EMPATHY AND NARRATIVE FICTION:

THE EFFECTS OF PALACIO'S *WONDER* ON FOURTH-GRADE STUDENTS' EMPATHY

A THESIS

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Abstract

Narrative fiction, as a vehicle for empathic development, is deemed important across many contexts; however, limited empirical studies have examined this hypothesis as it relates to elementary students. The purpose of this mixed-methods action-research study is to investigate whether reading narrative fiction, combined with classroom activities on empathy and perspective, potentiates empathy in fourth-grade students. Participants ($N = 46$) were asked to complete pre- and post-unit questionnaires to measure empathy within three domains: affective empathy, cognitive empathy, and intention to help. Questionnaire data from the eleven-week novel study demonstrated statistically significant growth in my students' empathy across all three domains. There was no significant difference in empathy growth between males and females in the three empathy domains. Qualitative data from eight academically diverse fourth-grade case studies were analyzed to further investigate the development of students' empathy. Results indicated that during the eleven-week novel study, students developed their abilities to articulate their own affected emotions, their understanding of another's emotions, and their plans to help another.

Keywords: Empathy, Narrative Fiction, Elementary Students

Introduction

In an era of explicit polarization, competition, and standardization, it is becoming increasingly important to teach children how to empathize with other beings. Today's assessment-driven climate often does not allow room for character development in schools. There exists a strong pressure to divert time from fiction to focus more on nonfiction texts. This is a costly trade, however, because the social and emotional benefits from reading narrative fiction are invaluable. Barak Obama is one of many to recognize the importance of narrative fiction as an impetus for empathy development. In a 2007 speech about empathy and literacy, Obama exclaimed,

> The biggest deficit that we have in our society and in the world right now is an empathy deficit. We are in great need of people being able to stand in somebody else's shoes and see the world through their eyes. And the great power of books is the capacity to take you out of yourself and put you somewhere else. And to suddenly say, "Oh, this is what it's like" – maybe not perfectly – but it gives you some glimpse of "This is what it is like to be a woman," or "This is what it is like to be an African-American" […] And so it's books more than anything else that are going to give our young people the ability to see other people. And that then gives them the capacity to act responsibly with respect to other people ("Pres. Barak Obama," 2007).

The idea that books have the power to generate empathy by transporting readers to experience different places, cultures, and lives is a bold and hopeful statement. Research indicates that in adults, there exists a positive correlation between reading narrative fiction and empathy. However, it is imperative that teachers understand the relationship between fiction and character development in our young students. Therefore, the present study aims to test the hypothesis that fourth-grade students will show improved empathy scores after a narrative-fiction novel study, combined with classroom activities on empathy and perspective.

Literature Review

In order to explore the effects of reading narrative fiction on empathy, it is important to first define the term "empathy." The literature provides countless definitions of empathy across different fields of study, including philosophy, psychology, psychiatry and neuroscience. Although these definitions of empathy share some commonalities, they are largely influenced by the domains from which they were constituted. In English, the word "empathy" is derived from the Greek root *pathos,* meaning emotion, feeling, suffering, or pity. The English words "empathy" and "sympathy" are often used interchangeably. Scholars have recently aimed to distinguish the two terms, with "empathy" referring to the experience of feeling and understanding someone else's emotions, and "sympathy" referring to the feeling of concern for another (Coplan, 2004; Keen, 2006; Mar & Oatley 2008; Mar, Oatley, Djikic, & Mullin, 2011). The current usage of the term "empathy" was coined by the British psychologist Edward Titchener in 1908, when he translated it from the German word *Einfühlung* which means "feeling in/into." More recently, research in the field of neuroscience has begun to influence the characterization of empathy.

Empathy serves as an umbrella term, encompassing an expansive variety of traits, behaviors, and reactions to stimuli (Junker & Jacquemin, 2017). It is important to acknowledge that empathy has no universal definition. Researcher Daniel Batson (2009) argues that empathy is applied to more than a half-dozen phenomena that are used in various contexts. Although there are many conceptualizations of empathy, Batson's eight concepts suggest that empathy involves other-oriented feelings. Batson (2009) describes *other-oriented* as "the focus of the emotion; it is felt *for* the other" (p. 8). His analysis indicates that feeling for another person who is suffering involves an other-oriented emotional response, generated from and congruent with

the observed welfare of another. *Congruent* implies the emotion (positive or negative) is mirrored; however, congruence does not require that the content of the emotion is exactly the same (Batson, 2009). Most psychologists agree that empathy involves three skills: the ability to share the feelings of another (affective empathy), the ability to understand the feelings of another (cognitive empathy), and the intention to respond to a person in distress (Decety & Jackson, 2004). I refer to these skills as empathic abilities. In this study, empathy is defined as the ability to share and understand emotional states of others (Batson, Fultz, & Schoenrade, 1987).

Research in neuroscience and the social sciences suggests that two systems of empathy exist: an emotional contagion system and a cognitive perspective-taking system (Shamay-Tsoory, Aharon-Peretz, & Perry, 2009). These systems that regulate the sharing of fellow emotions (sometimes referred to as emotional empathy) and the understanding of others' emotions (sometimes referred to as Theory of Mind), influence the ways in which people act in social situations. Another element of empathy that is not often researched as such, is the intention to help another in need. This concept is often associated with prosocial behavior, or actions that are performed by one to improve the welfare of another (Decety, Bartal, Uzefovsky, & Knafo-Noam, 2016). Through a comprehensive meta-analytic review, Decety and his colleagues found that clinical and social neuroscience research "lends strong support to the notion that emotion reactivity in general, particularly the sharing of another's distress, plays a pivotal role in facilitating prosocial behavior" (Decety et al., 2016, p. 4). Experiences of affective empathy, often generated from witnessing others in pain or distress, tend to facilitate a desire to help. Accordingly, this study explores the effects of narrative fiction in three domains: affective empathy, cognitive empathy, and intention to help.

Affective Empathy

The earliest system developed in human beings is the emotional contagion system (De Waal (2008). This phenomenon, otherwise known as affective empathy, pertains to the way in which one is affected by another's emotional state. Neuroimaging studies suggest that emotional contagion is explained by mirror neuron activity. Mirror neurons are activated in the inferior frontal gyrus (IFG) when one is exposed to the emotions of another (Chakrabarti, Bullmore, & Baron-Cohen, 2006; Shamay-Tsoory et. al., 2009). Affective empathy, as caused by mirror neurons, is evident even in infants. Babies cry in response to another's distress and are unable to separate their own distress from that of others (Singer, 2006). It is important to note that these affective reactions transform into the foundation of prosocial behaviors (Decety & Meyer, 2008; Deecty & Svetlova, 2012; Cheng, Chen, & Decety, 2014; Decety et. al., 2016). A study by De Wied, Branje, and Meeus (2007) also demonstrated that children with higher affective empathy are more likely to engage in constructive conflict resolution during disagreements with peers.

Cognitive Empathy

Cognitive empathy is rooted in a more advanced system of perspective-taking that involves higher cognitive functions than affective empathy (Baron-Cohen, Tager-Flusberg, & Lombardo, 2013). Theory of Mind is the ability to understand the emotions of another. Neuroimaging studies have examined the way in which the medial frontal lobe dictates the Theory of Mind network in humans (Gallagher & Frith, 2003). Physiological occurrences make it possible for children in late childhood and early adolescence to become more skilled in taking the perspective of another individual (Decety & Jackson, 2004; Hoffman, 2008; Preston & de Waal, 2002). Cognitive empathy, perspective-taking, and Theory of Mind are fairly interchangeable terms.

Intention to Help

The existing body of literature suggests that affective and cognitive empathy have an impact on how people act in social situations. In a meta-analytic review of the impact of Theory of Mind on children's prosocial behavior, researchers found that that Theory of Mind was significantly correlated with prosocial behavior in children between the ages of two to twelve (Imuta, Henry, Slaughter, Selcuk, & Ruffman, 2016). Actions like helping, comforting, and cooperating were all significantly associated with children's Theory of Mind. The analysis also revealed a significant correlation between empathic ability and children's spontaneous prosocial behavior, defined as the responsive actions that are generated on one's own accord. Research demonstrates that children with greater empathic abilities are typically more capable of regulating their emotions, showing less aggression, and acting prosocially (Eisenberg, 2000; Meuwese, Crone, Rooij, & Güroğlu, 2015).

Parallels Between Narrative Fiction and Empathy

It is important to situate the current study in the context of existing research that investigates the relationship between reading narrative fiction and empathy. In 2000, Hakemulder proposed that narrative fiction can serve as a "moral laboratory." Since then, recent studies have presented empirical evidence that support the relationship between reading fiction and empathy in adults (Johnson, 2012; Johnson, Cushman, Borden, & McCune, 2013; Kidd & Castano, 2013; Mar, Oatley, Hirsh, dela Paz, & Peterson, 2006; Mar, Oatley, & Peterson, 2009). Mar and his colleagues (2006; 2008) discovered that the more fiction adults read, the stronger their empathic abilities were. This research was expanded when Johnson (2012) found that adult readers who were emotionally transported into a narrative story experienced increased empathy and altruistic behavior. In adults, reading fiction tends to generate more empathy than reading

nonfiction texts. This information was proven by Kidd and Castano (2013), during a study in which reading literary fiction, compared to popular fiction and no reading at all, produced significantly higher Theory of Mind scores.

Research surrounding effects of reading narrative fiction on the development of children's empathy is drastically underrepresented. Few studies have explored the changes in students' social attitudes after reading a fictional text. A study by Mar, Tackett, and Moore (2010) found that greater exposure to children's books was associated with stronger Theory of Mind. Some experiments have focused on reducing specific prejudices towards stigmatized groups. Multiple studies (e.g. Cameron & Rutland, 2006; Cameron, Rutland, Brown & Douch, 2006; Vezzali, Stathi & Giovannini, 2012; Vezzali, Hewstone, Capozza, Giovannini, & Wölfer, 2014) have discovered that interventions in reading and discussing narratives about stigmatized groups have increased students' tolerance. It is evident that there is much work to be done in researching the effects of narrative fiction on empathy in children.

Developmental Trajectory of Empathy

Empathy is a response to others that develops physiologically as humans grow older. Children begin to express empathic concern and respond emotionally toward others during the first year of life (Davidov, Zahn-Waxler, Roth-Hanania & Knafo, 2013). These feelings of affective empathy are the first component of empathy to appear in infants (Decety, 2010a; Decety, 2010b; Decety & Svetlova, 2012). Around the age of two, children begin to differentiate between self and other, allowing for reactions that are more attune to others' distress (Nichols, Svetlova & Brownell, 2009). Empathic responses that are based on emotional arousal construct the basis for prosocial behaviors like helping, acting with altruism, and compassion (Decety & Meyer, 2008; Decety & Svetlova, 2012). Empathic arousal becomes more specific in children

between 18 and 36 months. At this time, children differentiate the emotions of others, reacting with more emotional and personal distress to another's sadness compared to another's physical pain (Bandstra, Chambers, McGrath & Moore, 2011; Williams, O'Driscoll & Moore, 2014).

In 2014, Cheng, Chen, and Decety conducted a study on typically developing children between the ages of three and nine to document the neurophysiological stages of the development. Results indicated that during these ages, there is a decline in affective arousal and an increase in cognitive appraisal. This is a form of cognitive empathy, or understanding of another's emotions, that is self-situated. Cognitive appraisal involves interpreting another's emotions and often leads to "emotions, usually along dimensions of certainty, pleasantness, attentional activity, control, anticipated effort, and self-other responsibility" (Lerner, Li, Valdesolo & Kassam, 2015, p. 806). The researchers determined that a shift from more affective arousal to more empathic understanding occurs in children between ages three and nine. Students in fourth grade (typically ages nine and ten) will experience developmental shifts that decrease their appreciation of affective arousal and increase their awareness of cognitive appraisal and empathic understanding. This information is important in the field of education because it supports the need to investigate how pedagogical decisions influence empathy that is developing in children.

The current study focuses on fourth-grade students who are typically nine or ten years of age. This age is a critical, transitional period in a child's life. Developmentally, fourth-grade students experience the end of the middle-childhood stage (approximately ages six to ten). As children approach adolescence, they tend to experience cognitive, physical, emotional, and social changes that influence their abilities to connect with others. In their early-adolescent years, many children begin to prioritize social activities with peers, acceptance of peers, and

appearance over academics. In early adolescence, children's desire to conform to their peers peaks. Children develop a narrow focus on competition and social comparison (Eccles, 1999; Oberle, Schonert-Reichl, & Thomson, 2010).

Social comparisons can build or break students' abilities to relate and connect to others. Eccles (1999) states that adolescents tend to befriend peers who are similar to them, suggesting that social differences and biases influence peer relationships. This is supported by research by Weller and Lagattuta (2013) that reports children become more discriminating with age about who they want to help. As students become more attune to social competition and selective peer grouping, it is important that educators instill the value of empathy because of its influence on social-emotional competence. Research has shown atypical empathic development to be associated with conduct disorder and externalizing problems (Decety, Michalska, Akitsuki & Lahey, 2009). To prepare students of this age to care for, work with, and value other beings, teachers must make pedagogical decisions that strengthen empathic ability.

Existing Research on *Wonder* and Empathy

Two studies have been conducted to explore whether sixth-grade students' empathy is potentiated by reading R.J. Palacio's popular *Wonder* and participating in classroom activities on characterization, perspective, and empathy (Freeman and Guarisco, 2015; Guarisco, Brooks, Freeman, 2017). Freeman and Guarisco's first study (2015) measured general empathic tendencies in sixth-grade students ($N = 67$, 32 male, 35 female). The researchers used the Interpersonal Reactivity Index, a multifaceted scale that does not target participants' attitudes toward a specific population. The tests were administered before and after the six-week unit and measured empathic tendencies within four subscales: Empathic Concern, Perspective Taking, Personal Distress, and Fantasy Scale. Findings suggest that there was a small, but statistically

significant increase in students' scores in the Perspective Taking subscale. There was no significant difference between the empathy scores of males and females.

In the second study, previous findings by Guarisco and Freeman (2015) were expanded upon (Guarisco et al., 2017). The researchers examined empathy during a similar, five-week reading unit using three empathy measures and two Theory of Mind skills. Seventy-eight students (41 male, 37 female) in sixth grade were given the choice between reading *Wonder* or *The Crossover*. The researchers assessed students in a variety of ways, including: a baseline assessment to gather demographic information, the Interpersonal Reactivity Index (IRI) to measure empathic tendencies, the Faux Pas Test for Children to measure recognition of social errors caused by false beliefs, and the Reading the Mind in the Eyes Test for Children to test the ability to infer emotions from pictures of eyes.

The researchers found that girls who chose to read *Wonder* scored higher than boys on the baseline Empathic Concern and Perspective Taking subscales. After the unit, students displayed increases in different domains of empathy and Theory of Mind, depending on the book they selected. The researchers utilized only three subscales from the IRI to measure empathic tendencies including: Empathic Concern, Perspective Taking, and the Fantasy Scale. Findings indicate that reading *Wonder* was associated with higher Perspective Taking and *The Crossover* with higher Empathic Concern. The effects of reading *The Crossover* were different between males and females: boys' Perspective Taking scores remained unchanged after reading this novel, while girls' scores decreased significantly in this subscale. These results suggest that the selection of a narrative fictional text may create disparities in empathy growth.

The significant increase in Faux Pas scores after reading *Wonder* indicates that students' Theory of Mind skills improved after reading the novel. These results are important in framing

the current research because they support that *Wonder* has been shown to enhance empathy in adolescents. Although these participants are two years older than the participants in the present study, the results are important because little research on this topic has been conducted. For students who read *The Crossover*, only females exhibited significant growth in Faux Pas scores, suggesting again that the selection of a narrative fictional text may influence outcomes in empathy scores.

Plot Synopsis

Wonder (2012) is the story of 10-year-old August Pullman, as told by multiple narrators (Palacio). August, also known as Auggie, was born with significant craniofacial deformities and has been homeschooled due to the extensive surgeries throughout his childhood. Auggie's parents decide to send him to fifth grade where he makes friends with classmates Jack and Summer. When Auggie overhears Jack disparaging him to other classmates, their friendship is shattered. Their relationship is mended when Jack punches Julian, the boy who has bullied Auggie since the start of fifth grade. In the end, Auggie's classmates who once avoided him like "the Plague," stand up for Auggie and accept him.

Why *Wonder*?

Wonder is told from the perspectives of multiple characters, all with their own experiences and conflicts. These different accounts provide various opportunities for students to empathize with characters. *Wonder* is written on a fifth-grade reading level, and with proper differentiation models and strategies, this book is accessible to fourth-grade students. Since the protagonist is a fifth-grade student, his experiences are relatable for children around this age. The book places a strong emphasis on kindness and provides ample opportunities to discuss inclusivity, bullying, and emotions. In writing the novel, R.J. Palacio's goal was to promote

empathy. The author considers empathy "the antithesis of bullying" (Walsh, 2013, p. 1). Because of its content and reading level, I deemed this novel as appropriate to investigate the relationship between narrative fiction and empathy in children.

Methods

This mixed-methods action research study explores the relationship between exposure to narrative fiction and empathy in children. Pre- and post-survey data with written short-response data provided evidence for the growth in students' empathy over the eleven-week novel study. Empathy is a central tenant to human relations, and I am devoted to weaving opportunities for character and development into my instruction. The study design tests the hypothesis that fourth-grade students will show improved empathy scores after a narrative fiction novel study, combined with classroom activities on empathy and perspective.

Participants

A total of 60 fourth-grade students participated in the study (nine to ten years of age). Individuals were removed from the analysis because they were missing data ($N = 14$), resulting in a final sample of 46 persons ($N = 46$, 22 male, 24 female). The school is situated within a metropolitan area and serves 621 students in kindergarten through eighth grade. It is a Title I school that receives financial assistance from the federal government because it serves high percentages of children from low-income families. Seventy-two percent of students qualify for free and reduced lunch. The school serves a diverse population including: 54 percent of students identifying as Hispanic, 21 percent of students identifying as White, 14 percent of students identifying as Black, six percent of students identifying as two or more races, two percent of students identifying as Hawaiian/Pacific Islander, and one percent of students identifying as

American Indian/Alaska Native. Seventeen percent of students receive special education services and 36 percent of students identify as English Language Learners (ELL).

Procedures

The researcher led the *Wonder* unit, designed as a novel study, to all students during whole-class instruction for three days per week. The *Wonder* unit was taught in adherence to Common Core State Standards, was complemented by nonfiction texts two days per week, and was embedded with opportunities for social-emotional development. All reading for the novel study was completed in class, where students read in mixed-ability triads. These triads were determined by the students' STAR Reading scores. Mini-lessons on perspective, close readings, and empathy were directed through whole-class instruction.

Students were guided through multiple close reading activities to understand events from multiple perspectives. For example, students examined a scene that was described from both August's and Via's perspectives. In this scene, August cuts a braid that he has been growing for years. Students worked in their triads to analyze both characters' perspectives of the event, using the FAST model to identify Auggie and Via's Feelings, Actions, Speech, and Thoughts. At the end of each of the eight parts of the novel, which switched between six narrators, the students added to a "timeline." The "timeline" was a large table consisting of six columns (one for each character) and six rows (one for each major event in the novel). Students used the FAST model to analyze each character's perspective of the major events in the novel. Throughout the 11-week novel study, students wrote narrative essays to retell specific events in the novel from alternate characters' perspectives.

In *Wonder*, August's teacher, Mr. Browne, gives his students "precepts." These precepts are defined as words to live by, and they are often used as writing prompts in his English

classroom. Mr. Browne also asks his students to create their own precept and send it to him in the mail over the summer. Like August, students in the fourth-grade classes responded to Mr. Browne's precepts in their writing. They too were required to write their own precepts.

Over the course of the novel study, students also participated in weekly 20-minute community circles to discuss topics relating to empathy. Community circle activities ranged from discussions about bullying prevention to *The Compliments Project* (2017), an exercise in which every student in class takes a turn being on the "hot seat." While this student sits facing away from a whiteboard, his/her classmates take turns writing positive statements about that student on the whiteboard. Once all students have contributed, the student on the "hot seat" turns around to read what has been written about him/her.

Measures

Empathy is a broad construct that has been measured differently across disciplines. As stated earlier, it is important to acknowledge that empathy has no universal definition. Most psychologists agree that empathy involves three skills: the ability to share the feelings of another (affective empathy), the ability to understand the feelings of another (cognitive empathy), and the intention to respond to a person in distress (Decety & Jackson, 2004). Given the study's focus on a holistic representation of empathy, both quantitative and qualitative data were collected.

Three subscales were adopted from the *Empathy Questionnaire for Children and Adolescents* (EmQue-CA) to measure the three dimensions of empathy. This instrument is a validated tool consisting of three subscales: affective empathy, cognitive empathy, and intention to comfort. Although objective measures like the EmQue-CA are reliable, it is important to also investigate empathy through a phenomenological approach because of its contextual nature.

Qualitative data were collected for eight case studies, reflecting the lived experiences and personal empathic growth of these individuals.

Quantitative measures.

The EmQue-CA was employed to measure participants' empathic tendencies. The questionnaire to measure empathy was given to every participant during the first week of the novel study and then again during the final, eleventh week of the unit. Research suggests that the EmQue-CA is a reliable and valid instrument to evaluate empathy in children and adolescents who are aged ten or older and typically developing (Overgaauw, Rieffe, Broekhof, Crone & Guroglu, 2017).

Before the EmQue-CA instrument was used, the researcher reviewed and edited the published version to make three scales that were more accessible to her fourth-grade readers. The instrument, available in the Appendix, consists of 19 items within three subscales: (1) *affective empathy* to measure the extent to which one feels for the emotion of another (eight items: e.g., 'When a friend is upset, I feel upset too'), (2) *cognitive empathy* to measure the extent of one's understanding of another's distress (four items; e.g., 'If a friend cries, I usually understand what has happened'), and (3) *intention to help* to measure the extent to which one is inclined to aid another in need (seven items: e.g., 'If a friend is sad, I like to comfort him/her'). Students were asked to rate the extent to which the statement was true for them on a three-point Likert scale: (0) not true, (1) somewhat true, and (2) often true. Some questions were reverse-scored. When the questionnaire responses were coded, all questions were scored so that higher scores reflected higher empathy. This questionnaire was modified very subtly by the researcher to best accommodate fourth-grade students.

Reliability.

The original study produced a total of 14 items within three theoretical constructs: (1) affective empathy (six items), cognitive empathy (three items), and intention to comfort (five items). According to Overgaauw et al. (2017), The Cronbach's alpha coefficients of the three original scales of the EmQue-CA indicated good internal consistencies: *affective empathy* 0.70, *cognitive empathy* 0.70, and *intention to comfort* 0.74.

Before the EmQue-CA instrument was used, the researcher reviewed and edited the published version to make three scales that were more accessible to her fourth-grade readers (Table 1). Reverse-scored questions were added to each scale, resulting in larger scales: *affective empathy* (eight items), *cognitive empathy* (four items), and *intention to help* (seven items). The intention to comfort scale was renamed as *intention to help* because this description better represents its items.

Table 1

Items of the Empathy Questionnaire for Children and Adolescents (EmQue-CA) subscales

Item
Subscale 1: Affective Empathy
1. If my parent is happy, I also feel happy.
2. I feel awful when two people argue.
3. When a friend cries, I never cry.*
4. I often feel sad when I watch a sad movie.
5. When two people argue, I don't care.*
6. When a friend cries, I also cry.
7. If someone in my family is sad, I feel really bad.^
8. When a friend is upset, I feel upset too.
Subscale 2: Cognitive Empathy
9. When a friend is angry, I usually know why.
10. If a friend is sad, I understand mostly why.
11. If a friend cries, I usually understand what has happened.
12. When a friend is sad, I usually don't understand why.* friend is upset, I feel upset too.
Subscale 3: Intention to Help
13. If a friend is sad, I like to comfort him/her.
14. If a friend has an argument, I don't try to help.*
15. If a friend is sad, I do not like to comfort him/her.*
16. I like to help when a friend gets angry.

17. If a friend has an argument, I try to help.
18. I want everyone to feel good.
19. If a friend is sad, I want to do something to make it better.

*Reverse-scored. ^Item 7 was removed from all analyses in this study.

After the results were collected, one item in the *affective* empathy scale was excluded since it lowered the inter-item reliability: (If someone in my family is sad, I feel really bad). In the current study, the Cronbach's alpha coefficients for the three scales were good: *affective empathy* (seven items) 0.71, *cognitive empathy* (four items) 0.77, and *intention to help* (seven items) 0.79.

Statistical analysis.

In order to investigate the study's research questions, numerous statistical procedures are conducted. Multiple paired-samples t-tests were conducted to compare the three domains of empathy before and after the eleven-week novel study. Independent-samples t-tests were run to compare pre- and post-unit scores from the three subscales for males and females. Additionally, mixed factorial ANOVAs were conducted to examine the impact of gender on affective empathy, across two time periods (pre-unit and post-unit).

Qualitative measures.

Of the 46 participants, eight students were selected as case studies to offer qualitative data on the development of students' empathy throughout the novel study. A representative sample of case study participants were chosen to provide diverse viewpoints based on specific learning differences. The researcher selected participants from four categories, all based on STAR reading scores: advanced readers, fourth-grade-level readers, below grade-level readers, and English language learners (ELL). The students were given prompts to assess the three domains of empathy. For example, to assess affective empathy, students were asked how they felt after reading a passage describing Auggie's despair when his dog dies. For cognitive

empathy, students were asked to explain why one teacher's words mean so much to Auggie: "When given the choice between being right or being kind, choose kind" (Palacio, 2012, p. 27). An example of one prompt that was assigned to understand students' intention to help asked students to decide how they would act if they were asked to befriend a with a facial difference.

Data analysis.

The researcher recorded, transcribed, and thematically coded the qualitative data. In the second cycle of data reduction, the themes from students' short-answer responses were invivo coded for words or phrases that related to affective empathy, cognitive empathy, or the intention to help. Data were transcribed into a matrix, analyzed for word frequencies, and grouped into themes. The themes were compared with quantitative descriptive statistics to ensure triangulation.

Results

This study investigated the effects of reading narrative fiction, combined with classroom activities on empathy and perspective, on fourth-grade students' empathy. Through this novel study that was grounded in empathizing with different characters, I was able to facilitate positive change in the fourth-grade students' affective empathy, cognitive empathy, and intention to help (Figure 1).

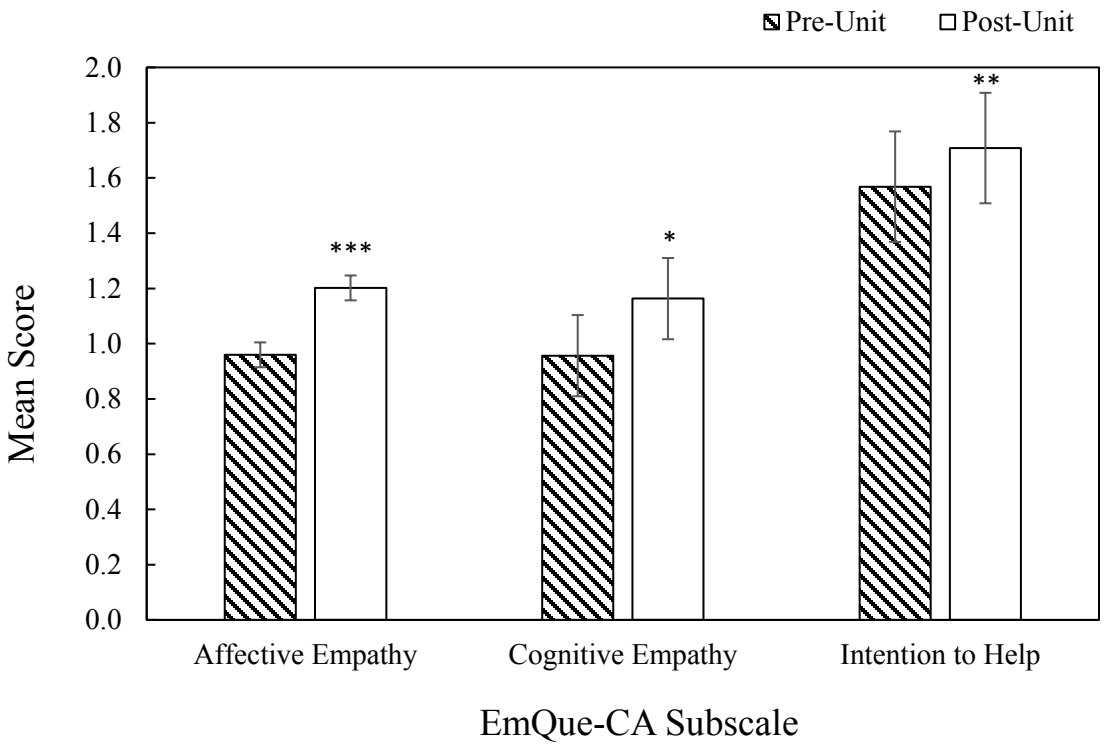

Figure 1. Scores on the affective empathy, cognitive empathy, and intention to help subscales of the EmQue-CA increased in students after the *Wonder* novel study.

By the end of the novel study, the fourth-grade students were significantly more empathic with regards to their affective empathy, cognitive empathy, and their intention to help (Table 2). It is important to note that there is a lack of independence between participants that is methodologically unavoidable, in the classroom setting. The independence of observation (IoO) assumption was violated. However, the face validity of these results suggests this finding should continue to be explored. This is further supported by the large effect sizes for affective empathy ($\eta^2 = .30, p < .001$), cognitive empathy ($\eta^2 = .12, p = .016$), and intention to help ($\eta^2 = .15, p = .007$). The effect sizes were determined to show a strong relationship between the post-unit scores and the novel study in accordance with Cohen's (1988) guidelines (p. 284-7).

Table 2
Summary of Paired Samples T-Test Results and Effect Sizes for pre/post unit

Subscale	T1 Mean	T2 Mean	*t*-value	eta-squared
Affective Empathy	0.96	1.20	-4.41***	.30
Cognitive Empathy	0.96	1.16	-2.50*	.12
Intention to Help	1.57	1.71	-2.82**	.15

*$p < .05$ **$p < .01$ ***$p < .001$

Affective Empathy

A paired-samples t-test was conducted to compare students' affective empathy before and after the eleven-week novel study. The students' scores were measured with the affective empathy subscale from the EmQue-CA. The seven items on the subscale were collapsed and averaged into total affective empathy scores for before and after the novel study. The paired t-test analysis revealed a statistically significant increase in affective empathy from Time 1 (M = 0.96, S = 0.38) to Time 2 (M = 1.20, S = 0.46); $t(45) = -4.41$, $p < .001$ (two-tailed). Thus, the affective empathy post-unit scores were significantly higher than the pre-unit scores. The mean increase in affective empathy scores was 0.24 with a 95% confidence interval ranging from 0.35 to 0.13. The means and standard deviations are presented in Table 3. The eta-squared statistic indicates a large effect size ($\eta^2 = .30$, $p < .001$). Therefore, 30% of the variability in affective empathy post scores can be attributed to the novel study.

Table 3
Descriptive Statistics for Affective Empathy for Time 1 and Time 2

Time period	N	Mean	Standard deviation
Time 1	46	0.96	0.38
Time 2	46	1.20	0.45

Qualitative Findings

The increase in students' affective empathy scores was corroborated by qualitative findings, which revealed the eight case study participants were more emotionally affected by Auggie's experiences at the end of the novel study. Qualitative data from short-responses

indicate that during the eleven-week novel study, students developed their abilities to articulate their own affected emotions. In the beginning of the novel study, students had limited, rudimentary responses when asked how the author made them feel when Auggie was betrayed by his only friend. Salient themes indicated that students felt "disappointed" and "sad" for the main character when he was betrayed in the beginning of the novel study. Students provided basic responses that indicated they were moderately affected by Auggie's heartbreak when he was backstabbed by his best friend:

> *RJ Palacio made me feel offended because Jack wasn't really Auggie's true friend anymore for saying stuff like that.*

and

> *RJ Palacio made me feel sad for Auggie because he just feels like not even attending school anymore with jerks.*

At the end of the novel study, students used more refined vocabulary to explain their affected emotions in depth. When asked how they felt when Auggie's dog, Daisy passed away, students provided much stronger descriptions of their affected emotions. Students tended to make personal connections to Auggie's loss that affected their own emotions:

> *I felt really, REALLY stressed out when Auggie's dog, Daisy, passed away. I felt this way because my grandma is really old, and when I read that part, I felt like my grandma was going to pass away soon. The last time my grandma came was in February and I'm afraid that I will never see her again.*

and

> *When Daisy died I felt depressed. I think I felt this way because Daisy was an important character not just in the book, but in my heart. When I got home, my dog Roxy shook my*

hand, like she does all the time, and it made me cry a waterfall of tears. I spent most of my day petting her and taking care of her.

The emotions articulated by the above case study were a salient trend throughout the short responses in which participants consistently explained that they "feel sad" and "feel bad for Auggie." Four students described how the loss of Daisy "made me cry" and six students made personal connections to Auggie's loss.

Cognitive Empathy

A paired-samples t-test was conducted to compare students' cognitive empathy before and after the eleven-week novel study. The students' scores were measured with the cognitive empathy subscale of the EmQue-CA. The four items on the subscale were collapsed and averaged into total cognitive empathy scores for before and after the novel study. The paired t-test analysis revealed a statistically significant increase in cognitive empathy from Time 1 (M = 0.96, S = 0.45) to Time 2 (M = 1.16, S = 0.53); $t(45) = -2.50$, $p = .016$ (two-tailed). The cognitive empathy post-unit scores were significantly higher than the pre-unit scores. The mean increase in cognitive empathy scores was 0.21 with a 95% confidence interval ranging from 0.37 to 0.04. The means and standard deviations are presented in Table 4. The eta-squared statistic indicates a large effect size ($\eta^2 = .12$, $p = .016$). Therefore, 12% of the variability in affective empathy post scores can be attributed to the novel study.

Table 4
Descriptive Statistics for Cognitive Empathy for Time 1 and Time 2

Time period	N	Mean	Standard deviation
Time 1	46	0.96	0.45
Time 2	46	1.16	0.53

Qualitative Findings

An analysis of qualitative measures indicated that students were able to understand and explain Auggie's emotions with more breadth at the end of the novel study. Similarly to affective empathy results, qualitative data revealed that students had limited, rudimentary responses when asked why Mr. Browne's first precept was so important to Auggie. Mr. Browne's precept stated, "when given the choice between being right or being kind, choose kind" (Palacio, 2012, p. 27). Most salient were the explanations that Auggie "wants to be treated with kindness" and "Mr. Browne is kind." Students were able to understand Auggie's emotions, but used limited vocabulary to do so:

> *This precept means so much to Auggie because he wants people to treat him kind because he doesn't want people to judge by his looks. I know this because people always stare at August.*

and

> *This precept means so much to Auggie because he is grateful. I know this because Mr. Browne was making Auggie laugh and smile.*

At the end of the novel study, students explained their understanding of Auggie's emotions more thoroughly. Qualitative data from short-responses suggest that students developed their abilities to understand and articulate Auggie's emotions throughout the novel study. Closer to the end of the unit, students were asked why Auggie became mad at his sister when she did not invite him to her play. The most salient themes in the qualitative data indicated that participants understood Auggie's sister was "embarrassed by Auggie" and she "didn't want her friends to see" Auggie. Case studies explained Auggie's emotions with clarity and refined vocabulary:

> *Auggie felt this way because Via always stood up for him and now she just left him out. He was her life. Now she just cares about his face, just like everyone else. She always put herself in his shoes and said things* [to others] *like 'what are you looking at?' but now she is a person who sees Auggie as a freak, not ignoring his face, like she always did.*

and

> *Auggie felt this way because he knew that if he went, Via would get embarrassed, and that hurt inside him. He thinks that Via doesn't want her high school friends to see her brother is a freak.*

Intention to Help

A paired-samples t-test was conducted to compare students' intention to help before and after the eleven-week novel study. The students' scores were measured with the intention to help subscale of the EmQue-CA. The seven items on the subscale were collapsed and averaged into total intention to help scores for before and after the novel study. The paired t-test analysis revealed a statistically significant increase in affective empathy from Time 1 ($M = 1.57$, $S = 0.44$) to Time 2 ($M = 1.71$, $S = 0.35$); $t(45) = -2.82$, $p = .007$ (two-tailed). Thus, the intention to help post-unit scores were significantly higher than the pre-unit scores. The mean increase in intention to help scores was 0.14 with a 95% confidence interval ranging from 0.24 to 0.04. The means and standard deviations are presented in Table 5. The eta-squared statistic indicates a large effect size ($\eta^2 = .15$, $p = .007$). Therefore, 15% of the variability in affective empathy post scores can be attributed to the novel study.

Table 5
Descriptive Statistics for Intention to Help for Time 1 and Time 2

Time period	N	Mean	Standard deviation
Time 1	46	1.57	0.44
Time 2	46	1.71	0.35

Qualitative Findings

The increase in students' intention to help scores was confirmed by qualitative findings, which revealed that the case studies developed more refined vocabulary to articulate their intentions to help Auggie. In the beginning of the novel, students were inclined to help when given a hypothetical situation. I asked students what they would say if their principal called them, asking if they would be a welcome buddy for a student with a facial difference. Most participants said they would help, and recurring themes like "want him to be comfortable," "want everybody to have a friend," and "don't care how people look." Responses indicated that the students thought every child should have a friend:

> *If Mr. Tushman asked me to be a welcome buddy for a new student with a facial difference, I would say 'of course.' I would say this because I am the type of person who wants everybody to have a friend to hang out with and to play and joke around with.*

and

> *I would say yes because if I looked different, I wouldn't want people not to be my friend just because I looked different.*

At the end of the novel study, the case studies not only confirmed their intentions to help Auggie, but also provided details about how they would defend him. Toward the end of the novel, two boys who were on the bullies' side of the 'war' encountered Auggie getting beaten up by bullies from another school. I asked participants what they would do if they were Henry or Miles, and unanimously, the students claimed they would defend Auggie. Many participants

included the words they would say to the bullies from another school:

> *I would also tackle them because it isn't fair for people to bully him just because he looks different. I would act this way because Auggie was born this way. He is normal. He plays games, rides his bike, eats and drinks. I would also tell Eddie 'how would you feel if you were born like that and someone kept picking on you, even if nothing was your fault?'*

and

> *I would stand up for Auggie. It really isn't fair that people bully Auggie just because of how he looks. He was born like that. People shouldn't judge people by their looks.*

The answers articulated by the above participants were salient themes throughout the short responses in which participants consistently explained that "it isn't fair" and that they would "stand up for Auggie." The qualitative results demonstrated that students developed more refined vocabulary and strategies for assisting others to articulate their intentions to help.

Gender Differences

Independent-samples t-tests were run to compare pre- and post-unit scores from the three subscales for males and females. Only the pre-unit affective empathy subscale revealed a significant difference in scores for males ($M = 0.82$, $S = 0.36$) and females ($M = 1.09$, $S = 0.36$); $t(44) = 2.56$, $p = .01$ (two-tailed). Females scored significantly higher on the pre-unit affective empathy subscale. The magnitude of the differences in the means (mean difference = 0.27, 95% *CI:* 0.06 – 0.48) was moderate (eta squared = .07).

Mixed factorial ANOVAs were conducted to examine the impact of gender on affective empathy, across two time periods (pre-unit and post-unit). There was no significant interaction between gender and time, Wilks' Lambda = .98, F (1, 44) = .76, $p = .39$, partial eta-squared =

.02. The main effect comparing the two genders was significant F (1, 44) = 4.30, p = .04, partial eta-squared = .09, suggesting that males only showed a greater increase in the sample, but this result is not generalizable to the population.

The data did not reveal a significant interaction between gender and time with regards to the cognitive empathy subscale, Wilks' Lambda = .98, F (1, 44) = 1.06, p = .31, partial eta-squared = .13. The main effect comparing the two genders was not significant F (1, 44) = 6.04, p = .44, partial eta-squared = .01, indicating that there was no difference in the effectiveness of the two genders. Lastly, the data did not reveal an important interaction between gender and time with the intention to help subscale, Wilks' Lambda = 1.00, F (1, 44) = .004, p = .95, partial eta-squared < .001. When looking at the two genders, the comparison was not significant F (1, 44) = .14, p = .71, partial eta-squared = .003, suggesting that both genders were affected equally by the pre-post analysis.

Discussion

The present investigation explored the role of narrative fiction on the development of fourth-grade students' empathy. The hypothesis was supported, indicating that fourth-grade students' empathy improved after an eleven-week novel study using narrative fiction. The results suggest a role for narrative fiction in facilitating development in children's affective empathy, cognitive empathy, and their intention to help. This is the first study to show that reading narrative fiction in an upper-elementary classroom can influence significant growth in children's empathy across these three domains, simultaneously.

The results indicate a more substantial increase in children's empathy, after reading narrative fiction, than prior studies do. Two studies have measured empathy in sixth-grade students before and after five-week narrative fiction units (Freeman & Guarisco, 2015; Guarisco

et. al., 2017). Few studies have explored the changes in students' social attitudes after reading a fictional text. The findings in the current study are consistent with some of the results from the studies by Guarisco and colleagues (2015; 2017). The 2015 study's results indicate that there was a small, but statistically significant increase in students' scores in the Perspective Taking subscale (similar to cognitive empathy) after students read the novel, *Wonder*. In 2017, the researchers again found a significant increase in Perspective Taking scores for students who read *Wonder*. It was also discovered that students who read *The Crossover* developed higher Empathic Concern (similar to affective empathy). These findings are expanded upon by the current study because my students not only experienced growth in both affective and cognitive empathy, but also in their intention to help.

My findings, which are more robust than previous evidence, can be explained through five accounts. First, given previous findings, ample empirical evidence supports the relationship between reading fiction and empathy in adults (Johnson, 2012; Johnson et. al., 2013; Kidd & Castano, 2013; Mar et. al., 2006; Mar & Oatley, 2008; Mar et. al., 2009). Since data supports this relationship in adults, it is possible that children's empathy is also affected by reading narrative fiction.

The second account supports my first: although children function at far less advanced cognitive levels than do adults, typically developing children between the ages of three and nine actually experience an increase in cognitive appraisal, indicating cognitive empathy (Cheng et. al., 2014). This suggests that children may experience reactions to narrative fiction that are similar to adults because they are developing the capacity to cognitively assess emotional situations. The researchers also determined that a shift from more affective arousal to more empathic understanding occurs in children between these ages. Students in fourth grade

(typically ages nine and ten) will experience developmental shifts that decrease their appreciation of affective arousal and increase their awareness of cognitive appraisal and empathic understanding. The results of the current study may have been significant because students aged nine and ten have developed empathic abilities through cognitive appraisal.

The third account contends that the significant results as they may have been affected by the classroom environment. Due to the fluid nature of action research, as it operates within the teacher-researcher's classroom, environmental variables may have influenced the results. The exponential growth in empathy can likely be attributed not only to the novel study and the classroom activities on empathy and perspective, but also to the classroom in which the unit was taught. I began this unit in January, so I had already spent four months teaching this group of students. Social influence in empathy development is described as a neural process: "the roots of empathy are subsumed in the evolution of parental care and group living, which explains why empathy is influenced by social context, especially group membership" (Decety, 2015, p. 4). The positive classroom climate fostered a common group membership and was built upon established relationships, mutual trust, and a sense of community where students were encouraged to feel safe, vulnerable, and authentic.

A fourth account explains the significant results as applicable only to the specific novel, *Wonder*. It is important to note that this small body of research suggests that the selection of a narrative fiction text may influence outcomes in empathy scores; thus, this indicates that fourth- and sixth-grade student's affective and cognitive empathy increase after reading *Wonder*, but not after reading other narrative fiction texts. This may be because *Wonder* provided the perspectives of six different narrators in the book, creating natural opportunities in which students had to take the perspectives of new characters. These different accounts provided

various perspectives in which students could empathize with. The book places a strong emphasis on kindness and provides ample opportunities to discuss inclusivity, bullying, and emotions. The current findings could also be explained by Johnson's (2012) findings, that adult readers who were emotionally transported into a narrative story experienced increased empathy and altruistic behavior. Perhaps my students were transported into *Wonder* because the protagonist is a fifth-grade student, and his experiences are relatable for children around this age.

A final account suggests that the sheer timespan of this novel study influenced the significant results. Previous investigations of empathy growth in children reading narrative fiction only spanned five weeks. My results were perhaps more robust because the eleven-week novel study allowed time for students to truly dive into the novel and empathize with its characters. Perhaps results begin to fill a gap in the research, emphasized by Djikic and Oatley (2014) as a lack of experimentation to measure longer-term effects of narrative fiction on empathy.

Gender Considerations

It is important to note that in comparing pre- and post-unit scores within the three domains for males and females, both genders were affected equally by the novel study. Only one significant finding between genders was revealed: females scored significantly higher than males on the pre-unit affective empathy questionnaire. In comparing the current study with prior research, some findings differ. The findings by Guarisco and colleagues (2017) suggest that after reading *The Crossover*, boys' Perspective Taking scores did not change and girls experienced a significant decrease. My research indicates that there is no significant difference in empathy growth between males and females in the three empathy domains. This could be, in part, because limited research exists on empathy growth in children reading narrative fiction,

between genders. Developmentally, boys and girls both experience a shift from more affective arousal to more empathic understanding between the ages of three and nine (Cheng et. al., 2014). Results about gender differences are not universal.

Implications

Since narrative fiction in an upper-elementary classroom can influence significant growth in children's empathy, there are numerous implications for classroom teachers and curriculum design. Firstly, teachers should embed social-emotional learning into curriculum. The novel study provided natural avenues to discuss kindness, inclusivity, bullying, and emotions. This evidence also supports that classroom teachers should incorporate narrative fiction. In today's assessment-driven educational climate, it is imperative to recognize that both nonfiction and fiction texts improve students' learning opportunities. While nonfiction texts support content-specific academic growth, fiction texts benefit social-emotional development. As proven in this study, it is possible for educators to teach fictional texts while adhering to Common Core State Standards, incorporating nonfiction texts, and embedding empathy development. Additionally, the current study suggests that teachers should practice intentional mixed-ability grouping, where students grow in teaching, listening, and collaborating with others. Lastly, classroom teachers should aim to facilitate a positive culture where emotions are discussed through authentic conversations and students feel safe in their vulnerability.

The relationship between narrative fiction and empathy is a complex construct that requires further research. A longitudinal study by multiple teachers across many schools would provide a more thorough investigation of narrative fiction's effects on empathy in elementary students. Variables like a specific fictional text, the level of a reader's transportation into a

novel, the quality of the teacher, and the duration of the novel study should be examined more stringently.

Limitations

Results from this study are promising in that fourth-grade students' empathy improved after an eleven-week novel study using narrative fiction. The findings suggest a role for narrative fiction in facilitating development in children's affective empathy, cognitive empathy, and their intention to help; however, this study's findings must be considered judiciously. Although the sample size was adequate (46 participants), this was an action research project by a single teacher with two of her own fourth-grade classes. To replicate this research, one would likely have to first foster relationships and build a classroom community. I acknowledge that there is a lack of independence between participants that is methodologically unavoidable, in the classroom setting. The independence of observation (IoO) assumption was violated. However, the face validity of these results suggests this finding should continue to be explored. Finally, I note that empathy is a complex construct that cannot be fully investigated through survey responses and eight case studies.

Conclusion

Over the past twenty years, educational discourse has been pervaded with debates about assessment, accountability, and international competition and as a result, character development has been prorogued. This pressure has resulted in a diversion from fiction reading to focus more on nonfiction texts. However, it is imperative to recognize the role of narrative fiction in facilitating children's empathy development. The students' significant growth in empathy over the course of the unit suggests that there exists some truth behind the words of those who profess

the power of empathy. Similarly to Barak Obama, essayist Susan Sontag (2007) exclaimed the capacity of literature as a means to understand and connect with those who differ from us.

> Literature can tell us what the world is like. Literature can give standards and pass on deep knowledge, incarnated in language, in narrative. Literature can train, and exercise, our ability to weep for those who are not us or ours (p. 205).

Teaching children to encounter the world through an empathic lens has implications that can influence the ways in which they care for others, understand others, and act to improve the welfare of others. The findings of this study suggest that teaching narrative fiction and providing ample opportunities for activities on empathy and perspective, can potentiate empathy in fourth-grade students.

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APPENDIX

Empathy Questionnaire for Children and Adolescents

Below you will find 19 short sentences. Every sentence is a statement about how you react to other people's feelings. You can respond by circling often true, sometimes true, or not true. Circle the answer that best fits you. You can only mark one answer. Please remember there are no wrong or right answers!!

1. If my parent is happy, I also feel happy.	Never True	Sometimes True	Often True
2. If a friend is sad, I like to comfort him/her.	Never True	Sometimes True	Often True
3. If a friend has an argument, I don't try to help.	Never True	Sometimes True	Often True
4. I feel awful when two people argue.	Never True	Sometimes True	Often True
5. When a friend cries, I never cry.	Never True	Sometimes True	Often True
6. When a friend is angry, I usually know why.	Never True	Sometimes True	Often True
7. If a friend is sad, I do not like to comfort him/her.	Never True	Sometimes True	Often True
8. I like to help when a friend gets angry.	Never True	Sometimes True	Often True
9. I often feel sad when I watch a sad movie.	Never True	Sometimes True	Often True

10. If a friend has an argument, I try to help.	Never True	Sometimes True	Often True
11. If a friend is sad, I understand mostly why.	Never True	Sometimes True	Often True
12. I want everyone to feel good.	Never True	Sometimes True	Often True
13. When two people argue, I don't care.	Never True	Sometimes True	Often True
14. When a friend cries, I also cry.	Never True	Sometimes True	Often True
15. If a friend cries, I usually understand what has happened.	Never True	Sometimes True	Often True
16. If a friend is sad, I want to do something to make it better.	Never True	Sometimes True	Often True
17. If someone in my family is sad, I feel really bad.	Never True	Sometimes True	Often True
18. When a friend is sad, I usually don't understand why.	Never True	Sometimes True	Often True
19. When a friend is upset, I feel upset too.	Never True	Sometimes True	Often True