31	95
Average:	2.6	6.06	Average:	3.1	5.94

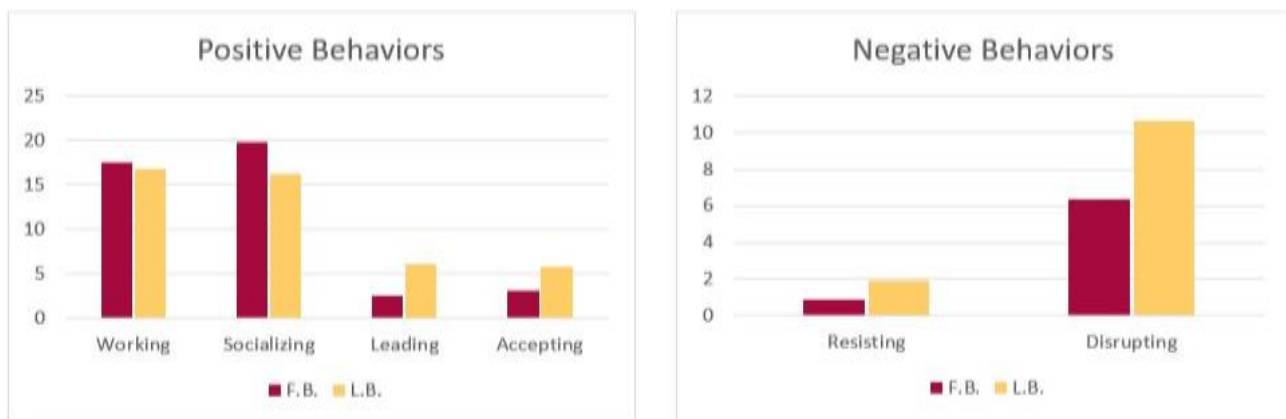
  

Resisting			Disrupting		
	First born	Later born		First born	Later born
Total:	9	30	Total:	64	171
Average:	0.9	1.88	Average:	6.4	10.69

In the category of working, the mean for first-born children was 17.6 while the later-born children averaged 16.9 working behaviors. In socializing, first-born children had a mean of 19.8 and later-born children averaged 16.3 social behaviors. These two categories, although slightly higher for the first-born children, were not different. However, later-born children engaged in about twice as much leading behavior, with a mean of 6.1, whereas first-born children only averaged 2.6. Similarly, for accepting behavior, the mean for later-born children was 5.9 whereas first-borns had a mean of 3.1.

Results for the negative behaviors of resisting and disrupting were similar to those on leading and accepting, with later-born children engaging in approximately twice as many negative behaviors as first-borns. First-borns averaged .9 resistant behaviors while later-borns averaged 1.9. First-borns averaged 6.4 disrupting behaviors, about half as much as later-borns who averaged 10.7. Overall, there was a clear difference in negative behaviors between first and later-born children, but not for the positive behaviors (see Figure 4). The overall means for positive behaviors of first-born students was 43.1, while later-born students had an overall average of 45.2. The overall means for the negative behaviors, however, revealed that later-born children have a tendency to engage in negative behaviors about twice as much as first-borns. The overall mean for negative behaviors was 7.3 for first-borns and 12.6 for later-borns.

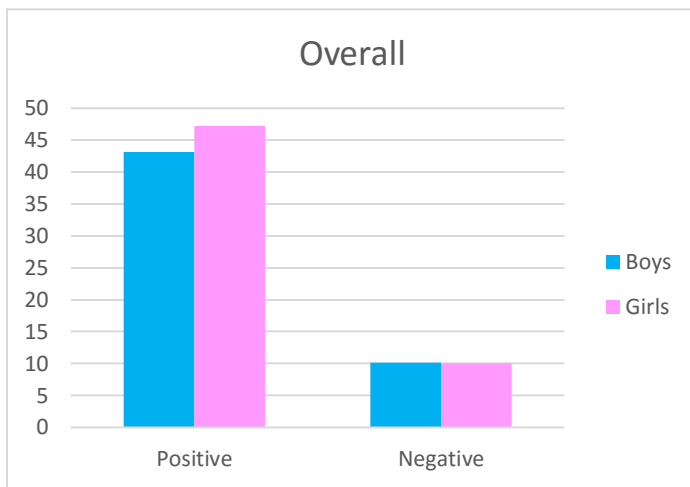
*Figure 4*



**Behavioral Differences by Sex**

Hypothesis 1b. stated that girls will engage more in working, socializing, and accepting behavior compared to boys, regardless of birth order. Results of the observations showed that there was not overall a difference in average behavior between boys and girls (see Figure 5). Both positive and negative behaviors were similar for members of both sexes (see Table 3 for frequencies of each behavior.)

*Figure 5*



*Table 3.*

<b>Working</b>			<b>Socializing</b>		
	Boys	Girls		Boys	Girls
Total:	319	191	Total:	281	198
Average:	17.7	19.1	Average:	15.6	19.8

<b>Leading</b>			<b>Accepting</b>		
	Boys	Girls		Boys	Girls
Total:	83	43	Total:	93	40
Average:	4.6	4.3	Average:	5.2	4.0

<b>Resisting</b>			<b>Disrupting</b>		
	Boys	Girls		Boys	Girls
Total:	27	12	Total:	155	88
Average:	1.5	1.2	Average:	8.6	8.8

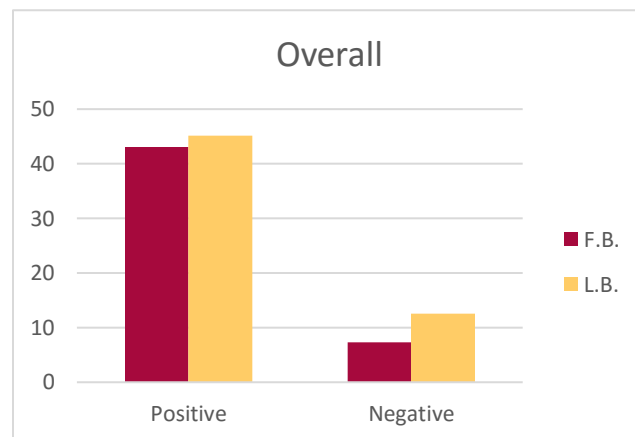


For working, boys averaged 17.7 events in comparison to girls who had a slightly higher average of 19.1. For socializing, boys had averaged 15.6 interactions while girls averaged 19.8. This category manifested the largest difference in average behavior between the sexes. The girls in the group were more often talkative and observed being on their phones. For leading behaviors, the boys averaged 4.6 times and the girls averaged 4.3. For accepting, the boys averaged 5.2 compliant events while the girls averaged a 4.

The averages for negative behaviors of resisting and disrupting were the same across all the students. For resisting, the boys had an average of 1.5 negative events and the girls had a similar average of 1.2. Similarly, for the category of disrupting, the boys averaged 8.6 while the girls averaged 8.8.

Overall, boys had an average of 43.1 for positive behaviors and the girls average 47.2 for positive behaviors; a difference of about 4 points. For negative behaviors, the boys averaged 10.1 while the girls had an average of 10, virtually identical (see Figure 6).

*Figure 6*



Although not predicted, the interaction between birth order and gender was also examined. The observed behaviors in all six categories for first-borns were compared to later-born by gender. The results showed that first-born girls had higher frequencies in behaviors

involving socializing (See figure 7). For the rest of the observed behaviors, later-born girls had higher frequencies (see Table 4 for frequencies of each behavior).

Figure 7

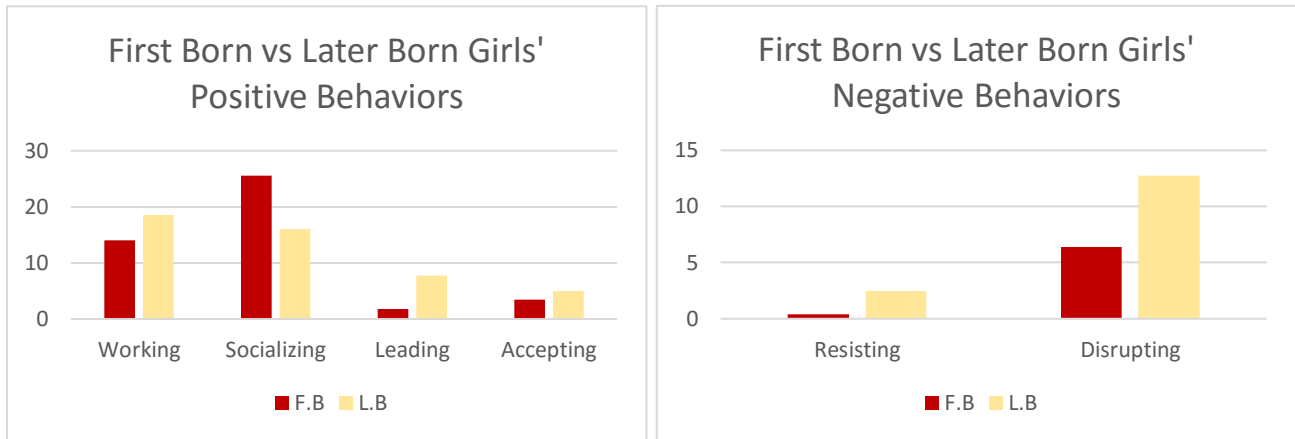


Table 4

<b>Working</b>			<b>Socializing</b>		
	F.B Girls	L.B Girls		F.B Girls	L.B Girls
Total:	70	74	Total:	128	64
Average:	14	18.5	Average:	25.6	16

<b>Leading</b>			<b>Accepting</b>		
	F.B Girls	L.B Girls		F.B Girls	L.B Girls
Total:	9	31	Total:	17	20
Average:	1.8	7.75	Average:	3.4	5

<b>Resisting</b>			<b>Disrupting</b>		
	F.B Girls	L.B Girls		F.B Girls	L.B Girls
Total:	2	10	Total:	32	51
Average:	0.4	2.5	Average:	6.4	12.75

When comparing first-born males to later-born males, the results showed that first-born boys engaged slightly more in working (See figure 8). In all of the other areas, later-born boys engaged in slightly higher frequencies (See Table 5 for frequencies of each behavior).

Figure 8

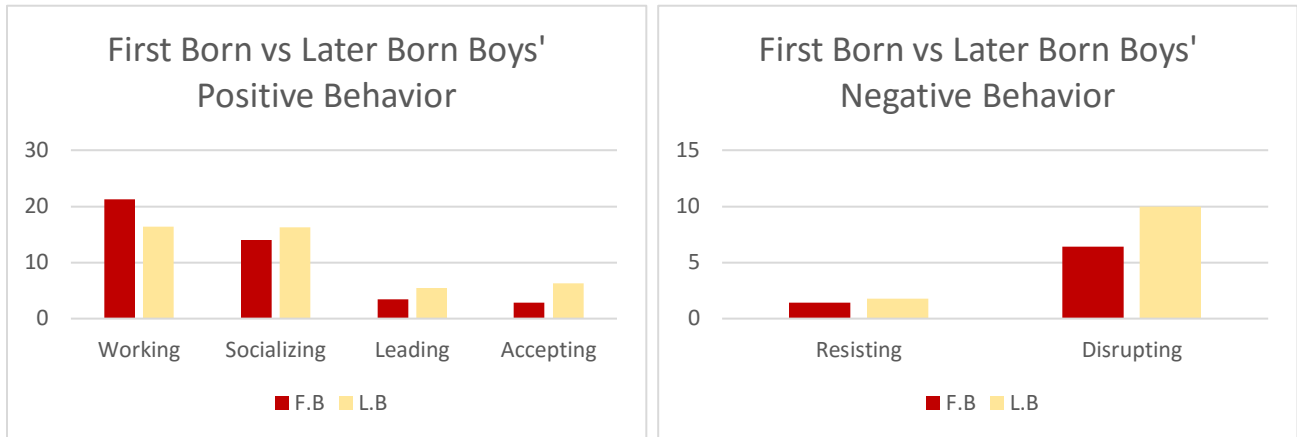


Table 5

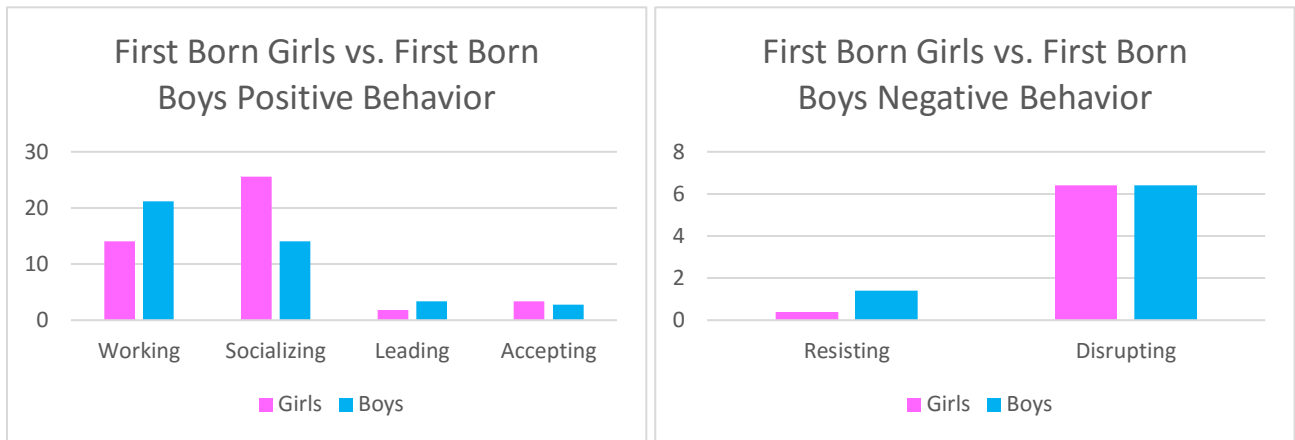
<b>Working</b>			<b>Socializing</b>		
	F.B Boys	L.B Boys		F.B Boys	L.B Boys
Total:	106	197	Total:	70	196
Average:	21.2	16.4	Average:	14	16.3

<b>Leading</b>			<b>Accepting</b>		
	F.B Boys	L.B Boys		F.B Boys	L.B Boys
Total:	17	66	Total:	14	75
Average:	3.4	5.5	Average:	2.8	6.3

<b>Resisting</b>			<b>Disrupting</b>		
	F.B Boys	L.B Boys		F.B Boys	L.B Boys
Total:	7	22	Total:	32	120
Average:	1.4	1.8	Average:	6.4	10

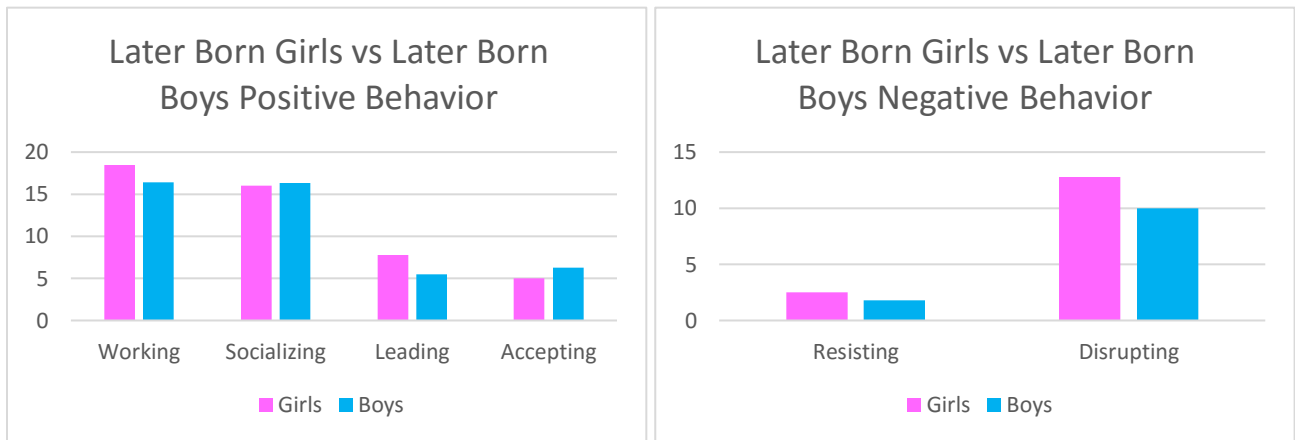
When first born girls and boys were compared, the results showed that first born girls engaged about half as much in socializing as boys. Boys’ average frequencies were about half as much as girls in resisting, leading, and three-fourths higher in working (See figure 9).

Figure 9



When later born girls and boys were compared, it was found that overall, both genders were almost equal in all areas. Girls had slightly higher frequencies in working, leading, resisting and disrupting. Boys had slightly higher frequencies in accepting, and were about equal in socializing (See figure 10).

Figure 10



Hypothesis 2a stated that parents will report more mature expectations of working, leading, and accepting behavior for first-born children than for later-born children. Hypothesis 2b parents will report gendered expectations for children regardless of birth order. Finally, hypothesis 3a stated that children’s social behavior in the classroom will be positively related to parent expectations.

Each student took home a survey for their parent or legal guardian to answer. The survey had questions regarding household tasks and how they are determined. The survey's goal was to determine to what degree parent's expectations influenced their child's personality and if their expectations were reflective of their children's personality in the classroom. During the course of the research, out of 28 surveys handed out, only five were returned. The surveys were not enough to analyze and draw conclusions from them, but the comments on the five returned surveys did help explain, or infer, the results found.

## **Discussion**

### **Birth Order**

Herrera, Zajonc, Wieczorkowska, and Cichomski (2003) suggested that first-born children would typically rank higher in intelligence, obedience, and responsibility. Saroglou and Fiasse (2001) reported that later-born children exhibit more rebellion than first-born children. However, the results from these observations do not entirely support the previous research. For instance, even though first-born students did average slightly higher frequencies of working and socializing, the later-born students averaged about twice as much in the remaining four categories. When birth order was analyzed in interaction with sex, the results were fairly similar to the overall birth order analysis. First born girls versus later born girls showed overall that later born girls had about twice as much in leading, accepting, resisting and disrupting. First born boys versus last born boys obtained very similar results.

The category which seems to contradict previous research is that of leading. According to the results of this study, later-born children were about twice as likely to engage in leading behavior than their first-born counterparts, regardless of sex. This seems to contradict the idea that the older siblings will be natural leaders because they will often times be expected to help take care of their siblings.

This unexpected finding may be explained by examining the five survey responses that were received from the parents. In the survey, one of the questions asked whether or not chores were assigned based on birth order or on age. All five respondents agreed that the chores were based on age, and that all of their children had to do chores regardless of their birth order. In other words, all children were expected to help with chores, such as washing dishes, sweeping, or helping outside with the lawn regardless of who is older. This may lead to children not defining clear 'leadership' expectations solely based on their birth order which suggests that gender and age complicates birth order expectations of parents.

During the observations, the later-born children were more likely to offer assistance to other students or take leadership in classroom activities such as volunteering to help the teacher. Later-born children were also twice as likely to participate in accepting behavior than their first-born counterparts. This was somewhat reflective of previous research because it makes sense for later-born children to be accustomed to receiving help from others such as their parents, older siblings, and teachers.

What did support previous research, particularly the idea that later-born children are more rebellious, were the results for the negative observations. According to the analysis, later-born children are twice as likely to engage in resisiting and disrupting behavior than the first-born students, regardless of sex. It is important to clarify that in the resisting category, however, the later-borns were most likely to need correction more than once. The later-born children were also more likely to move around the room and to leave the room without previously asking for permission. These two acts of rebellion are reflective of the previous research.

### **Sex Differences**

Even though Keller and Zack (2002), and Punch (2001) said that gender influences a child's personality because it will essentially provide them a stereotypical idea of what

femininity and masculinity look like, the present results do not show a clear difference in behavior between boys and girls. The analysis did not show an overall distinction between behaviors and the biological sex of the students in the program. However, when comparing first born girls and boys, the results showed that boys had somewhat higher frequencies in working, leading and resisting. First-born girls were more sociable compared to later-born girls. This may be due to the fact that first-born boys are typically expected to be leaders and an example to their younger siblings while the first-born girls may be expected to be more caring to their younger siblings. Later born boys and girls reflected the overall gender comparison in that they were about equal in every category.

The overall finding was not predicted and somewhat surprising. Since the overwhelming majority of the students are of Hispanic decent, there tends to be a culture of machismo and as Punch (2001) stated, there are clear expectations for members of each sex (2001). Even though these students come from a culture that encourages differences in behavior based on sex, the children in this study did not seem to show stereotypical differences. For instance, it was expected that boys would show more negative behaviors than girls, but the results for the overall and later-born analyses do not support previous findings.

This similarity in behaviors may be explained by five parents who responded that they had the same expectations in regards to chores for children of both sexes. The survey that was sent to the students' parents asked them if they thought that boys should help wash dishes, sweep and help around the house and if girls should help outside with the lawn. All five parents answered 'yes.' This may be due to a change in culture among the new Hispanic generations in the United States. It appears they are abandoning the 'machismo' that has been a part of their cultures and adapting a more 'equal' ideal.

Even though the girls in the class were observed working and socializing slightly more frequently than boys, there was not a clear difference in the overall observations and the later-born comparison. Although in the present study, observation of first-born girls and first-born boys reflected gender expectations, the overall analysis did not support the stereotype that girls are usually more talkative than boys..

### **Conclusion**

Sir Francis Galton observed that first-born children had a closer relationship with their parents because they were, for a time being, only children (Forer & Still, 1976). This led to Alfred Adler developing birth order theory which stated that a child's personality was influenced by his/her position in the family (Forer & Still, 1976). In theory, the older the child the more likely they were to imitate their parents and to adapt more 'mature' behaviors. In a later study, Nyman (1995) found that there are differences in characteristics associated with first and later-born individuals. Essentially, he found that older siblings were rated as more independent, responsible, caring leaders. He also observed that there were different characteristics associated with both genders. He found that while a male was ranked as self-centered, dominant, and independent, females were ranked as nurturing and responsible (Nyman, 1995).

Recent studies have both supported and refuted birth-order theory. Keresteš (2006) found no significant differences in infant temperament based on birth order besides fear. Saroglou and Fiasse (2001) observed that, contrary to popular belief, it is not the youngest sibling who shows more rebellion; rather it is the second-born child. They assert that the last-born sibling is much like the first born in conscientiousness, religiosity, and educational achievement (Saoglou & Fiasse, 2001). Dotterer, Crouter and Booth (2009) found that children are influenced by social learning and gender schema theories, learning and adapting to stereotypical masculine and



feminine characteristics and behaviors. Punch (2001) also noticed that much of the household decision of labor is divided by gender.

The present study sought to answer the question of what influences behavior: birth-order, sex differences, and/or parental expectations. Hypothesis 1a, stated that first-born children would engage in more working and leading behavior compared to later-born children. Although this hypothesis was not completely supported by this study, it was not completely refuted. The study found that first-born children engage in more working and socializing behavior than their later-born counterparts, but do not show as much resisting and disrupting as later-born children. Hypothesis 1b predicted that girls would engage in more working, socializing, and accepting behavior than boys. This study found that overall, girls engage in working and socializing behaviors with a slightly higher frequency than boys. The remaining four categories of leading, accepting, resisting, and disrupting were generally equal to boys. Hypothesis 2a, 2b, and 3 could not be analyzed by this study due to the low parental response.

### **Limitations of the Study**

One of the limitations this study encounter was that during the observations, only one out of ten girls, was in the fifth grade; the remaining nine girls were seventh graders. This caused there to be little variability in age for the girls. Another limitation was that this study did not distinguished between first-born, second-born, third-born, etc. children. The children were grouped into two categories, first-born and later-born. We were unable to analyze the difference in behavior between second-born and third-born children. Also, this study did not control for number of children in a family nor years of spacing between siblings.

This study could be improved by more subjects being observed and having greater parental participation. The low parental response on the survey portion limited the results and success of the study. The survey portion of the study would have been able to provide insightful

information to be able to better determine and compare the expectations parents have for their children and the behavior of the children. These surveys could have helped answer the second and third hypotheses and provide a better understanding of the results for the first hypothesis. A future and more complete study should include both more child participants and parental survey respondents. Perhaps it would be beneficial to personally talk to the parents or to set a meeting time or appointment to encourage them to answer the surveys.

### **Recommendations for Educators**

The results of this study could help educators determine whether to expect certain behaviors with more frequency from later or second-born children as well as for boys and girls. This study does not intend a 'one-size-fits-all' approach since all children are different, but it would help teachers have a better understanding of why certain children may engage in a behavior with more frequency than another. This does not mean that negative behaviors will be justified or tolerated with the excuse that it is expected of them for being later-born or boys. However, if a teacher were aware of the child's birth order within his or her family, he or she would have a better understanding what parental and family interactions may be for that child. It would be beneficial for educators to understand the dynamics of their student's families and to understand the family's perspective on sex roles.

### **Implications for Parents**

This study could also help parents understand how their interaction with their children may affect their personality formation and their behaviors in the classroom. If a parent or legal guardian can understand that certain interactions trigger certain behaviors, they may have more opportunities to help their children develop positive behavioral characteristics. It is imperative for parents to understand that they can influence on their child's behavioral responses and views of gender roles. In order for girls and boys to develop to their fullest potential, it is important for

parents to encourage equal household tasks and encourage children of both sexes to participate in activities or chores that society would normally be attributed to a specific sex.

### **Recommendations for Future Research**

Future research would benefit from observing the children's behavior at home with their siblings and their parents as well as in the classroom to allow the researcher to better compare how children behave around their siblings versus how they behave around classmates. It would also demonstrate how differently a child behaves when instructed to complete a task by a parent or guardian versus when instructed by a teacher. Observing students in their homes would also allow the researcher to take into account spacing between siblings to see how that affects their behavior. In future studies, the students also should be given the opportunity to self-report so that the researcher can compare how the parent perceives the child, how the child perceives him or herself, and how the child is actually behaving. Lastly, future research should include a wider range of ages and a larger, more diverse sample to better understand how culture influences children's behavior.

### **Summary**

Overall, this study found that birth order may have a greater influence on a child's developing personality than their biological sex. The study also supported the idea that later-born children tend to engage more frequently in negative behaviors, thus being considered more rebellious. Surprisingly, there was not much of a difference in behavior between boys and girls, possibly suggesting that the social construct of gender does not necessarily influence a person's behavior to the degree birth order and interactions with family members do. Hard-worker, leader, sociable, accepting, resistant, and disruptive may all be used to describe a person's personality. Although there is no argument that individual differences in personality vary from person to person, what shapes that personality is still debatable.

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**Appendix**



**Study of Child Responsibilities**

Respondent: \_\_\_ Mom \_\_\_ Dad \_\_\_ Other (please explain \_\_\_\_\_)

Age of child: \_\_\_\_\_

Sex: \_\_\_ Male \_\_\_ Female

Order of birth: \_\_\_ First-born \_\_\_ Middle child \_\_\_ Last-born (youngest)

Number of children in family: \_\_\_ Boys \_\_\_ Girls

Number of children currently living in household: \_\_\_ Boys \_\_\_ Girls

Does the older child ever watch for his/her younger siblings? \_\_\_ Yes \_\_\_ No

Are there assigned chores for children? \_\_\_ yes \_\_\_ No

If yes, please describe

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How frequently do the chores switch? (circle best option)

1	2	3	4	5
Don't switch (stay the same)	change a little	Are variable (Depends)	Change frequently	Chores are not fixed (Everybody does everything)

Are chores assigned based on age, or on birth-order? (mark your best option)

\_\_\_ Age \_\_\_ Order of being born

\_\_\_ Other (please explain) \_\_\_\_\_

Does the youngest child have the same expectations as an older sibling did at that age? (mark your best option)

\_\_\_ Yes \_\_\_ No

Please explain why

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**Behavioral Observations Definitions****Working**

Overall definition: The child follows directions and works on an assigned task for the duration of a minute.

- *Silently reads book or works on homework:*  
Definition: The child reads a book or works on homework without engaging in a conversation for the duration of the minute
- *Dedicated to a task:*  
Definition: The child works on a task uninterrupted for the duration of the minute
- *Has materials for classroom:*  
Definition: The child has all of the materials needed to complete their task. Does not need to ask someone to borrow the material (i.e. pencils, paper, etc)
- *Raises hand to ask/answer a question:*  
Definition: The child participates in the class by raising their hand.
- *Works on a task with others:*  
Definition: The child works on a task (i.e. homework or another activity) with one or more classmates.

**Socializing**

Overall definition: The child engages in conversations or social interactions with classmates or teachers for the duration of a minute.

- *Reads or works on homework while talking:*  
Definition: The child engages in a conversation with a classmate, while doing their homework. They do this simultaneously, not exclusively.
- *Uses mobile phone:*  
Definition: The child takes out their mobile phone.  
Ex. Uses the phone to listen to music, take pictures, text their friends or go on social media.
- *Talkative with student/s or group:*  
Definition: The child talks with another student or a group of students. They do not do this while working on a task or doing homework. It is exclusively talking.
- *Talkative with teacher:*  
Definition: Starts a conversation with a teacher (or adult) in the room. This conversation is not related to academics. The child simply wants to talk to the teacher.
- *Participates in Class:*  
Definition: The child participates in the classroom discussion or activity  
Ex. Child begins to talk or participate without raising their hand.

- Ex. The child works on an activity and cooperates with the teacher by following the instructions that were given.

### Leading

Overall definition: The child volunteers to help others and takes responsibility for actions.

- *Offers to help classmate/s with homework:*  
Definition: Child helps classmates with tasks.  
Ex. "Let me help you"  
"let me show you"
- *Verbally reinforces self or others:*  
Definition: Child is encouraging to self for others.  
Ex. "I can do this"  
"You can do this"  
"I'm so smart"  
"You're so smart."
- *Volunteers to help the teacher*  
Definition: Child is willing to help the teacher when asked.
- *Takes initiative or leadership*  
Definition: The child takes action without being prompted.  
Ex. "We should..."  
"I think we should..."  
"Let me..."
- *Takes responsibility for actions*  
Definition: Confronts the consequences of what has been done.  
Ex. "I did"

### Accepting

Overall definition: The child accepts and follows rules. The child accepts help from others.

- *Asks for permission to leave the room*  
Definition: Child asks the teacher to for permission to leave the room prior to leaving.
- *Sits quietly waiting for instructions*  
Definition: For the duration of the minute, child waits silently for instructions from teacher to start working.
- *Accepts help from another student*  
Definition: The child is open to receiving help from others students.
- *Accepts help from a teacher*  
Definition: The child is open to receiving help from the teacher.

- *Apologizes*

Definition: The child realized he has misbehaved, and is able to admit it.

### Resisting

Overall definition: The child does not cooperate with students or teachers.

- *Refuses to help a classmate with homework*

Definition: The child is not cooperating with other classmates in homework.

- *Needs to be corrected more than once*

Definition: The child is not following directions and needs to be told more than once.

- *Refuses help from another student*

Definition: The child rejects help from classmates.

- *Refuses help from a teacher*

Definition: The child rejects the teachers' help.

- *Does not apologize*

Definition: The child does admit or recognize wrong-doing, refuses to apologize.

### Disrupting

Overall definition: The child exhibits aggressive behavior and distracts others.

- *Verbal aggression towards classmates*

Definition: The child uses negative language against others. (Emotional bullying)

Ex. "You're dumb"  
"You're fat"  
"You're ugly"

- *Physical aggression towards classmates*

Definition: Child physically hurts another person.

- *Interrupts someone who is speaking*

Definition: Child talks when another person is talking in a disruptive manner.

- *Leaves the room without permission*

Definition: Child exits the room without notice.

- *Moves around the classroom*

Definition: Child doesn't sit still for the duration of the minute.

Ex. Walks, run, moves around.

- *Contradicts teacher (talks back)*

Definition: Child talks back to a teacher