

EXCLUSION OF YOUTH WITH DOWN SYNDROME:
EFFECTS OF AGE, MORAL REASONING, AND PAST EXPERIENCE

by

JENNA REARDANZ

FRANCES A. CONNERS, COMMITTEE CHAIR
KRISTINA L. MCDONALD, COMMITTEE CO-CHAIR
JENNY CUNDIFF
HYEMIN HAN
MENGYA XIA

A DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in the Department of Psychology
in the Graduate School of
The University of Alabama

TUSCALOOSA, ALABAMA

2021

Copyright Jenna Reardanz 2021

ALL RIGHTS RESERVED

ABSTRACT

Social exclusion can be detrimental to those who experience it (Killen, 1991). Experiences of exclusion can increase the likelihood of later internalizing and externalizing issues (Masten, Eisenberger et al., 2009; Denham, et al., 2017). Research among typically developing (TD) children and adolescents suggests that there is a curvilinear trend of exclusion, in that exclusion peaks during early adolescence (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983). Additionally, research suggests that as youth get older they tend to use more morally based reasoning when deciding if they are going to include or exclude a peer (Smentana, et al., 2012; Wainryb, et al., 2005; Smentana, 2013). Past research has primarily focused on the exclusion of a TD peer, instead of a peer with a disability. A few seminal studies have demonstrated that those with a disability may be at a higher risk to be excluded when compared to TD peers (Gasser, Malti, & Buholzer, 2012). Additionally, past research suggests that positive past experiences may increase the likelihood to include a peer with a disability (Armstrong, et al., 2016; Nowicki, 2006). The current study found the expected curvilinear trend of excluding others, especially when the excluded peer had Down syndrome (DS), as well as the expected impact of both disability type and situation on rates of exclusion. Linear trends of moral reasoning with age were found in specific disability and situation interactions. However, the relationship between past experience and moral reasoning with exclusion was not substantiated.

DEDICATION

This dissertation is dedicated to everyone who supported, guided, and believed in me throughout the course of its completion. Specifically, I want to dedicate this work to Dr. Noel Wescombe who was the first to help me see that a PhD was a real possibility. His encouragement to seriously consider a doctoral degree started me on this path and his support during the application process was instrumental in my success. Although he is no longer here to read this, I am forever grateful for his belief in me. I especially want to thank a few additional people. First my mentors for giving me the opportunity and guidance to pursue and succeed on this path. Second, my friends who have advised, listened, and helped me to laugh through this process. Last, but not least, I want to thank my family for always supporting me and raising me to believe that I could do anything I set my mind to.

LIST OF ABBREVIATIONS AND SYMBOLS

DS	Down syndrome
PD	Physical disability
TD	Typical developing
ID	Intellectual disability
ASD	Autism spectrum disorder
DIT	Defining Issues Test
r	Pearson product-moment correlation
t	Computed value of t test
F	Computed value of F test
TVEM	Time Varying Effect Modeling
ICT	Intergroup Contact Theory
SDT	Social Domain Theory
N	Total sample size
>	Greater than
η^2	Eta Squared effect size
CHS	Children Helping Science
M	Mean
SD	Standard Deviation

ACKNOWLEDGEMENTS

I am grateful to have the opportunity to thank those who have helped me during this project. First, to my friends and family for always supporting and encouraging me. I could not have done this without them. From offering advice to simply listening, their support has been invaluable to me. Second, to my mentors, Fran Connors and Kristina McDonald, I am incredibly grateful. They took a chance in agreeing to co-mentor me and research areas beyond their own areas. Their guidance has been immensely helpful and key in getting to where I am. Their input, guidance, and encouragement throughout this process have been absolutely essential. I would also like to thank the other members of my dissertation committee, Mengya Xia, Hyeman Han, and Jenny Cundiff, for their input, expertise, and support of this project and my research interests. I am so grateful to each of the professors who took the time to encourage and support me in the pursuing of my doctoral degree. Especially Patricia Bruininks who introduced me to research and Noel Wescombe who first made me believe a PhD was an option. I would like to thank each school administrator and teacher for their assistance in connecting me with families interested in participating in this study. Finally, I am incredibly grateful for each parent who encouraged their child to participate and each youth who took the time to complete the measures.

CONTENTS

ABSTRACT.....	ii
DEDICATION.....	iii
LIST OF ABBREVIATIONS AND SYMBOLS.....	iv
ACKNOWLEDGEMENTS.....	v
LIST OF TABLES.....	vi
LIST OF FIGURES.....	x
INTRODUCTION.....	1
Peer Exclusion.....	2
Theoretical Foundations	8
Moral Reasoning and Acceptance of Social Exclusion.....	20
Past Experiences	24
Current Study	26
METHODS.....	32

Participants.....	32
Measures.....	34
Procedure.....	40
Piloting.....	41
RESULTS.....	43
DISCUSSION.....	65
Main Findings.....	65
Importance & Future Directions.....	74
Policy Implications.....	80
REFERENCES.....	82
APPENDICES.....	90

LIST OF TABLES

1. Participant Demographics.....	33
2. Reasoning Choices.....	37
3. Quantity Measure CFA Fit Indices.....	39
4. Quantity Measure CFA Factor Loading.....	39
5. Descriptives.....	46
6. Correlations of Main Constructs.....	47
7. Mixed ANOVA Exclusion.....	50
8. Mixed ANOVA Moral Reasoning.....	51
9. Moral Reasoning Predicting Exclusion	53
10. Experience Quality and Exclusion Correlation.....	59
11. Past Experience and Exclusion ANOVA.....	60
12. Quantity of Past Experience and Moral Reasoning Correlation.....	61
13. Quantity of Past Experience and Moral Reasoning Regression.....	62

14. Summary of Findings.....64

15. Piloting Demographics.....91

16. Piloting Results.....93

LIST OF FIGURES

1. Representation of Expected Exclusion.....	29
2. Expected Mediation.....	31
3. Exclusion by Disability & Vignette.....	49
4. Moral Reasoning by Disability & Vignette.....	52
5. TVEM: Overall Exclusion.....	55
6. TVEM: DS Exclusion.....	55
7. TVEM: DS Intellectual Exclusion.....	56
8. TVEM: DS Physical Exclusion.....	56
9. TVEM: DS Non-Ability Exclusion.....	56
10. TVEM: PD Exclusion.....	56
11. TVEM: PD Intellectual Exclusion.....	57
12. TVEM: PD Physical Exclusion.....	57
13. TVEM: PD Non-Ability Exclusion.....	57

14. DS Intellectual Vignettes Mediation Model.....	63
15. DS Non-Ability Vignettes Mediation Model.....	63

INTRODUCTION

Children know from a young age that it is wrong to act in ways that are harmful to others, yet throughout the lifespan, individuals continue to exclude each other (Killen, 1991). When one is excluded from a group it can be acutely painful and detrimental for healthy social and emotional development and academic success (Masten, Eisenberger, Borofsky, Pfeifer, McNealy, Mazziotta, & Dapretto, 2009; Denham, McGee, Eriksson, McGrath, Norman, Sawyer, & Scott, 2017). Children who are socially excluded are significantly more likely to experience mental health issues, like depression and anxiety, and to be socially maladjusted (Wesselmann, Gryzbowski, Steakley-Freeman, DeSouza, Nezek, & Williams, 2016). Excluded youth are likely to have few quality reciprocal friendships or friend groups, and finally, these children are significantly more likely to exhibit internalizing and externalizing dysfunction (Vanhalst, Van Peteghem, & Soenens, 2017). Oftentimes individuals experiencing exclusion may struggle to learn and develop social skills that support further social success, thus exacerbating, and sometimes increasing the exclusion that the individual faces (Wesselmann, et al., 2016). Conversely, children who are included by their peers are more likely to be successful socially, emotionally, and academically (Masten, et al., 2009).

Existing research indicates that children with a disability are at a higher risk to be excluded by their peers (Gasser, Malti, & Buholzer, 2012). However, research is only beginning to consider how typically developing (TD) children consider and reason about their decisions to

exclude or include youth with a disability, like Down syndrome (DS). The current study examined the trends of exclusion of youth with DS across age. Additionally, this study explored how past experiences with someone with DS, situation type, and the use of moral reasoning influence the exclusion of youth with DS.

PEER EXCLUSION

Much of the research investigating peer exclusion focuses on the exclusion of TD youth. This research demonstrates that from childhood through late adolescence there is a curvilinear relationship between an individual's age and their likelihood to exclude a peer. It seems that the decisions to exclude others tend to peak around early adolescence with lower rates in both childhood and later adolescence (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983). Although this pattern is widely supported (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983; Theimer, Killen, & Stangor, 2001), some studies do not find this curvilinear trend. For instance, Killen and Stangor (2001) found that when youth were given the option to choose a peer in an activity that mismatched the peer's gender or racial stereotype, (e.g., a boy in ballet class) most chose to include the peer regardless of age. These findings were in direct contradiction to other literature, even going against another study that utilized a very similar procedure. This deviation from the larger body of literature was explained through older children's ability to understand and consider histories of opportunity. In other words, younger participants seemed to get caught in the stereotype less than older participants. Specifically, when asked about why they rated exclusion as acceptable, younger participants were more likely to cite the stereotype mismatch or match compared to the older age groups. For example, younger participants were less likely to accept exclusion when the stereotype matched (ex. A girl

in ballet class) compared to when there was a stereotype mismatch (ex. A boy in ballet class; Theimer, Killen, & Stangor, 2001).

However, the majority of the research does suggest a peak in exclusion and approval of exclusion around early adolescence (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983; Theimer, Killen, & Stangor, 2001). Therefore, this pattern is fairly well established in the literature studying TD individual's exclusion of peers.

While research does demonstrate a common pattern of exclusion across age there is little research that investigates if the same pattern is seen when the excluded individual has a disability. There are a select few studies that suggest that exclusion may be a common experience for individuals with a disability, especially those with an intellectual disability (ID; Twyman, Saylor, Saia, Macias, Taylor, & Spratt, 2010; Solish, Perry, & Minnes, 2010). Specifically, one study (Twyman et al., 2010) focused on the ostracism and bullying of children between 8 and 17 years of age who had some kind of special medical need. These needs included learning disability/ID, attention deficit or hyperactivity disorder, autism spectrum disorder (ASD), behavioral or mental health disorders, and cystic fibrosis. During the child's visit to their primary care physician, they were asked to complete the *Reynolds' Bully-Victimization Scale* (Reynolds, 2003) and a 15-item social ostracism scale that was created for this study. This study found that children with a disability were at a generally higher risk to be excluded by peers. Additionally, the group of children with ID reported the highest rates of both exclusion and bullying (Twyman et al., 2010). It is important to understand that this study reports only preliminary findings and is based on a relatively small sample size of participants with an ID (N

= 34). That being said, this study clearly demonstrates that having a special healthcare need or disability seems to increase the exclusion that youth face.

A second study (Solish, Perry, & Minnes, 2010) demonstrated similar results, however, investigated a wider range of activities. In this study researchers focused on youth between the ages of 5 and 17 years who were either TD, had ASD, or an ID. The parents of each individual completed a questionnaire created for this study, *The Activities Questionnaire*, in which they reported on their child's participation in social, recreational, and leisure activities. This questionnaire included 34 items with subscales for different activities. For each item, parents were asked; 1) if their child participated in the activity, 2) the frequency that the child participated, 3) with whom their child participated, 4) who arranged that activity and 5) who (if anyone) supported the child in the activity. For both social and recreational activities, participants with ASD or ID participated significantly less than TD peers. Additionally, when looking at social activities, those with ASD and ID seemed to have a parent involved more frequently than TD participants. These results suggest that many social activities that youth with an ID or ASD participate in are organized and/or hosted by parents instead of peers (Solish, Perry, & Minnes, 2010). Similar to the study that was previously discussed, there was a relatively small sample size (N = 30) of participants with ID. However, this study also indicates that participants with ID do not seem to be included in activities at a comparable level to those who are TD.

A study by Reardanz et al. (2019) focused specifically on individuals with DS and suggests that youth with DS are less socially accepted than TD peers. This study focused on participants between the ages of 11 and 18 years both with DS and those who are TD. Participants in this

study completed a modified version of the *Child Social Experiences Questionnaire* (CSEQ; Crick & Grotpeter, 1996). Results from this study indicated that those with DS reported significantly more incidents of victimization compared to their TD peers. Additionally, those with DS also reported being the recipient of prosocial acts significantly less than their TD peers. This study also demonstrated that when relational victimization, which includes things like social exclusion, is paired with the received fewer prosocial acts, it may indicate that those with DS are "neglected peers". In other words, these results seem to suggest that those with DS are left out or excluded, more than their TD peers. Altogether, these studies establish that those with ID are at a heightened risk to be excluded by peers (Schwab, Gebhardt, & Huber, 2016; Reardanz, et al., 2019; Gasser, Malti, & Buholzer, 2012).

A similar line of research moves beyond surveying the experiences of youth with ID or DS and investigates the decisions of TD youth to include or exclude (Schwab, Gebhardt, & Huber, 2016; Malti, & Buholzer, 2012). These studies seem to, at least preliminarily, confirm the findings of the previously discussed research; those with DS or ID are often excluded. One study, in particular, concentrated on how teacher feedback impacted the social acceptance of a fictional peer with DS compared to a TD fictional peer (Schwab, Gebhardt, & Huber, 2016). Participants in this study were 3rd and 4th-grade students in Austria and Germany. In this study, researchers utilized a computer-based task where participants were introduced to a new virtual, gender-matched classmate. This classmate either had DS, indicated by a picture of the student, or no visible disability. In addition to the image of the "new classmate", participants were given feedback regarding teacher opinion and game playing ability. Feedback was randomly assigned to be either positive or negative. Participants were then asked how much they would want to sit next to the new fictional peer on a five-point Likert scale. Results indicated that when a fictional

peer had positive feedback, especially positive feedback from the teacher, participants were much more likely to indicate that they wanted to sit near that fictional peer. However, across feedback types, participants were less likely to want to sit next to a peer with DS compared to a TD peer. Thus, indicating that the fictional peer with DS was less socially accepted than the TD peer (Schwab, Gebhardt, & Huber, 2016).

Another line of research has investigated how TD youth consider and think about including peers with DS. Gasser et al. (2012) investigated the inclusion of children with an intellectual or physical disability based on integrated classrooms in Switzerland. This study also looked at the impact of participant age and contact history with peers who have a disability. Specifically, this study worked to investigate how inclusive educational settings and moral emotions impacted the inclusion decisions of typically developing peers towards those with a disability. In this study participants between 9 and 12 years of age were presented with vignettes and asked to make judgments towards fictional peers who chose not to include someone with a disability. The excluded peer in the story had either an ID or a physical disability (PD). After the participant was shown the vignette explaining that the fictional child with a disability was excluded, they were asked questions like “*What do you think, is it good or bad that _____ decided to exclude _____?*” Participants were also asked to justify their reasoning. Additionally, participants were asked to predict how they would feel if they chose to exclude the child with a disability. These responses were then coded to assess 1) if the participant evaluated the exclusion as right or wrong and 2) what justifications were used. Justifications were primarily rooted in either morally based emotions (happiness, guilt, empathy, etc.) or amoral emotions (fear, anger, etc.). A very small number of participants, less than 5%, used both moral and amoral justifications in this study. Participants also reported on their own sympathy towards children with disabilities and

their past experience (called “contact intensity”) with others who have a disability (Gasser, Malti, & Buholzer, 2012).

Results of this study indicated that the majority of participants judged the exclusion of either peer (ID or PD) as wrong and reported relatively high sympathy for children with a disability. Additionally, this study demonstrated that when a participant reported more contact (i.e., was a student in an inclusive classroom), they were more likely to have higher sympathy and utilize more morally based judgments than participants who had less contact history (Gasser, Malti, & Buholzer, 2012). This study indicates that there seems to be sympathy for children with a disability when they are excluded. However, participants were not asked if they themselves would choose to include, thus indicating a need to investigate not just the acceptance, but also the rates of exclusion/inclusion.

The current study built on the work of Gasser et al. (2012) to investigate several questions. First, the current study investigated how disability and situation impact TD youth’s exclusion decisions. Second, the study explored how moral reasoning was related to exclusion decisions. Third, the current study assessed age patterns in the decision to exclude youth with disabilities. Finally, the study examined how individual experiences with peers who have disabilities are predictive of exclusion decisions, comparing how TD youth make these decisions similarly or differently with regards to peers who have different kinds of disabilities. We compared exclusion decisions about youth who have PD and DS because these groups are at higher risk to experience exclusion (Twyman, et al., 2010; Solish, Perry, & Minnes, 2010; Schwab, Gebhardt, & Huber, 2016; Reardanz, et al., 2019; Gasser, Malti, & Buholzer, 2012).

This study focuses specifically on youth with DS, opposed to ID more generally, for a few main reasons. First, DS is the most commonly known genetic cause of ID, with about 6,000 babies born each year in the United States with DS (Kozma, 2008; Mai, et al., 2019). This birth rate means that there are over 400,000 individuals with DS living in the United States today (Mai, et al., 2019). The sheer number of individuals with DS means that the likelihood of a TD individual interacting with them is fairly high. However, it is not only the number of individuals with DS that dictates the importance of the study. Individuals with DS have distinctive facial features (e.g., slanted eyes, flattened facial features, that make them more easily identifiable than other types of ID; Kozma, 2008). Additionally, those with DS tend to be more likely to be in special education settings and have poor communication and emotion regulation skills, all increasing the risk for adverse social experiences (Godleski, Kamper, Ostrov, Hart, & Blakely-McClure, 2015; Murphy, Faulkner, & Reynolds, 2014). Each of these factors converges to potentially increase the risk of exclusion for those with DS even more than those with other disabilities. The current study aims to investigate the risk of those with DS being excluded compared to another group at high risk for peer exclusion: youth with PD (Lindsay & McPherson, 2011). Additionally, comparing two groups with disabilities allows for investigation of the impact of the *type* of disability, not just the impact of disability generally. Therefore, this study will focus on comparing the exclusion of those with DS to those with a PD.

THEORETICAL FOUNDATIONS

To fully comprehend the moral reasoning of youth, it is important to understand the theories that make up the current conceptualization of its development. Moral development is commonly defined as the principles that guide both social interactions and relationships (Bond, 1980).

Kohlberg's theory of moral development (1969), Neo-Kohlbergian theory (Rest, Narvaez, Thoma, & Bebeau, 2000) and Social Domain Theory (SDT; Turiel, 1983) are a few of the forefront theories of moral development and are vital to understanding the decisions children and adolescents make in regard to excluding peers.

KOHLBERG'S THEORY OF MORAL DEVELOPMENT. Kohlberg's theory of moral development hypothesizes that with age and improvements in cognitive functioning moral reasoning becomes more advanced. Specifically, Kohlberg's theory suggests that with age individuals develop more morally advanced forms of reasoning (Kohlberg, 1969; Kohlberg & Hersh, 1977). This theory consists of three major levels, preconventional, conventional, and postconventional, with two stages in each level. In the preconventional moral level, individuals face the first two stages, *obedience/punishment*, and *self-interest*. Then, during the conventional level of moral development, individuals move through the third and fourth stages, *conformity and personal accord*, and *authority and social order*. Finally, during the post-conventional level, individuals face the final two stages, *social contract* and *universal principles*.

Specifically, in the first level, preconventional, young children between infancy and about age five, demonstrate reasoning which is based on rules and tangible consequences (Kohlberg & Hersh, 1977). During this level of moral development, young kids move through two stages: *Obedience and Punishment* (stage 1) and *Self-Interest* (stage 2). First, they enter a stage of moral development centered around obedience and punishment and then move to a second stage focused on their own self-interest (Kohlberg & Hersh, 1977). A child at this level of development may base judgments of exclusion on if they had been explicitly taught that it was

wrong, if they had been punished for excluding a child in the past, or if it suits their own self-interests to exclude.

With advances in cognitive abilities children become more able to reason in complex moral ways. As children become older, they move into a conventional state of moral reasoning. This level of reasoning is largely driven by the social context in which one operates. This context could be macro, like one's nationality, or on a more micro level, like one's peer group (Kohlberg & Hersh, 1977). Children are typically in this stage from around 5 through 12 years of age. Moral decisions are made based on rules and regulations dictated by one's context. Specifically, during this level youth move through two stages: *Conformity and Interpersonal Accord* (stage 3) and *Authority and Social Order* (stage 4). First, morality is based on conformity and interpersonal relationships, specifically seen through efforts to create and maintain friendships. Second, youth in this conventional level of moral development, move through morality based on authority and social order. This is seen as an increase in the fixation on rules and an emphasis on maintaining social order (Kohlberg, 1969). This differs from previous stages as children are using their understanding of their own context to establish the rules. For example, a child in this stage may understand that there are different rules at home and at school, so action may be acceptable in one context and not in the other.

During late adolescence, individuals generally move to the post-conventional level. They begin to be able to reason in an even more abstract and advanced manner (Kohlberg, 1969). Once again, during this level, individuals tend to move through two stages of moral development: *Social Contract* (stage 5) and *Universal Principles* (stage 6). Specifically, there is an emphasis on morality that is based on one's social context and universal principles. The focus

on morality based on one's social context is similar to the previous stage, however, there is less of an emphasis on maintaining order and more on the definition of morality by the group. For example, someone in this stage of moral development may define their morality based on how their social group defines it and not simply on if it will disrupt group functioning. When an individual moves to the last stage, focusing on the idea that morality is based on ideals that are mutually beneficial, they are typically an adult (Kohlberg & Hersh, 1977). An individual in the postconventional level of moral reasoning can separate that even though something goes against the laws of a situation it still be may be morally correct.

This theory outlines six stages of moral development framed in three levels: pre-conventional, conventional, and post conventional. Kohlberg's theory is based loosely on ages and patterns of development, however, not everyone follows the same patterns (Kohlberg & Hersh, 1977). It is important to understand that some individuals may not ever reach the later stages of moral development, and others may move through the stages very quickly. Essentially, although there are general age guidelines, there are no firm developmental checkpoints for moral development within Kohlberg's theory.

Originally these conclusions were drawn from interviews and subjective ratings by researchers (Kohlberg, 1958; 1969). However, with time, more objective and uniform methods of measurement were established. Specifically, to assess moral reasoning in Kohlberg's theory participants were presented with standardized interview prompts that involved a moral dilemma. The responses were rated or coded using Standard Issue Scoring which assesses a combination of the dilemma itself, the issue, social norms, and elements of moral content that are presented (Kohlberg, 1981; Damon, 1983; Turiel, 1979; Colby, Kohlberg, Gibbs, Lieberman, Fischer, &

Saltzstein, 1983). This method has been used in a variety of studies and was synthesized and confirmed during a large-scale, 20-year longitudinal study in which American male participants were followed over time (Colby et al., 1983).

While Kohlberg's model of moral development is still referenced today, it is not without critique. Two main concerns of this theory include moral relativism and that that theory is biased towards males (Harman, 1978; Vitz, 1994). Moral relativism is the idea that moral guidelines are based on one's own self and culture. In other words, what one considers morally right or wrong varies between individuals and cultures (Harman, 1978). Stage placement is based on the "moral correctness" of the participants' answers (Vitz, 1994). However, moral relativism poses that each individual has their own set of moral criteria defined by their context (Harman, 1978). Due to the manner of assessment, critics of Kohlberg's theory argue that it is impossible to assess individuals based on Kohlberg's stages while simultaneously encompassing moral relativism. Specifically, there is concern surrounding what is considered the "morally correct" answer. According to moral relativism, what is morally correct likely differs between individuals and cultures. Thus, the theory may not be accurate across all people (Vitz, 1994).

This theory is not only criticized for issues of moral relativism, there also seems to be a bias towards more stereotypical male ways of thinking (Vitz, 1994). Due to this male-centric viewpoint, concerns about the application of the theory across gender have been widely established (Hogan & Emler, 1978; Gilligan, 1977, 1982, 1987). The initial development of Kohlberg's stages was entirely based on samples of young American males (Kohlberg, 1958; Gilligan, 1977), yet the theory has been generalized to people of all genders. The theory neglects to incorporate the moral worth of constructs that are societally associated with more stereotypical

female ways of thinking, like caring and mercy. Simultaneously Kohlberg's theory places an emphasis on the importance of more stereotypical male ways of thinking, centered on issues of justice and fairness (Gilligan, 1977; 1987). Despite facing critique, Kohlberg neglected to make major changes in the model to incorporate a wider concept of morality, thus potentially calling the theory into question (Brown & Tappan, 1991).

NEO-KOHLBERGIAN THEORY. In order to address many of the concerns raised about classic Kohlbergian moral development, researchers have continued to investigate and revise his theory and its stages in response to criticisms and new research (Rest, Narvaez, Thoma, & Bebeau, 2000; Thoma, 2014). This revised theory, called Neo-Kohlbergian Theory, poses moral schemas, instead of Kohlberg's stages. This vernacular shift demonstrates a move from firm stages to more "soft" stages in which someone increases in moral complexity with usage (Rest et al., 2000). Additionally, this new theory is more concrete, specific in each stage, takes into account cognitive operations, and poses a less universal theory. The newer theory addresses cultural differences that may play a part in moral development (Rest, et al., 2000). Many of these findings are based on the *Defining Issues Test* (DIT; Rest 1979) that was created loosely on Kohlberg's moral stages. The DIT has been used in many studies that have shown empirical support not only for this measure, but also for the Neo-Kohlbergian approach itself (Rest, et al., 1999).

This theory poses three unique moral schemas in which individuals ascend during development. These schemas track loosely with the stages of moral development that were proposed by Kohlberg; however, the first stage is not included in Neo-Kohlbergian theory. The first schema is the *Personal Interest Schema*, which is a combination of Kohlberg's stages of

Self-Interest (stage 2) and *Conformity and Interpersonal Accord* (stage 3). This schema has a main focus surrounding the personal rewards and punishments that an individual faces in a moral situation (Rest, et al., 1999). For example, an individual who is operating in this stage would likely choose to include a peer because they know that if they do not, they may be punished by a parent or teacher.

The second schema or the *Maintaining Norms Schema* is similar to Kohlberg's fourth stage of moral development, *Authority and Social Order*. Individuals in this schema focus on the moral basis of society and what it perceives as good and bad or right and wrong. Individuals in this stage of moral development would be likely to include a peer if they believe that their social culture is one that promotes inclusion (Rest et al., 2000). For example, if an adolescent were to operate in a school that strongly promoted a culture of inclusion, they would likely be more apt to include a peer because they are operating within a larger context that promotes inclusion.

The final schema of the Neo-Kohlbergian theory is the *Post-Conventional Schema*, which is a combination of Kohlberg's stages of *Social Contract* (stage 5) and *Universal Principles* (stage 6). In this stage, individuals demonstrate that moral decisions should be processed based on shared, reciprocal ideals, and should be discussed or criticized when needed. This stage of development differs from the previous stage due to the more advanced cognitive processes that are relied upon. In the previous stage, individuals are focused on the social definition of what is morally right. Conversely, in this stage, individuals are more focused on the intersection between personal and societal definitions of morality. This stage encourages discussion and, when needed, revisions to the definitions of morality. The majority of youth and adolescents do not operate in this stage of moral development (Thoma, 2014). However, if an individual in this

stage were to make a decision regarding inclusion, it is likely that they would base it on the ideals and universal principles of morality in which their group or society operates.

SOCIAL DOMAIN THEORY. While Kohlberg's theory is still utilized in the explanation and understanding of moral development, Social Domain Theory (SDT) has developed more recently, and empirical support of SDT is growing (Turiel, 1983; Smentana 2013). SDT, like both Kohlberg's theory and Neo-Kohlbergian theory, focuses on the impact of cognitive development on moral reasoning. However, SDT also focuses on the importance of peer interactions and context in the development of morality (Smentana, 2013). The premise of SDT is that moral, social-conventional, and personal domains are unique from one another and have distinct contributions to the development of moral reasoning. This theory also highlights that at a very young age children are able to integrate all dimensions into their reasoning. Moral domains commonly include ideas surrounding fairness, justice, and doing what is right (Smentana, 2013). Social-conventional reasoning is based on social norms and expectations grounded strongly in one's social context (Smentana, 2013). Finally, the personal domain includes factors like choices over one's own body, privacy, and activity (Nucci, 2008).

Similar to the later stages of Kohlberg's theory and Neo-Kohlbergian theory, SDT poses that all three of these domains are shaped by both social experiences and consistencies within one's social environment. For example, if a child is consistently exposed to social situations in which they are encouraged to consider the feelings of another, they may be more likely to use those thoughts in future situations. However, SDT seems to place greater emphasis on the social context throughout all stages of development than both Kohlbergian and Neo-Kohlbergian theories. Not only does SDT assert that individuals' domains are shaped by social experiences,

but it also poses that one can, and often does, utilize multiple domains in conjunction to make decisions (Smentana, 2013). It is important to understand that development within SDT is not always linear, meaning that the use of each of the domains does not follow a single trend of development. An individual could utilize more morally based reasoning in one situation and more conventional reasoning in another. Therefore, it is important to understand that context for the decision plays an important role in the decision itself. Essentially, SDT allows for individuals to emphasize the domain that they deem to be the most important in each situation. SDT also poses that situational factors may make certain forms of reasoning more likely. For example, if an individual is making a decision regarding if they should help a classmate, they may utilize more rule based reasoning if a teacher is present compared to if no teacher is present (Smentana, 2013). Due to SDT's flexibility, ability to incorporate multiple domains, and the precedent from past studies examining exclusion, it will be primarily utilized as the main theoretical backing for the current study.

Studies investigating issues surrounding social domain theory (SDT) typically utilize forms of vignettes and follow-up questions to assess youth's reasoning. Specifically, youth are presented with a social situation, through a written vignette (Park & Killen, 2010; Hitti, Mulvey, Rutland, Abrams, & Killen, 2014), interviews (Killen, Clark, Richardson, Crystal, & Ruck, 2010), or a combination of a pictorial and verbal description (Killen & Stangor, 2001). Then youth are asked to make a morally based decision, like whether or not to include a hypothetical peer (Park & Killen, 2010; Hitti, et al., 2014). Youth are then asked to explain or assess the choice that was made either through an interview (Killen, et al., 2010; Killen & Stangor, 2001) or written prompt (Park & Killen, 2010; Hitti, et al., 2014).

Specifically, in one study (Park & Killen, 2010), researchers were interested in assessing the evaluation of peer exclusion in different contexts based on cultural differences in Korea and the United States. In this study, participants read a short vignette where one child is excluded and then were asked to evaluate the acceptability of that decision. Participants indicated this decision on a 1-6 Likert scale and then wrote their justification for this decision. These answers were then coded for reasoning type based on a coding system used in previous research (Killen et al., 2002; Smetana, 2006; Tisak, 1995; Turiel, 2006). Responses were coded to fit in three main categories: moral, social-conventional, and psychological. Within these main categories, there were five more specific codes, two moral (prosocial/empathy and fairness/discrimination), two social-conventional (group functioning/stereotypes and external influences), and one psychological (personal choice). These coding groups, moral, social-conventional, and personal/psychological, firmly fit into the social domain theory (Park & Killen, 2010; Smetana, 2006; Turiel, 2006; Killen, Lee-Kim, McGlothlin, & Stangor, 2002). Thus, indicating the solid match between social domain theory and the exclusion justifications given by youth. This match is important as it demonstrates that youth are organically utilizing the domains that are posed in SDT. This study indicated success for this format of data collection and found that participants viewed the exclusion as more acceptable when the excluded peer was a part of a different group (nationality) in both countries (Park & Killen, 2010).

SDT-based studies investigating exclusion generally find that the use of moral reasons increases with age. Younger children generally tend to focus on the other two domains, personal choice and social-conventional, opposed to the moral domain (Smetana, 2006; Turiel, 2006; Killen, et al., 2002). However, it is important to understand that even at a young age, children are able to reason in multiple domains simultaneously. The age differences found are likely due to

the prioritization of different domains in decision making, not that certain domains are entirely neglected or ignored. The prioritization of each domain varies not only from person to person but between situations as well. For example, preschool-aged children focus more on moral issues when presented with situations of physical harm than when confronted with issues of equality and fairness (Smetana, Kelly, & Twentyman, 1984).

While younger children do utilize moral reasoning, they tend to use it at a lesser rate than older children and adolescents (Smetana, Jambon, Conry-Murray, & Sturge-Apple, 2012). When assessing moral ability, it is important to also take cognitive development into account. It has been suggested that younger children use less moral reasoning because they have a less developed theory of mind. As young children develop this skill, they are more able to take the perspective of another and thus reason in a morally advanced manner (Smetana, et al., 2012). As children age, they become more focused on issues of fairness, although not yet fully understanding issues of equality until later (Davidson, Turiel, & Black, 1983). Children often struggle to differentiate between fairness, like everyone receiving the same thing, and equality, like everyone having the same opportunity for success (Wainryb, Brehl, & Matwin, 2005). For example, if child A needs assistance to complete a task, while child B does not need the same assistance, a child may focus on the lack of fairness in the situation instead of the equality created. A child would likely judge this situation as unfair *and* unequal, and struggle to comprehend the differences between the two. This leads to children focusing strongly on fairness and rule-based issues when reasoning about morality (Wainryb, Brehl, & Matwin, 2005).

Not only is morality centered around fairness during early and middle childhood, but much of the focus is also placed on concrete acts, like physical transgressions (Davidson, Turiel,

& Black, 1983; Wainryb, Brehl, & Matwin, 2005). However, as children get older and move into late childhood, around 10 – 12 years old, they begin to focus on a wider range of issues. Specifically, children become more able to understand and focus on a wide range of moral transgressions, expanding from just physical harm to include things like social exclusion. It is possible that this expansion is a result of an increase in the ability to reason and think in an abstract manner (Wainryb, Brehl, & Matwin, 2005).

During adolescence, individuals become more able to understand issues of equality, instead of simple fairness, as well as more complex and ambiguous social situations (Nucci, 1981; Smentana, 2013). As individuals develop from childhood through adolescence there seems to be a broad trend of the increasing use of moral reasoning. However, research has found that there seem to be periods of transitional growth during adolescence that impact one's ability to reason morally (Nucci and Turiel, 2009). Specifically, younger adolescents tend to take a more egotistical perspective and are more strongly influenced by things like group membership and functioning when thinking about including others in activities (Cooley, Elenbaas, & Killen, 2016). A young adolescent may be able to abstractly reason about an issue and come to a decision based on moral concerns, however when actually confronted with the same situation, more weight may be placed on group functioning. For example, in a study looking at the impact of gender and race/ethnicity on exclusion, young adolescents used social-conventional reasoning like a “*student likes different music, so he/she won’t fit in with the group*” as reasoning to exclude the individual (Killen et al., 2002). This is not a unique finding as a review article found this to be a trend among individuals during this age and stage of development (Killen, 2007). In later adolescence, individuals become more able to disentangle their personal choices and focus more on the moral aspects of a situation (Smentana, 2013).

MORAL REASONING AND ACCEPTANCE OF SOCIAL EXCLUSION

As previously described, there is a relationship between age and one's ability to reason morally, in that with age moral reasoning increases. Specifically, as individuals age, they tend to move towards more universal principles, or the ability to operate based on one's individual moral standards (Kohlberg, 1969; 1975; Gewirth, 1978). This relationship not only applies to general moral reasoning but also to the reasoning behind decisions made to include or exclude a peer (Theimer, Killen, & Stangor, 2001). This increase in moral reasoning is likely tied to the acceptance of social exclusion. These constructs, the use of moral reasoning and the acceptance of exclusion, seem to follow closely to the reasoning that is used in each developmental stage (Killen & Stangor, 2001; Malti & Ongly, 2014). It seems that these two constructs are inextricably linked throughout development.

In childhood, individuals tend to morally operate under what they have been instructed often citing rules and what they have been directly taught or instructed by a teacher or a parent (Malti & Ongley, 2014). For example, when older children (8 years old) were asked to give "donations" to a fictional peer in need, they utilized non-moral reasoning, like "*The teacher might find out and get angry*" more than moral reasoning. Interestingly, this study found that children who did use moral reasoning were more likely to donate to the fictional peer (Malti & Ongley, 2014). Additional research has also demonstrated that elementary school-aged children tend to use non-moral reasoning more than moral reasoning (Killen, 2007; Theimer, et al., 2001). Thus, when elementary school-aged children are asked about their reasoning to include or exclude a peer they often cite rules about including peers and explain that their decision was based on these rules (Killen, 2007; Theimer, et al., 2001). This focus on the rules often seems to

lead children to reject social exclusion. Children are often taught that it is "mean" or "not nice" to leave someone out, thus leading them to not condone the behavior (Malti & Ongley, 2014).

As children age into early adolescence, about age 13-15 years, their moral reasoning becomes more advanced and they begin to operate under the guise of mutual reciprocity with those around them and an understanding that social actions have reciprocal consequences (Killen, Sinno, & Margie, 2007). Once again, this parlays into the peer relations arena as adolescents are more likely to cite things like the importance of group functioning or the desire to fit in with a group as reasoning to include or exclude a peer (Cooley, Elenbaas, & Killen, 2016). This type of reasoning corresponds with greater exclusion than during other developmental periods. Not only is more exclusion seen during this period, but young adolescents also tend to condone exclusion at a higher rate than both children and older adolescents (Killen, Sinno, & Margie, 2007).

There seems to be a relatively sudden increase in the acceptance of exclusion during early adolescence. In fact, one study indicates that, while the majority of young adolescents do condemn exclusion, there seems to be an increase of those who condone it during this time (Malti, Ongley, Dys, & Colasante, 2012). It is important to note that many adolescents reported negative emotions, like guilt, when a peer was excluded, especially if the exclusion was viewed as intentional harm. However, many are able to mentally negotiate the exclusion of peers to be less impactful, and thus less condemned, by focusing on the lack of intentionality in the decision. Specifically, these adolescents are able to convince themselves, whether or not it is objectively accurate, that the exclusion of a peer is done in a way that was not *intentionally* meant to cause harm. It is not that these complex rationalizations are unique to young adolescents, but rather that

the frequency they occur seems to increase during this time, in turn increasing the rates of exclusion as well (Malti, et al., 2012).

Additionally, during early adolescence, social groups and group functioning become significantly more important (Smentana, 2013; Park & Killen, 2010). Thus, when asked about their reasons for exclusion or inclusion, youth tend to justify exclusion based on social conventional or personal domain reasons. For example, a young adolescent may say something like *“It’s her decision who she wants to be friends with”* (personal), *“Girls are not supposed to play with baseball cards”* (conventional), or *“If you let someone new in the group, they won’t know how it works or what it’s about and it will be disruptive”* (group function) when justifying their decision to exclude a peer (Killen, 2007; Killen & Stangor, 2001; Malti & Ongly, 2014; Killen, 2007). Since group functioning and membership significantly increase in their importance during early adolescence, these reasons are more widely accepted during this developmental period as a reason to justify exclusion (Smentana, 2013). These justifications seem to also extend to the acceptance of other's exclusion. Specifically, that exclusion is more acceptable if the excluded peer could alter the social order or negatively impact group functioning.

With age, moral reasoning continues to become more complex. Potentially as a result of this higher-order moral reasoning, a drop in the amount of exclusion is seen (Malti, Ongley, Dys, & Colasante, 2012). It is important to note that across development the majority of individuals cite exclusion as wrong and choose not to exclude peers. For example, across age and excluded groups, children choose to include a peer at rates from 80% - 95% (Killen & Stangor, 2001; Killen, 2007). Additionally, according to SDT, children and young adolescents are not amoral,

they simply place a greater emphasis and importance on more socially related reasoning than their older counterparts (Killen, 2007; Killen, Lee-Kim, McGlothlin, & Stangor, 2002).

While there seem to be relatively clear developmental trends of both moral reasoning and the acceptance of exclusion, group membership must also be taken into consideration. When exclusion based on one's group membership, like race or gender, is studied, a layer of complexity is added. Past research has shown that from a young age most children rate exclusion based on group membership as morally wrong, yet some still seem to exclude based on race or gender (Theimer, Killen, & Stangor, 2001). Specifically, one study investigated the reasoning that youth use when asked about exclusion based on race and gender (Killen & Stangor, 2001). In this study, White children and adolescents between 5 and 13.5 years of age were asked to evaluate situations in which a group was considering excluding a fictional peer. In each of these situations, the fictional peer's stereotype did not match the situation or group activity. For example, stereotype mismatched situations included a boy joining ballet, girls trading baseball cards, a Black child in a math club, and a White child playing basketball. After the situation was presented, children answered questions about their judgment of the situation; *"Is it alright or not alright to exclude the [nonstereotypic] child from the activity?"*, *"Who should the club pick?"* and rate how bad it would be on a 0-6 Likert scale to exclude the child. Although a majority of participants objected to the idea of exclusion based on group membership, adolescents were more likely to exclude a peer based on race and gender when the situation did not match with the stereotypical view of gender or race. For example, participants were less likely to include a male in a ballet club compared to a girl, or a White student in a basketball club compared to a Black student (Killen & Stangor, 2001).

These studies give insight as to what youth consider to be important when considering excluding a peer. For example, older children may focus on what they have been taught about if it is permissible to exclude others (Killen, 2007; Theimer, et al., 2001; Malti & Ongley, 2014), while younger adolescents may focus on how the peer will impact their group (Killen, Sinno, & Margie, 2007; Cooley, Elenbaas, & Killen, 2016), and older adolescents focus most on the harm that comes from exclusion (Malti, Ongley, Dys, & Colasante, 2012). When individuals are more aware of the harm that exclusion can cause, they are less likely to choose to exclude (Rutland & Killen, 2015). Therefore, the current study assessed the predictive nature of moral reasoning on exclusion decisions when a peer has a disability.

PAST EXPERIENCE

While both age and moral reasoning are strong influences on one's choice to include or exclude, they are not the only factors. Past research has demonstrated that when the excluded individual is a part of an outgroup, such as being from a different race or ethnic group or having a different ability level, one's experience with the outgroup is predictive of inclusion (Valls & Kyriakides, 2013). Research has shown that those who have more experience with another group are more likely to include members of that group (Valls & Kyriakides, 2013).

One theory that serves to support the idea that increased contact leads to more positive behaviors, such as inclusion, is Intergroup Contact Theory (ICT). This theory originally posed that when there is contact in which individuals have equal status, common goals, cooperation, and shared support of authority, positive group effects will occur (Allport, 1954). However, due to criticism, largely surrounding the lack of generalizability of the theory (Pettigrew, 1986; Brewer & Miller, 1988; Hewstone, 1996) the theory has evolved (Pettigrew, 1998). In recent

years this theory has been conceptualized as more inclusive of situations and has been generalized beyond interracial relations (Pettigrew, Troop, Wagner, & Christ, 2011).

A large-scale meta-analysis indicated that ICT tends to reduce prejudice; however, the positive benefits tend not to generalize outside of the specific outgroup members that one interacts with (Pettigrew, et al., 2011). These findings show that if an individual has had positive experiences with someone with DS, this will likely result in a lessened prejudice against others with DS but may not generalize to people with other intellectual disabilities. Not only have these studies demonstrated that ICT benefits relations between people of different ethnicities and races, but also those with different sexual orientations and ability status (Pettigrew & Troop, 2006; Pettigrew, et al., 2011).

Research suggests that children with experiences with others who have a disability are more accepting towards peers with disabilities and there is a strong connection between the amount of contact one has had with someone with a disability and their self-reported attitudes. Specifically, one study illustrated this relationship with youth ages 7-16 years (Armstrong, Morris, Abraham, Ukoumunne, & Tarrant, 2016). Youth reported on both their past contact with and attitudes towards individuals with disabilities through the *Chedoke-McMaster Attitudes Towards Children with Handicaps (CATCH)* scale (Rosenbaum, Armstrong, & King, 1986). Results demonstrated that overall, participants who reported more contact also reported more positive attitudes. Interestingly, this relationship was stronger for the younger participants than the older youth (Armstrong, et al., 2016). Along with other studies, this research seems to indicate that more contact with individuals with a disability yields more positive attitudes (Beaulieu-Bergeron & Morin, 2016; Nowicki, 2006).

While there seems to be a relatively well-established link between experiences and attitude, the impact on behavior is less studied. There is evidence that connection between experiences and behaviors exists. Specifically, if a child has positive past experiences, they may be more likely to include a peer with a disability (Lindsay & Edwards, 2013). While this research was done with a disability on a broad level, there is nothing to suggest that this pattern would be different for individuals with DS. Additionally, it seems when children are given the opportunity to interact in positive ways with peers with a disability, they are more likely to act inclusively in the future (Lindsay & Edwards, 2013). While the current study will not measure behaviors in the “real world”, it will measure the inclusion/exclusion decisions that participants make. The current study aims to integrate and investigate the importance of past experiences with youth with DS as predictors of exclusion decisions and reasoning for these decisions.

CURRENT STUDY

The current study had a number of main goals. First, this study investigated the relationship between disability type and situation. The current study also investigated how the use of moral reasoning was related to exclusion decisions, how exclusion varied by age, and how past experiences with people with DS were related exclusion decisions. Finally, the current study investigated if the use of moral reasoning explained the expected relationship between past experiences and exclusion rates.

In order to investigate these hypotheses, vignettes were utilized. Specifically, TD participants read a set of stories depicting situations in which they decided how likely they would be to exclude a peer. The fictional peer had either DS, or a PD. Participants read and responded to vignettes of various situations, some based on intellectual disability, like a group assignment,

some on a physical ability, like playing a sport, and some based on a situation not dependent on ability to participate, like a club. Participants indicated the likelihood that they would include the fictional peer and ranked reasons why they made that decision. Additionally, participants were asked to report generally on their past experiences with people who have DS or a PD. This measure included different situations as well as asked about the quality of interaction experiences.

MAIN QUESTIONS AND HYPOTHESES. The current study investigated five major questions; 1) How did the type of vignette (stereotype match vs. mismatch) predict rates of exclusion? 2) What was the relationship between the use of moral reasoning and rates of exclusion? 3) How did exclusion vary across participant age? 4) What was the relationship between past experience with someone with DS or a PD and the tendency to include a peer with DS or PD, respectively? and 5) How did the use of moral reasoning explain the relationship between the past experiences with someone with DS or a PD and rates of exclusion? Each question and hypothesis are discussed in detail in the following.

Question 1: How did the type of vignette relate to the rates of exclusion? Specifically, is the mismatch hypothesis applicable to peers with a disability? Similar to past research, the current study utilized a stereotype “match vs mismatch” paradigm (Killen & Stangor, 2001). While there is not a single stereotype for individuals with DS or a PD, it is logical that the fictional peer with DS will be at a higher mismatch in the intellectual ability vignettes than the fictional peer with a PD. Conversely, in the situations that are based on physical ability, the fictional peer with a PD is likely to be a greater mismatch than the fictional peer with DS. Past research has demonstrated that when there is a gender or race-based stereotype mismatch, youth

are more likely to exclude (Killen & Stangor, 2001). The current study investigated if this stereotype influence was applicable to those with DS or a PD.

The current study investigated if those with a PD were excluded more than those with DS in situations that were based on physical abilities, like playing a sport, or if those with DS were excluded more than those with a PD in situations that were based on intellectual abilities, like completing a group assignment. Past research has demonstrated that when there is a mismatch between stereotype and situation, exclusion is more accepted (Killen & Stangor, 2001). It was expected that exclusion would be highest for those with DS in the intellectually based vignettes, and highest for those with a PD in the physically based vignettes when compared to the non-ability-based vignettes.

Question 2: What is the relationship between the use of moral reasoning and rates of exclusion? Specifically, do youth who use more morally based reasons exclude less? Previous research suggests that during childhood individuals tend to rely on conventional reasoning, citing reasons like *“because my parents taught me to include”* or *“because excluding someone is against the rules”* when asked why they made their decision to include or exclude a peer (Killen, 2007; Theimer, et al., 2001; Malti & Ongley, 2014). During early adolescence, reasoning becomes more based in the social setting. Young adolescents tend to cite social-conventional reasons, like *“because it will make me look cool”* and group functioning reasons, *“because the group will work better without them”* (Killen, Sinno, & Margie, 2007; Cooley, Elenbaas, & Killen, 2016). During late adolescence individuals tend use more moral reasons like *“because it’s unfair to exclude others from participating”* as to why they made their choice (Malti, Ongley, Dys, & Colasante, 2012). Overall, research has demonstrated that when youth use more

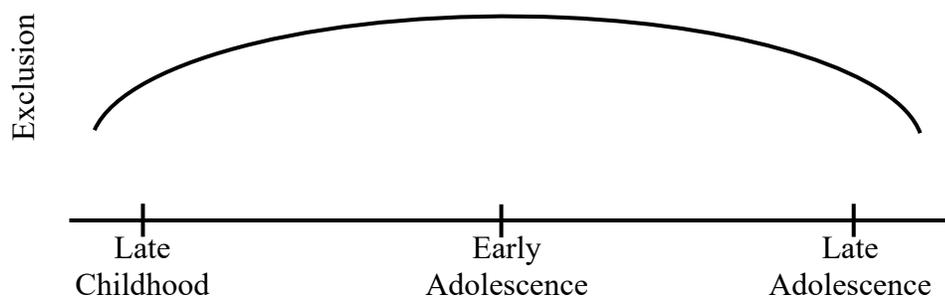
morally based reasons, they are less likely to exclude a peer (Gasser, Malti, & Buholzer, 2012). Based on this body of work, it was hypothesized that there would be a negative linear relationship between moral reasoning and exclusion. Specifically, that higher rates of moral reasoning would predict lower rates of exclusion.

Question 3: How does exclusion of DS and PD peers change across participant age?

Specifically, is the peak of exclusion in early adolescence seen when the peer has a disability?

Past research has demonstrated a curvilinear trend between age and the rates of exclusion (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983). However, only a few investigate if this trend remains when the peer being excluded has a disability. Additionally, the current study expands the age range of participants, allowing for comparison of participants from late childhood to late adolescence when the same measures were used. It was hypothesized that the current study would replicate the findings of past research (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983) that regardless of the type of vignette or fictional peer’s disability, there would be an increase in exclusion rates in early adolescence (~12-14 years). See Figure 1 for representation of the expected relationship.

Figure 1. Representation of the peaks of exclusion by age group.



Note. Individuals report exclusion rates around 8-9% at the peak

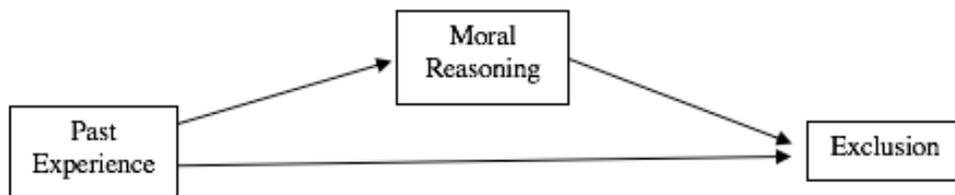
Question 4: What is the relationship between past experiences with someone with DS or a PD and rates of exclusion? Specifically, do those with more quantity or higher quality of past experiences exclude less often than youth with less quantity or lower quality of past experiences? Past research suggests that those with more experience with a group tend to have a more positive attitude towards that group (Pettigrew & Troop, 2006; Pettigrew, et al., 2011). Additionally, those with more experience tend to be more inclusive towards members of the outgroup they have had experience with (Armstrong, et al., 2016; Beaulieu-Bergeron & Morin, 2016; Nowicki, 2006). Research has also demonstrated that the quality of past experiences is important, when an individual has positive past experiences with a group they are more likely to include. For example, one study demonstrates that if an individual has positive past experiences, they may be more likely to include a member of that group (Pettigrew & Troop, 2006).

The current study expanded on this body of work and investigated the relationship when the group being included/excluded were individuals with a disability. It was hypothesized that, in line with past research (Pettigrew & Troop, 2006; Pettigrew, et al., 2011), when a participant reports more experiences, they would be less exclusive. Specifically, it was hypothesized that there would be a negative linear relationship between quantity of past experience and rates of exclusion. In addition, it was hypothesized that there would also be a negative relationship between quality of past experiences and exclusion rates, in that those who report having positive past experiences would be less likely to exclude the hypothetical peer.

Question 5: Does moral reasoning mediate the relationship between quantity of past experience and exclusion? As previously mentioned, the use of more moral reasoning and more experiences seem to individually be related to lower rates of exclusion (Killen, Lee-Kim,

McGlothlin, & Stangor, 2002; Rutland & Killen, 2015). However, few studies have investigated if moral reasoning can explain the relationship between past experiences and exclusion. Additionally, the investigation of these relationships when the individual being excluded/included has DS or a PD is novel. It was hypothesized that the use of moral reasoning would at least partially explain the relationship between past experiences and overall rates of exclusion. See Figure 2 for a representation of this relationship. This was hypothesized as past research has shown that past experience links to more morally based reasoning (Killen, Lee-Kim, McGlothlin, & Stangor, 2002) and use of moral reasons seems to decrease exclusion (Rutland & Killen, 2015). Therefore, the current study aimed to move current research forward in two ways related to this hypothesis. First, the current study assessed if these relationships remained when the excluded peer had a disability. Second, the current study assessed the three variables in one model, utilizing mediation, instead of separate analyses.

Figure 2. Relationship between past experience and exclusion mediated by moral reasoning



METHODS

RECRUITING

Participants were recruited through a number of different methods, primarily through educational settings. Specifically, participants were contacted through social media, schools, and online groups. An invitation to participate in the study was posted to researchers' personal social media profiles as well as social media pages for labs. The study was advertised through the online forum *Children Helping Science (CHS)*. This is a website designed to help connect families with studies that fit their child(ren). Finally, the vast majority of participants were recruited through educational settings. A total of 1,209 private schools, public school districts, and homeschool groups in three states were contacted. One home school group in Washington state, 323 private and public schools in Washington state, 738 private and public schools in Tennessee, and 147 private and public schools in Alabama were contacted. Of those homeschool groups, schools, and districts contacted, six school districts, five private schools, and one homeschool group sent out invitations to families to participate in the study. Through this, a total of 225 participants started the study, with 218 of these participants yielding usable data.

PARTICIPANTS

A total of 225 participants between the ages of 8 and 18 years of age provided consent (through parents/guardians) and assent. Three participants' data were removed due to the speed of completion being less than 6 minutes, and four participants' data was removed due to less than

45% of the questions being completed. Therefore, a total sample of 218 participants are included in analyses. The majority of participants were female (53.67%) and averaged 12.93 years of age ($SD = 2.99$). 49.08% of participants indicated they were White, 45.41% of participants indicated they were Black/African American, and 5.51% of participants indicated they were American Indian/Alaska Native, Asian/Pacific Islander, or Mixed Race/Other. In regard to ethnicity, 9.63% of participants indicated they were Latinx. Of the seven participants that were excluded from analyses, due to either speed of completion or a lack of completion, four (57.14%) indicated they were White and three (42.85%) indicated they were Black/African American, and none indicated they identified as Latinx. Excluded participants were majority female (57.14%). Chi-square analyses indicated that the demographics of the excluded participants were not different from the included participants on either race ($X^2 = 6.59, p = .19$) or gender ($X^2 = 2.77, p = .10$). Participants completed, on average, the full testing battery in just under 17 minutes (16 minutes and 52 seconds). A full breakdown of participant demographics can be found in Table 1.

Table 1

Demographics of Participants

Age Group	% of sample	Gender		Race			Latinx	Duration (min)		Age	
		Male	Female	White	Black	Other		M	SD	M	SD
Late Childhood (8-11 years)	38.89	51.73	48.28	37.93	56.32	5.75	11.49	19.24	8.39	9.80	1.04
Early Adolescence (12-14 years)	28.00	44.26	55.74	52.46	47.54	4.92	11.48	15.09	6.91	12.90	.50
Late Adolescence (15-18 years)	32.11	41.42	58.58	64.29	30.00	5.71	5.71	14.38	7.47	16.50	1.14
Overall	100.00	47.33	53.67	49.08	45.41	5.51	9.63	16.52	7.97	12.93	2.99

Note. Gender, Race, Latinx are all presented in percentages.

Age is presented in years

“Other” race includes American Indian/Alaska Native, Asian/Pacific Islander, and Mixed Race/Other

MEASURES

EXCLUSION. Participants read situations (see Appendix B) in which a peer with DS or PD asked to join in an activity or group. Participants then indicated how likely they would be to include this fictional peer. This methodology is similar to that which was used in Park and Killen (2010) and Gasser, Malti, and Buholzer (2012). Before participants were presented with the vignettes, they were given a brief description of DS and shown five pictures of individuals with DS. This was done to ensure that all participants were aware of what DS is and how it may impact the individuals who have it. These images allowed participants to know if they have interacted with individuals with DS in the past, even if they were unaware of the diagnosis. In addition to the description of DS, individuals were given a description and pictures of the comparison group, peers with a PD. This group was selected as the comparison group for two main reasons. Youth with PD have been used as a comparison group in past studies (Gasser, Malti, & Buholzer, 2012; Smith & Williams, 2004) and results indicate that this group is excluded less than youth with ID in intellectually and non-ability-based situations. Participants read a description of disability for all of the fictional peers so that one group was not more salient than the other (See Appendix B for a full example). Images and names throughout the vignettes were matched to the participant's self-reported gender.

After reading the descriptions of DS and PD, participants read a total of 18 vignettes presented in a random order. Immediately before each vignette, there was a one sentence reminder of what DS or a PD is. For example, “_____ has a physical disability which means s/he may have trouble moving around.” or “_____ has Down syndrome which means s/he may have trouble learning and remembering things.” These descriptions were adapted from Gasser, Malti,

and Buholzer (2012). The vignettes were presented in a similar manner each time. First the vignette introduced the situation and made it clear that decisions about inclusion are to be made by the participant without influence from adults. Then, the vignette introduced a peer with DS or a PD who expressed interest in wanting to join the group. Finally, the vignette ended with a statement that the participant had to choose if the peer joined or not.

Participants read a total of 18 vignettes describing the situations where exclusion was presented as a possibility. Six vignettes focused on non-ability-based situations, like afterschool clubs, that served as a sort of control for the other vignette types. Twelve of the vignettes addressed ability-based situations, with six about intellectual ability based activities and six about physical activities. Presentation order and the assignment of disability type to each situation was randomized to prevent any order effects. Participants were presented with vignettes of each ability type in order to allow for comparison between situations of stereotype match, mismatch, and neutral/control. Specifically, this allowed for comparison of the stereotype “mismatch” of a peer with DS in intellectual ability situations to be compared to the stereotype “match” of a peer with a DS in a physical ability situation. Additionally, the non-ability-based vignettes allowed for comparison to a “control group” of sorts. After participants read the vignette, they were asked to rate on a scale of 1-4 (1 “Definitely won’t include” to 4 “Definitely would include”) how likely they were to include the peer in the outlined situation. This measure indicated good internal reliability with an alpha value of .89.

This ability versus non-ability paradigm was included in order to address a similar type of dichotomy that has been presented in past research. Previous literature largely focuses on asking participants to include a fictional peer in a situation that is mismatched with the stereotype of a

group. For example, the study asked participants if a boy should be included in a ballet class (Killen & Stangor, 2001). While there is no singular stereotype of individuals with DS or a PD, it seems that a lack of ability is a main assumption that a peer may make. Specifically, the intellectual ability vignettes served as a stereotype mismatch for the DS group, while the physical ability group served as a stereotype mismatch for the PD group. Therefore, the addition of intellectual ability versus physical ability versus non-ability situations within the vignettes created a 3 (vignette type) X 2 (disability) design allowing analyses to assess the potential differences between vignette type (Vignettes can be found in Appendix B).

MORAL REASONING. After indicating how likely they are to include, participants ranked the top three reasons they made their choice to include or exclude from a list of eight reasons. Each participant could choose up to three reasons for each vignette. When they choose their reasons, participants rated the top three reasons they used. Specifically, participants' top choice was assigned 3 points, their second choice 2 points, their third choice 1 point, and each of the not selected choices were assigned 0 points. Participants were given options to select from, instead of generating their own answers, in an effort to lessen the burden for participants.

Each reasoning option addressed an aspect of social domain theory in the personal, moral, and social-conventional domains (Killen, 2007; Theimer, et al., 2001; Malti & Ongley, 2014; Killen, Sinno, & Margie, 2007; Cooley, Elenbaas, & Killen, 2016; Malti, Ongley, Dys, & Colasante, 2012). Past studies utilized interview methodology and participants provided their own reasons. The options selected in this study were reported as common responses in these past studies. See Table 2 for each reason and its corresponding domain. Because moral reasoning is the focus in this study, moral reasoning scores were computed for each participant. Scores could

range from 0 to 3 dependent upon an average of the frequency of use and rating of the reason. Lower scores indicating that they were selected less and were rated as less important and higher scores indicating that they were selected more frequently and were rated as more important. For example, if a participant never selected a reasoning type, the score would be zero, but if they were to select a reason in that type as the most important for each vignette, they would have a score of 3 for that reasoning type. Should a participant varying in ranking and choice of a vignette, say they consistently rank it as less important, the average score would fall between those two aforementioned extremes of zero and three.

Table 2.

<i>Reasoning Choices</i>	
Moral Domain	
I was thinking about _____'s feelings	
I was thinking about what is fair	
Personal Domain	
So other kids will like me	
Because it is what I wanted to do	
Social-Conventional Domain	
Because adults have taught me to (<i>rule based</i>)	
Because I am following the rules (<i>rule based</i>)	
Because _____ might impact my group (<i>group functioning based</i>)	
Because _____ might not be good at [the activity] (<i>group functioning based</i>)	

Participants were also given the option of selecting “something else” and writing in a reason that was not listed. The majority of the time participants did not utilize the “something else” option and was selected less than 5% of the time by participants. If a participant did select this option and write in an answer it was coded by researchers. Specifically, two researchers coded each response on if it was a morally based reason or not. Coders had good reliability (kappa= 0.87) and agreement (94.1%) on the items. Items that were not morally based were not coded further since non-moral reasons were not a focus of the current study and were not

incorporated into analyses. Across the 18 vignettes, this measure indicated good internal reliability with an alpha level of .92.

PAST EXPERIENCE. Lastly, participants were asked to complete a questionnaire that addressed their past experiences with individuals with DS and with a PD. This was completed last as to not influence the other measures. Specifically, participants were asked to rate how often they have interacted with an individual with DS or a PD in a variety of settings, including school, home, religious gathering (church, youth group, etc.), after school, and summer activities. Participants indicated the frequency of their past interactions on a 1 (Never) to 4 (Every day or almost every day) scale. Scores were averaged across each disability type. Each participant had three scores, one for the average past experience with individuals with a PD or DS, and one representing the average for past experience with those with a PD and those with DS separately.

A supplementary Confirmatory Factor Analysis (CFA) was conducted to assess the loading of experience on one scale. In order to examine the factor structure of the measure items were loaded onto two scales: experience with someone with DS and experience with someone with a PD. The measure demonstrated adequate fit, with two scales: past experience with someone with DS and with a PD. This fit was assessed with a CFA. The model for the measure (18 total items; 9 each scale) demonstrated good fit, $X^2(134) = 489.52$, RMSEA = .12, SRMR = .10 (full fit indices can be found in Table 3). All items showed significant factor loadings between .22 and .55 (all factor loading can be found in Table 4) and demonstrated good reliability ($\alpha = 0.91$). However, this measure is a checklist and thus it was not expected that each item would correlate with each other. Therefore, these results are not unexpected and do not invalidate the use of the measure.

Table 3.

Quantity of Past Experience: Fit Indices for Confirmatory Factor Analyses (CFA)

X ²	df	X ² ratio	RMSEA	90% CI	SRMR	CFI
489.52	134	3.65	.12	.11 .13	.10	.08

Note: Fit Indices (Hopper, et al., 2008): X²ratio of ≤ 2 | RMSEA: < .08 | 90%CI: <.06 - .08 | SRMR: ≤ .08 | CFI ≤ .09

Table 4.

Quantity of Past Experience: CFA Factor Loading

	Unstandardized Estimate	Standard Error	p
Factor 1: Down syndrome			
School	.33	.06	< .001
Class	.30	.06	< .001
Afterschool program	.30	.05	< .001
Sports team	.55	.05	< .001
Youth group	.42	.05	< .001
Summer camp	.30	.06	< .001
Club	.29	.05	< .001
Family friend	.48	.06	< .001
Family member	.22	.06	< .001
Factor 2: Physical Disability			
School	.38	.06	< .001
Class	.46	.06	< .001
Afterschool program	.45	.05	< .001
Sports team	.55	.05	< .001
Youth group	.42	.05	< .001
Summer camp	.44	.05	< .001
Club	.33	.05	< .001
Family friend	.22	.05	< .001
Family member	.31	.05	< .001

Note: Reporting based on guidelines from Cabrera-Nguyen, 2010

Participants were then asked to rate how positive these interactions were overall to potentially assess the impact of the quality of past interactions on the relationship between experience and exclusion rates. Positivity scores are reported on a three-point Likert scale with

lower scores indicating fewer positive experiences and higher scores indicating more positive experiences. The full measure can be found in Appendix C.

PROCEDURE

After being invited to participate, interested parents emailed the researcher. Parents were then sent a link to the parental consent form. This form was hosted through Qualtrics software. If the parent indicated consent to their child participating in the study, they were automatically given the link to the child questionnaire. At this point, parents were instructed to let their child complete the questionnaire independently. Each child participant was then asked to provide assent.

Participants completed the measures in an online format on a computer, tablet, or other technological device. Since data collection happened in the participant's home, parents were instructed to not influence their child's answers and only provide support for understanding questions if needed. All measures were administered through Qualtrics. Through Qualtrics, anonymity was maintained by not collecting any identifying information, including IP addresses.

The presentation of the vignettes was randomized in order to prevent any sort of order effects. In addition to the randomization of the vignettes, the order of the experience questionnaire was randomized. Specifically, half of the participants responded to their past experience with those with DS first and the other half responded to their past experience with those with a PD first.

Data collection began after consent was provided by a parent or guardian and assent was provided by the child participant. First, participants indicated their age in years, race, ethnicity,

and gender. Then, they read descriptions of DS and PD as well as viewed the images of people with DS and a PD. Images were matched to the participant's self-selected gender and were presented in stages (all DS information then all PD information). It was made clear to participants that there is diversity in physical appearance for both disabilities and the pictures are examples of what someone with DS/a PD *may* look like. This was done in order to ensure that all participants are fully aware of what DS and a PD are. Next, participants read each vignette. Within each vignette, there was a short reminder of the relevant disability (DS or PD). The vignettes stated if the fictional peer had DS or a PD. After reading the vignette, participants answered questions assessing how likely they were to include the peer and why they made that decision. After completing the vignettes section, participants completed the measure of past experience with individuals with DS or a PD. Participants were asked to check situations that they have interacted with someone who has DS or a PD (presented separately).

PILOTING

In order to fully assess the practicality, feasibility, and quality of the measures pilot testing was completed. This piloting included 19 participants spanning the entire age range (8-18 years; $M_{\text{age}} = 12.53$, $SD_{\text{age}} = 3.10$). Piloting was done specifically to address two main concerns. First, to ensure that the measures were able to be completed in a reasonable amount of time on the computer. Piloting indicated that participants of all ages were able to complete the measures in a timely manner ($M_{\text{time}} = 13.38$ min; $SD_{\text{time}} = 3.16$ min). Additionally, each participant that assented to the study completed it. Thus, indicating that participants did not have issues with either the questionnaire itself or the manner of administration (Qualtrics survey online). A second purpose of piloting was to ensure that the measures detected variability in participant

responses. This was a specific concern for the measures investigating exclusion as it was possible that participants may always choose to include. However, this was not the case as mean scores for inclusion ranged from 2.40 – 3.70 (higher scores indicated less exclusion), demonstrating that participants did have some variation in scores. Some minor changes were made to the wording of reasoning choices as well as the response format for the reasoning. A full background, procedure, results, and discussion for the pilot study can be found in Appendix A (page 89).

RESULTS

Analyses were completed through two different statistical software packages, SPSS and SAS. SPSS software was used for all analyses except for TVEM, which was completed through SAS utilizing the TVEM Macro (Li, Dziak, Tan, Huang, Wagner, & Yang, 2017). In order to complete the mediation analyses, PROCESS version 3 software (Hayes, 2018) through SPSS was utilized. For all significance tests, an alpha level of .05 was used.

In order to assess the main questions in the current study, five main groups of analyses were completed. First, in order to investigate the impact of vignette and disability type on exclusion, a 3(vignette) x 2(disability) x 3(age group) mixed ANOVA was run. This analysis was selected due to the ability to detect both main and interaction effects of the aforementioned variables. To address the second question, the relationship between moral reasoning and age, a linear regression was used. This test was utilized as it allows for testing of the hypothesized relationship, an increase of moral reasoning as individuals age. A TVEM analysis was not used for this question as the expected relationship was linear. Third, to test the relationship between age and exclusion, a series of TVEM analyses were used. This test was selected as it allows for an in-depth understanding of the expected distribution of exclusion rates across age. Fourth, in order to assess the relationship between past experiences, both quality and quantity, with exclusion decisions two analyses were completed. To assess the relationship between quality and exclusion a correlational analysis was done. To assess the relationship between quantity of experience and exclusion a simple ANOVA was completed. Finally, to assess how moral

reasoning on the relationship between quantity of past experience and exclusion a mediation analysis was planned.

PRELIMINARY ANALYSES

All distributions were examined for skew and kurtosis and two measures indicated negative skew. Moral reasoning had a skew of 2.01 ($SE = .17$) and past experience had a skew of 1.57 ($SE = .18$). Exclusion was not skewed with a value of .84 ($SE = .17$). All three measures; moral reasoning 3.77 ($SE = .33$), past experience 2.78 ($SE = .35$), and exclusion 3.11 ($SE = .33$), demonstrated acceptable levels of kurtosis. More detail can be found in the main analyses section.

DESCRIPTIVE STATISTICS. Means, standard deviations, and ranges for each of the primary constructs and divided by age group appear in Table 5. Overall participants indicated that on average, they would include on the scale between a 3 “probably would include” and a 4 “definitely include” ($M = 3.39$, $SD = 0.26$). For subsequent analyses inclusion was reverse coded in order to reflect exclusion ($M_{reverse} = 1.60$, $SD_{reverse} = 0.26$). Analyses indicated that there were no gender ($F(2, 213) = 1.08$, $p = .30$) or race ($F(2, 213) = 1.39$, $p = .25$) differences.

With regard to moral reasoning, participants reported using moral reasoning at about their third most important option ($M = .81$, $SD = .09$). This means that participants did typically indicate a moral reason, but it was not necessarily the most important form of reasoning. On average, participants ranked rule based conventional reasoning as most important ($M = 1.52$, $SD = .18$). An ANOVA indicated that there were no significant differences between the three age groups use of moral reasoning, ($F(2, 210) = .06$, $p = .94$), rule based conventional reasoning ($F(2, 214) = .05$, $p = .95$), group functioning conventional reasoning, ($F(2, 214) = .34$, $p = .72$), or

personal reasoning ($F(2, 212) = .55, p = .58$). Analyses revealed that there were no gender ($F(2, 210) = .03, p = .87$) or race ($F(2, 210) = 2.39, p = .07$) differences.

Participants reported low levels of past experience with both individuals with a PD and those with DS. On average, participants reported experience in various situations between “never - 1” and “sometimes - 2” ($M_{DS} = 1.46, SD_{DS} = .43; M_{PD} = 1.46, SD_{PD} = .44$). In regard to the quality of experience, a repeated measures t-test indicated that participants reported lower levels of quality of past experiences with peers with DS compared to those with a PD ($t(216) = 3.00, p = .003$). These scores, both ranged between “sort of positive - 2” and “really positive - 3”. When broken down by age group; late childhood (8-11 years), early adolescence (12-14 years), and late adolescence (15-18 years), there were no significant statistical differences on quantity of experience; $F(2, 216) = .60, p = .55$.

Correlational analyses are shown in Table 6. Exclusion, moral reasoning, and quantity of experience were not correlated. Overall exclusion did not significantly correlate with either moral reasoning or quantity of past experience. Additionally, moral reasoning did not correlate with quantity of past experience.

Table 5.

Descriptive Statistics: Measures of Exclusion, Moral Reasoning, and Past Experience

	Exclusion		Moral Reasoning		Past Experience - Quality		Past Experience - Amount	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Down Syndrome	1.60	.30	.75	.10	2.49	.66	1.46	.43
Physical Disability	1.60	.32	.85	.16	2.67	.59	1.45	.44
Intellectual Ability Vignettes	1.60	.31	.83	.24	---	---	---	---
Physical Ability Vignettes	1.76	.42	.76	.13	---	---	---	---
Non-Ability Vignettes	1.43	.34	.82	.09	---	---	---	---
Overall	1.60	.26	.81	.09	2.58	.45	1.45	.38

Note. All scores are averages. Higher scores indicate more of each respective variable (ex. Higher score indicates more exclusion). Experience quality and amount were not measured in relation to vignette type.

Table 6.

Correlations of main constructs

	1	2	3	4	5	6	7	8	9	10	11
1. Exclusion: Intellectual Vignettes	1										
2. Exclusion: Physical Vignettes	.24**	1									
3. Exclusion: Non-Ability Vignettes	.21**	.41**	1								
4. Moral Reasoning: Intellectual Vignettes	-.05	.09	-.11	1							
5. Moral Reasoning: Physical Vignettes	-.08	.06	.08	-.07	1						
6. Moral Reasoning: Non-Ability Vignettes	-.04	.02	.08	-.08	.11	1					
7. Quantity Past Experience: DS	.06	.04	.04	.05	-.01	.07	1				
8. Quantity Past Experience: PD	.05	.03	.01	.06	.02	-.04	.54**	1			
9. Overall Exclusion	.62**	.80**	.74**	.01	.04	.03	.09	.06	1		
10. Overall Moral Reasoning	-.01	.07	-.05	.85**	.37**	.20**	.01	-.01	.01	1	
11. Overall Quantity Experience	.06	.05	.03	.05	.03	.03	.87**	.88**	.10	-.01	1

*p < .05; **p<.001

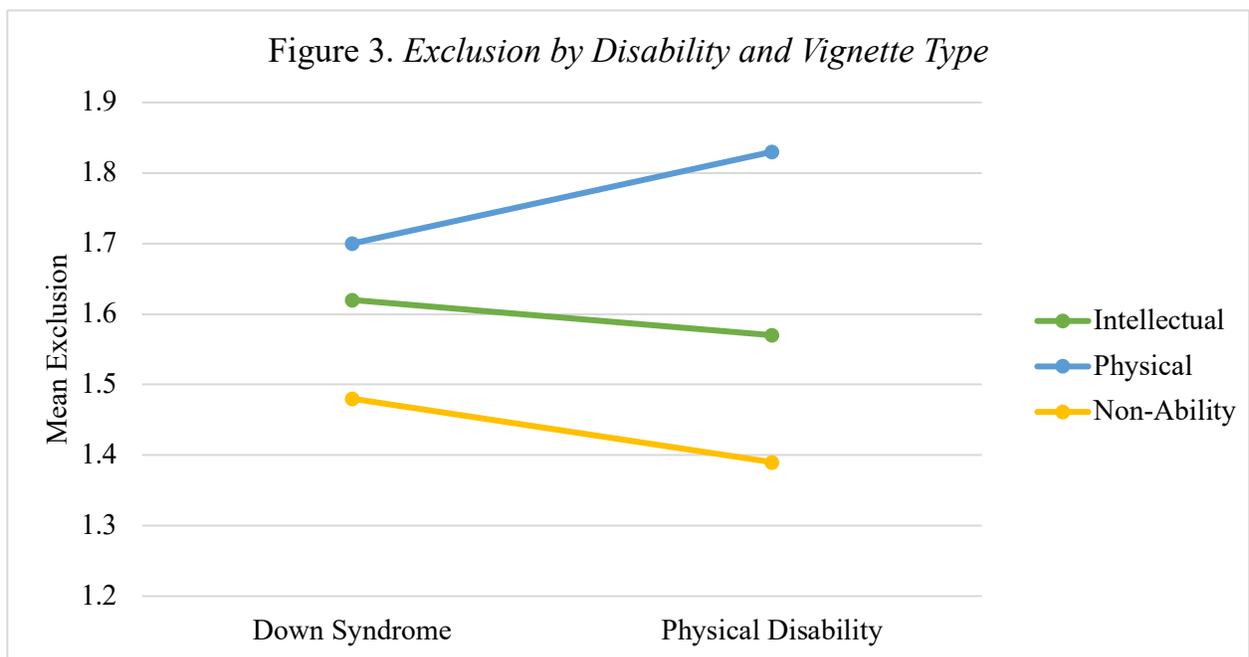
MAIN ANALYSES

The **first main question** in the current study asked if the mismatch hypothesis is applicable to peers with a disability? In order to assess how vignette and disability type influenced exclusion decisions, a 3(vignette) X 2(disability) X 3(age group) mixed ANOVA was conducted. It was hypothesized that there would be main effects of disability and vignette type as well as an interaction effect. Participants were split into childhood (8-11 years), early adolescence (12-14 years), and late adolescence (15-18 years), in order to assess age effects in this analysis. Unlike what was hypothesized, there was no main effect of disability type ($F(2, 212) = .01, p > .05$), age ($F(2, 212) = .65, p > .05$) or a significant three-way interaction between age, disability type, and vignette type ($F(4, 212) = .15, p > .05$).

As hypothesized, this analysis indicated a main effect of vignette type, $F(2, 212) = 60.68, p < .001, \eta^2 = .38$, on participants decisions to exclude or include the fictional peer. Post hoc analyses using Tukey HSD determined that participants were most likely to exclude a participant in the physical disability vignettes ($M = 1.76, SD = .41$) than either the intellectual ($M = 1.60, SD = .31$) or non-ability based vignettes ($M = 1.43, SD = .34$). Additionally, participants were more likely to exclude in the intellectual based vignettes ($M = 1.60, SD = .31$) compared to the non-ability based vignettes ($M = 1.43, SD = .34$). This finding indicated that exclusion was the highest in the physical ability based vignettes and lowest in the non-ability based vignettes.

Additionally, as hypothesized, there was an interaction effect of vignette type by disability of the fictional peer, $F(2, 212) = 7.47, p < .001, \eta^2 = .06$. This analysis indicated a small effect size per Cohen's interpretation guidelines (1988). These results indicate that when a fictional peer had DS, they were more likely to be excluded than the fictional peer with a PD in both the intellectual and non-ability-based vignettes. In the physical ability based vignettes the

opposite was true; a fictional peer with PD was more likely to be excluded than the fictional peer with a DS. As with past research (Killen & Stangor, 2001), this demonstrates that when there is a stereotype mismatch, a person is less likely to be included. In other words, when the situation was a mismatch to the disability of the fictional peer (DS in the intellectual ability vignettes and PD in the physical ability vignettes), participants were more likely to exclude. These results are demonstrated in Figure 3 and Table 7.



This analysis was performed first in order to assess if vignette and disability needed to be considered in subsequent analyses. This analysis indicated that there was an impact of vignette type and an interaction between disability and vignette, therefore subsequent analyses utilized exclusion scores for each vignette and disability type.

Table 7.

3x2x3 Exclusion: Mixed ANOVA Full Results

	<i>SS</i>	<i>df</i>	<i>F</i>	η^2
Vignette	22.29	2, 212	60.68**	.22
Disability	.001	2, 212	.01	-
Age	.26	2, 212	.65	-
Vignette*Disability	2.56	2, 212	7.47**	.03
Vignette*Age	.15	2, 212	.20	-
Disability*Age	.36	2, 212	1.13	-
Vignette*Disability*Age	.11	4, 212	.15	-

**p<.001

When investigating the specific stereotype mismatch paradigms (peer with DS in an intellectual based vignette and the peer with a PD in a physical ability based vignette), there was partial support for the hypothesis. It was hypothesized that exclusion would be highest when the mismatch was present. This was true for the peer with a PD in a physical ability based vignette when compared to both intellectually based, $t(216) = 6.19, p < .001$, and non-ability-based vignettes, $t(215) = 10.89, p < .001$. Thus, indicating that when the peer with a PD was in the stereotype mismatch, exclusion was the highest. However, this was not true when the fictional peer had DS. Specifically, for DS intellectual ability based vignettes there was not higher exclusion than the non-ability-based vignettes, $t(216) = 3.53, p < .001$, and the mismatch paradigm yielded less exclusion than the physical ability based vignettes, $t(215) = 1.93, p = .05$. Therefore, this test demonstrated that the highest exclusion when the peer had DS happened in the physical ability based vignettes and not the intellectual ability based vignettes as hypothesized.

The **second main question** in the current study asked if youth who use more morally based reasons exclude less? In order to assess this, a series of simple linear regressions were used. It was hypothesized that moral reasoning and exclusion would be negatively related.

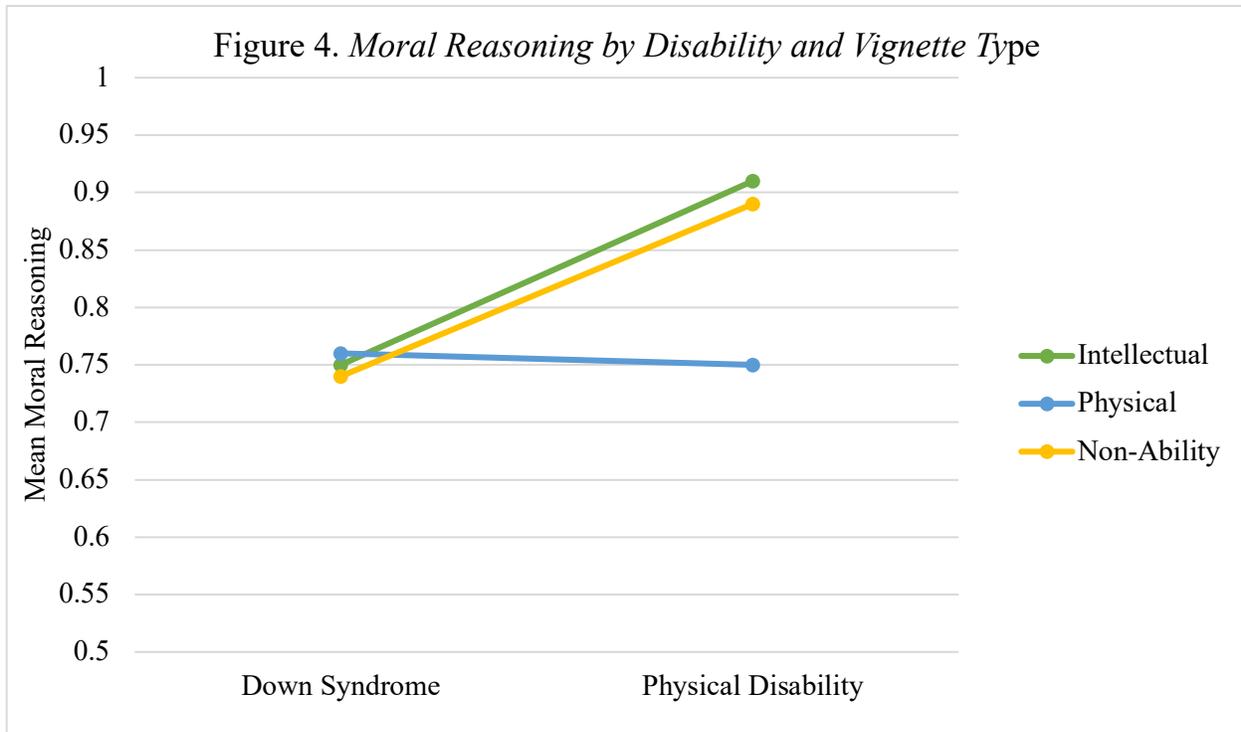
Before completing the main linear regressions, the impacts of age (by group), vignette type, and disability of the fictional peer on moral reasoning were assessed through a 3(vignette) x 2(disability) x 3(age) mixed ANOVA. The results from this analysis indicated main effects of both vignette ($F(2, 208) = 11.42, p < .001$) and disability ($F(2, 209) = 16.48, p < .001$) on moral reasoning. This analysis did not show a significant main effect of age group. This analysis revealed a significant interaction between disability and vignette type ($F(2, 208) = 10.04, p < .001$). Post hoc analyses (Tukey HSD) indicated that overall participants utilized morally based reasons more when the fictional peer had a PD ($M = .85, SD = .75$) compared to when the fictional peer had DS ($M = .70, SD = .85$). Additionally, when the vignette was physical ability based ($M = .76, SD = .13$) participants utilized moral reasoning less than when the situation was intellectual ($M = .83, SD = .24$) or non-ability based ($M = .82, SD = .09$). These interactions and main effects can be seen in Figure 4 and Table 8.

Table 8.

3x2x3 Moral Reasoning: Mixed ANOVA Full Results

	SS	df	F	η^2
Vignette	1.83	2, 209	16.02**	.20
Disability	.81	1, 209	16.48**	.26
Age	.11	2, 209	.45	-
Vignette*Disability	1.65	2, 209	15.62**	.19
Vignette*Age	.07	4, 209	.32	-
Disability*Age	.02	2, 209	.15	-
Vignette*Disability*Age	.03	4, 209	.16	-

Note. ** $p < .001$



This analysis demonstrates that when the participant has DS there is not a significant difference between the use of moral reasoning by vignette type. However, when the participant has a physical disability, participant utilized significantly less moral reasoning in physical ability vignettes compared to the intellectual ($t(214) = 4.48, p < .001$) and non-ability vignettes ($t(216) = 9.24, p < .001$). As a result of this analysis, following tests involving moral reasoning were run separately by vignette and disability type.

The linear regression analyses included moral reasoning as the predictor variable and exclusion decisions, separated by vignette and disability, as the dependent variable. Moral reasoning was calculated through averaging participants' rankings of the moral reasons they utilized when deciding to include or exclude a fictional peer across vignettes for each type of vignette and disability. Contrary to what was hypothesized, this analysis did not find a significant predictive relationship between moral reasoning and exclusion decisions overall ($F(1, 207) = .02,$

$p = .89$) or for any vignette and disability type (test statistics for each can be found in Table 9 below).

Table 9.

Linear Regression: Moral Reasoning Predicting Exclusion

	<i>df</i>	<i>F</i>	<i>p</i>	<i>beta</i>
Overall	1, 207	.02	.89	-.01
DS Intellectual Ability	1, 215	.03	.86	-.01
DS Physical Ability	1, 215	.50	.48	.05
DS Non-Ability	1, 216	1.76	.19	.09
PD Intellectual Ability	1, 214	.51	.47	.05
PD Physical Ability	1, 216	1.48	.23	.08
PD Non-Ability	1, 216	.60	.44	-.03

The **third question** in this study asked if the exclusion peak in early adolescence was seen when the peer has a disability? In order to assess this question a series of Time Varying Effect Modeling (TVEM) analyses were used. TVEM is similar to regression or curve estimates in that it investigates how data changes over time. However, TVEM varies from both regression and curve estimates in that it does not force a specific type of association between variables. In other words, with TVEM the association between variables is not forced to be represented by an estimated curve (Lanza, 2020). The shape of the slope is estimated from the data instead of predetermined as with other analyses (Shiyko, Lanza, Tan, Li, & Shiffman, 2012). The estimation of the shape of the slope allowed for the most accurate description of how the dependent variable changes across the time variable. This analysis originated with longitudinal data; however, it has been shown to be successful with cross-sectional data as well (Schuler, Vasilenko, & Lanza, 2015). In the current study the time variable was the age of participants in years. Therefore, the time axis reflects each age (8-18 years) for the sample. TVEM allows for analysis of overall trends of exclusion across the entire age range. Essentially, the analysis

performed a regression analysis at each data point (each year in this dataset), that was then combined to create an overall trend. TVEM allows for the investigation and understanding of an outcome variable (exclusion) to be modeled across a continuous “time” variable (age). Results are displayed as a figure and the curve of the line is described as demonstrated. This analysis was completed through SAS software utilizing the TVEM macro produced by Li, et al. (2017).

These analyses demonstrated a peak in exclusion during early adolescence for overall exclusion, when the peer had DS and in the non-ability vignettes when the peer had a PD. Figures representing these trends can be found in Figures 5 - 13. Specifically, there was a slight peak at just over 12.5 when looking at exclusion overall, with dips indicating less exclusion at younger and older ages. Focusing on situations when the fictional peer had DS, there is a peak in exclusion at about 13 years of age, with exclusion lessening for participants who are younger and older. When the fictional peer had DS and the vignette were intellectually based, there was a peak at about 13.5 years with lower rates at younger and older ages. This curve showed that exclusion rates dipped lower in the older ages than they were initially in the younger ages. When the peer had DS and the vignette was physical, there was a similar curve with a peak in exclusion around 12.5 years. However, this curve demonstrated that exclusion did not decrease in the older ages to return to the same rates as younger ages. In situations when the fictional peer had DS and the vignettes were non-ability based, there was a peak at about 13 years. Interestingly at the youngest, 8 years, and oldest, 18 years, there seemed to be an increase in exclusion almost back to the peak level.

Looking at when the fictional peer had a PD, there was only one situation when there was the expected peak in exclusion: when the vignettes were non-ability based. This curve followed a similar pattern as the non-ability based vignettes when the peer had DS. Specifically, the exclusion peaked at about 13 years of age with increases at the youngest and oldest ages (8 and 18 years respectively). In the other situations when the peer had a PD, the rate of exclusion was relatively flat across age indicating that there does not seem to be an age effect. In summary, when the peer had DS there was a peak in exclusion during early adolescence, around 12-13 years of age but this was not seen when the target peer had a PD.

Figure 5. *Trend of Overall Exclusion by Age*

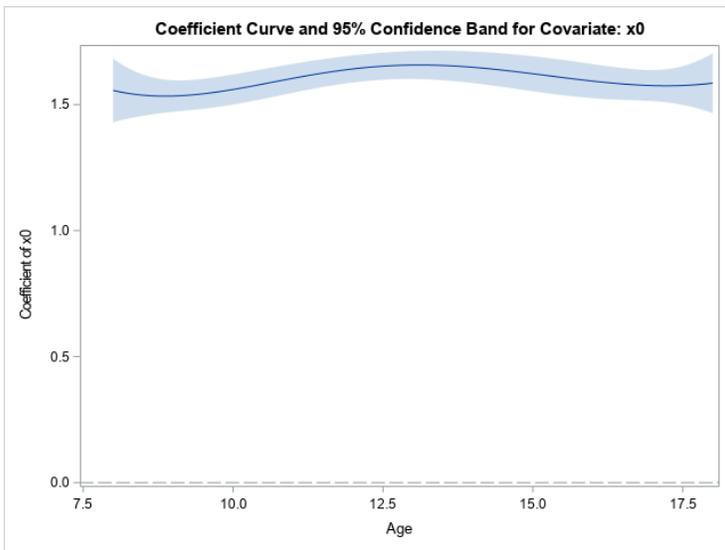


Figure 6. *Trend of DS Exclusion by Age*

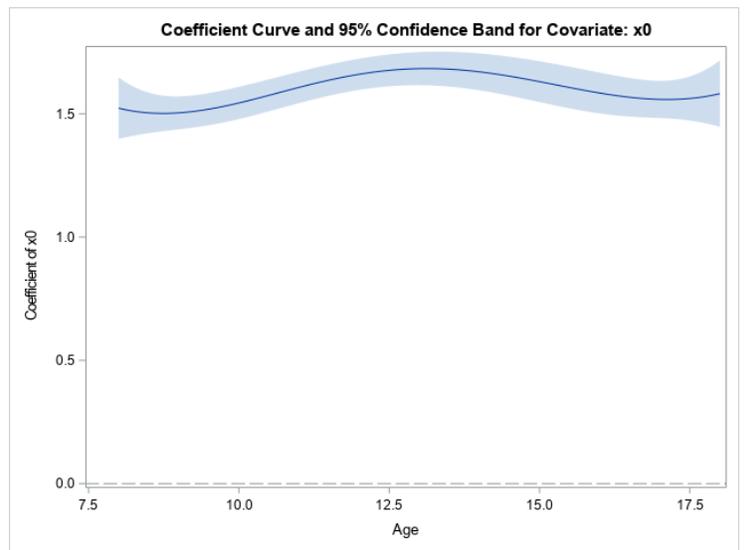


Figure 7. *Trend of DS- Intellectual Vignettes Exclusion by Age*

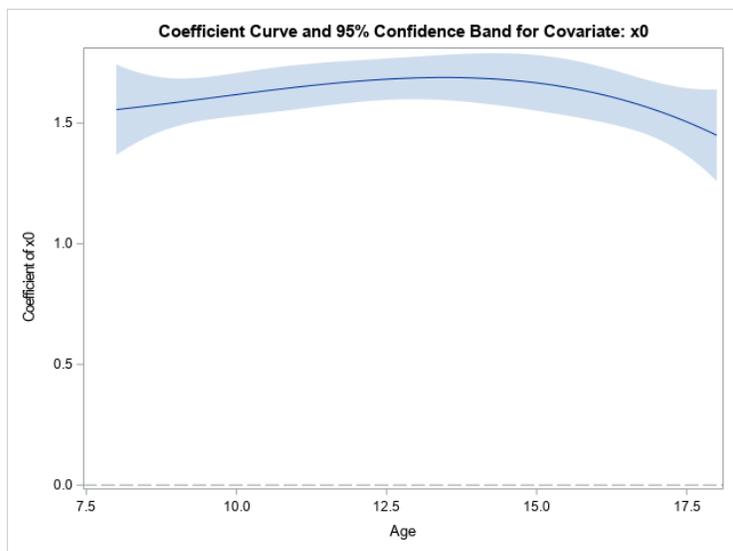


Figure 8. *Trend of DS- Physical Vignettes Exclusion by Age*

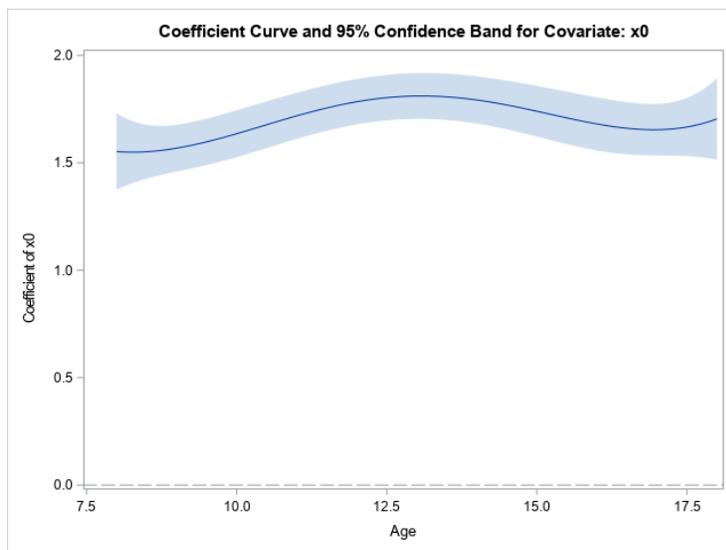


Figure 9. *Trend of DS- Non-Ability Vignettes Exclusion by Age*

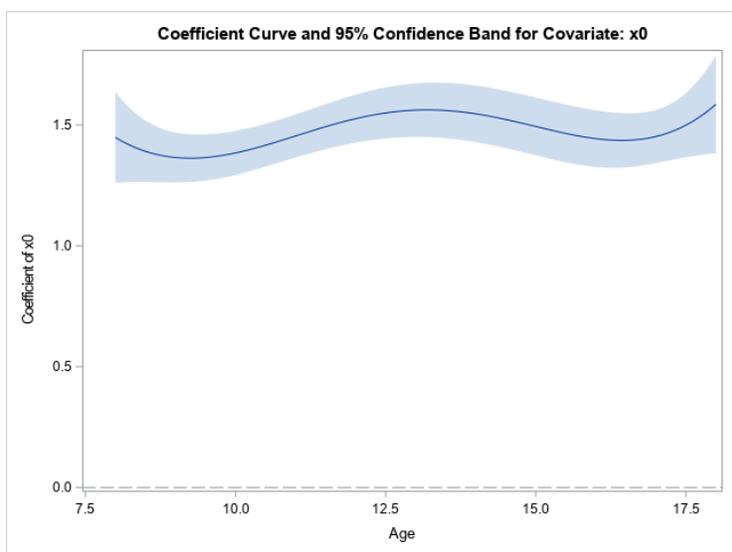


Figure 10. *Trend of PD Exclusion by Age*

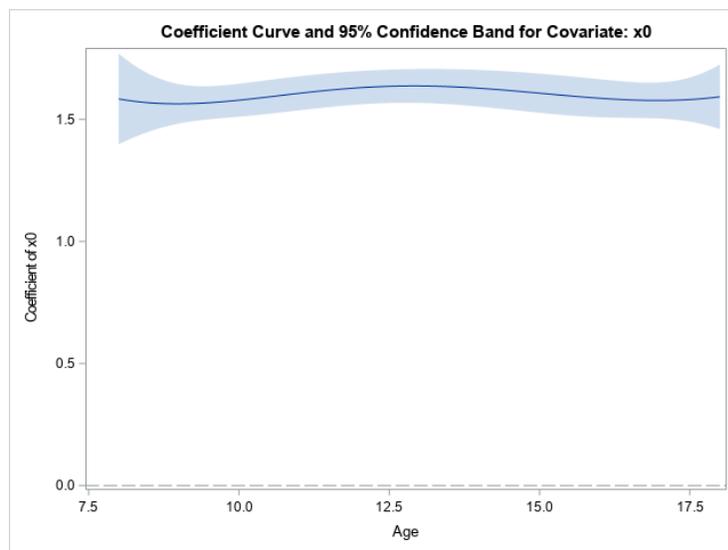


Figure 11. *Trend of PD- Physical Vignettes Exclusion by Age*

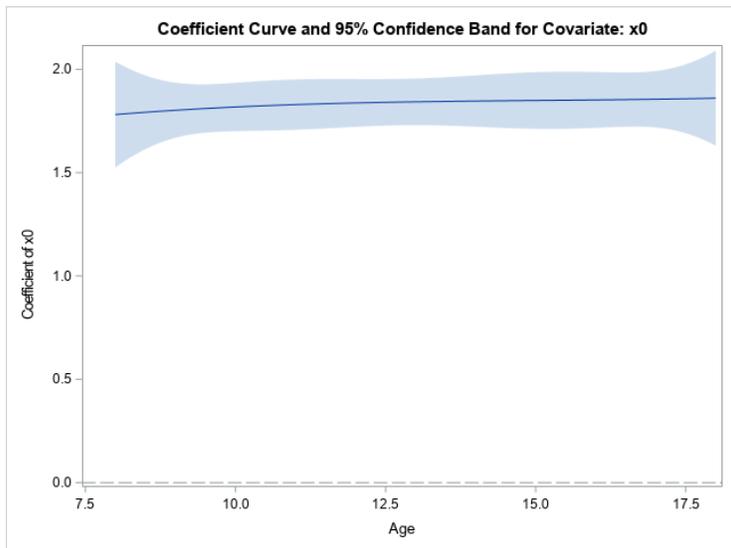


Figure 12. *Trend of PD- Non-Ability Vignettes Exclusion by Age*

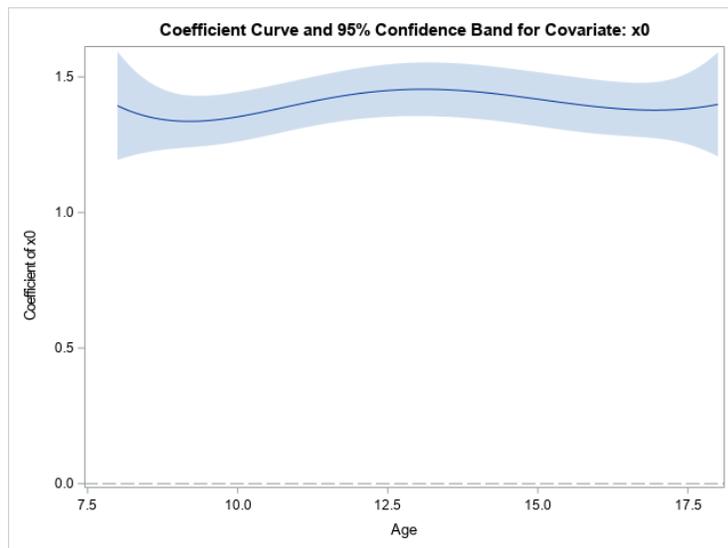
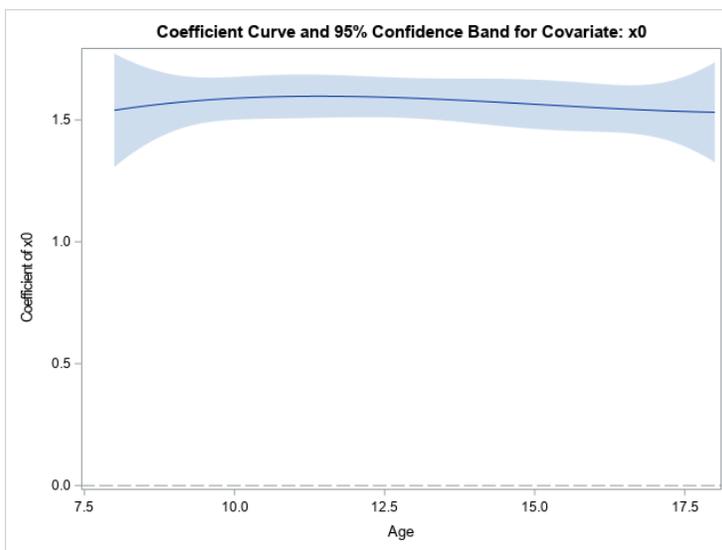


Figure 13. *Trend of PD- Intellectual Vignettes Exclusion by Age*



While TVEM was the main statistical test utilized to assess this question, regression with the main effect of age and then age-squared analyses were used to examine possible quadratic effects of age to support the interpretation of the main findings. The exclusion of youth overall, youth with DS, and youth with a PD were investigated to establish the findings for the high level results. Regarding overall exclusion the TVEM analysis indicated a slight peak in exclusion around 12.5 years of age. A quadratic regression analysis supported this with a test statistic approaching significance $R^2 = .02$, $F(213) = 1.80$, $p = .08$, $b = .06$. When looking only at the exclusion when the fictional peer had DS, TVEM indicated a peak in exclusion around 13 years of age. A quadratic regression analysis supported this result, indicating significance, $R^2 = .03$, $F(213) = 3.00$, $p \leq .05$, $b = .15$. When the fictional peer had a PD the TVEM analysis demonstrated a relatively flat trend of exclusion across age. This was also supported by a regression analysis indicated non-significant quadratic effect of age $R^2 = .003$, $F(213) = .35$, $p \geq .05$, $b = .04$.

The **fourth question** in this study asked if those with more quantity or higher quality of past experiences exclude less often than youth with less quantity or lower quality of past experiences? In order to full assess this question, two sets of analyses were completed. First, in order to assess the relationship between the quality of past experience and exclusion a bivariate correlation was run. It was hypothesized that there would be a negative relationship between quality and exclusion rates. In other words, it was expected that those with higher quality past experiences would choose to exclude less. There were no meaningfully significant correlations in this analysis. See Table 10 for full correlations. Specifically, the quality of past experience with individuals with DS did not correlate with exclusion decisions when the fictional peer had DS.

Similarly, the quality of past experience with someone with a PD did not correlate with exclusion when the fictional peer had a PD.

Table 10.

Correlations between quality of past experience and exclusion rates

	1	2	3	4	5	6	7	8	9	10
1. DS Quality	1									
2. PD Quality	.01	1								
3. DS Intellectual Ability Exclusion	.09	.14*	1							
4. DS Physical Ability Exclusion	.03	.07	.07	1						
5. DS Non-Ability Exclusion	-.12	.06	.09	.30**	1					
6. PD Intellectual Ability Exclusion	-.10	.06	.07	.156*	.19**	1				
7. PD Physical Ability Exclusion	-.11	.02	.14*	.27**	.27**	.19**	1			
8. PD Non-Ability Exclusion	-.09	-.03	.10	.25**	.27**	.13	.24**	1		
9. Overall Exclusion	-.06	.09	.43**	.62**	.61**	.49**	.66**	.56**	1	
10. Overall Quality	.75**	.67**	.16*	.07	-.05	-.04	-.07	-.09	.02	1

Note. * $p < .05$; ** $p < .001$

Second, in order to assess the relationship between the amount of past experience and inclusion decisions an ANOVA was run. It was hypothesized that those with more experience would choose to exclude less. This analysis was selected due to the significant skew regarding the amount of past experience, specifically, past experience was skewed at 1.86 ($SE = .17$) for DS and at 1.56 ($SE = .17$) for PD. Participants were split in to high and low experience groups based on a median split (1.33 for both groups). See Table 11 for the full test outcomes. Overall, these analyses did not yield any significant differences, indicating that there was not a relation

between past experience and exclusion. These results are not what was hypothesized. It is possible that this is due to the low rates of experience across disability type.

Table 11.

One-Way ANOVA: Amount of Past Experience & Exclusion

Down Syndrome			
	<i>df</i>	<i>F</i>	<i>p</i>
Intellectual Ability	2, 216	1.67	.19
Physical Ability	2, 216	2.71	.07
Non-Ability	2, 217	1.38	.25
Physical Disability			
	<i>df</i>	<i>F</i>	<i>p</i>
Intellectual Ability	2, 217	.21	.81
Physical Ability	2, 216	.49	.61
Non-Ability	2, 216	.87	.42
Overall Experience			
	<i>df</i>	<i>F</i>	<i>p</i>
Overall Exclusion	1, 187	.02	.88

The **fifth main question** asked if moral reasoning mediates the relationship between quantity of past experience and exclusion. In order to assess this question, a mediation analysis was used to assess how the relation of past experiences and exclusion was explained by moral reasoning. It was hypothesized that moral reasoning would partially explain the relationship between quantity of past experience and exclusion. In most settings, past experience did not predict or correlate with moral reasoning, specifically when the peer had DS and the situation was physically based ($r = .04, p > .05; F(1, 202) = .26, p = .61, b = .02$), when the peer had a PD in an intellectual setting ($r = .04, p > .05; F(1, 195) = .28, p = .60, b = .04$), a physically based setting ($r = .01, p > .05; F(1, 198) = .59, p = .55, b = -.05$), or a non-ability based setting ($r = -.11, p > .05; F(1, 197) = 2.18, p = .14, b = -.03$). Additionally, quantity of past experience was

not found to predict or correlate with moral reasoning overall, ($r = -.01, p = .89; F(1, 183) = .02, p = .90, b = -.002$).

However, two analyses were completed because the independent variable, quantity of past experience, correlated with and predicted the mediator, moral reasoning, in two specific situations: when the fictional peer had DS and the situation was intellectually based ($r = .14, p = .04; F(1, 201) = 4.15, p = .04, b = .05$) and when the situation was non-ability based ($r = .16, p = .03; F(1, 201) = 5.13, p = .03, b = .04$). All correlations between quantity, quality, and moral reasoning can be found in Table 12. Table 13 displays the results from regression analyses investigating the predictive value of the quantity of past experience on moral reasoning.

Table 12.

Correlations between quantity of past experience and the use of moral reasoning

	1	2	3	4	5	6	7	8	9	10
1. DS Quantity	1									
2. PD Quantity	.54**	1								
3. DS Intellectual Ability Moral Reasoning	.14*	.08	1							
4. DS Physical Ability Moral Reasoning	.04	.03	.03	1						
5. DS Non-Ability Moral Reasoning	.16*	.06	-.03	.33	1					
6. PD Intellectual Ability Moral Reasoning	.003	.04	.11	.002	-.11	1				
7. PD Physical Ability Moral Reasoning	-.04	.01	-.01	-.07	-.07	-.11	1			
8. PD Non-Ability Moral Reasoning	-.02	-.11	-.02	.02	-.05	-.03	-.04	1		
9. Overall Moral Reasoning	.01	-.01	.40**	.32**	.34**	.80**	.19**	.23**	1	
10. Overall Quantity	.89**	.88**	.13	.06	.12	.001	-.02	-.06	-.01	1

Note. * $p < .05$; ** $p < .001$

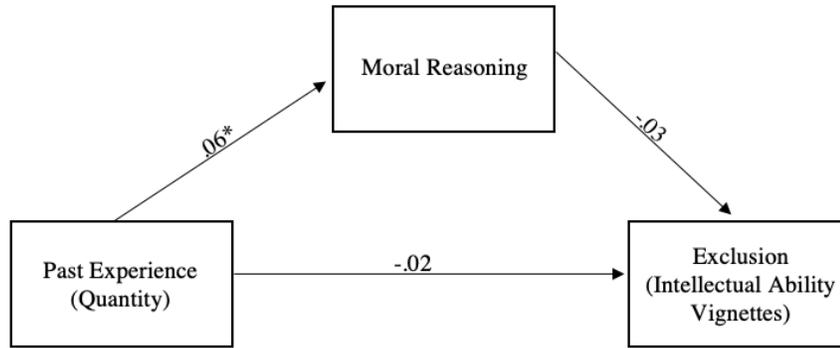
Table 13.

Regression: Quantity of past experience predicting moral reasoning

	<i>df</i>	<i>F</i>	<i>p</i>	<i>beta</i>
Overall	1, 183	.02	.90	-.002
DS Intellectual Ability	1, 201	4.15	.04*	.05
DS Physical Ability	1, 202	.26	.61	.02
DS Non-Ability	1, 201	5.13	.03*	.04
PD Intellectual Ability	1, 195	.28	.60	.04
PD Physical Ability	1, 198	.59	.55	-.05
PD Non-Ability	1, 197	2.18	.14	-.03

Due to the significant correlations and predictive value of past experience and moral reasoning when the peer had DS and the situation was either intellectually or non-ability based, two mediation analyses were run. First, the mediation was calculated when the peer had DS and the situation was intellectually based. As demonstrated in Figure 14, the standardized regression coefficient between quantity of past experience and moral reasoning was statistically significant. However, the regression coefficient between moral reasoning and exclusion was not statistically significant. Unstandardized indirect effects were computed for each of the 10,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles. The bootstrapped unstandardized indirect effect was .002. The 95% confidence interval ranged from -.04 to .02, which includes 0. Thus, the indirect effect was not significant.

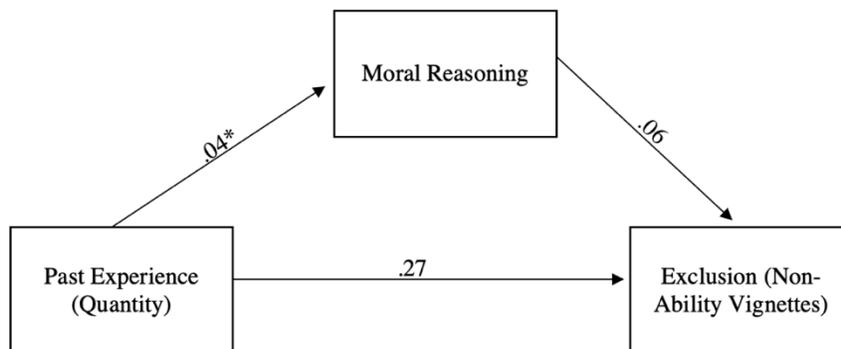
Figure 14. *Mediation model: Intellectual vignettes & peer with DS*



Note. *p <.05

A second mediation analysis was run when the peer had DS and the situation was non-ability based. As demonstrated in Figure 15, the standardized regression coefficient between quantity of past experience and moral reasoning was statistically significant. However, the regression coefficient between moral reasoning and exclusion was not statistically significant. Unstandardized indirect effects were computed for each of the 10,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles. The bootstrapped unstandardized indirect effect was .002. The 95% confidence interval ranged from -.08 to .20, which includes 0. Thus, the indirect effect was not significant.

Figure 15. *Mediation model: Non-ability vignettes & peer with DS*



Note. *p <.05

In summary, of the five main questions in this study, support was not found for three and found in some cases for the other two. A summary of the questions and findings related to each can be found in Table 14 (below).

Table 14.

Summary of findings: Main questions

1	<i>Question:</i> Is the mismatch hypothesis applicable to peers with a disability? <i>Findings:</i> In some cases. Youth with a PD were excluded most in the stereotype mismatch.
2	<i>Question:</i> Do youth who use more morally based reasons exclude less? <i>Findings:</i> Not supported.
3	<i>Question:</i> Is the peak in early adolescent exclusion seen when the peer has a disability? <i>Findings:</i> In some cases. There is a peak overall and when the peer had DS. When the peer had a PD there was a peak only if the situation was non-ability based.
4	<i>Question:</i> Do those with more quantity or higher quality of past experiences exclude less often than youth with less quantity or lower quality of past experiences? <i>Findings:</i> Not supported for either quality or quantity of past experience.
5	<i>Question:</i> Does moral reasoning mediate the relationship between quantity of past experience and exclusion? <i>Findings:</i> Not Supported.

DISCUSSION

The current study, and other studies like it, can be used to develop a more in depth understanding of the social experiences of youth with DS. This is important as youth with a disability are at a higher risk for experiencing adverse social experiences (Twyman, et al., 2012; Solish, Perry, Minnes, 2010). The current study aimed to better understand how typically developing youth exclude youth with a disability, specifically those with DS. The study focused on assessing the impact of situation, disability type, the use of moral reasoning, and age on exclusion. Results from the present study seem to suggest that disability and situation seem to have an impact on exclusion decisions of typically developing youth. Additionally, results suggest that exclusion of DS youth may vary with age.

MAIN FINDINGS

The **first main question** in the current study asked was the mismatch hypothesis applicable to peers with a disability? It was hypothesized that each of the constructs, disability and vignette type, would individually and jointly impact exclusion and that exclusion would be the lowest in the non-ability-based vignettes. Overall, this hypothesis was partially supported in that youth excluded differently based on the situation but not based on disability alone. Specifically, youth excluded the most in the physical ability based vignettes and least in the non-ability based vignettes.

The current study was also interested in the interaction of disability and vignette type because of the stereotype mismatch paradigm. Past research has demonstrated that when there is

a lack of fit between the excluded peer and the group, exclusion seems to be more acceptable and common. Park and Killen (2010) demonstrated that when youth are from another nationality, exclusion was more accepted. Specifically, that Korean and American youth both rated exclusions as more acceptable when the excluded peer was from the other nationality. A second study investigated the mismatch paradigm more specifically. Killen & Stangor (2001) found that when there was a mismatch between the excluded peer and the situation, like a boy in ballet class, youth rated exclusion as more acceptable and excluded more.

While there is no specific or well-known stereotype for individuals with DS or a PD, a stereotype mismatch was created through the introduction of intellectual and physical ability based vignettes. Stereotype mismatch was defined as when the fictional peer had DS and the situation was intellectually based or when the fictional peer had a PD, and the situation was physically based. In line with past research, it was hypothesized that exclusion would be the highest in these stereotype mismatch situations (Killen & Stangor, 2001). This hypothesis was supported when the fictional peer had a PD, but not when the fictional peer had DS. Interestingly, exclusion was highest in the physical ability based vignettes regardless of what type of disability the fictional peer had.

A contributing factor to these results could be the types of situations presented in the physical ability based vignettes. Five of six situations were based on sports team situations, for example, picking teams for a basketball game, which may lend to a more competitive situation. Conversely, the intellectual ability vignettes were not all based in competition situations. However, the half of the intellectual disability vignettes did have an inherent element of competition, like picking teams for a quiz game, and the other three had an evaluative component (an assigned grade). While it is possible that participants in the study placed a higher

importance on the more sports-based situations, the competitive or evaluative nature of the intellectual ability vignettes seems to negate competition as the main reason. In other words, both intellectual and physical ability based vignettes were designed to have an element of competition or evaluation, thus it seems unlikely that this alone explains the increase of exclusion in the physical ability based vignettes.

The **second question** in the current study asked did youth who use more morally based reasons exclude less? Social Domain Theory (SDT), the main theoretic backing for moral reasoning in the current study, outlines three main domains of reasoning. These three domains are moral, personal, and social conventional (Nucci, 1981). Unlike Kohlberg's theory of moral development (Kohlberg, 1958; 1969; Kohlberg & Hersh, 1977) and Neo-Kohlbergian theory (Rest, et al., 2000; Thoma, 2014), SDT does not focus on increases in moral development or ability strictly by age (Nucci, 1981; Smentana, 2013). Rather, SDT poses that individuals use reasoning based in each of these domains when making a decision and age differences are related to which domain is most heavily relied upon. For example, older youth tend to utilize more reasoning from the moral domain compared to younger youth (Malti, Strohmeier, & Killen, 2015).

SDT has been utilized in the past to understand exclusion across development, with past research demonstrating a focus on the social conventional domain, especially rules, during childhood, a focus on the social conventional domain, especially group norms, during early adolescence, and the moral domain during later adolescence (Strohmeier, & Killen, 2015; Damon, 1977; 1983; Theimer, Killen, & Stangor, 2001). However, SDT also poses that individual and situational differences can have an impact on which domain is utilized. For example, in a formal setting, like the workplace, one may be more likely to utilize the social

conventional domain, focusing on rules and regulations, rather than the moral or personal domains to make a decision (Smentana, 2013). The current study posed that youth who utilized reasoning within the moral domain would be less likely to exclude the fictional peer.

In order to fully grasp the nuanced picture of moral reasoning and exclusion it was determined that there were differences in moral reasoning depending on both vignette type and disability type. The current study found that youth utilized moral reasoning more when the peer had a PD compared to when the peer had DS. Additionally, youth used moral reasoning least when the situation was physical ability based. Therefore, analyses were broken up by disability and vignette type. However, regardless of disability or vignette type, moral reasoning did not predict exclusion.

As suggested moral reasoning, and its development, is incredibly nuanced and context does have an impact. It is possible that the lack of support for the hypothesis could be explained by the lower use of moral reasoning when the fictional peer had DS than when the peer had a PD. However, it is also possible that these results are explained, at least in part, by the method of measurement. Participants were asked to pick from a list of options, instead of a free response or interview section as has been used in past research (Killen & Stangor, 2001; Theimer, Killen, & Stangor, 2001; Malti, Strohmeier, & Killen, 2015). While similar methods have been used successfully in the past (Killen & Park, 2001), it is possible that there was a constraint on participant responses that impacted these results.

Additionally, it is also possible that when the excluded peer has a disability, there was a different relationship between moral reasoning and age than when the peer does not have a disability. Past research has focused primarily on the exclusion of youth who do not have a disability, while this study focuses on youth who has a disability. Therefore, it is entirely

possible that this deviation from past research is a valid result of the peer's disability and not a measurement error. Research has shown that youth with a disability are at a higher risk to be excluded (Malti & Buholzer, 2012; Schwab, Gebhardt, & Huber, 2016; Reardanz, et al., 2019). For example, Schwab, Gebhardt, and Huber (2016) demonstrated that when typically developing youth are asked to rank how much they would like to sit next to a peer with DS, they indicated a lower preference than for a TD peer. This study, and others (Malti & Buholzer, 2012; Reardanz, et al., 2019) have indicated that youth with a disability seem to be less socially accepted than their peers without a disability. In order to investigate this further, future research should utilize more standard methods of measurement, like interviews, to assess youths' moral reasoning making when excluding a peer with a disability.

The **third main question** of this study asked was the peak of exclusion in early adolescence seen when the peer has a disability? Past research indicated that exclusion seems to peak in early adolescence, with lower rates in both childhood and later adolescence (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983; Theimer, Killen, & Stangor, 2001). This research is wholly based on situations when the excluded peer(s) did not have a disability. Thus, it was hypothesized that a similar relationship between age and exclusion would be found when excluding peers with DS or PD. Results supported for the hypothesis when the target peer had DS, with a peak in exclusion around early adolescence. There was not a consistent peak when the peer had a PD. Additionally, regression analyses indicated support for the aforementioned interpretation of the curve.

One potential explanation proposed to explain the peak in exclusion is rooted in social domain theory (SDT; Nucci, 1981). This theory poses that different domains, moral, personal, and social-conventional, are relied upon when one makes a decision (Smentana, 2013). During

different stages of development individuals rely more heavily on one domain to drive decision making. SDT asserts that during early adolescence individuals rely more heavily on social conventional reasoning (Smentana, 2013) and that this explains the increase in exclusion during early adolescence. In the current study there did not seem to be age differences in the utilization of moral reasoning.

Another potential explanation for this peak in exclusion could be related to the changing acceptance of social exclusion across age. Past research has demonstrated that during early adolescence youth tend to rate exclusion as more acceptable than both younger and older participants (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983; Theimer, Killen, & Stangor, 2001). Specifically, one study demonstrated that the youngest and oldest groups of participants found exclusion less acceptable and excluded less than the middle age group, early adolescence (Malti, Strohmeier & Killen, 2015). It is possible that results from the current study were influenced by the same reason. For example, younger adolescents may have felt that it was more acceptable to exclude the fictional peer and as a result they chose to exclude more frequently than older and younger participants.

However, when the excluded peer has a PD and the situation was ability based, either intellectual or physical, the trend of exclusion was relatively flat, indicating that there do not seem to be major differences in rates of exclusion by age in those specific situations. When the situations were intellectual ability based and the peer had a PD it is possible that the flat peak is explained by the physical disability itself. Specifically, past research that has demonstrated the peak has almost exclusively focused on excluded peers who do not have a disability (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983; Theimer, Killen, & Stangor, 2001). Therefore, it is possible that youth, regardless of age, feel that excluding a peer with a PD is more

unacceptable than a peer with DS if the situation is intellectually based. While results from the current study did not show an overall difference in rates of exclusion when the peer had a PD or DS, they did demonstrate that the fictional peer with a PD was excluded less than the peer with DS in intellectual settings. If this is the case, young adolescents may have felt that exclusion was not warranted at similar rates to their older and younger counterparts. Young adolescents may have felt that those with a PD were completely able to participate in the intellectual situations and therefore chose to include them. Past research has demonstrated that younger adolescents tend to focus more on group functioning than children or older adolescents (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983). It could be that younger adolescents reasoned that the peer with a PD would not have a negative group impact in the intellectual ability vignettes and thus chose not to exclude.

When the fictional peer had a PD and the situation was physically based, there was also a relatively flat pattern of exclusion. It is possible that this was a result of the stereotype mismatch that was present. A past study (Killen & Stangor, 2001) that utilized a similar mismatch paradigm as the current study also did not find a peak in exclusion. Park and Killen (2001) also utilized a mismatch paradigm through race and gender and did not find full support for the peak in exclusion that has been demonstrated in other research studies. In the aforementioned study this finding was explained through the idea that the younger children were more likely to accept exclusion if there was a stereotype mismatch (Stangor & Killen, 2001). In the current study, it could be that younger children are excluding youth with a PD more in the physical ability vignettes because of the stereotype mismatch. Adolescents in the current study may have relied less on the stereotypes and thus excluded less. Thus, it is possible that this stereotype awareness drives a flatter exclusion trend across age.

The **fourth main question** of the current study asked did those with more quantity or higher quality of past experiences exclude less often than youth with less quantity or lower quality of past experiences? Specifically, this aim investigated how the quality and quantity of past experience each related to exclusion decisions. It was hypothesized that there would be negative relationship between each measure of past experience and exclusion, in that the quality or quantity of past experiences increase, exclusion would decrease.

Past research has demonstrated that there seems to be a relationship between both the amount and quality of experience with an outgroup and exclusion of that outgroup (Pettigrew, et al., 2011; Pettigrew, 1998; 1986; Allport, 1954). Specifically, research has indicated that when an individual has more positive experiences with a member of a group they are not a part of, they are less likely to exclude a member of that group in the future (Pettigrew, et al., 2011).

Intergroup Contact Theory (ICT) poses that experience with members of an outgroup leads to more positive behaviors towards members of that outgroup (Allport, 1954; Pettigrew, 1986; Pettigrew, et al., 2011). ICT also poses that when those experiences encompass equal status, common goal(s), cooperation, and a shared support of authority those positive group effects are even stronger (Pettigrew, et al., 2011). Therefore, it was hypothesized that youth who reported having more experiences and more positive experience with either DS or a PD would exclude the fictional peer less. The current study found no support for this hypothesis. Specifically, there was no difference between the high and low experience groups for either disability type in any of the three vignette types.

This finding does refute past research (Pettigrew, Troop, Wagner, & Christ, 2011); however, it is quite possible that it is explained by the minimal variability in experience amount. In the current study participants, regardless of age, reported very little past experience with people with

either DS or a PD. Additionally, due to the minimal experience reported, correlational analyses were not possible, and a median split was utilized. This split, resulting from low experience, could possibly be the lack of significance. It is possible that the current lack of significance is truly valid, however this seems unlikely as numerous past studies seem to support the relationship, even with individuals with a disability (Pettigrew & Troop, 2006; Pettigrew, et al., 2011).

It is possible that the limited variability in past experiences limited the magnitude of the relation with moral reasoning in the vast majority of contexts. It was not unexpected that youth reported limited experiences, but this may have resulted in difficulty detecting relationships between past experience quality.

While there is not a specific minimum amount of experience needed for ICT to be valid, research has suggested the effect is stronger when an individual has more experience with an outgroup (Bohmert & DeMoris, 2014; Wojcieszak & Azrout, 2016). Bohmert and DeMoris (2014) investigated the impact of ICT in the context of interracial friendships. This study found that when an individual has more interracial friends they had more positive racial attitudes. An additional study found that as the quantity of past experience increased, the outgroup attitudes improved (Wojcieszak & Azrout, 2016). While there is no specific minimum of contact, it is possible that the minimal quantity of past experience reported in this study with people with a disability may explain why there was not a relationship between quantity of past experience and exclusion decisions. Additionally, the minimal quantity of past experience reported in the current study led to limited variability. This limited variability likely caused an issue with statistical detection and may have led to the non-significant results.

The **fifth question** asked did moral reasoning mediate the relationship between quantity of past experience and exclusion? Based on the past research indicating relationships between

moral reasoning and both exclusion (Malti, Ongley, Dys, & Colasante, 2012) and past experiences (Pettigrew, et al., 2011) it was hypothesized that moral reasoning would mediate the relationship between the two variables. Specifically, past research has indicated that youth who use more moral reasoning are less likely to exclude (Killen & Stangor, 2001). Additionally, research indicates that youth who have more experience with an outgroup may be more likely to utilize morally based reasons when deciding to exclude a member of the at group (Nowicki, 2006). The current study did not find support for the predicted model.

In summary, the results from the current study yield support for some hypotheses and do not support others. As hypothesized there does seem to be an impact of vignette type on exclusion. Specifically, youth excluded the most in the physical ability based vignettes and least in the non-ability based vignettes. Additionally, there also seemed to be an impact of disability type in some vignette situations. The current study found that youth with DS were excluded more than those with a PD in situations that were not ability based and that the youth with a PD were excluded more in the situations that were physically based. However, the relationship between past experiences and exclusion was not significant. Additionally, there does seem to be support for the hypothesis that exclusion peaks during early adolescence, especially when the fictional peer has DS.

IMPORTANCE AND FUTURE DIRECTIONS

While these results are important to understand on their own, it is important to remember that this area of research focusing on youth with a disability is relatively new. Historically, research of exclusion has focused on gender or race (Killen & Stangor, 2001). As a result of the novelty of the current study, it is vital that these first steps be contextualized with future research in order to gain a deeper and more accurate understanding. Future research should focus on

replicating significant results from the current study and work to utilize different methodology to understand insignificant results and expand significant findings.

The current study does not indicate that moral reasoning relates to exclusion. However, in order to fully understand this relationship, or lack of a relationship, additional research should be done. One way to investigate this further is through utilizing interview methodology in order to assess decision making and reasoning. This method would likely yield more in-depth results, similar to past research. These interview methods could access a level of nuance or complexity that was not assessed in the format utilized in the current study. For example, youth may have selected a reason that only partially represented their thinking. Alternatively, it is possible that youths' reasoning was more complicated than the answer options presented. In an interview setting, youth would be able to expand on their ideas.

In addition to utilizing alternative methodologies, future research should focus on replicating and expanding the results of the current study centered around the impact of vignettes and disability type. Specifically, future research should utilize additional vignettes in order to assess other situation types and confirm the findings of the current study. One potential direction that future studies could take would be to focus on uniquely social vignettes. Past research has indicated that young adolescents tend to cite reasons within the social-conventional domain when validating exclusion of peers (Smentana, 2013; Nucci, 2008). Therefore, if youth in this developmental period were presented with specifically social situations (e.g., sleepovers, friendship activities) it is possible that they may be more likely to exclude. Additionally, older children and adolescents could choose to exclude more in citing personal domain reasoning over their own friendships. Social groups could be seen as an area that one has more personal control over, and thus more personal domain reasons could be used to justify exclusion. This could allow

for a deeper understanding of the complexity of exclusion based on situation and expand on the finding that situation seems to impact exclusion.

In addition to expanding research on scenarios, in order to further study the main aims in this study it could be beneficial to focus on intentionally including youth who have had past experiences with peers with a disability. The results in the current study did not find the expected relationship between past experience and exclusion decisions. However, participants in the current study reported low levels of past experience with peers with either DS or a PD. Therefore, future research should focus on a specific comparison between youth who report high levels of past experience and those who report low or average levels. This research would be advantageous in that it would allow for greater variability and, as a result, a greater change of group differences. This line of research could also be investigated through an intervention approach designed to increase experience with peers with a disability.

Although the current results could be further investigated by future research, the current study does yield three main conclusions of applicable significance. First, the current study demonstrates that the context surrounding exclusion does make a difference. The current study revealed that youth are most exclusive when a situation is based in physical ability, like playing a sport, and least exclusive when the situation was not based on an ability, like inclusion in a club. It seems likely that this result is largely driven by the competitive nature of the physical ability based vignettes. These vignettes largely based in picking teams to play a sport. Oppositely, the non-ability-based vignettes had little to no competition involved. Therefore, it seems that competition is largely driving exclusion decisions. While the body of research regarding competition and exclusion is limited, one study does demonstrate the link. Taylor and Bruner (2012) demonstrated that more competitiveness in youth soccer predicted more exclusion. While

this study was done in a very specific context, elite youth soccer, it does begin to demonstrate that there may be a link between competition and exclusion. The current study seems to support this idea as the more competitive vignettes were the situations that participants excluded the most.

This finding is important for two reasons; it both reveals vulnerability and a direction for intervention. First, since it seems that more competitive situations yield more exclusion, parents, educators, and others who work with youth who have a disability be acutely aware of potential exclusion in competitive situations. Specifically, if an adult knows a situation has inherent competition, they may want to monitor exclusion of youth with a disability more closely than situations that have a less competitive nature. Second, an intervention focusing on encouraging youth to learn about and focus on the skills of individuals with a disability could lessen this exclusion. For example, in the current study one youth indicated that they would include the peer with a PD in their basketball team because “[they] have a friend in a wheelchair who plays basketball and is really good.” While this is just one anecdotal example, it seems possible that if more youth were exposed to and aware of those with a disability succeeding in competitive situations exclusion could lessen.

Third, the current study indicates that the age trends of exclusion seen with TD peers seems to hold true when the peer has a disability, and especially when the disability is DS. Specifically, that there seems to be a peak in exclusion rates around early adolescence (12-13 years of age). This finding is in line with past research done when the excluded peer is TD (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983; Theimer, Killen, & Stangor, 2001). Specifically, when the peer had DS, regardless of situation type, this peak seemed to be present.

However, when the peer had a PD the peak was only present if the situation was non-ability based.

This finding is of note for multiple reasons. First, this confirms that the trends seen among TD youth seem to carry over when the peer has a disability, especially DS. This is particularly important as the body of research regarding the social experience of individuals with a disability is still relatively new and thus much is still unknown. It is often assumed that the trends and patterns seen in TD individuals will be the same when the individual has a disability. In this case, when the peer has DS this seems to be true, however when the peer has a PD it is dependent on the situation. Second, these results are important in regard to implementation of the findings. In other words, these findings help research to better understand the social landscape for individuals with DS and a PD, allowing for interventions to support positive social experiences. For example, if exclusion is highest during early adolescence, this may be a good time to focus on interventions that promote inclusion in efforts to decrease exclusion. Additionally, it could allow for parents, educators, and administrators to know when to be on “highest alert” for exclusion. When individuals know they should be watching closely for increases in exclusion, they may be more able to identify and remedy those incidents.

Future research should work to better understand these results through three avenues. First, research should work to confirm and expand these results. Specifically, researchers should work to replicate the findings in this study and investigate if other samples indicate a peak when the peer has a PD. Expansion should focus on more types of disabilities to investigate if the demonstrated trends are seen when the peer has a disability that is not DS or a PD (for example, if the peer is D/deaf). Second, researchers should work to understand why the peak in exclusion occurs. Research among typically developing youth suggests that this peak is seen due to an

increase in emphasis on group functioning and group membership/acceptance (Malti, Strohmeier, & Killen, 2015; Damon, 1977; 1983). Future research could focus on establishing if those reasons are similar when the excluded peer has a disability. Third, moving forward research should work to understand what interventions can work to “flatten the curve” of exclusion. If it remains clear that there is a peak in early adolescence, research should focus on determining and testing interventions that can be implemented to reduce exclusion during this developmental period.

Finally, the current study indicates that disability type did have an impact on exclusion decisions. For the physical ability based vignettes, the current study demonstrated that youth exclude more when the peer had a PD. This is in line with past research that indicated that when there is a mismatch between the stereotype of the individual and the situation, exclusion is higher and more justified (Killen & Stangor, 2001). Similarly, exclusion was higher for the peer with DS in the intellectually based vignettes, another stereotype mismatch. However, when the situation was not based on ability, youth excluded the peer with DS more than the peer with a PD. This is of particular note because this suggests that the exclusion is a result of DS and not of a stereotype mismatch. In other words, when all things are considered equal, youth would rather include a peer with a PD than a peer with DS. This is in line with past research suggesting youth with an ID are at a high risk for poor social experiences (Lindsay & McPherson, 2011) and that youth with DS are at an even higher risk to be socially excluded (Malti & Buholzer, 2012; Schwab, Gebhardt, & Huber, 2016; Reardanz, et al., 2019). The current study supports these results, suggesting that exclusion may be more of a concern for youth with DS than youth with another disability. Future studies should focus on isolating the specific reason(s) behind

exclusion of those with DS in a more open-ended manner. Once the “why” is better understood, interventions can be created and implemented to address those specifics.

POLICY IMPLICATIONS

While any one study cannot independently be translated to policy change, when used in conjunction with others, areas for change can be highlighted. The current study demonstrated the importance of disability and context on rates of exclusion. Past research supports the idea that context is an important part of understanding social decisions (Killen & Stangor, 2001; Park & Killen, 2012). As previously mentioned, research has indicated that youth are more likely to exclude or be accepting of exclusion when the excluded peer’s stereotype does not match the situation or when they are of another nationality (Killen & Stangor, 2001; Park & Killen, 2012). For example, a boy in ballet class (Killen & Stangor, 2001) or, as in the current study, a peer with a PD in a physically based situation. The current study also demonstrated higher rates of exclusion for the peer with DS in the non-ability based situations compared to the peer with a PD. In other words, when the situation was “ability neutral”, or there was not an expectation or necessity of ability, participants chose to exclude the peer with DS more than the peer with a PD. This finding builds on the idea that those with DS seem to be at a higher risk to experience adverse social interactions (Reardanz, et al., 2019; Schwab, Gebhardt, & Huber, 2016). The current study did not utilize a direct TD comparison group which, in order to definitively state that those with DS are at a higher risk to be excluded when compared to TD peers, would be needed. However, two studies indicate that this is likely to be the case. Reardanz, et al. (2019), youth with DS reported being left out and ignored by their peers and Schwab, Gebhardt, & Huber (2016) reported that youth with a disability were included less than the TD comparison

group. Therefore, these studies along with the current study demonstrate the importance of both situation and disability type on exclusion.

In conjunction, these findings highlight the main policy implication of the current study: a movement towards inclusive settings for individuals with DS or a disability. Specifically, policy should work to create more inclusive educational settings for youth with a disability. One main way that this heightened exclusion could be lessened is through indirect messaging regarding exclusivity. If youth are consistently seeing their peers with a disability excluded from the classroom, this may send the message that exclusion is “okay” for kids with disabilities. Local, state, and federal policy jurisdictions could be levered to promote change in this area. One specific example of a policy that could assist in supporting inclusive education would be the designation of educational funding to be set aside for support workers and aides. In this situation children or youth with a disability could be able to remain in inclusive settings with an aide or support worker. This would not only allow for the youth with a disability to benefit from inclusion but help send the message that exclusion is not acceptable. The same principle of policy change could, and arguably should, be applied to society at large. For example, a similar change could be implemented in the workplace. While policy alone cannot change the landscape of social experiences for youth with DS or a disability broadly, it is one concrete method to support the promotion of inclusion and a positive social experience.

REFERENCES

- Allport, G.W. 1954. *The Nature of Prejudice*. Reading, MA: Addison-Wesley. 537 pp.
- Armstrong, M., Morris, C., Abraham, C., Ukoummine, O.C., & Tarrant, M. (2016). Children's contact with people with disabilities and their attitudes towards disability: A cross-sectional study. *Disability Rehabilitation*, 38(9), 879 – 888. doi: 10.3109/09638288.2015.1074727.
- Beaulieu-Bergeron, R., & Morin, D. (2016). A Qualitative Investigation of Fifth- and Sixth grade Students' Attitudes towards Intellectual Disability. *International Journal of Disability, Development & Education*, 63(5), 514–528. <https://doi-org.libdata.lib.ua.edu/10.1080/1034912X.2016.1144874>
- Bond, E. (1980). Gewirth on reason and morality. *Metaphilosophy*, 11(1), 36-53.
- Brewer MB, Miller N. 1988. Contact and cooperation: when do they work? In Katz, P.A. & Taylor, D.A. (Eds.). pp. 380 *Eliminating Racism: Profiles in Controversy*. New York City, NY: Plenum.
- Brown, L. M. & Tappan, M.B. (1991). Commentary. *Human Development*, 34, pp. 81 -87.
- Cabrera-Nguyen, P. (2010). Author guidelines for reporting scale development and validation results in the journal of the society for social work and research. *Journal for the Society of Social Work and Research*, (1)9, 99-103. doi:10.5243/jsswr.2010.8
- Chiu, Y.L., Kao, S., T., S.W., & Lin, F.G. (2017). Effect of personal characteristics, victimization types, and family-and-school-related factors on psychological distress in adolescents with intellectual disabilities. *Psychiatry Research*, 248, 48 – 55. doi: 10.1016/j.psychres.2016.12.015
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd edition). Hillsdale, New Jersey: L.
- Colby, A., Kohlberg, L., Gobbs, J., Lieberman, M., Fischer, K., & Saltzstein, H.D. (1983). A longitudinal study of moral judgment. *Monographs of the Society for Research in Child Development*, 48(1/2, pp. 1-124). doi: 10.2307/1165935
- Cooley, S. & Killen, M. (2015). Children's evaluations of resource allocation in the context of group norms. *Developmental Psychology*, 51(4). doi: 10.1037/a0038796

- Cooley, S., Elenbaas, L., & Killen, M. (2016). Social exclusion based on group membership is a form of prejudice. in Horn, S.S., Ruck, M.D., & Liben, L.S. (eds.) *Equity and Justice in Developmental Science: Implications for Young People, Families, and Communities*, 51, 103 – 129. doi: 10.1016/bs.acdb.2016.04.004
- Damon, W. (1977). *The social world of the child*. San Francisco: Jossey-Bass.
- Damon, W. (1983). *Social and personality development: Infancy through adolescence*. New York City, NY: W.W. Norton
- Davidson, P., Turiel, E., & Black, A. (1983). The effect of stimulus familiarity of criteria and justifications in children's social reasoning. *British Journal of Developmental Psychology*, 1, 49–65.
- Evans-Polce, R. J., Vasilenko, S. A., & Lanza, S.T. (2014). Changes in gender and racial/ethnic disparities in rates of cigarette use, regular heavy episodic drinking, and marijuana use: Ages 14 to 32. *Addictive Behaviors*, 41, 218-222 PMID: PMC4314406
- Fritz, M.S. & MacKinnon, D.P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, 18(3), 223-239. <https://doi.org/10.1111/j.1467-9280.2007.01882.x>
- Flesch, R. (1948). A new readability yardstick. *Journal of Applied Psychology*, 32(3), 221–233. <https://doi.org/10.1037/h0057532>
- Gilligan, C. (1977). In a different voice: Women's conception of the self and morality. *Harvard Educational Review*, 47, pp. 481 – 517.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Gilligan, C. (1987). Moral orientation and moral development. In Kittay, E. & Myers, D (Eds.). *Women and Moral Theory*. Totowa, NJ: Rowan & Littlefield
- Harman, G. (1978). What is moral relativism? In Goldman, A.I. & Kim, J. (Eds.) *Values and Morals: Essays in Honor of William Frankena, Charles Stevenson, and Richard Brandt*. pp. 143 – 161. New York City, NY: Springer. doi: 10.1007/978-94-015-7634-5_9
- Hayes, A.F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression based approach*. Second Edition. New York, NY: The Guilford Press.
- Hewstone M. 1996. Contact and categorization: social-psychological interventions to change intergroup relations. In *Foundations of Stereotypes and Stereotyping*, ed. CN Macrae, C Stagnor, M Hewstone, pp. 323–68. New York: Guilford. 462 pp.

- Hitti, A., Mulvey, K.L., Rutland, A., Abrams, D., & Killen, M. (2013). When is it okay to exclude a member of the ingroup? Children's and adolescents' social reasoning. *Social Development, 23*(3). doi: 10.1111/sode.12047
- Hogan, R.T. & Emler, N.P. (1978). The bases in contemporary social psychology. *Social Research, 45*, pp. 478 – 534.
- Kahn, J. (2020). Reporting mediation and moderation. *Illinois State University*.
<http://my.ilstu.edu/~jkhahn/medmod.html>
- Killen, M., Lee-Kim, J., McGlothlin, H., & Stangor, C. (2002). How children and adolescents evaluate gender and racial exclusion. Monographs for the Society for Research in Child Development (Serial No. 271, Vol. 67, No. 4). Oxford, England: Blackwell.
- Killen, M., Kelly, M. C., Richardson, C., & Jampol, N. S. (2010). Attributions of intentions and fairness judgments regarding interracial peer encounters. *Developmental Psychology, 46*(5), 1206-1213. doi: 10.1037/a0019660
- Killen, M., Sinno, S., & Margie, N.G. (2007). Children's experiences and judgments about group exclusion and inclusion. *Advances in Child Development and Behavior, 35*, 173 – 218.
- Killen, M. & Stangor, C. (2001). Children's social reasoning about inclusion and exclusion in gender and race peer group contexts. *Child Development, 72*(1), 174 – 186. doi: 10.1111/1467-8624.00272
- Kohlberg, L. (1958). *The development of modes of moral thinking and choice in the years ten to sixteen*. Unpublished doctoral dissertation, University of Chicago.
- Kohlberg, L. (1969). Stage and sequence: The cognitive development approach to socialization. In D. A. Goslin (Ed.). *Handbook of socialization theory* (pp. 347-480). Chicago, IL, Rand McNally.
- Kohlberg, L. (1981). Essays on moral development. *The Philosophy of Moral Development*. San Francisco, CA: Harper and Row
- Kohlberg, L. & Hersh, R.H. (1977). Moral development: A review of the theory. *Theory into Practice, 16*(2). doi: 10.1080/00405847709542675
- Kozma, C. (2008). What is Down syndrome? In S. J. Skallerup, S. J. Skallerup (Eds.), *Babies with Down syndrome a new parent's guide* (pp. 1-43). Bethesda, MD, US: Woodbine House.
- Lanza, S. (2020, May 12). Time-varying effect modeling. Retrieved from
<https://www.methodology.psu.edu/ra/tvem/>

- Lanza, S.T., Vasilenko, S.A., & Russell, M.A. (2016). Time-varying effect modeling to address new questions in behavioral research: Examples in marijuana use. *Psychology of Addictive Behaviors*, 30(8), 939-954, <https://doi.org/10.1037/adb0000208>
- Li, R., Dziak, J. D., Tan, X., Huang, L. Wagner, A. T., & Yang, J. (2017). *TVEM (time-varying effect modeling) SAS macro users' guide* (Version 3.1.1). University Park: The Methodology Center, Penn State. Retrieved from <http://methodology.psu.edu>
- Lindsay, S. & Edwards, A. (2013). A systematic review of disability awareness interventions for children and youth. *Disability and Rehabilitation*, 35, 623 – 646. doi: 10.3109/09638288.2012.702850
- Lindsay, S. & McPherson, A.C. (2011) Strategies for improving disability awareness and social inclusion of children and young people with cerebral palsy. *Child: Care, Health and Development*, 36(6), 809-816. <https://10.1111/j.1365-2214.2011.01308.x>
- Lewis, D. (1969). *Convention: A philosophical study*. Cambridge, MA: Harvard University Press.
- Mai CT, Isenburg JL, Canfield MA, Meyer RE, Correa A, Alverson CJ, Lupo PJ, Riehle-Colarusso T, Cho SJ, Aggarwal D, Kirby RS. (2019). National population-based estimates for major birth defects, 2010–2014. *Birth Defects Research*, 111(18): 1420-1435.
- Malti, T., & Ongley, S. F. (2014). The development of moral emotions and moral reasoning. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 163-183). New York, NY, US: Psychology Press.
- Malti, T., Ongley, S.F., Dys, S.P., & Colassante, T. (2012). Adolescents' emotions and reasoning in contexts of moral conflict and social exclusion. *New Directions in Youth Development*, 136, 27 – 40. doi: 10.1002/yd.20036.
- Masten, C.L., Eisenberger, N.I., Borofsky, L.A., McNealy, K., Mazziotta, J.C., & Dapretto, M. (2009). Neural correlates of social exclusion during adolescence: Understanding the distress of peer rejection. *Social, Cognitive, and Affective Neuroscience*, 4(2), 143-157. doi: 10.1093/scan/nsp007.
- Murphy, S. M., Faulkner, D. M., & Reynolds, L. R. (2014). A randomized controlled trial of a computerized intervention for children with social communication difficulties to support peer collaboration. *Research in Developmental Disabilities*, 35, 2821-2839.
- National Down Syndrome Society. (2012). *Down syndrome facts*. Retrieved from <http://www.ndss.org/down-syndrome/down-syndrome-facts/>

- Northcutt Bohmert, M., & DeMaris, A. (2015). Interracial friendship and the trajectory of prominerity attitudes: Assessing intergroup contact theory. *Group Processes & Intergroup Relations*, 18(2), 225–240. <https://doi.org/10.1177/1368430214550342>
- Nowicki, E. A. (2006). A cross-sectional multivariate analysis of children's attitudes towards disabilities. *Journal of Intellectual Disability Research*, 50(5), 335.
- Nowiki, E.A., Brown, J., & Stepien, M. (2014). Children's thoughts on the social exclusion of peers with intellectual or learning disabilities. *Journal of Intellectual Disability Research*, 58(4), 356 – 357. doi: 10.1111/jir.12019
- Nowiki, E.A. & Sandieson, R. (2002). A meta-analysis of school -age children's attitudes towards persons with physical or intellectual disabilities. *International Journal of Disability Development and Education*, 49(3), 243 – 265. doi: 10.1080/1034912022000007270
- Nucci, L. (1981). The development of personal concepts: A domain distinct from moral or societal concepts. *Child Development*, 52, 114–121.
- Nucci, L. P. (2008). *Nice is not enough: Facilitating moral development*. New York: Pearson.
- Park, Y., & Killen, M. (2010). When is peer rejection justifiable?: Children's understanding across two cultures. *Cognitive development*, 25(3), 290–301. doi: 10.1016/j.cogdev.2009.10.004
- Pettigrew, T.F. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49, pp. 65 – 85. doi: 10.1146/annurev.psych.49.1.65
- Pettigrew, T.F. 1986. The contact hypothesis revisited. In Hewstone & Brown (Eds.) pp. 169–95. *Contact and Conflict in Intergroup Encounters*. Oxford: Blackwell.
- Pettigrew, T.F., & Troop, L.R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90(5), 751 – 783. <https://doi.org/10.1037/0022-3514.90.5.571>
- Pettigrew, T.F., Troop, L.R., Wagner, U., & Christ, O. (2011). Recent advances in intergroup contact theory. *International Journal of Intercultural Relations*, 35, 271 – 280. doi: 10.1016/j.ijintrel.2011.03.001
- Reardanz, J., Conners, F.A., McDonald, K.L., & Singh, N. (2019). Peer victimization and communication skills in adolescents with Down syndrome: Preliminary findings. *Journal of Autism and Developmental Disorders*, 50, pp. 349-355. doi:10.1007/s10803-019-04238-z
- Rest, J. (1979). *Development in Judging Moral Issues*. Minneapolis, MN: University of Minnesota.

- Rest, J., Narvaez, D., Bebeau, M., & Thoma, S. (1999). A neo-Kohlbergian approach: The DIT and schema theory. *Educational Psychology Review, 11*(4), 291-324.
- Rest, J.R., Narvaez, D., Thoma, S.J., & Bebeau, M.J. (2000). A neo-Kohlbergian approach to morality research. *Journal of Moral Education, 29*(4), 381-395. doi: 10.1080/713679390
- Reynolds WM. *Reynolds Bully-Victimization Scales for Schools*. San Antonio, TX: The Psychological Corporation; 2003.
- Robinson, R.J. (2000). Learning about happiness from persons with Down syndrome: Feeling the sense of joy and contentment. *American Journal of Intellectual and Developmental Disabilities, 105*(5), 372-376. Doi:10.1352/0895-8017(2000)105
- Rosenbaum, P.L., Armstrong, R.W., & King, S.M. (1986) Children's attitudes toward disabled peers: A self-report measure. *Journal of Pediatric Psychology, 11*.
- Schuler, M. S., Vasilenko, S. A., & Lanza, S. T. (2015). Age-varying associations between substance use behaviors and depressive symptoms during adolescence and young adulthood. *Drug and Alcohol Dependence, 157*, 75-82. PMID: PMC4663168
- Schwab, S., Gebardt, M., & Huber, C. (2016). Social acceptance of students with Down syndrome and students without disability. *Educational Psychology: An International Journal of Experimental Educational Psychology, 36*(8), 1501 – 1515. doi: 10.1080/01443410.2015.1059924
- Shiyko, M. P., Lanza, S. T., Tan, X., Li, R., & Shiffman, S. (2012). Using the time-varying effect model (TVEM) to examine dynamic associations between negative affect and self-confidence on smoking urges: differences between successful quitters and relapses. *Prevention science : the official journal of the Society for Prevention Research, 13*(3), 288–299. <https://doi.org/10.1007/s11121-011-0264-z>
- Smetana, J.G. (2013). Moral development: The social domain theory view. in Zelazo, P.D. (Ed.), *The Oxford Handbook of Developmental Psychology* (1st ed., pp.833 – 864). New York, NY: Oxford University Press, USA.
- Smetana, J. G., Jambon, M., Conry-Murray, C., & Sturge-Apple, M. L. (2012). Reciprocal associations between young children's developing moral judgments and theory of mind. *Developmental Psychology, 48*(4), 1144-1155. doi: 10.1037/a0025891
- Smetana, J.G. (2006). Social-cognitive domain theory: Consistencies and variations in children's moral and social judgments. M. Killen, J. Smetana (Eds.), *Handbook of moral development*, Lawrence Erlbaum Associates Publishers, Mahwah, NJ (2006), pp. 119-153

- Smetana, J.G., Kelly, M., & Twentyman, C.T. (1984). Abused, neglected, and nonmaltreated children's conceptions of moral and social-conventional transgressions. *Child Development, 55*(1), 277-287. doi: 10.1111/j.1467-8624.1984.tb00291.x
- Smith, L.A. & Williams, J.M. (2004). Children's understanding of the casual origins of disability. *Journal of Cognition and Development, 5*, 383-397.
- Solish, A., Perry, A., & Minnes, P. (2010). Participation of children with and without disabilities in social, recreational and leisure activities. *Journal of Applied Research in Intellectual Disabilities, 23*(3), 226-236. doi: 10.1111/j.1468-3148.2009.00525.x
- Taylor, I.M. & Bruner, M.W. (2012). The social environment and developmental experiences in elite youth soccer. *Psychology of Sport and Exercise, 13*(4), 390-396. doi: 10.1016/j.psychsport.2012.01.008
- Theimer, C.E., Killen, M., & Stangor, C. (2001). Young Children's evaluations of exclusion in gender-stereotypic peer contexts. *Developmental Psychology, 37*(1), 18 – 27.
- Thoma, S.J. (2014). Measuring moral thinking from a neo-Kohlbergian perspective. *Theories and Research in Education, 12*(3), 347-365. doi: 10.1177/1477878514545208
- Tisak, M. (1995). Domains of social reasoning and beyond. Vasta, R. (Ed.) *Annals of Child Development: Vol 11*, pp. 95-130. Jessica Kingsley Publishers, London England.
- Turiel, E. (2006). The development of morality. N. Eisenberg, W. Damon, R.M. Lerner (Eds.), *Handbook of child psychology: Vol. 3, Social, emotional, and personality development*, 6th ed., John Wiley & Sons Inc, NJ, pp. 789-857
- Turiel, E. (1983). Domains and categories in social-cognitive development. in Overton, W.F. (Ed.), *The Relationship Between Social and Cognitive Development* (pp. 53 -99). Hillsdale, NJ: Lawrence Erlbaum Associates Inc.
- Twyman, K., Saylor, C., Saia, D., Macias, M., Taylor, L., & Spratt, E. (2010). Bullying and ostracism experiences in children with special health care needs. *Journal of Developmental and Behavioral Pediatrics, 31*(1), 1-8., doi: 10.1097/DBP.0b013e3181c828c8
- Valls, R. & Kyriakides, L. (2010). The power of interactive groups: How diversity of adults volunteering in classroom groups can promote inclusion and success for children of vulnerable minority ethnic populations. *Cambridge Journal of Education, 43*(1), 17 – 33. doi: 10.1080/0305764X.2012.749213
- Vanhalst, J., Luyckx, K., Van Petegem, S., & Soenens, B. (2018). The detrimental effects of adolescents' chronic loneliness on motivation and emotion regulation in social

- situations. *Journal of Youth and Adolescence*, 47(1), 162 – 176. doi: 10.1007/s10964-017-0686-4
- Vasilenko, S. A. & Lanza, S. T. (2014). Predictors of multiple sexual partners from adolescence through young adulthood. *Journal of Adolescent Health*, 56, 491-497. doi: 10.1016/j.jadohealth.2013.12.025 PMID: PMC4139487
- Wainryb, C., Brehl, B., & Matwin, S. (2005). Being hurt and hurting others: Children's narrative accounts and moral judgments of their own interpersonal conflicts. *Monographs of the Society for Research in Child Development*, 70, 1–114.
- Wang, C., Williams, K. E., Shahaiean, A., & Harrison, L. J. (2018). Early predictors of escalating internalizing problems across middle childhood. *School Psychology Quarterly*, 33(2), 200-212. doi: 10.1037/spq0000218
- Wesselmann E.D., Grzybowski M.R., Steakley-Freeman D.M., DeSouza E.R., Nezelek J.B., Williams K.D. (2016) Social Exclusion in Everyday Life. In: Riva P., Eck J. (eds) Social Exclusion. Springer, Cham.
- Winance, M. (2006). Trying out the wheelchair: The mutual shaping of people and devices through adjustment. *Science, Technology, and Human Values*, 31, p. 52 – 72. doi: <https://doi.org/10.1177/0162243905280023>
- Wojcieszak, M. & Azrout, R. (2016). I saw you in the news: Mediated and direct intergroup contact improve outgroup attitudes. *Journal of Communication*, 66(6), pp 1032 – 1060. doi: 10.1111/jcom.12266
- Vitz, P.C. (1994). Critiques of Kohlberg's model of moral development: A summary. *Revista Espanola de Pedagogia*, 52, 197, pp 5 – 35.

APPENDIX A. PILOTING

PILOTING PURPOSE. Although similar measures have been used in the past, these specific stories have not been used. Therefore, in order to ensure that these measures will be successful with the intended age group, the measures have been piloted. The first main aim of piloting these measures was to assess the practicality of the survey, especially the length of time and ability for participants to complete it independently on the computer. The second main aim of piloting these measures was to assess the variability in participant responses. The main area of concern in variability of responses was in regard to the choice to include or exclude the fictional peer.

PILOTING PARTICIPANTS AND PROCEDURE. Participants were recruited through word of mouth and through social media. Piloting included 19 total participants between the ages of 8 and 18 years ($M_{\text{age}} = 12.53$, $SD_{\text{age}} = 3.10$). This included 6 participants in the older two age groups, and 7 in the youngest group (see Table 15 for full demographic information). Piloting participants were split relatively equally between genders (52.6% male) and were mostly White and non-Latinx (84.2%) with one participant reporting they identified as Black or African American, one participant reporting they identified as Asian or Pacific Islander, and one reporting they identified as Latinx. Aside from the procedure surrounding the reasoning, participants followed the same procedure as described in the procedure section. Participants during the piloting portion indicated the reasons they used by checking up to three choices for

each vignette. This procedure was altered based on piloting; a full explanation can be found in the piloting discussion portion of the document.

Table 15.

Demographics of Piloting Participants

	N	Age in years (M/SD)	Completion Time in min (M/SD)	% Male	% White, non Latinx
Late Childhood (8 – 11 years)	7	9.14/1.21	18.14/2.03	57.1%	85%
Early Adolescence (12-14 years)	6	12.83/0.75	11.03/4.40	50.0%	83%
Late Adolescence (15-18 years)	6	16.17/1.47	10.18/2.50	50.0%	83%
Total	19	12.53/3.10	13.38/3.16	52.6%	84.2%

PILOTING RESULTS. This piloting portion of the study served two main purposes.

Overall, results demonstrate that these measures were both practical for participants and demonstrated variability in response. Specifically, to address the practicality of the testing battery, time of completion was assessed. Participants averaged about 13.38 minutes ($SD_{\text{time}} = 3.16$) to complete the full survey, with length of time ranging from 6.12 minutes to 23.56 minutes. In addition to the time of completion, all participants who assented to the study completed it. This 100% completion rate suggesting that participants were able to complete the questionnaire in the format it was presented, online through Qualtrics.

In addition to assessing the practicality of these measures, a second aim of piloting was to assess the variability in participant responses. Variability was assessed in each measure and each showed decent variability even with the small sample size. The vignette style measure of exclusion demonstrated a range of average responses from 2.40 to 3.70 ($M_{\text{exclusion}} = 3.24$; $SD_{\text{exclusion}} = .893$). Not only did the overall scores demonstrate variance, when broken down by age group each group showed variance as well. See Table 10 for detailed descriptors broken down by measure and age.

In order to assess the moral reasoning used in the piloting measures, each participant's score was calculated by dividing the total number of times they selected a moral option by the total number of selections they made. Scores could range from 0-1 based on the proportion of morally driven reasons the participant selected. This method has been slightly altered for the proposed study, see the piloting discussion for a more in depth description of the changes made. Moral reasoning demonstrated good range with scores ranging from .125 to .385 ($M_{\text{reasoning}} = .2$; $SD_{\text{reasoning}} = .756$). Again, each age group individually showed good variance in regard to moral reasoning. In regard to the past experience participants have with individuals with either DS or a PD, the range was quite large, from 1.00 to 4.00 ($M_{\text{DS}} = 1.20$; $SD_{\text{DS}} = .676$; $M_{\text{PD}} = 1.40$; $SD_{\text{PD}} = .548$). See Table 11 for detailed descriptors broken down by measure and age.

Table 16.
Preliminary Analyses: Piloting Data

	<i>M</i>	<i>SD</i>	Minimum	Maximum
<i>Late Childhood (8 – 11 years)</i>				
Overall Inclusion	3.32	.758	2.60	3.70
Moral Reasoning	.238	.697	.125	.246
Past Experiences (DS)	12.86	3.64	9.00	17.00
Past Experiences (PD)	12.98	3.81	9.00	18.00
<i>Early Adolescence (12-14 years)</i>				
Overall Inclusion	3.12	.627	2.40	3.60
Moral Reasoning	.273	.748	.183	.286
Past Experiences (DS)	11.91	3.78	9.00	18.00
Past Experiences (PD)	12.35	3.84	9.00	18.00
<i>Late Adolescence (15-18 years)</i>				
Overall Inclusion	3.28	.786	2.50	3.70
Moral Reasoning	.325	.348	.204	.385
Past Experiences (DS)	11.53	3.42	9.00	16.00
Past Experiences (PD)	14.33	4.23	10.00	21.00
<i>Total</i>				
Overall Inclusion	3.24	.893	2.40	3.70
Moral Reasoning	.279	.756	.125	.385
Past Experiences (DS)	12.10	3.73	9.00	18.00
Past Experiences (PD)	13.22	4.49	9.00	21.00

Note. Past experiences are a total score. Inclusion and reasoning are averages across participants. Higher scores indicate more inclusion, more moral reasoning, and more experience with each group. Inclusion possible range: 1-4; Moral reasoning possible range: 0-1; Past experiences possible range: 9-36.

PILOTING DISCUSSION. As previously mentioned, there were two broad goals for piloting this testing battery. First, to ensure that participants were practically able to complete each of the measures. Specifically, piloting allowed for assessment of completion time and any issues preventing completion of the measure. Results demonstrated that participants were all, across the age range, able to not only complete the measure, but do so in a reasonable amount of time. Based on the results from piloting, there was one potential outlier in regard to completion time. One participant took only 6 minutes and 11 seconds to complete the measure. When the responses for this participant are assessed, there is still variability across the measures.

Therefore, it seems that this participant was well able to answer the questions in a reasonably

thoughtful manner. Moving forward, completion time will be a method in which potentially invalid results can be identified. Using the parameters presented in the piloting data, any participant that completes the measure in less than five minutes will be deemed as “too fast” and the results for that participant will not be used in final analyses. While it is not entirely possible to know how thoughtful participants are based solely on length of time the survey took them to complete, it is an indicator that a participant moved too quickly to be thoughtful in their responses.

Looking beyond completion time, it seems that there were no major issues with completing the measure in the presented format. All participants that assented to the questionnaire completed all questions. Based on this as well as the fact that no issues were reported to the researcher, it is concluded that the format presented was practical and not too burdensome for participants to complete.

An additional concern that had been raised was the reading level of the vignettes being too advanced for younger participants. Each vignette was assessed for reading level based on the Flesch-Kincaid Readability Test (Flesch, 1948) and falls below the grade level for the youngest participant ($M_{\text{gradelevel}} = 3.78$). Additionally, participants have the option to listen to each vignette and the descriptions of DS and PD should they choose to. The option to listen to the vignettes paired with the appropriate grade reading level indicates that reading comprehension should not be an issue for participants in this study. Overall, it seems that participants are able to comprehend and complete the measure in a reasonable amount of time when presented to them in an online format.

In regard to the second aim of piloting, assessing the variability in participant responses, the results from the piloting sample (N = 19) indicate that there seems to be decent variability in response. Overall, participants chose to include the fictional peer more than exclude, so averages are be closer to “*Definitely include*” (4) than “*Definitely wouldn’t include*” (1). This was expected and in line with past research (Park & Killen, 2010; Hitti, et al., 2014; Killen, et al., 2010; Killen & Stangor, 2001). Variability for exclusion and moral reasoning measures was good both overall and for each age group even with the small sample size. Therefore, piloting results indicate that variability should not be a concern moving forward. There was also variability in the experiences that participants have had with individuals with DS or a PD, however the majority of participants had little experience. This, however, is not a concern as the current study is interested in investigating the impact of typical experiences and is not an intervention looking to increase experiences with those with a disability.

While there was good variability in the reasoning participants used, based on the results of the piloting group, there were two changes made to this measure. First, the wording of options was altered slightly to better fit the domains found in SDT and to make each selection clearer to participants. Second, the response format was altered. Originally participants selected between one and three choices in an unweighted format. After consideration for the data output and intended analyses, this response format has been changed. Now, participants are asked to rank their top three choices. This method makes two important changes to the measure. First, participants are required to select three choices, which will standardize the number of items each participant chooses. A standardized selection amount will allow for improved comparison between participants. Second, in this method participants are ranking their choices. This allows for more weight to be given to the most important reason, while still taking into account multiple

reasons. Based on the results from the piloting sample as well as the slight revisions that were made, the testing battery seems to be a reasonable, effective, and valid method in which to assess the main questions in the current study.

APPENDIX B. VIGNETTES

After each vignette participants will be informed that: “Another student at school, ____, tells you that s/he wants to be on your team” and that this peer either “has a physical disability which means s/he may have trouble moving around.” or “has Down Syndrome which means s/he may have trouble learning and remembering things.”

Then they will be told: “Some people already in your group want him/her to join and some do not want him/her to join.”

Practice Item:

1. You are told that you are **going to the park** with some friends. **You get to pick who comes with you.**

Intellectual Ability Based:

1. You are told that you are going to do a **group project** in class. **You get to pick who is in your group.**
2. You have a **tough homework** assignment. You are going to work on it with other kids' afterschool. **You get to pick who is in your group.**

3. You are **picking teams** to play a Charades. **You get to pick who is on your team.**
4. You are **picking teams** to play a quiz game. **You get to pick who is on your team.**
5. You are working with a group to build a bridge for a class assignment. **You get to pick who is on your team.**
6. You are **picking teams** to play a puzzle game. **You get to pick who is on your team.**

Physical Ability Based:

1. You are **picking teams** to play basketball after school. **You get to pick who is on your team.**
2. You are **picking teams** to play volleyball after school. **You get to pick who is on your team.**
3. You are **picking teams** to play soccer after school. **You get to pick who is on your team.**
4. You and some friends are going outside during lunch to play catch. **You get to pick who comes.**
5. You are **picking teams** to go bowling after school. **You get to pick who is on your team.**
6. You are **picking teams** to play cornhole after school. **You get to pick who is on your team.**

Non-Ability Based:

1. You are a part of the **art club** afterschool. In this club, people work on their own art projects together. **You get to decide who is in the club.**
2. You are a part of the **movie club** afterschool. In this club, people watch a movie together. They also talk about the movie. **You get to decide who is in the club.**
3. You are a part of the **drama club** afterschool. In this club, people act out plays and play improv games. **You get to decide who is in the club.**
4. You are a part of the **music club** afterschool. In this club, people get together and sing and play music. **You get to decide who is in the club.**
5. You are in the **nature club** afterschool. In this club, people get together and learn about animals and nature. **You get to decide who is in the club.**
6. You are in the **service club** afterschool. In this club, people get together and help their community. **You get to decide who is in the club.**

Participants will then be asked “Would you include _____?”

1 Definitely won't include	2 Might include	3 Probably would include	4 Definitely would include
---	---------------------------	---------------------------------------	---

*Then their reasons for making their choice. Participants will rank their top three reasons for making the choice. Specifically, they will be asked “**Why did you make that choice? Rank your top 3!**”*

	I was thinking about _____'s feelings
	Because adults have taught me to
	Because _____ might impact my group
	Because _____ might not be good at <u>[the activity]</u>
	Because it is what I wanted to do
	Because I am following the rules
	I was thinking about what is fair
	So other kids will like me

APPENDIX C. DESCRIPTIONS

Participants will be shown these descriptions and pictures (matched to gender).

Note: descriptions are based on those used in Smith & Williams, 2004 and Gasser, Malti, & Buholzer, 2012.

You are going to read some stories. Some stories are about people with Down syndrome. People with Down syndrome may have a hard time learning things. They may have a hard time remembering things. They might also be slower in their thinking. They may need help from other people. Other than that, they are like people who do not have Down syndrome.

Someone with Down Syndrome may look something like these people



You are going to read some stories. Some stories are about people with a Physical disability. People with a physical disability may have trouble moving around. They may use something to help them move. They might need help from other people. Other than that, they are like people who do not have a physical disability.

Someone with Physical Disability may look something like these people:



APPENDIX D. MEASURES OF PAST EXPERIENCE

Participants will indicate their experience with people with Down syndrome and a Physical Disability. They will answer for each group separately.

	Never	Sometimes	A lot	Every day or almost everyday
In your school?				
In your class?				
In an afterschool program?				
On your sports team?				
In a youth group?				
At summer camp?				
In a club?				
Because they are a family friend?				
Because they are in your family?				

They will then be asked to rank how positive the interactions have been overall for each group separately:

Not Positive	Sort of Positive	Really Positive
--------------	------------------	-----------------

APPENDIX E. INSTITUTIONAL REVIEW BOARD APPROVAL



December 15, 2020

Jenna Reardanz
Department of Psychology
College of Arts & Sciences
Box 870348

Re: IRB Application: 20-005 B (eP: 20-02-3349) "Social Exclusion of Youth with Disabilities"

Dear Jenna Reardanz:

The University of Alabama Institutional Review Board has reviewed the revision to your previously approved full board protocol. The board has approved the minor change in your protocol.

Please remember that your approval will lapse on 03/11/21. Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number.

Good luck with your research.

Sincerely,



Jessup Building | Box 870127 | Tuscaloosa, AL 35487-0127
205-348-8461 | Fax 205-348-7189 | Toll Free 1-877-820-3066

Note: This is the approval letter noting the acceptance of the submission of approval from the final recruiting site.

February 9, 2021

Jenna Reardanz
Department of Psychology
College of Arts & Sciences
Box 870348

Re: IRB # 20-005-R1 (eProtocol: ID 20-02-3349) "Social Exclusion of Youth with Disabilities"

Dear Jenna Reardanz:

The University of Alabama Institutional Review Board has granted approval for your renewal application.

Your protocol has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 8 as outlined below:

(8) Continuing review of research previously approved by the convened IRB as follows:

(a) where (i) the research is permanently closed to the enrollment of new subjects; (ii) all subjects have completed all research-related interventions; and (iii) the research remains active only for long-term follow-up of subjects; or

(b) where no subjects have been enrolled and no additional risks have been identified; or

(c) where the remaining research activities are limited to data analysis.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. The approval for your application will lapse on February 8, 2022. If your research will continue beyond this date, please submit the Continuing Review form to the IRB as required by University policy before the lapse. Please note, any modifications made in research design, methodology, or procedures must be submitted to and approved by the IRB before implementation. Please submit a final report form when the study is complete.

Good luck with your research.

Sincerely,



Jessup Building | Box 870127 | Tuscaloosa, AL 35487-0127 | 205-348-8461
Fax 205-348-7189 | Toll Free 1-877-820-3066 | rscompliance@research.ua.edu

Note. This is the letter indicating approval of the renewal to continue analysis.