

## AN ABSTRACT OF THE DISSERTATION OF

Jamie Jaramillo for the degree of Doctor of Philosophy in Human Development & Family Studies  
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Abstract approved: \_\_\_\_\_

Brianne Kothari

Academic success is a salient domain of youth development and is related to positive lifelong outcomes among youth in foster care. However, youth in foster care experience compounding adversities, including maltreatment and foster care placement itself, which put them at risk of academic disengagement and underachievement. Despite these adversities, academic resilience can be nurtured to set youth on a more positive life trajectory. In particular, the relationships youth have with service providers, including caseworkers, have a prominent role for resilience processes of youth in foster care yet remain understudied. Caseworkers can act as a source of emotional support and as “institutional agents” who provide access to resources within the child welfare system and who can communicate the complexities of the system to youth and families to facilitate decision making.

The current studies used a resilience framework to examine secondary data from two of the largest randomized control trials to date involving youth in foster care. These studies sampled youth across three developmental periods (i.e. preadolescence, adolescence, and the transition to adulthood). Both took place in the Portland, Oregon metropolitan area and explored academic outcomes and used similar measures. The current studies aimed to describe several characteristics of youth-caseworker relationships as perceived by youth (knowledge of caseworker, contact, relationship quality, emotional support, instrumental support, & stability) across preadolescence, adolescence, and the transition to adulthood. A second aim was to examine the association of youth-caseworker relationships with positive academic outcomes (i.e. school engagement & high school completion). Finally, the studies examined the differential

impact of youth-caseworker relationships on youth academic outcomes by level of youth risk (i.e. high posttraumatic symptoms & special education).

Both study 1 and study 2 indicated relatively high youth-caseworker relationship quality averages with substantial variation and developmental differences in the role of caseworkers. Additionally, current findings suggest that positive youth-caseworker relationships can bolster school engagement and the probability of high school completion with a regular diploma vs alternative (i.e. modified diploma or GED). Finally, the studies provide support for differential impact theory whereby the influence of youth-caseworker relationships on youth academic outcomes depends on the level and type of youth risk. Findings indicate that academic resilience is a complex process involving the interaction of personal and environmental risks and resources with implications for child welfare and education practice and policy.

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Youth-Caseworker Relationships and Academic Resilience of Youth in Foster Care

by  
Jamie Jaramillo

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APPROVED:

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Major Professor, representing Human Development & Family Studies

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Head of the School of School of Social and Behavioral Health Sciences

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Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

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Jamie Jaramillo, Author

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## **CHAPTER 1: GENERAL INTRODUCTION & LITERATURE REVIEW**

### **Introduction**

Academic achievement is a salient domain of youth development and is related to positive lifelong outcomes. For youth in foster care, academic achievement is related to economic well-being, better mental health, and less substance abuse in young adulthood (Forsman et al., 2016). However, the academic underachievement of many youth in foster care is well documented; Youth in foster care are disproportionately represented in special education, have high rates of grade repetition, have low school engagement and standardized test scores, and experience discipline and exclusion at higher rates than their counterparts (Pears et al., 2013; Scherr, 2007; Zetlin, MacLeod, & Kimm, 2012). Across grade level and subject areas, state reports show that high percentages of youth in foster care score in the lowest proficiency groups (Barrat & Berliner, 2013; Clemens & Tis, 2016). Studies consistently find that youth in foster care are less likely to complete high school compared to their counterparts (Courtney, et al., 2007; Barrat & Berliner, 2013; Burley, 2013; Pears et al., 2013). In the state of Oregon, only 35% of youth in foster completed high school compared to 77% of youth not residing in foster care (Oregon Department of Education, 2019). A national study found that 84% of youth in foster care wanted to attend college, but only 20% of those who completed high school did attend college (National Working Group on Foster Care and Education [NWGFCE], 2014). Due to these statistics, federal law now recognizes the need to track academic outcomes of youth in foster care (Every Student Succeeds Act).

Youth in foster care experience compounding adversities which put them at risk for academic underachievement. Maltreatment, poverty, domestic violence exposure, family instability, and housing instability are common experiences prior to foster care placement and are related to academic underachievement (Berger et al., 2015; Clemens et al., 2018; Conger & Finkelstein, 2003; Herbers et al., 2012; Romano, Babchishin, Marquis, & Fréchette, 2015). Once in foster care, youth experience stress from family separation, placement instability, and adjustment to new homes and schools which may disrupt academic progress (Berger et al., 2015). These compounding adversities can result in significant mental health challenges for youth in foster care (Courtney, McMurtry, & Zinn, 2004; Mowbray, Ryan, Victor, Bushman, Yochum, & Perron, 2017; Kohl, Edleson, English, & Barth, 2005; Pecora, White, Jackson, &

Wiggins, 2009; Smith, & Marsh, 2002). In turn, mental health challenges are also related to academic underachievement (Choice et al., 2001; Flynn et al., 2013; Mihalec-Adkins & Cooley, 2019; Perzow et al., 2013; Shin, 2003).

Despite these adversities, academic resilience can be nurtured to set youth in foster care on a more positive life trajectory. Academic resilience refers to processes of adaptation, such as school engagement, and reaching academic standards expected for one's developmental stage, such as high school completion by late adolescence, despite exposure to adversity. Personal, relational, and contextual factors all contribute to academic resilience. Yet, several reviews found that most resilience studies lack an ecological perspective (Liu et al., 2017; Titterton et al., 2017; Ungar, 2011; Ungar et al., 2013).

In particular, the relationships youth have with service providers, including caseworkers, have a prominent role for resilience processes of youth in foster care yet remain understudied (Ungar, 2013). Caseworkers have significant authority in child welfare organizations and can transmit valuable resources, opportunities, and privileges to youth. Although research suggests that the foster care intervention may not have a positive impact on outcomes of youth overall (Goemans et al., 2018; Warburton et al., 2011), it may be that this social service has a differential impact partly due to the relationship quality between caseworkers and youth.

The 2 current studies used a resilience framework to describe several characteristics of youth-caseworker relationships (knowledge of caseworker, contact, youth-perceived relationship quality, emotional support, instrumental support, & stability) across preadolescence, adolescence, and the transition to adulthood. Additionally, the studies examined the association of youth-caseworker relationships with positive academic outcomes (i.e. school engagement, high school completion). Finally, the studies examined the differential impact of youth-caseworker relationships on youth academic outcomes by the level of youth risk (i.e. clinical posttraumatic symptoms, special education).

## **Resilience Framework**

***Changing Definitions of Resilience.*** Researchers from different disciplines and theoretical standpoints approach the definition and study of resilience in unique ways. Historically, resilience was thought to be a defining trait of a person: something intrinsic that you either have or do not have. Resilience researchers are moving away from this concept of resilience as an individual trait. The focus has shifted towards both individual processes of adaptation and the responsiveness of the environment to the needs of individuals experiencing adversity (Ellis & Dietz, 2017; Liu et al., 2017; Masten & Barnes, 2018; Ungar et al., 2015). In other words, resilience is what happens after adversity when (a) people do what they must to survive and thrive, and (b) the people and places around them provide needed resources, supports, and services.

Increasingly, researchers are recognizing that there are multiple paths to resilient outcomes, and significant within-person variation such that one person can be resilient in one domain, one context, according to one set of cultural standards, or at one point in time but not another (Masten & Monn, 2015; Wright et al., 2013). This movement is largely influenced by theoretical perspectives including Relational Developmental Systems (RDS; Masten & Barnes, 2018; Lerner et al., 2012; Overton, 2013), Bronfenbrenner's bioecological model (Bronfenbrenner & Morris, 2006), and the social determinants of health (Braveman et al., 2014; Ellis & Dietz, 2017). These theories hold that aspects of the person, the person's social relationships, and the community all contribute to adversity as well as to resilience processes. This is echoed by lifecourse theorists (Dannefer, 2003; Elder, 1998; Elder, Shanahan, & Jennings, 2015; Kohli, 2007; Settersten, 2009). They emphasize the study both of individual influence, because we each have some control or agency over our lives, and the influence of social circumstances such as culture, economics, housing markets, social services, and policies which dictate one's access to resources. The fit between internal assets (e.g. skills, behaviors, beliefs) with external resources (e.g. basic needs, social support/services) is critical to the emergence of resilience. This is the process, or rather set of processes, by which youth get what they need to develop positively, and such processes may look different for youth experiencing higher levels of adversity (Masten & Barnes, 2018; Lerner et al., 2012; Ungar, 2013).

***Current Definition of Resilience.*** The current studies will use the following definition which is influenced by multiple disciplines and theories: Resilience refers to a person or group

demonstrating positive outcomes by culturally prescribed standards despite experiences of adversity which put them at risk for negative outcomes (Khanlou & Wray, 2014; Wright, et al., 2013; Masten & Barnes, 2018; Titterton & Taylor, 2017; Ungar, 2011).

*Culture.* Standards of positive and negative outcomes are determined by culture (Ungar, 2011). Culture refers to the patterns of behavior and interaction by which individuals and groups manifest shared norms, language, customs, beliefs, and values (Wong, Wong & Scott, 2006). Culture can apply to nations, social groups within nations (e.g. racial groups), or to institutions (e.g. child welfare, schools). What is considered positive or negative in one culture may not be in another. Further, standards are typically established by the dominant culture within a society (Ungar, 2011).

*Adversity.* Adversity is defined as events or circumstances that may potentially lead to harm, distress, or disruption of health or development (Kalmakis & Chandler, 2014). Adverse experiences that occur in childhood are particularly concerning as they lead to greater risk of physical and mental illnesses in adulthood (Anda et al., 2006; Danese et al., 2009; Pecora et al., 2009; Williamson et al., 2002). Adverse childhood experiences (ACEs) vary in severity and are often chronic. Further, it is rare to experience only one ACE. Rather, ACEs tend to be cumulative with more ACEs increasing one's probability of negative outcomes (Kalmakis & Chandler, 2014).

ACEs stem from a child's family, home, school, and community environments which are shaped by systemic inequalities (Ellis & Dietz, 2017; Kalmakis & Chandler, 2014). Although ACEs are experienced by all social groups, they are most commonly experienced by people of color and those who live in concentrated poverty areas with high rates of unemployment, housing instability, food insecurity, violence, inadequate schools, and a lack of healthy options, resources, or social services (Ellis & Dietz, 2017). In such environments, parents and youth are exposed to toxic levels of stress and trauma (Dreyer et al., 2016). This manifests within some families in a variety of adverse ways including lack of resources, mental and physical illness, substance abuse, domestic violence, ineffective parenting, child maltreatment, incarceration, and parent separation or divorce (Ellis & Dietz, 2017; Kalmakis & Chandler, 2014; Lefebvre, Fallon, Van Wert, & Filippelli, 2017). Foster care placement itself is considered an adverse experience because of family separation, instability of home and school, and the tendency for youth needs to

remain unmet (Berger et al., 2015; Charles & Matheson, 1990; Mowbray et al., 2017; Pecora et al., 2009; Waid, 2014).

*Risk.* The term “risk” refers to uncertainty about both the outcomes of an event (e.g. ACE) and uncertainty about the severity of the outcome (Aven & Renn, 2009). Typically, researchers use the term “risk” when talking about factors that have been associated with negative outcomes in previous studies, acknowledging that not every individual demonstrates the negative outcome. In fact, youth develop a greater capacity to cope with stress in the future if they have some level of exposure to adversity, but not toxic levels of exposure (Garmezy, Masten, & Tellegen, 1984; Masten & Cicchetti, 2015; Rutter, 1987).

***Multiple Domains of Resilience.*** Developmentalists have identified three core process and outcome domains that indicate how a youth is doing: behavioral, social, and academic (Masten et al., 1999; Masten & Tellegen, 2012). It is useful to examine one outcome domain at a time and to situate criteria within the culture and historical moment. This may help to disentangle the complexity of resilience processes and to uncover nuances of the processes specific to each domain. Researchers may also identify more influences and processes leading to resilient outcomes if they do not only consider those that have an impact across multiple domains. At the same time, there are cascading effects such that doing well in one domain is highly predictive of doing well in another. For example, mental health and social skills are related to greater school engagement among youth in foster care (Mihalec-Adkins & Cooley, 2019).

***Academic Resilience.*** Academic achievement is a salient domain of youth development and is related to positive lifelong outcomes in health, well-being, and social mobility, particularly for youth in foster care (Forsman et al., 2016). Academic resilience is conceptualized in the current studies as processes of adaptation (e.g. school engagement) and reaching academic standards expected for one’s developmental stage (e.g. high school completion by late adolescence) despite exposure to adversity (e.g. maltreatment, foster care). The influence of personal, relational, and contextual characteristics are important to academic resilience.

Academic resilience must also be situated in culture. The culture of academics in the United States reflects and rewards White, middle-class, patriarchal, and individualistic values and beliefs (Education Resources Institute, 2004; Elmore, 2009; Stanton-Salazar, 2011). Youth with different characteristics and risk exposure experience this context in unequal ways. An ecological approach is needed to understand this complexity.

***Ecological Approach.*** The current studies will be framed by an ecological approach to resilience (Ungar, 2011). Ungar (2011) detailed four principles for the study of social ecological resilience. First is *Decentrality*. This principle emphasizes a focus on the physical and social environment first, interactional processes between the environment and youth second, and youth influences last. Second is *Complexity*. By this principle, researchers construct contextually and temporally specific models by examining context and not generalizing to all time points or outcome domains. Third is *Atypicality* which is the understanding that individuals may adopt coping strategies that seem “atypical” or even “maladaptive” to the dominant culture, but they serve a purpose for individuals in adverse environments. For example, Black youth may disengage from school when the school environment is toxic to their racial identity, thus protecting their identity but risking their academic underachievement (Dei et al., 1997). The atypicality principle is where Ungar differs from many other resilience researchers. Others tend not to consider whether a more socially desirable option of coping is made available to youth by their environments. Finally, the principle of *Cultural Relativity* states that the standards of success vary by culture and sometimes even within a culture (Ungar, 2011). These principles will be used in the proposed studies to guide the research questions and to put boundaries on the interpretation of results. The current studies will also use a strength-based approach.

***Strength-based Approach.*** Researchers of resilience and youth development are changing their definitions of success from the mere absence of problems to the presence of positive markers, or strengths (Afifi & MacMillan, 2011; Benson & Scales, 2011; Daniel, 2010; Newman, 2002; Rutter, 2000). For example, in addition to understanding the risk factors leading to aggressive behavior in school, researchers also strive to understand what leads to positive behaviors, like school engagement. This strength-based approach balances a deficit-based approach. A deficit-based approach to research highlights important risk mechanisms but it also has drawbacks (Benard, 2006). First, when deficit-based research is put into practice it can lead to more negative outcomes by perpetuating negative stereotypes. For example, it is common for teachers to have low expectations of their students who have experienced adversity and to think that these students are incapable of reaching the same levels of achievement as their more privileged counterparts (Auwarter et al., 2008; Education Resources Institute, 2004; Elmore, 2009; Stanton-Salazar, 2011). In turn, teacher expectations are a stronger predictor of academic underachievement than a student’s own motivation (Jussim et al., 2005).

A strength-based approach focuses on solutions and the growth of youth and families even when they experience adversity and systemic inequalities that are slow to change (Benard, 2006). Instead of trying to “fix” people, this approach empowers people by highlighting their available assets, resources, and potential for taking control over their lives. In practice, a strength-based approach has been shown to improve institutional climate of juvenile corrections and clinician-client relationships (Barton & Mackin, 2012; Welfare et al., 2013). Accounting for individual, family, and community strengths in research offers a more balanced and complete picture. Both strengths and deficits within individuals and their external environment need to be examined to better understand processes of resilience (Titterton & Taylor, 2017). The current studies will examine predictors of school engagement (a strength) and predictors of the positive outcome of high school completion.

***Promotive and Protective Processes.*** Resilience researchers across disciplines commonly search for the internal and external influences or processes that are related to positive outcomes (Masten & Barnes, 2018). Such processes can be promotive or protective. Promotive processes are associated with positive outcomes regardless of one’s exposure to adversity and they demonstrate main effects in statistical models. The positive youth development framework offers examples, including positive relationships with adults and engagement in youth programs (Arnold, 2018; Sanders et al., 2015). Yet, the processes that promote positive outcomes at low levels of adversity may not be enough to overcome high levels of adversity. Protective processes are particularly impactful for youth experiencing high levels of adversity, such as social services for maltreated youth (Pecora, 2012; Ungar, 2013). Protective processes demonstrate moderating effects on risk in statistical models. Sometimes a promotive process can also have a protective effect, like positive parenting in high risk environments (Masten & Palmer, 2019). In the current studies, the caseworker-youth relationship will be examined as a potential protective factor for school engagement as well as for high school completion among youth in foster care.

***Promotive and Protective Relationships.*** One of the most powerful sources of support and access to resources are human relationships (Zeanah et al., 2018). Relationships with caregivers have been well researched showing that support, attachment bonds, role modeling, and socialization are promotive processes (Zeanah et al., 2018). Indeed, children do better in multiple domains when they are moved from institutional care to family like homes with safe, responsive, and stimulating caregivers (Zeanah et al., 2017). Relationships are also a source of

social capital, particularly relationships with adults outside of the family. Social capital refers to the resources and support embedded in one's social network that are accessible through relationships with institutional agents (Stanton-Salazar, 2011). An institutional agent is a person with relatively high status or authority in an organization who transmits valuable resources, opportunities, and privileges (Stanton-Salazar, 2011).

### **Caseworker-youth relationships & Differential Impact**

Caseworkers are institutional agents who have the power to change the course of a youth's life. They have authority in child welfare agencies and influence decisions about the safety, permanency, and well-being of maltreated youth, with placement in foster care being the most extreme form of intervention (Ryan et al., 2006). Caseworkers determine the kind, amount, and quality of services provided by child welfare agencies to children and families (Goerge, 1994; Lipsky, 1980). They also regulate eligibility for services and know how to navigate the child welfare system (Goerge, 1994; Lipsky, 1980). Service providers, including caseworkers, have a salient role for resilience processes of youth in foster care (Ungar, 2013). For example, one study of adolescents involved with child welfare who used more than one social service (e.g. mental health, juvenile justice, and special education classes) showed that the quality of care provided by one service provider was more predictive of positive outcomes (e.g., school engagement, avoiding delinquency) than the quantity of services they used (Ungar, Liebenberg, Armstrong, Dudding, & van de Vijver, 2013).

Although research suggests that the foster care intervention may not have a positive impact on outcomes of youth overall (Goemans et al., 2018; Warburton et al., 2011), it may be that this social service has a differential impact partly due to the relationship quality between caseworkers and youth.

The theory of differential impact helps to explain why some youth do well after adversity and others do not. Ungar (2018) describes three principles of differential impact theory. First, environments cause individuals to adapt. If the right supports and services are provided to youth who experience adversity, they are more likely to change and adapt in positive ways. Second, the impact of an intervention (e.g. foster care) will depend on the interaction of risk level (e.g. oppressed racial identity, mental health challenges) and resource level (positive relationships with caseworkers). Third, more complex adversity requires more complex supports and services to nurture resilience (Ungar, 2018).

There is emerging support for the differential impact of caseworker relationships. One study found that caseworker-youth relationship quality varies widely and has an influence on school engagement levels (Tilbury, Creed, Buys, Osmond, & Crawford, 2014). Another found that positive relationships between caseworkers and foster parents has an indirectly reduces youth trauma symptoms (Leon et al., 2008). Youth of different ages, genders, and races have different experiences with service providers (Ungar et al., 2013). The direct relationship between youth and caseworkers in association with youth outcomes, particularly academic outcomes, remains understudied as does the differential impact by youth characteristics (O'Higgins et al., 2017; Ungar, 2013).

### **Personal Characteristics and Academic Outcomes among Youth in Foster Care**

The current studies focus on two academic outcomes. First is school engagement. Second is high school completion.

***School engagement.*** School engagement refers to students' thoughts, feelings, and behavior in the school context (Fredricks, Blumenfeld, & Paris, 2004). Engaged students display interest, commitment, and involvement with school activities, school work, and have positive relationships with teachers, staff, and peers (Fredricks, Blumenfeld, & Paris, 2004). School engagement has been referred to as engagement in a “prosocial institution” because schools provide a predictable structure and play a large role in socializing children to the values, norms, and expectations of the dominant culture in which they live (Bender, 2012; Masten et al., 2008). Masten et al. (2008; 2018) consider school engagement to be an important and malleable individual adaptive system that can be enhanced in order to facilitate resilience.

There is extensive evidence that school engagement is protective and predicts positive academic outcomes among at-risk youth (Pears, Kim, Fisher, & Yoerger 2013). For maltreated youth, greater school engagement is related to academic attainment, better mental health, self-esteem, development of future orientation, and less substance abuse and delinquent behavior (Bender, 2012; Cheung et al., 2017; Conn et al., 2014; Khambati, Mahedy, Heron, & Emond, 2018; Oshri et al., 2018; Pears et al., 2013; Snyder & Smith, 2015; Williams & Nelson-Gardell, 2012). Further, research shows that school engagement mediates the relationship between maltreatment and school success, thus making it a key component of protective processes (Haskett et al., 2006).

**High School Completion.** Youth may complete high school by obtaining a high school diploma, a modified diploma, or a General Educational Diploma (GED). High school completion is an indicator of adaptation and is predictive of a positive life trajectory. For example, high school completion protects maltreated youth against arrests in young adulthood (Smith, Ireland, Elwyn, & Thornberry, 2013). Although a GED is better than not completing high school at all, a regular diploma offers more benefits. For example, those with a high school diploma are 1.7 times more likely to complete an associate degree, 3.9 times more likely to complete a bachelor's degree, and likely to have higher incomes (Grubb, 1999; National Center on Education Statistics, 2003; Smith, 2003). A national study found that youth in foster care earn a GED at a much higher rate than youth not in foster care, suggesting barriers to obtaining a regular diploma (Pecora et al., 2006).

Overall, school engagement levels and high school completion rates are lower among youth in foster care compared to their counterparts (Courtney, et al., 2007; Barrat & Berliner, 2013; Burley, 2013; Pears et al., 2013). There is variation within the population of youth in foster care that has been partly explained by personal characteristics.

**Personal Characteristics.** Bronfenbrenner and Morris (2006) described three kinds of personal characteristics that partly determine a person's outcomes: disposition, demand, and resource. Disposition characteristics are related to temperament and personality. Demand characteristics include identity markers like age, race, or gender as well as physical appearance and innate behaviors. Resource characteristics include health, abilities, and knowledge (Bronfenbrenner & Morris, 2006). Any of these personal characteristics can influence how other people and institutions in the environment respond to the youth. For example, teachers tend to have higher expectations for and provide more support to youth privileged by class and race (Education Resources Institute, 2004; Elmore, 2009; Stanton-Salazar, 2011). It is important to consider how these personal characteristics influence a youth's lived experience in an unequal society.

**Age.** Overall, there are mixed findings on age and academic outcomes of youth in foster care (O'Higgins, Sebba, & Gardner, 2017). Two studies found lower school engagement among older youth in care (Goemans et al., 2018; Mihalec-Adkins & Cooley, 2019).

**Gender.** Among youth in foster care, girls mostly have better academic outcomes compared to boys but not always (Clemens et al. 2018; O'Higgins, Sebba, & Gardner, 2017).

Two studies found higher school engagement among girls in foster care (Goemans et al., 2018; Mihalec-Adkins & Cooley, 2019). Some evidence suggests that placement in foster care is particularly detrimental to the likelihood of high school completion of Black male youth (Warburton et al., 2011).

*Race.* Being a person of color is related to worse educational outcomes among youth in foster care (O’Higgings, Sebba, & Gardner, 2017). For example, Clemens et al (2018) found that students of color do worse on standardized reading, writing, and math tests in grades 4-10. Related to school engagement, research indicates that extracurricular participation varies by ethnic group membership with White youth more likely to participate than youth of color (Darling et al., 2005). Youth of color in foster care are less likely to complete high school with a diploma and more likely to have a GED compared to White youth in foster care (Dworsky, et al., 2010; Harris, et al., 2009; O’Brien, et al., 2010).

*Special Education.* In general, receipt of special education is related to worse educational outcomes (O’Higgings, Sebba, & Gardner, 2017) and may be a greater risk specifically for youth in foster care (Sebba et al., 2015). Youth in foster care receiving special education services are at greater risk of academic underachievement (Geenen and Powers, 2006, Smithgall et al., 2005) and poorer transition outcomes (Anctil et al., 2007; Westat, Inc., 1991), compared to youth in foster care who do not receive special education services. Studies show that youth in foster care who receive special education graduate on time at lower rates than their counterparts in foster care (Clemens, 2014). One study showed that only 16% of foster youth receiving special education services with a primary disability of emotional disturbance graduated from high school, and 18% left school because they were incarcerated (Smithgall et al., 2005).

The intersection of foster care and special education is complex. To begin with, youth with disabilities are overrepresented in the child welfare system as they are more likely to experience maltreatment and at times maltreatment leads to disability (Vig & Kaminer, 2002). There are also shared environmental factors, such as poverty, that increase the risk of both maltreatment and disability (Vig & Kaminer, 2002). Compared to the general population, children in foster care are less likely to be performing at grade-level and more likely to be placed in special education (Seyfried, Pecora, Downs, Levine, & Emerson, 2000; Trout et al., 2008). Boys and youth of color in foster care are even more likely to be placed in special education (Slayter, 2016). Notably, compared to the general population of youth in special education, youth

in foster care who receive special education are more likely to have a primary diagnosis of emotional disturbance and less likely to have a learning disability as their primary diagnosis (Hill & Lightfoot, 2018).

*Posttraumatic Symptoms.* Youth in foster care experience a range of mental health challenges, including posttraumatic symptoms. They often display high levels of depression, anxiety, withdrawal, somatic complaints, anger, aggression, disobedience, antisocial behavior and delinquent behavior (Pecora, White, Jackson, & Wiggins, 2009). These symptoms stem from maltreatment and compounding risk factors such as poverty, parental substance abuse, exposure to domestic violence, and foster home placement instability (Courtney, McMurtry, & Zinn, 2004; Kohl, Edleson, English, & Barth, 2005; Smith & Marsh, 2002; Waid, 2014; Webster & Needel, 2014). For example, maltreatment among youth in foster care is related to depression and posttraumatic symptoms (Heneghan et al., 2013; Kolko et al., 2010; McMillen et al., 2005; Turner, Finkelhor, & Ormrod, 2006).

One nationally representative, cross-sectional study of adolescents in foster care showed lower school engagement among those with more internalizing and externalizing symptoms (Mihalec-Adkins & Cooley, 2019). Other studies also show that posttraumatic symptoms and mental health challenges are linked to worse academic outcomes (Choice et al., 2001; Flynn et al., 2013; Perzow et al., 2013; Shin, 2003; Threlfall, Auslander, Gerke, McGinnis, & Tlappek, 2017), although one showed no link (Wise et al., 2010). There is a bidirectional relationship between mental health and academic outcomes. For some children, mental health challenges lead to academic underachievement, but for others underachievement leads to mental health challenges (Gustafsson et al., 2010).

One study examined mental health challenges in relation to school engagement among youth in foster care over time and found that as symptoms increased, school engagement decreased (Goemans et al., 2018). One study found that youth with a diagnosis of mental disorder were less likely to receive a GED compared to dropping out, but it was not related to receiving a regular diploma (White et al., 2018).

### **Contextual Characteristics and Academic Outcomes among Youth in Foster Care**

The current studies will examine two contextual characteristics. First is school instability. Second is school type.

***School instability.*** On average, youth live in 3.4 different foster placements and some change homes over 10 times (Wulczyn, Kogan, & Harden, 2003; Zima et al., 2000). National data shows that the longer youth are in foster care, the more placement instability they experience (Children's Bureau, 2017). School changes may accompany these placement changes. One study found that 31% of initial foster home placements lead to a school change and the percentage increased by 11-19% for subsequent placement changes, depending on placement type (Clemens, Klopfenstein, et al., 2017). Over 30% of youth in care change schools five or more times (National Working Group, 2014).

Studies of school instability have yielded mixed findings in relation to academic outcomes with some showing a detrimental impact on achievement (Burley and Halpern, 2001; Conger and Rebeck, 2001; Sebba et al., 2015) and others showing null effects (Perzow et al., 2013; Sullivan, Jones, & Mathiesen, 2010; Zima et al., 2000). To my knowledge, school instability has not been examined in relation to school engagement. Given the disruptive nature of school changes, it is plausible that youth experience corresponding disruptions in their engagement. On the other hand, the predictable structure common across schools may provide youth with a sense of regularity and stability even as their home lives change. It is important to see if and how school instability impacts school engagement.

School instability has been related to lower odds of earning a high school diploma and greater odds of earning a GED or not completing high school (Clemens et al., 2016). School stability in ninth and twelfth grades may be particularly important for high school completion (Clemens et al., 2016). However, one study found no impact of school instability on high school completion (White et al., 2018).

### **Gaps in Literature**

There are several gaps in the literature. First, to date, academic outcomes have been informed primarily by studies conducted with low-risk, middle-class, White youth in Western countries which limits generalizability (Henrich, Heine, & Norenzayan, 2010). The current studies add to the literature by including youth in foster care, a diverse, high-risk, and understudied population. Second, despite developmental theory and evidence, several reviews found that most resilience studies lack an ecological approach. They do not focus on the interaction of individuals with multiple systems in the environment (Liu et al., 2017; Titterton et al., 2017; Ungar, 2011; Ungar et al., 2013). Instead, studies tend to focus on individual

psychological processes such as the self-system, cognition, emotion, coping, and motivation (Liu et al., 2017; Titterton et al., 2017; Ungar, 2011; Ungar et al., 2013). In particular, the relationship between youth and service providers, such as caseworkers, in association with academic outcomes remains understudied (O'Higgins et al., 2017; Ungar, 2013). Third, most studies of youth in foster care focus on the risk factors leading to negative academic outcomes. More evidence is needed to understand the predictors of positive outcomes, resilience processes, and the role of service providers for youth in foster care.

### **Proposed Studies**

The two current studies used a resilience framework to describe several characteristics of youth-caseworker relationships (knowledge of caseworker, contact, youth-perceived relationship quality, emotional support, instrumental support, & stability) across preadolescence, adolescence, and the transition to adulthood. Additionally, the studies examined the association of youth-caseworker relationships with positive academic outcomes (i.e. school engagement, high school completion). Finally, the studies examined the differential impact of youth-caseworker relationships on youth academic outcomes by the level of youth risk (i.e. clinical posttraumatic symptoms, special education).

The two studies were each be a secondary data analysis from some of the largest randomized control trials to date involving youth in foster care. These studies sampled youth in preadolescence, adolescence, and the transition to adulthood, allowing for examination of relevant academic outcomes for youth in different stages of development as well as an exploration of how caseworkers may be perceived differently by youth as they age. Both studies took place in the Portland, Oregon metropolitan area and explored academic outcomes. Finally, both studies shared some of the same or similar measures.

## **CHAPTER 2: STUDY 1**

### **Youth-Caseworker Relationships: Support for School Engagement & Differential Impact by Posttraumatic Symptoms among Youth in Foster Care**

#### **Introduction**

Academic success is a salient domain of youth development and is related to positive lifelong outcomes. For youth in foster care, academic achievement is related to economic well-being, better mental health, and less substance abuse in young adulthood (Forsman et al., 2016). However, the academic underachievement of many youth in foster care is well documented; youth in foster care are disproportionately represented in special education, have high rates of grade repetition, have low standardized test scores, and experience discipline and exclusion at higher rates than their counterparts (Scherr, 2007; Zetlin, MacLeod, & Kimm, 2012). Across grade level and subject areas, state reports show that high percentages of youth in foster care score in the lowest proficiency groups (Barrat & Berliner, 2013; Clemens & Tis, 2016). Studies consistently find that youth in foster care are less likely to complete high school compared to their counterparts (Courtney, et al., 2007; Barrat & Berliner, 2013; Burley, 2013; Pears et al., 2013). A national study found that 84% of youth in foster care wanted to attend college, but only 20% of those who completed high school did so (National Working Group on Foster Care and Education [NWGFCE], 2014). Due to these statistics, federal law now recognizes the need to track academic outcomes of youth in foster care (Every Student Succeeds Act).

Youth in foster care experience compounding adversities, including maltreatment and placement instability, which put them at risk for mental health challenges and academic underachievement (Berger et al., 2015; Frederick & Goddard, 2010; Threlfall et al., 2017). Despite these adversities, resilience can be nurtured to set youth in foster care on a more positive life trajectory. Specifically, school engagement has gained attention as a malleable, protective factor that can be nurtured in order to facilitate positive outcomes across multiple domains, including academic achievement (Khambati, Mahedy, Heron, & Emond, 2018; Masten et al., 2008). Emerging evidence suggests that the relationship quality between youth in foster care and their caseworkers may bolster school engagement during adolescence (Tilbury, Creed, Buys, Osmond, & Crawford, 2014). However, little is known about the experiences of children and youth in foster care with their caseworkers. Further, the impact of youth-caseworker relationship quality on youth outcomes is understudied and may not be universal; it could depend on the level

of risk that youth experience (Ungar, 2018). Youth in foster care who experience more family risk, exposure to violence, and maltreatment are more likely to have clinical levels of posttraumatic symptoms (Kolko et al., 2010). In turn, posttraumatic symptoms pose a risk for lower school engagement and academic underachievement (Threlfall et al., 2017).

The current study examined the experiences of children and youth aged 7-16 years with their caseworkers (knowledge of caseworker, perceived quality, responsiveness to needs, communication frequency, feeling able to communicate, & stability), and the potential of positive youth-caseworker relationships to strengthen specific areas of school engagement (i.e. emotional, behavioral, & cognitive). Additionally, the study examined the differential impact of youth-caseworker relationships on school engagement for youth with clinical posttraumatic symptoms compared to youth with non-clinical symptoms.

### **Resilience & Youth-Caseworker Relationships**

Resilience refers to both personal and contextual processes that promote positive outcomes and provide youth the resources and supports they need to cope with adversity (Ungar, 2011). Service providers, including caseworkers, have a salient role for activating resilience processes of youth in foster care who experience many compounding adversities (Ungar, 2013). Researchers have long considered the influence of caseworkers as one factor influencing youth outcomes. Caseworkers have a salient role for activating resilience processes for youth in foster care as they act as a source of support and as “institutional agents” which provide access to resources within the child welfare system (Ryan et al., 2006; Stanton-Salazar, 2011; Ungar, 2013). Researchers have argued that in order to build trusting, positive relationships between caseworkers and youth, time and stability of youth-caseworker relationships are needed along with caseworkers’ willingness to listen and respond to the needs of youth (Pinkney, 2018). Caseworker turnover has been researched more often than quality of relationships with caseworkers, and turnover has been found to disrupt the provision of quality services and the stability of caseworker relationships with youth and families (GAO, 2003; Zlotnik, 2011).

Regarding academic outcomes, one study of youth in foster care aged 14-18 years found that youth reports of caseworker helpfulness varied widely and had an influence on school engagement levels, but frequency of contact with caseworker was unrelated (Tilbury et al., 2014). Another study of youth aged 13-21 years involved with multiple social services (e.g. child welfare, mental health, juvenile justice, special education) showed that the quality of care

provided by one service provider was more predictive of school engagement than the quantity of services they received (Ungar, Liebenberg, Armstrong, Dudding, & van de Vijver, 2013). Ungar and colleagues (2013) used the Youth Services Survey, which assess satisfaction with service, input in decision making, relevance and accessibility of service, and respect and clear communication by service providers. Qualitative studies of youth and adults with foster care experience show that they report the benefits of having a supportive relationship with a caseworker on their educational aspirations and achievement (Harker et al., 2004; Pinkney & Walker, 2020; Rutman & Hubberstey, 2018). However, the impact of youth-caseworker relationships may not be universal; it could depend on the level of risk that youth experience (Ungar, 2018).

### **Differential Impact**

Child welfare legislation requires agencies to address the educational well-being of all youth in foster care (Gustavsson & Ann, 2012). Yet, research suggests that the foster care intervention does not have a positive impact on outcomes of maltreated youth overall (Goemans et al., 2018; Warburton et al., 2011). The theory of differential impact helps to explain why some youth in foster care do well in one or more outcome domain and others do not. Ungar (2018) describes three principles of differential impact theory. First, environments cause individuals to adapt. If meaningful supports and services are provided to youth who experience adversity, they are more likely to change and adapt in positive ways. Second, the impact of an intervention (e.g. foster care) will depend on the interaction of risk level (e.g. posttraumatic symptoms) and resource level (e.g. positive relationship with caseworker). Third, more complex adversity requires more complex supports and services to nurture resilience (Ungar, 2018).

### **Resilience & School Engagement**

Developmentalists have identified three core domains that indicate youth functioning and resilience: behavioral, social, and academic (Masten & Tellegen, 2012). The academic domain is especially important because it is related to positive lifelong outcomes in health, well-being, and social mobility for youth who have experienced adversity, including youth in foster care (Font & McGuire-Jack, 2013; Forsman et al., 2016; Pears, Kim, Fischer, & Yoerger, 2013).

In particular, school engagement has gained attention as a malleable, protective factor that can be nurtured in order to facilitate positive outcomes across multiple domains (Masten et al., 2008). Schools provide a predictable structure and play a large role in socializing children to

the values, norms, and expectations of the dominant culture in which they live (Bender, 2012; Masten et al., 2008). Therefore, engagement in school may be particularly impactful for youth in foster care who experience significant instability and often lack positive relationships with adults at home (Coohey et al., 2011; Romano, Babchishin, Marquis, & Fréchette, 2015). Indeed, in a qualitative study, some youth with foster care experience revealed that school provided a sense of normalcy, purpose, safety and stability when their home lives were unstable or conflictual (Rutman & Hubberstey, 2018). Further, for maltreated youth, greater school engagement is related to academic achievement, better mental health, self-esteem, development of future orientation, and less substance abuse and delinquent behavior (Bender, 2012; Cheung et al., 2017; Conn et al., 2014; Hershberger & Jones, 2018; Khambati, Mahedy, Heron, & Emond, 2018; Mihalec-Adkins & Cooley, 2019; Oshri et al., 2018; Pears et al., 2013; Snyder & Smith, 2015; Williams & Nelson-Gardell, 2012).

Conceptually, school engagement refers to students' thoughts, feelings, and behavior in the school context and can be divided into three dimensions: behavioral, emotional, and cognitive (Fredricks, Blumenfeld, & Paris, 2004). Behavioral engagement encompasses student's actions and participation in academic or social aspects of school. Emotional engagement refers to positive and negative attitudes or feelings towards these aspects of school. Cognitive engagement incorporates motivation and investment in school (Fredricks, Blumenfeld, & Paris, 2004). Researchers have argued that it is important to examine the three dimensions of school engagement individually to better understand associations with outcomes and target interventions for youth in foster care (Pears et al., 2013; Wang, Willet, & Eccles, 2011).

School engagement levels are lower among youth in foster care compared to their low-socioeconomic status counterparts (Pears et al., 2013). Still, school engagement levels have been shown to vary among youth in foster care by personal characteristics of youth. Two studies found lower school engagement among older youth and among boys in foster care (Goemans et al., 2018; Mihalec-Adkins & Cooley, 2019). A review of academic outcomes of youth in foster care found race and special education status to be strong predictors (O'Higgins, Sebba, & Gardner, 2017). Related to school engagement, one study found that white youth were more likely to participate in extracurricular activities than youth of color (Darling et al., 2005). Although achievement levels have been found to be lower for youth in special education, to my knowledge no studies have examined school engagement (O'Higgins et al., 2017).

### **Adversity, Posttraumatic Symptoms, & Risk to School Success**

Youth in foster care experience compounding adversities which put them at risk for posttraumatic symptoms, mental health challenges, low school engagement, and academic underachievement. For example, maltreatment among youth in foster care is related to depression and posttraumatic symptoms (Heneghan et al., 2013; Kolko et al., 2010; McMillen et al., 2005; Turner, Finkelhor, & Ormrod, 2006). Additionally, poverty, domestic violence exposure, family instability, and housing instability are common experiences prior to foster care placement and are related to academic underachievement (Berger et al., 2015; Clemens et al., 2018; Conger & Finkelstein, 2003; Herbers et al., 2012; Romano, Babchishin, Marquis, & Fréchette, 2015). Once in foster care, youth experience stress from family separation, placement instability, and adjustment to new homes and schools which may disrupt academic progress (Berger et al., 2015).

Another strong predictor of academic outcomes is school stability (O'Higgins et al., 2017). On average, youth live in 3.4 different foster placements and some change homes over 10 times (Wulczyn, Kogan, & Harden, 2003; Zima et al., 2000). National data shows that the longer youth are in foster care, the more placement instability they experience (Children's Bureau, 2017). One study found that 31% of initial foster home placements lead to a school change (Clemens, Klopfenstein, et al., 2017). Over 30% of youth in care change schools five or more times (National Working Group, 2014).

Studies of school instability have yielded mixed findings in relation to academic outcomes with some showing a detrimental impact on achievement (Burley and Halpern, 2001; Conger and Rebeck, 2001; Sebba et al., 2015) and others showing null effects (Perzow et al., 2013; Sullivan, Jones, & Mathiesen, 2010; Zima et al., 2000). To my knowledge, school instability has not been examined in relation to school engagement. Given the disruptive nature of school changes, it is plausible that youth experience corresponding disruptions in their engagement. On the other hand, the predictable structure common across schools may provide youth with a sense of regularity and stability even as their home lives change.

The adversities experienced by youth in foster care can result in significant mental health challenges (Courtney, McMurtry, & Zinn, 2004; Mowbray, Ryan, Victor, Bushman, Yochum, & Perron, 2017; Kohl, Edleson, English, & Barth, 2005; Pecora, White, Jackson, & Wiggins, 2009; Smith, & Marsh, 2002). In turn, mental health challenges are also related to lower school

engagement and academic underachievement (Choice et al., 2001; Flynn et al., 2013; Perzow et al., 2013; Shin, 2003; Threlfall et al., 2017). Regarding school engagement, several studies have shown a negative impact of mental health challenges. A study of maltreated children in grades 3-5 residing in foster care showed that they have lower school engagement compared to their low-socioeconomic status counterparts (Pears et al., 2013). Another study of girls in foster care aged 12-19 years found that posttraumatic symptoms and depression were related to lower school engagement levels (Threlfall, Auslander, Gerke, McGinnis, & Tlapek, 2017). One study examined mental health challenges in relation to school engagement among youth aged 5-16 years in family foster care over time and found that as symptoms increased, school engagement decreased (Goemans et al., 2018). Finally, a nationally representative, cross-sectional study of youth aged 11-17 years in foster care showed lower school engagement among those with more internalizing and externalizing symptoms (Mihalec-Adkins & Cooley, 2019).

Despite these adversities and the risk factor of mental health challenges, academic resilience can be nurtured to set youth in foster care on a more positive life trajectory. Specifically, youth-caseworker relationships may be a powerful source of support and access to resources needed to cope with adversity.

### **Current Study**

The direct relationship between youth and caseworkers in association with youth outcomes, particularly academic outcomes, remains understudied (O'Higgins et al., 2017; Ungar, 2013). To date, no studies have examined the differential impact of youth-caseworker relationships on school engagement of youth with different levels of risk, such as posttraumatic symptoms. The following research questions guide the current study:

1. What experiences do preadolescent and adolescent youth in foster care (aged 7-16) report having with their caseworkers (i.e. knowledge of caseworker, communication frequency, perceived relationship quality, responsiveness to needs, stability) and which characteristics are associated with youth-perceived relationship quality?
2. Does youth-caseworker relationship quality predict school engagement, controlling for contextual and personal characteristics of youth in foster care?
3. Does the association between youth-caseworker relationship quality and school engagement differ for youth with high posttraumatic symptoms compared to youth with low symptoms?

## Method

The current study is a secondary data analysis of the Supporting Siblings in Foster Care Study (SIBS-FC) study, a NIMH-funded experimental test of a sibling intervention for foster youth (Kothari et al., 2017). Data were collected longitudinally through multiple methods and reporters, including survey, interview, Oregon DHS records, and structured observation. The current study will focus on youth surveys at baseline. It is important to include youth perspectives in research, particularly youth in foster care whose voices are often ignored (Nybell, 2013).

## Procedure

**Recruitment.** Siblings were universally recruited from Oregon DHS. A member of the research team who was also employed at DHS identified potential participants from the DHS database. To be eligible, the older sibling had to be in foster care for at least 90 days and between the ages of 11-15 at study entry. In addition, the older sibling must have had a younger sibling also in care that was within 4 years of age of him or her. Both siblings must have provided assent and have had consent from DHS, the legal guardian. Foster parent informed consent was also required for foster parent participation. Siblings had to live within the 4-county Portland metropolitan area. When an older sibling had two or more younger siblings that met inclusion criteria, the sibling closest in age was selected. Pairs were excluded if they were scheduled to leave the tri-county area within the next year of study startup. Individuals who experienced a profound cognitive disability or were actively psychotic were excluded from the study.

Caseworkers of eligible sibling pairs were asked for consent. Once received, foster parents were mailed an informational packet and asked to participate in a formal orientation. Orientation included a description of the intervention, design of the study, risks and benefits of participation. If a sibling pair was living apart from one another, each family received a separate orientation. Consent and assent forms were collected from foster parents and youths. In addition, foster parents gave authorization for researchers to exchange information with the youths' schools. If a youth changed foster home placement, researchers attempted to contact, orient, and recruit the new foster parent. Sibling pairs were yoked by living situation (i.e., siblings living together or apart) and matched by race (i.e., white or non-white) and sibling composition (i.e. same or mixed gender). Each pair was randomly assigned to participate in the SIBS-FC intervention or receive community-as-usual services.

**Intervention.** The SIBS-FC intervention was not a focus of the current study. The intervention was designed to improve the quality of sibling relationships for pre-adolescent and adolescent youth in foster care by targeting each child's social skills and reducing conflict between siblings (Kothari et al., 2017).

**Data Collection.** All data were gathered in conformity with the requirements of the Institutional Review Board at Portland State University and DHS. Each youth was followed for 18 months and data was collected every 6 months, yielding a total of 4 major waves occurring at 0, 6, 12, and 18 months. Youth completed surveys focused on the central outcome domains of academics, mental health, quality of life, and sibling relationship quality. The current study will focus on youth survey data collected at baseline (Time 1) and 6 months (Time 2).

### **Sample**

Data were gathered from 328 preadolescents and adolescents (mean age =11.87 years, SD =2.01, range 7-16 years). Half (50%) were female. Half (50%, n=162) identified as youth of color (including American Indian or Alaska Native, Asian or Pacific Islander, Black or African American, multiracial, other). At baseline, over half of youth lived in non-relative foster homes (56%, n=183) and almost three-quarters lived with a sibling (73%, n=238). Most had been living with their current caregiver for over 2 years.

This sample has some similarities to both the Oregon child welfare population as well as the national child welfare population. Data reported from the 2012 fiscal year indicated that 39% of Oregon foster youth were in the 7-15-year age range and 42% were youth of color (USDHHS, 2012). While sibling-focused data are not readily available or reported in statewide and national reports of foster youth, in 2008—just prior to study start up—about 68% of youth were placed together with one or more of their siblings (Oregon DHS child welfare database analysis conducted at our request). In addition, the 2012 Adoption Foster Care and Reporting System report indicated that 39% of youth in foster care nationally were in this 7-15-year age range and 58% were people of color (USDHHS, 2012).

### **Outcome Measure**

**School Engagement.** Youth completed the School Engagement Scale (Fredricks, Blumefield, Friedel, & Paris, 2005). This 19-item measure has 3 subscales; items are rated on a Likert type scale with 1=*never* to 5=*very often*. The behavioral school engagement subscale contains 5 items ( $\alpha = .72$ , e.g., I follow the rules at school, I pay attention in class), the

emotional school engagement subscale contains 6 items ( $\alpha = .86$ , e.g., I like being at school, My classroom is a fun place to be), and the cognitive school engagement subscale contains 8 items ( $\alpha = .82$ , e.g., I study at home even when I don't have a test, I check my school work for mistakes).

### **Predictor Measures**

***Caseworker Relationship Quality.*** Youth reported on 4 items about their relationship with their caseworker. The items and response options were as follows: (a) "On a scale of 1-10, how good is your relationship with your caseworker?" 1 = *not good at all* to 10 = *very good*, (b) "On a scale of 1-10, how well does your caseworker listen to you?" 1 = *doesn't listen at all* to 10 = *always listens*, (c) "How well does your caseworker respond to your needs?" 1 = *doesn't ever respond* to 10 = *always responds*, (c) "When you have a problem, how helpful is your caseworker?" 1 = *not helpful at all* to 10 = *always helpful*. Items were averaged and Cronbach's alpha was 0.82.

***Caseworker Knowledge.*** In addition to questions about caseworker relationship quality, youth were asked whether they know who their caseworker was (0=*no*, 1=*yes*), whether they had their contact information (0=*no*, 1=*yes*), and whether they felt that they could contact their caseworker when needed (0=*no*, 1=*yes*).

***Caseworker Contact.*** Youth also reported the number of times in the past three months that they had seen their caseworker and talked to their caseworker.

***Caseworker Stability.*** Youth reported the number of months that they had the same foster care caseworker. A variable was created which converted months to years. Additionally, Oregon DHS administrative records were examined for the total number of caseworkers that youth had since entering foster care.

***Posttraumatic Symptoms.*** Youth completed the Child Report of Posttraumatic Symptoms (CROPS) (Greenwald & Rubin, 1999). The 25-item measure has a range is 0-50 and scores of 19 and above suggest a need for clinical attention, though not necessarily diagnosis. The CROPS has been normed with youth who were incarcerated or had an incarcerated parent, where 30-40% exceeded the cutoff, with scores of 16-19 on average (e.g., Arditti & Savla, 2015; Bockneck, Sanderson, & Britner, 2008; Perkins et al., 2016). Youth were asked to indicate how true each of the 25 items were for them in the past week. Example items include, "I feel strange or different

than other kids,” and “I worry that bad things will happen.” Response options included 1= *none*, 2 = *some*, and 3 = *lots*. Items were summed and Cronbach’s alpha at study baseline was 0.89.

**Demographics.** At study baseline, youth self-reported their age, gender (1=*male*, 2=*female*), race (re-coded as 0= *White* or 1=*Youth of Color*), and whether they were in special education (0=*no* 1=*yes*). Table 1.1 displays demographic breakdown of the sample.

**School Stability.** Youth reported the number of months they had been at their current school. A variable was created which converted months to years. Youth also reported whether they had changed schools in the past year (0=*no*, 1=*yes*).

**Covariates.** Demographics, caseworker stability, and school stability were explored in bivariate analyses and were covariates in multivariate analyses.

## Analysis & Results

**Preliminary Analysis.** All analyses were completed in Stata version 16 (Stata Corp, 2019). Missingness ranged from 0-25%. Full information maximum likelihood (FIML) methods were used to address missing data, which is superior to listwise deletion and mean imputation in multiple regression analysis, yielding less biased results (Enders, 2001; Schäfer & Graham, 2002). Table 1.1 displays descriptive statistics for the study sample. On average, youth reported 3.65 ( $SD=.93$ ) for emotional school engagement, 4.08 ( $SD=.72$ ) for behavior school engagement, and 3.17 ( $SD=.90$ ) for cognitive school engagement. About 31% of youth had changed schools during the past year and youth had been attending their current school for an average of 1.30 years ( $SD=1.35$ ). About 58% of youth reported clinical levels of posttraumatic symptoms and 32% were receiving special education.

**Primary Analysis.** The first research question asked about youth experiences with their caseworkers. Table 1.2 provides descriptive statistics for each caseworker item as well as the composite caseworker relationship quality scale. On average, youth had had 5.17 ( $SD=3.12$ ) total caseworkers since their entry into foster care and had their current caseworker for less than one year an average ( $M=.92$ ,  $SD= 1.49$ ). Most (82%) felt that they could contact their caseworker when needed and yet only 56% reported that they had their caseworker’s contact information. On average, youth saw their caseworkers close to seven times ( $M=6.66$ ,  $SD=8.58$ ) in the past 3 months and talked to their caseworker slightly more than once per month ( $M= 3.42$  ( $SD = 6.81$ )). There was substantial variation in caseworker contact with 50% of youth reporting that they had not talked to their caseworker at all during the past 3 months.

On average, youth reported high on the youth-caseworker relationship quality scale ( $M=8.14$ ,  $SD=1.92$ ) with reports spanning the entire 10-point scale. About 15% reported low relationship quality (one standard deviation below the mean or lower), 45% reported medium (near sample mean), and 40% reported high (one standard deviation above the mean). Among youth aged 7-9-years, 12% reported low relationship quality, 41% medium, and 47% high. Among 10-13-year-olds, 12% reported low, 46% medium, and 42% high. Among 14-16-year-olds, 31% reported low, 46% medium, and 23% high.

Table 1.2 shows ratings of specific caseworker relationship quality items. On average, youth reported relatively high caseworker responsiveness to needs ( $M=8.26$ ,  $SD=2.18$ ), helpfulness with problems ( $M=8.36$ ,  $SD=2.23$ ), and how well caseworkers listened to them ( $M=8.84$ ,  $SD=1.07$ ). There was substantial variation with youth reports spanning the entire 10-point scale.

Table 1.3 shows correlations among all study variables, including caseworker items, including youth-perceived relationship quality. Responsiveness to needs had the strongest correlation with youth-caseworker relationship quality ( $r=.50$ ,  $p<.05$ ) followed by helpfulness with problems ( $r=.52$ ,  $p<.05$ ) and listening ( $r=.46$ ,  $p<.05$ ). Frequency of seeing caseworker was weakly correlated ( $r=.17$ ,  $p<.05$ ) and communication frequency was unrelated. Feeling able to contact caseworker and caseworker stability in terms of total caseworkers and time with current caseworker were not significantly related to youth perceived relationship quality.

To answer the final research questions, a series of multiple linear regression analyses were conducted, each predicting a subscale of school engagement (i.e. emotional, behavioral, cognitive), and are displayed in Table 1.4. All models adjusted standard errors for sibling clusters and included variance inflation factors to test for multicollinearity, of which there were no concerns. Main effects of caseworker relationship quality and covariates as well as the interaction of youth-caseworker relationship quality with posttraumatic symptoms were examined for each subscale.

Results of Model 1A indicated that a one-unit increase in youth-caseworker relationship quality predicted a .08 unit increase in emotional school engagement ( $b=.08$ ,  $p<.001$ ). A one-unit increase in posttraumatic symptoms predicted a .02 unit decrease in emotional school engagement ( $b=-.02$ ,  $p<.01$ ). Finally, a one-year increase in age predicted a .09 unit decrease in emotional school engagement ( $b=-.09$ ,  $p<.001$ ). This model explained 12% of the variance.

Results of Model 1B indicated that the interaction of youth-caseworker relationship with posttraumatic symptoms was a significant predictor of emotional school engagement. This model explained 15% of the variance in emotional school engagement. Predicted margins were used to probe the interaction effect. Estimates for youth-caseworker relationship quality and posttraumatic symptoms were generated with plus or minus one standard deviation for high and low approximations. Figure 1 shows that youth with high caseworker relationship quality and low posttraumatic symptoms had the highest levels of school engagement. The impact of youth-caseworker relationship quality on emotional school engagement of youth with high posttraumatic symptoms appears to be weaker compared to youth with low symptoms.

Results of Model 2 indicated that a one-unit increase in youth-caseworker relationship quality predicted a .06 unit increase in behavioral school engagement ( $b=.06, p<.001$ ). A one unit increase in posttraumatic symptoms predicted a .02 decrease in behavioral school engagement ( $b=-.02, p<.001$ ). A one-year increase in age predicted a .04 unit decrease in behavioral school engagement ( $b=-.04, p<.05$ ). Finally, male gender predicted a .20 unit decrease in behavioral school engagement ( $b=-.20, p<.01$ ). This model explained 16% of the variance in behavioral school engagement. The interaction of youth-caseworker relationship quality with posttraumatic symptoms was not a significant predictor of behavioral school engagement (results not shown in table).

Results of Model 3 indicated that a one unit increase in youth-caseworker relationship quality predicted a .13 unit increase in cognitive school engagement ( $b=.13, p<.01$ ). A one-year increase in age predicted a .07 unit decrease in cognitive school engagement ( $b=-.07, p<.01$ ). Finally, male gender predicted a .30 unit decrease in cognitive school engagement ( $b=-.30, p<.01$ ). This model explained 17% of the variance in behavioral school engagement. The interaction of youth-caseworker relationship with posttraumatic symptoms was not a significant predictor of emotional school engagement (results not shown in table).

## **Discussion**

This study adds to the dearth of literature on youth experiences with their caseworkers and the influence of caseworkers on positive academic outcomes for youth in foster care. The study aimed to describe the experiences of preadolescents and adolescents in foster care with their caseworkers. A second aim was to examine the association of youth-caseworker

relationships with school engagement. Finally, the study examined the differential impact of youth-caseworker relationships on school engagement.

### ***Experiences of Preadolescents and Adolescents with Their Caseworker***

On average, youth reported high on the youth-caseworker relationship quality scale with substantial variation. Age explained some of this variation, with more youth ages 13-16 years (as compared to 7-12 years) reporting low overall relationship quality and fewer reporting high relationship quality. This was also true for each individual item of the relationship quality scale. This suggests that going forward, 13-16-year-olds are an important age group for caseworkers to focus on relationship-building, discussed further in a later section.

*Emotional support.* In addition to overall relationship quality, the current study examined emotional support as measured by youth reports of how well caseworkers listen to them and whether youth feel able to contact their caseworkers when needed. Listening was positively associated with perceived relationship quality, caseworker responsiveness to needs, and caseworker helpfulness with problems. Over 80% of youth said they felt able to contact or talk to their caseworker when needed and this was positively associated with relationship quality, responsiveness to needs, and helpfulness with problems. Findings are congruent with studies showing that youth value having their voices heard by service providers, including caseworkers, having autonomy and input in decision making, and having service providers who take an interest in their lives (Harker et al., 2004; Pinkney & Walker, 2020; Quest et al., 2012; Ungar et al., 2013).

*Instrumental support.* Caseworkers act as “institutional agents” for youth by providing instrumental support and transmitting valuable resources, opportunities, and privileges to youth (Goerge, 1994; Lipsky, 1980; Ryan et al., 2006; National Resource Center for Family-Centered and Permanency Planning, 2008; Stanton-Salazar, 2011). The current study examined instrumental support via youth reports of how responsive their caseworkers were to their needs and how helpful caseworkers were with problems. Each was strongly related to youth perceived relationship quality. Further, these items had stronger associations with youth perceived relationship quality than contact with caseworker. These findings suggest that although emotional support is valued among youth, instrumental support and the role of caseworkers as “institutional agents” are particularly important for building positive relationships. Additionally, the amount of contact appears to not be as important as the quality of contact.

*Caseworker Stability.* The current study examined caseworker stability in two ways: change of caseworker and time with current caseworker. Neither was associated with youth perceived relationship quality. These findings are inconsistent with theory (Pinkney, 2018) and some studies showing an interruption in the quality of services and relationships with youth when caseworkers change (GAO, 2003; Zlotnik, 2011). One reason for null findings could be that different youth experience a change in caseworker in different ways. In qualitative studies, a change of caseworker led to loss of trust by some youth while a few others reported a welcomed change that resulted in increased communication or a more involved caseworker (Bell, 2002; Strolin-Goltzman et al., 2010). This suggests that stability in and of itself does not influence youth-caseworker relationship quality. Stability in combination with youth-caseworker relationship quality or caseworker skill is important to consider. In addition, perhaps the timing of a caseworker change in the life of a youth has more explanatory power, or it may have a differential impact for youth with different levels of risk.

*Contact.* Caseworker contact encompasses having caseworker contact information, frequency of seeing caseworker, and frequency of communicating with caseworker. A concerning finding was that 50% of youth reporting that they had not talked to their caseworker at all during the past 3 months. Only 56% of youth overall had their caseworker's contact information. A higher percentage of youth aged 10-13-years and aged 14-16-years had caseworker contact information compared to youth aged 7-9-years. It could be that caseworkers are more likely to give older youth their contact information, reflecting increasing autonomy with age. Regarding preadolescents, caseworkers may be more reliant on caregivers to contact them if any concerns arise in-between visitations. Caseworkers might also find that preadolescents are more likely to communicate in-person. Indeed, frequency of communication was related to how often preadolescents and adolescents saw their caseworker, suggesting that communication happened mostly during caseworker visitations and perhaps was not common in-between visitations. Youth who saw their caseworker more often also reported higher relationship quality, but frequency of communication was unrelated. Qualitative studies indicate that regular caseworker presence and "showing up" are valued by youth (Stabler, et al., 2019). Whether preadolescents would benefit from having their caseworker's contact information and the autonomy to initiate conversations in-between visitations deserves further study. Additionally, the finding that communication frequency was not related to youth-perceived

relationship quality suggests that the kind of conversations that caseworkers typically have with preadolescent and adolescent youth may not be engaging on their level.

*Developmental Differences in Youth-Caseworker Relationships.* Findings suggest that the role of caseworkers varies by the developmental stage of youth. Youth who were 7-9-years-old reported higher levels of overall relationship quality compared to 10-13-year-olds and 14-16-year-olds. This suggests that caseworkers are doing well with preadolescents or it could be that preadolescent youth are less critical in their evaluation of relationships with adults. It could also be that preadolescent youth are less aware of their own unmet needs for emotional and instrumental support.

Adolescence emerged as an important age group for caseworkers to focus on relationship-building as more 14-16-year-olds reported low relationship quality and fewer reported high relationship quality. They reported lower on every aspect of youth-caseworker relationships, suggesting an overall need for more caseworker focus. Adolescence is a period of increased transitions (e.g. from elementary to middle school and middle to high school) with accompanying changes in adult expectations and at times poor fit of school culture with developmental changes (Elmore, 2009; Wang & Eccles 2012). Profound changes in brain development mean that adolescents are on par with adults in terms of cognition and they seek more autonomy, but they remain emotionally and socially immature which can lead to impulsivity and overreacting (Steinberg et al., 2009). It is also a period of increased risk-taking behavior, such as substance abuse (Gramkowski et al., 2009), and increased influence of peers compared to caregivers (Brown & Larson, 2009). Research on adolescent development suggests that these developmental changes can lead to an increase in conflict with adults, but that the reaction of youth depends on the relationship quality with adults. In less supportive relationships, disagreement may be interpreted by youth as a hostile attack that triggers an antagonistic response (Larsen & Collins, 2009). Caseworkers may benefit from more training and education related to adolescent development. In addition to these normative developmental changes, adolescents in foster care likely to experience more contextual risks compared to preadolescents. For example, placement breakdowns, placement in group homes, and lower probability of being re-united with birth families or being adopted and these stressors may have a particularly detrimental impact on the development of brain areas most important to functioning in interpersonal relationships (Festinger, 2002; Snowden, 2008; Strijker, Zandberg, & van der

Muelen, 2011). This could mean that adolescents are more critical of their relationships with caseworkers and may be less trusting or ready to communicate their needs. This suggests a need for more caseworker time and effort in case evaluation and understanding the complex needs of adolescents and meeting them at their level. More research with adolescents and what they find valuable in a caseworker is warranted.

### ***Association of Youth-Caseworker Relationships with School Engagement***

Positive youth-caseworker relationship quality was related to greater emotional, behavioral, and cognitive school engagement for preadolescents and adolescents in foster care, controlling for personal and contextual factors. This is congruent with findings by Tillbury and colleagues (2014) who sampled adolescents in foster care in Australia and found that caseworker helpfulness predicted a total score of school engagement. It is also consistent with qualitative studies detailing the ways in which youth in foster care benefit from the support and access to resources that come with positive caseworker relationships (Harker et al., 2004; Pinkney & Walker, 2020; Rutman & Hubberstey, 2018).

More research is needed to uncover the specific and nuanced ways that positive youth-caseworker relationships lead to improved school engagement. Findings from the Federal Child and Family Services Review, a state monitoring system for child welfare program alignment with federal requirements (Children's Bureau, 2003), showed that the frequency and quality of caseworker visits with youth and families was related to caseworker assessment of risk and needs, parent involvement in case-planning, service provision, and youth outcomes. A report by the Child Welfare Capacity Building Collaborative (CWCBC; 2017) used these findings to generate a theoretical model linking quality interactions between youth and caseworkers to trusting relationships, improved caseworker assessment of risk and needs, joint development of case plans, shared understanding of progress towards goals, and improved youth and family engagement and empowerment. In turn, safety, permanency, and well-being outcomes improve (CWCBC; 2017).

Following this theory, when caseworkers listen and respond to the needs and problems of youth, this leads to better assessments and greater levels of trust in the relationship. Trust has been hypothesized as a key factor for children and youth in foster care to communicate their needs to adults (Pinkney, 2018). Caseworkers may then become more aware of educational needs and can link youth with available services. Caseworkers may advocate for youth and they

may communicate with caregivers or teachers about what the youth needs. Caseworkers may also acknowledge and encourage academic achievement directly to the youth. Qualitative research indicates that youth in foster care feel supported in their educational success when caseworkers show a genuine interest in their education (Harker et al., 2004). Finally, caseworkers may act as institutional agents by improving educational supports in foster home placements (e.g. link foster parents to trainings, ensure that moves are in the best interest of education, advocating for youth needs), or enabling access to school supplies and learning supports, such as tutoring or funds for extracurricular activities.

### ***Posttraumatic Symptoms & Differential Impact***

In line with several studies showing a negative influence of mental health challenges on school engagement across childhood and adolescence (Goemans et al., 2018; Mihalec-Adkins & Cooley, 2019; Pears et al., 2013; Threlfall, Auslander, Gerke, McGinnis, & Tlappek, 2017), the current study found that high levels of posttraumatic symptoms were related to lower levels of behavioral school engagement. Researchers have posited that posttraumatic symptoms can negatively impact peer and teacher relationships at school, partly due to withdrawn and/or aggressive behavior (Threlfall et al., 2017). In turn, youth may feel a lack of support and belonging in school and may be less motivated to engage in school engagement behaviors (Appleton, Christenson, & Furlong, 2008). Indeed, posttraumatic symptoms have been associated with externalizing behaviors in school and more frequent suspensions (Gellman & DeLucia-Waack, 2006; Lipschitz et al., 2000; Saigh, Yasik, Oberfield, Halamandaris, & McHugh, 2002). Older adolescents with higher posttraumatic symptoms have been found to have more negative attitudes toward their school and teachers (McGill et al., 2014) and are more likely to have negative beliefs about the future (Allwood, Esposito-Smythers, Swenson, & Spirito, 2014). These issues may manifest as difficulties in developing and maintaining relationships with peers and teachers (Haight et al., 2013).

Supporting differential impact theory, current findings indicated that youth with more resources (i.e. higher youth-caseworker relationship quality) and lower risk (i.e. lower posttraumatic symptoms) had the greatest levels of emotional school engagement while youth with higher risk had lower school engagement levels at both high and low resource level. Emotional school engagement is relevant to both academic work and the social aspect of school, and qualitative research shows this dimension to be particularly impacted by experiences of

maltreatment (Frederick & Goddard, 2009). Caseworker emotional and instrumental support may be adequate for youth with fewer posttraumatic symptoms to facilitate coping with traumatic experiences and enabling them to be perceived more positively by peers and teachers at school. On the other hand, caseworkers may be unaware of the higher posttraumatic symptoms faced by some youth they serve, or they may misinterpret their symptoms. Another likely reason higher caseworker relationship quality was not associated with improved emotional school engagement among the high-risk youth is that such youth have more complex needs that require more complex resources to facilitate positive outcomes. It could be that caseworkers lack the time and resources to thoroughly assess youth or it could be that adequate or appropriate services may not be accessible. Trauma-informed research and service among youth in foster care is still gaining traction (Griffin et al., 2011), meaning that there simply may not be an adequate supply of trauma-related services for caseworkers to connect youth with. Attention to larger systems, including child welfare, education, and mental health, is necessary to understand the differential impact of youth-caseworker relationships on youth outcomes. In particular, the of lack resources, lack of trauma-informed practice, and lack of cross-system collaboration likely inhibits caseworker impact for some high-risk youth in foster care.

An audit of the Oregon Child Welfare System (Richardson & Memmott, 2018) detailed numerous deficits that contribute to caseworker inability to meet youth needs, particularly high-risk youth. First, many caseworkers have high caseloads and report high demands and inadequate training and support, leading to a high rate of turnover. This results in relatively new and inexperienced caseworkers taking on complex cases, including youth with mental health challenges. These poor working conditions, in combination with DHS mandate to place children immediately following removal and the growing lack of foster homes and residential facilities, can lead to caseworkers making hasty placement decisions with little to no consideration of a youth's mental and physical health or trauma experiences. Returning to caseload, when caseworkers have too many cases to manage, their effectiveness suffers. Overworked caseworkers have limited time to build relationships with youth and caregivers and to properly assess the needs of youth. The audit found that the mandated visitation frequency of once per month did not always occur and few youth in foster care considered their caseworker to be an adult they could turn to with needs or questions (Richardson & Memmott, 2018).

A lack of trauma-informed practice in education and mental health systems is another concern. Regarding mental health practice, youth with posttraumatic symptoms may be misdiagnosed with behavioral disorders (Griffin et al., 2011). Misdiagnosis means that youth are unlikely to receive appropriate treatment and their needs remain unmet. In education systems, youth who have experienced trauma do not necessarily meet any of the eligibility requirements for special education services. Many teachers may view such youth as defiant, disruptive, and unwilling to learn, rather than as a youth who have experienced trauma and who need accommodations and supports.

### ***Variation in School Engagement by Personal & Contextual Characteristics***

In the current study, personal and contextual factors had unique influences on the three dimensions of school engagement. Older youth tended to have lower levels of all three dimensions. Two other studies found lower overall school engagement among older youth in foster care (Goemans et al., 2018; Mihalec-Adkins & Cooley, 2019). The developmental literature provides evidence that emotional and cognitive abilities increase from childhood to adolescence (Yurgelun-Todd, 2007), which might be expected to correspond to greater school engagement in these areas. The current counterintuitive finding suggests a stronger influence of contextual factors. For example, compared to preadolescents, adolescents in foster care are more likely to experience placement breakdowns, placement in group homes, and lower probability of being re-united with birth families or being adopted (Festinger, 2002; Snowden, 2008; Strijker, Zandberg, & van der Muelen, 2011). In addition, Elmore (2009) argues that middle and high school environments fail to be developmentally appropriate. Finally, as previously discussed, adolescents experience more difficulty in relating to adults which can hinder support systems. Indeed, the current study found that older youth reported lower caseworker relationship quality.

The current study also found lower behavioral and cognitive school engagement among boys in foster care, similar to two other studies (Goemans et al., 2018; Mihalec-Adkins & Cooley, 2019). Researchers have explained gender differences as a difference in how boys and girls experience the school context. One study found that middle-school boys perceive less support from their peers and teachers and such support appears have a stronger association with mental health and attitude towards school for boys compared to girls (Rueger, Malecki, & Demaray, 2010).

Although a review of academic achievement of youth in foster care found race and special education status to be significant predictors (O'Higgins, Sebba, & Gardner, 2017), the current study did not find significant associations with school engagement. This suggests that the risk posed to students of color and students in special education are not due to their own engagement in school. Instead, relational and contextual factors may be stronger predictors. For example, teachers and other adults may have lower expectations for these disadvantaged youth (Auwarter et al., 2008). In turn, teacher expectations are a stronger predictor of academic underachievement than student motivation (Jussim et al., 2005).

School stability was expected to influence school engagement levels, given the number of studies that have shown a relationship with academic outcomes (Burley and Halpern, 2001; Conger and Rebeck, 2001; O'Higgins et al., 2017; Sebba et al., 2015). However, current findings are in line with some studies showing null effects (Perzow et al., 2013; Sullivan, Jones, & Mathiesen, 2010; Zima et al., 2000). It could also be that stability is not contingent upon physical location. Youth may still perceive a sense of familiarity across different schools because schools tend to have a predictable structure (Bender, 2012; Masten et al., 2008). Indeed, in a qualitative study, some youth with foster care experience revealed that school provided a sense of normalcy, purpose, safety and stability when their home lives were unstable or conflictual (Rutman & Hubberstey, 2018). Additionally, findings from a recent study comparing youth in foster care to their non-foster counterparts in a representative statewide survey suggest that in-school experiences, such as victimization and relationships with teachers, might be more responsible for the negative outcomes experienced by youth in foster care (Benbenisthy, Siegal, & Astor, 2018).

### ***Implications***

The current findings have implications for the study of resilience as a complex process involving the interaction of personal and contextual risks and resources, supporting the need for an ecological approach (Liu et al., 2017; Titterton et al., 2017; Ungar, 2011; Ungar et al., 2013). Similarly, researchers should examine the strengths and resources of at-risk populations, such as positive relationships, in order to fully understand resilience processes. Finally, the role of service providers, including caseworkers, in youth outcomes warrants further investigation.

This study demonstrates that youth in foster care with high posttraumatic symptoms are at increased risk for negative academic outcomes and need more supports. There are several implications for child welfare, education, and mental health practice and policy. Appropriate

assessment of youth should include attention to risk, both the level and the type of risk, as well as the personal and contextual resources and strengths of youth. When caseworkers and teachers focus on deficits, youth recognize this and perceive such people as unhelpful (Quest, et al. 2012). Further, evidence suggests a focus on strengths and positive expectations characterize “turnaround people” who support at-risk youth to make positive changes in their lives, such as pursuit of higher education (Benard, 2004; Hass et al., 2014). In their research of child welfare practice, Lou and colleagues (2008) found that some of the existing well-being frameworks were too focused on deficits or did not account for the youth’s personal and contextual strengths and resources that facilitate coping with adversity (Lou et al., 2008).

All systems that serve youth in foster care should be trauma-informed, given the high prevalence of clinical posttraumatic symptoms reported in the current study. Griffin and colleagues (2011) argue that child welfare agencies should adopt policies that require the measurement of traumatic events and posttraumatic symptoms during screenings and assessments, require mental health professionals to address the impact of trauma before diagnosis of mental illness, and require evidence-based, trauma-focused treatment to begin when a youth demonstrates posttraumatic symptoms (Griffin et al., 2011). Effective implementation of such policies would require caseworkers to be adequately trained and supported and to collaborate with mental health professionals.

These studies demonstrated the potential of positive youth-caseworker relationships to support positive academic outcomes among youth in foster care. This implies that the quality of interactions between youth and caseworkers matters, and state monitoring of the frequency and quality of caseworker visitations with youth is a step in the right direction (Children’s Bureau, 2003). To ensure high quality interactions, the Child Welfare Capacity Building Collaborative (2017) suggests that child welfare administrators should set standards and policies for quality contacts, build agency capacity, review performance, and introduce strategies for improvement. Considering the serious challenges of working within the Oregon Child Welfare system (Richardson & Memmott, 2018), these findings are a testament to the resilience of caseworkers and their ability to find a way to positively impact the lives of the youth they serve.

### ***Strengths & Limitations***

The current study has several strengths and limitation. A key strength is the examination of youth-caseworker relationships across two developmental periods (i.e. preadolescence and

adolescence). This allowed for exploration of how caseworkers may be perceived differently by youth as they age. The current study also focused on positive outcomes and included an examination of personal and contextual strengths and resources that contribute to resilience while previous studies have tended to focus on only risk factors. Finally, the current study centralized youth voices, which researchers increasingly consider to be essential for both youth empowerment and improvement of systems that serve youth (Liebmann & Madden, 2010; Nybell, 2013).

Current findings should be interpreted with consideration of limitations. First, this study is correlational, and the direction of causation is not clear. It could be that youth who are more engaged in school are more likely to have positive perceptions of their caseworkers, or perhaps caseworkers perceive such youth more positively and thus are more willing to provide support. Longitudinal analysis and experimental studies of interventions aimed at youth-caseworker relationship enhancement would clarify. Another limitation is relatively weak-to-moderate correlations, which may be stronger for certain subgroups of youth in foster care. A third limitation is the measurement of youth experiences with their caseworker. Relatively few items were used which may not capture the complexity of youth-caseworker relationships. For example, specific questions about trust, help with education, and conflict and are important to confirm theories herein. Finally, the study did not account for previous levels of school engagement, but research shows that it is relatively stable over time among youth in foster care (Goemans et al., 2018).

### ***Future directions***

Several future directions would improve and build upon the current work. Youth in foster care are a heterogeneous population with a diversity of experiences and having a variety of personal and contextual risks and resources. Further, youth experience the same systems and caseworker characteristics differently (Stabler et al., 2019; Ungar et al., 2013). To better understand this heterogeneity and design effective interventions, person-centered analysis and subpopulation analysis are needed (Goemans et al., 2018). An intersectional examination of youth characteristics may also clarify which youth experience the most educational risk (Cole, 2009; Kothari et al., 2018). Examining the timing of school changes and caseworker changes may lend clarity on how instability affects youth in foster care. Analysis of youth-caseworker relationships over time would aid in the understanding of youth experiences and impact on youth

outcomes. Finally, examination of differential impact by other risk factors, such as those more often experienced by older youth, would further understanding of how different levels and types of risk in combination with personal and contextual resources contribute to resilience.

### ***Conclusion***

Findings suggest that positive youth-caseworker relationships can bolster academic resilience among youth in foster care. Specifically, caseworkers may be able to support all areas of school engagement among youth in foster care. However, emotional school engagement may require more caseworker attention for youth with high posttraumatic symptoms.

Table 1.1  
*Sample Description*

	Mean (SD) or N (%)	Min	Max	Skew	Kurtosis
Age	M = 11.88 (SD = 2.01)	7.35	16.15	.06	2.43
<i>Gender</i>					
Female	164 (50%)				
Male	164 (50%)				
<i>Race</i>					
Youth of Color	162 (49%)				
Non-Hispanic White	166 (51%)				
<i>Special Education</i>					
Receives special education	102 (31%)				
No special education	217 (66%)				
Posttraumatic Symptoms	M = 20.58 (SD = 9.55)	0	46	.22	2.46
Low Symptoms (0-11)	63 (20%)				
Middle Symptoms (12-29)	206 (64%)				
High Symptoms (30+)	51 (16%)				
Clinical Cutoff (19+)	185 (58%)				
<i>School Stability</i>					
Changed schools this year	100 (30%)				
Did not change schools	223 (68%)				
School Length (Months)	M = 15.55 (SD = 16.15)	0	7	1.69	5.43
Emotional School Engagement	M = 3.65 (SD = .93)	1	5	-.53	2.78
Behavioral School Engagement	M=4.08 (SD = .71)	1.20	5	-.54	2.78
Cognitive School Engagement	M=3.17 (SD=.90)	1	5	-.08	2.49

Table 1.2

*Descriptive statistics for youth-caseworker relationship characteristics*

Caseworker Item	Mean	SD	Min	Max	Skew	Kurtosis
Relationship Quality Scale	8.14	1.92	1	10	-1.33	4.50
Relationship Quality Item	7.36	2.54	1	10	-.57	2.67
Responsiveness to Needs	8.26	2.18	1	10	-1.41	4.40
Helpfulness with Problems	8.36	2.23	1	10	-1.46	4.41
Listening	8.84	1.99	1	10	-1.98	6.12
Communication	3.42	6.81	0	51	3.74	20.84
Frequency Last 3 Months						
Frequency of Seeing Last 3 Months	6.66	8.58	0	52	1.98	6.12
Years with Current Caseworker	.92	1.49	0	11	3.55	18.01
Total Caseworkers	5.17	3.12	0	16	.86	3.70
Caseworker Item	Overall Valid % Yes	Age 7-9 Years Valid % Yes	Age 10-13 Years Valid % yes	Age 14-16 Years Valid % yes	$\chi^2$	
Have Contact Information	56%	42%	54%	75%	12.77**	
Feel Can Contact	82%	74%	84%	81%	3.29	
Low Relationship Quality Scale	15%	12%	12%	31%	14.62**	
Medium Relationship Quality Scale	45%	41%	46%	46%		
High Relationship Quality Scale	40%	47%	42%	23%		

*Note.* Relationship Quality Scale comprised of the average of 4 youth-caseworker relationship items

(i.e. quality item, listening, responsiveness, and helpfulness), Low = 0.00-8.14, Medium = 8.15-9.00, High = 10.00,

\*p<.05, \*\*p<.01

Table 1.3

*Correlations among school engagement, youth-caseworker, personal and contextual characteristics*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.Emotional School Engagement	-																			
2.Behavioral School Engagement	0.52*	-																		
3.Cognitive School Engagement	0.58*	0.48*	-																	
4. Relationship Quality Scale	0.20*	0.20*	0.31*	-																
5.Quality Item	0.19*	0.17*	0.25*	0.79*	-															
6.Listening	0.10	0.09	0.26*	0.80*	0.46*	-														
7.Responsiveness	0.21*	0.23*	0.27*	0.86*	0.50*	0.63*	-													
8.Helpfulness	0.15*	0.16*	0.21*	0.85*	0.52*	0.59*	0.69*	-												
9.Frequency of Seeing	-0.05	-0.02	-0.01	0.13*	0.17*	0.07	0.04	0.07	-											
10.Communication Frequency	-0.08	-0.02	-0.09	0.03	0.04	0.05	-0.02	-0.02	0.53*	-										
11.Feel Can Contact	-0.04	-0.06	-0.03	0.22*	0.10	0.14*	0.25*	0.18*	0.06	0.06	-									
12.Have Contact Information	-0.08	-0.00	-0.05	0.40	0.03	0.02	-0.03	0.00	0.06	0.12*	0.19*	-								
13. Age	-0.28*	-0.11*	-0.21*	-0.23*	-0.20*	-0.13*	-0.18*	-0.19*	-0.04	0.10	0.02	0.21*	-							
14. Male	-0.08	-0.11*	-0.16*	0.00	-0.01	0.05	-0.01	0.02	0.04	0.02	-0.09	-0.07	0.05	-						
15. Youth of Color	0.01	-0.03	0.07	0.05	0.11	0.10	0.05	0.02	0.00	-0.01	-0.07	0.02	-0.06	0.09	-					
16. Special Education	-0.10	-0.04	-0.02	0.08	0.12*	0.03	0.03	0.05	-0.08	-0.03	-0.06	0.08	0.12*	0.05	0.02	-				
17. Posttraumatic Symptoms	-0.16*	-0.29*	-0.06	-0.04	-0.02	-0.06	-0.05	-0.09	0.08	0.03	-0.00	0.05	-0.08	-0.09	0.15*	0.12*	-			
18. Years at Current School	0.03	-0.05	0.00	0.11	0.05	0.11	0.10	0.11	-0.01	-0.03	-0.02	-0.12	0.13*	0.05	0.11*	0.04	-0.01	-		
19.Changed Schools Past Year	-0.03	-0.06	-0.04	0.04	0.01	0.06	0.02	0.02	0.05	0.03	0.04	0.08	0.00	-0.04	0.01	-0.08	-0.06	-0.33*	-	
20. Years with Current Caseworker	-0.02	0.08	-0.06	0.03	0.13	-0.02	-0.04	0.00	0.02	0.08	0.03	0.05	0.04	0.07	0.08	0.17*	0.04	0.10	-0.14*	-
21. Total Caseworkers	0.04	0.05	0.01	0.00	0.01	0.04	0.02	0.02	0.05	0.07	-0.05	0.09	0.13*	0.05	0.07	0.11	0.03	-0.09	0.04	0.10

*Note.* Relationship Quality Scale comprised of the average of 4 youth-caseworker relationship items (i.e. quality item, listening, responsiveness, and helpfulness), \*p<.05

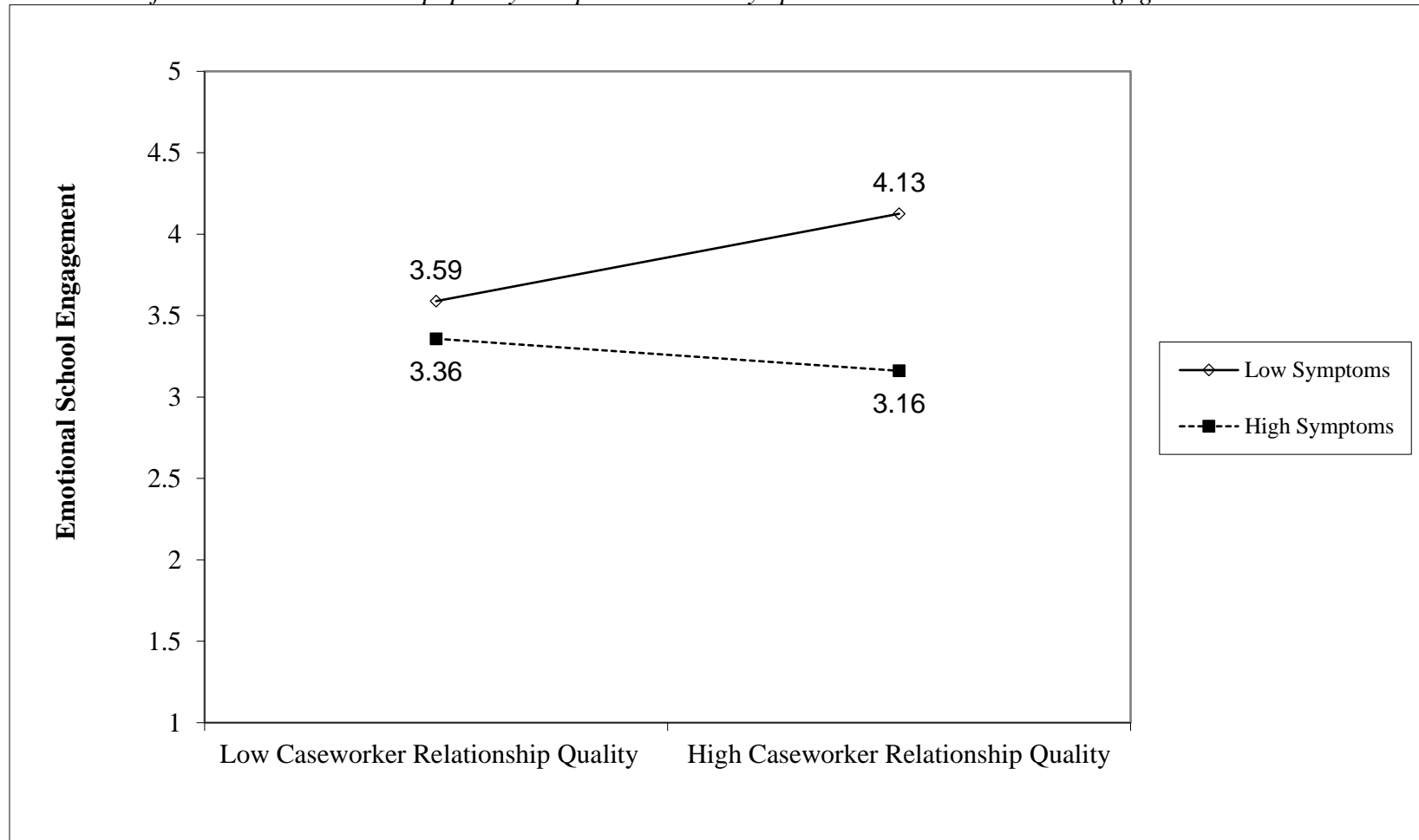
Table 1.4  
*Predicting subscales of school engagement (n = 328)*

	Model 1A: Emotional School Engagement			Model 1B: Emotional School Engagement Interaction			Model 2: Behavioral School Engagement			Model 3: Cognitive School Engagement		
Variable	<i>B</i>	<i>Robust SE B</i>	$\beta$	<i>B</i>	<i>Robust SE B</i>	$\beta$	<i>B</i>	<i>Robust SE B</i>	$\beta$	<i>B</i>	<i>Robust SE B</i>	$\beta$
Caseworker Relationship Quality	0.08***	0.03	0.03	0.25**	0.07	0.51	0.06***	0.02	0.17	0.13**	0.03	0.27
Age	-0.09***	0.02	-0.19	-0.10***	0.02	-0.21	-0.04*	0.02	-0.10	-0.07**	0.02	-0.15
Male	-0.16	0.10	-0.09	-0.15	0.13	-0.08	-0.20**	0.08	-0.14	-0.30**	0.09	-0.17
Youth of Color	0.05	0.11	0.03	0.01	0.11	0.02	0.03	0.07	0.02	0.15	0.10	0.08
Special Education	-0.14	0.13	-0.07	-0.15	0.13	-0.07	-0.03	0.09	-0.02	0.00	0.12	-0.00
Posttraumatic Symptoms	-0.02**	0.01	-0.17	0.05	0.11	0.49	-0.02***	0.00	-0.31	-0.01	0.10	-0.09
School Stability	-0.00	0.04	-0.01	0.01	0.03	0.00	-0.05	0.03	-0.10	-0.03	0.04	-0.05
Caseworker Stability	0.02	0.05	0.03	0.01	0.05	0.02	0.06***	0.02	0.12	-0.01	0.04	-0.02
Constant	3.57***	0.32	-	2.17***	0.64	-	4.34***	0.23	-	2.59***	0.20	-
Caseworker X Symptoms	-	-	-	-0.13*	0.06	-0.76	-	-	-	-	-	-
<i>R</i> <sup>2</sup>	0.12			0.15			0.17			0.16		

*Note.* Age mean-centered, all predictors measured at time 2, high school completion measured at time 3, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Figure 1.1

*Interaction of caseworker relationship quality and posttraumatic symptoms on emotional school engagement*



## CHAPTER 3: STUDY 2

### **Youth-Caseworker Relationships: Support for High School Completion & Differential Impact by Special Education among Youth in Foster Care**

#### **Introduction**

High school completion is considered a key developmental task for transition-aged youth and is related to health, economic and psycho-social well-being in adulthood (Freudenberg & Ruglis, 2007; Sum, Khatiwada, McLaughlin, & Palma, 2009; Tyler & Lofstrom, 2009). Further, high school completion protects youth in foster care from the negative outcomes of their counterparts, such as criminal justice involvement in young adulthood (Pecora et al., 2003; Smith, Ireland, Elwyn, & Thornberry, 2013). Although obtaining an alternative credential, such as a General Education Diploma (GED), is related to better outcomes compared to non-completion (Stark et al., 2015), those who receive a regular high school diploma more likely to complete postsecondary education and likely to have higher incomes (Grubb, 1999; National Center on Education Statistics, 2003; Smith, 2003).

Studies consistently find that youth in foster care are more likely to leave high school without a credential compared to their counterparts, and if they do graduate it is more likely that they earn an alternative credential (Courtney, et al., 2007; Barrat & Berliner, 2013; Burley, 2013; Pears et al., 2013; Pecora et al., 2006). A report by the Oregon Department of Education (ODE, 2019) showed that only 46% of youth in foster completed high school with any type of credential between years 2012 and 2017 compared to 80% of youth not residing in foster care; Of the youth in foster care who did graduate, 11% earned a GED compared to 3% of their counterparts. The report grouped modified diplomas with regular diplomas which underestimates the percent of youth in foster care receiving an alternative credential (ODE, 2019). A national study found that 84% of youth in foster care wanted to attend college, but only 20% of those who completed high school did so (National Working Group on Foster Care and Education [NWGFCE], 2014). While many factors contribute to post-secondary enrollment, a prominent influence is likely the type of high school credential received, with alternative credentials predicting lower enrollment rates (National Center on Education Statistics, 2003).

Youth in foster care experience compounding adversities and trauma which put them at risk of not completing high school or earning alternative credentials. Maltreatment, poverty,

domestic violence exposure, family instability, and housing instability are common experiences prior to foster care placement and are related to poor achievement outcomes (Berger et al., 2015; Clemens et al., 2018; Conger & Finkelstein, 2003; Herbers et al., 2012; Romano, Babchishin, Marquis, & Fréchette, 2015). Once in foster care, academic progress is disrupted by youth experiences of stress from family separation, placement instability, and adjustment to new homes and schools (Berger et al., 2015).

Many youth in foster care experience the additional risk factor of having one or more mental or physical disabilities, indicated by receipt of special education services. Youth who receive special education are more likely to dropout or earn an alternative credential (Almond et al., 2017). Youth in foster care with disabilities are at even greater disadvantage regarding academic achievement compared to youth in foster care without these experiences (Anctil, McCubbin, O'Brien, Pecora, & Anderson-Harumi, 2007; Clemens, et al., 2017; Geenen & Powers, 2006; Smithgall et al., 2005).

Despite these adversities, resilience can be nurtured to increase the probability of high school completion among youth in foster care. Emerging evidence suggests that youth-caseworker relationships may support positive academic outcomes among adolescents in foster care (Tilbury, Creed, Buys, Osmond, & Crawford, 2014). However, little is known about the experiences of transition-aged youth in foster care with their caseworkers. Further, youth-caseworker relationships have not been examined association with high school completion, although qualitative research suggests they play an important role (Quest et al., 2012). Finally, the differential impact of youth-caseworker relationships on youth outcomes has not been examined by level of youth risk, such special education.

The current study examined several elements of youth-caseworker relationships (i.e. knowledge of caseworker, perceived relationship quality, communication frequency, responsiveness to needs, helpfulness with transition plan, stability) among transition-aged youth (i.e.16-21 years) in foster care. The study also examined the association between youth-caseworker relationships and high school completion with any credential and with a regular diploma versus an alternative. Finally, the study examined the differential impact of youth-caseworker relationships on high school completion for youth receiving special education compared to their counterparts.

## **Resilience, Youth-caseworker Relationships, & Differential Impact**

Resilience refers to both personal and contextual processes that promote positive outcomes and provide youth the resources and supports they need to cope with adversity (Ungar, 2011). Service providers, including caseworkers, have a salient role for activating resilience processes of youth in foster care who experience many compounding adversities (Ungar, 2013). Caseworkers can act as a source of emotional support and as “institutional agents” who provide access to resources within the child welfare system and who can communicate the complexities of the system to youth and families to facilitate decision making (Goerge, 1994; Lipsky, 1980; Ryan et al., 2006; Stanton-Salazar, 2011; Ungar, 2013).

To date, scant research has focused on transition-aged youth experiences with their caseworkers. Researchers have argued that time, stability, and caseworkers’ willingness to listen and respond to the needs of youth are essential for building trust and positive youth-caseworker relationships (Pinkney, 2018). Some research suggests that there are not universally positive characteristics of youth-caseworker relationships. For example, Stabler and colleagues (2019) interviewed 22 youth involved with child welfare ranging in age from under 10 years to over 18 years about their experiences with caseworkers. Children and youth reported complex and diverse experiences. Some caseworkers were perceived as providing practical help but not focusing on relationship-building. Some were perceived as good at communicating information about the child welfare system but were not focused on providing help nor relationship building. Some were perceived as warm, engaging, and good listeners but did not always follow through with action. A key finding was that caseworkers with similar skills or characteristics were nevertheless experienced positively by some youth and negatively by others (Stabler, Wilkins, & Carro, 2019).

Caseworker turnover has been researched more often than quality of youth-caseworker relationships, and a change in caseworker has been found to disrupt the provision of services and the stability of relationships with youth and families (GAO, 2003; Zlotnik, 2011). In qualitative studies, some youth report that caseworker instability leads to loss of trust while a few others reported a welcomed change that resulted in increased communication or a more involved caseworker (Bell, 2002; Strolin-Goltzman, Kollar, & Trinkle, 2010).

There is emerging evidence that caseworkers can influence academic outcomes. One study of youth in foster care aged 14-18 years found that youth reports of caseworker helpfulness

varied widely and had an influence on school engagement levels (Tilbury et al., 2014). Another study of youth aged 13-21 years involved with multiple social services (e.g. child welfare, mental health, juvenile justice, special education) showed that the quality of care provided by one service provider was more predictive of school engagement than the quantity of services they received (Ungar, Liebenberg, Armstrong, Dudding, & van de Vijver, 2013). Ungar and colleagues (2013) used the Youth Services Survey, which assess satisfaction with service, input in decision making, relevance and accessibility of service, and respect and clear communication by service providers. Qualitative studies of youth and adults with foster care experience show that they report the benefits of having a supportive relationship with a caseworker on their academic aspirations and achievement (Harker et al., 2004; Pinkney & Walker, 2020; Rutman & Hubberstey, 2018). However, the impact of youth-caseworker relationships may not be universal; it could be different depending on the level of risk that youth experience (Ungar, 2018).

### ***Differential Impact***

Although child welfare legislation requires agencies to address the educational well-being of all youth in foster care (Gustaverson & Ann, 2012), research suggests that the foster care intervention does not have a positive impact on youth overall (Goemans et al., 2018; Warburton et al., 2011). The theory of differential impact helps to explain why some youth in foster care do well in one or more outcome domain and others do not. Ungar (2018) describes three principles of differential impact theory. First, environments cause individuals to adapt. If meaningful supports and services are provided to youth who experience adversity, they are more likely to change and adapt in positive ways. Second, the impact of an intervention (e.g. foster care) will depend on the interaction of risk level (e.g. special education) and resource level (e.g. positive relationship with caseworker). Third, more complex adversity requires more complex supports and services to nurture resilience (Ungar, 2018).

A qualitative study of seven transition-aged youth in foster care who were also receiving special education suggests that this high-risk sub-population may not be receiving adequate support from their caseworkers (Quest et al., 2012). Some youth reported that caseworkers did not respond to their needs, did not listen to them, or did not include them in decisions about their lives. Some youth stated that caseworkers did not communicate clearly about the child welfare system and were not helpful in transition planning. Some youth were conflicted about receiving

needed help from service providers, including caseworkers, perceiving the help to be inadequate or too focused on the negative aspects of the youth and their biological families. All youth reported that their caseworkers had an influence on their decision making regarding staying in school and staying in foster care, sometimes positive and sometimes negative (Quest et al., 2012).

### **Resilience & High School Completion**

Developmentalists have identified behavioral, social, and academic domains as key indicators of youth functioning and resilience (Masten & Tellegen, 2012). Academic achievement is particularly salient because it is related to positive lifelong outcomes in health and economic well-being for youth who have experienced adversity, including youth in foster care (Pecora et al., 2003; Font & McGuire-Jack, 2013; Forsman et al., 2016; Pears, Kim, Fischer, & Yoerger, 2013; Smith et al., 2013).

In particular, high school completion is related to higher rates of employment and higher income, as well as lower rates of early parenting and criminal justice involvement (Sum et al., 2009; Tyler & Lofstrom, 2009; Smith et al., 2013). Although obtaining an alternative credential, such as a GED, is related to better outcomes compared non-completion (Stark et al., 2015), those who receive a regular high school diploma are 1.7 times more likely to complete an associate's degree, 3.9 times more likely to complete a bachelor's degree, and likely to have higher incomes (Grubb, 1999; National Center on Education Statistics, 2003; Smith, 2003).

States vary widely in the types of credentials they offer students. The state of Oregon offers a modified diploma to students who "have demonstrated an inability to meet the full set of academic content standards required for a regular high school diploma, even with reasonable accommodations" and requires the same amount of course credits as a regular diploma but is more flexible in the types of courses that count towards completion (Modified Diploma Bill of 2007, HB 2848). Unfortunately, there is little research on modified diploma receipt and future opportunities for education or employment, and special education directors across the United States question the rigor and acceptance of modified diplomas by employers and post-secondary institutions (Johnson, Thurlow, & Stout, 2007).

A national study found that youth in foster care leave high school without a credential or earn an alternative credential at much higher rates than youth not in foster care, suggesting barriers to obtaining a regular diploma (Pecora et al., 2006). Still, high school completion rates

vary in the general population and among youth in foster care by gender, race, mental health status, course failure, and extracurricular activity. Some studies show that girls in foster care are more likely to complete high school (Montserrat & Casas, 2018), though others show null gender effects (Cage 2018). One study showed that youth of color in foster care complete high school at similar rates compared to non-Hispanic white youth (Cage 2018). However, youth of color in foster care are more likely to earn a GED compared to a regular diploma (Dworsky, et al., 2010; Harris, et al., 2009 ; O'Brien, et al., 2010). Youth in foster care with a diagnosed mental disorder are more likely to receive GED but are not more likely to dropout (White et al., 2018). In general, failing one or more courses in high school is predictive of high school dropout (Heppen, Theriault, & Bowles, 2009). Finally, among youth in foster care, participation in extracurricular activity has been shown to be related to high school completion but not receipt of a regular diploma compared to a GED (White et al., 2018).

### **Foster Care, Special Education, & Risk to High School Completion**

Youth in foster care experience compounding adversities which put them at risk for not completing high school or earning alternative credentials. Maltreatment, poverty, domestic violence exposure, family instability, and housing instability are common experiences prior to foster care placement and are related to academic underachievement (Berger et al., 2015; Clemens et al., 2018; Conger & Finkelstein, 2003; Herbers et al., 2012; Romano, Babchishin, Marquis, & Fréchette, 2015). Foster care placement itself is considered an adverse experience because of family separation, instability of home and school, and the tendency for youth needs to remain unmet (Berger et al., 2015; Charles & Matheson, 1990; Mowbray et al., 2017; Pecora et al., 2009; Waid, 2014).

School instability has gained attention as a particularly concerning aspect of foster care with implications for academic achievement (O'Higgins et al., 2017). On average, youth live in 3.4 different foster placements and some change homes over 10 times (Wulczyn, Kogan, & Harden, 2003; Zima et al., 2000). Often, placement changes lead to school changes. One study found that 31% of initial foster home placements lead to a school change (Clemens, Klopfenstein, et al., 2017). Over 30% of youth in care change schools five or more times (National Working Group, 2014). School instability has been related to lower odds of earning a regular high school diploma and greater odds of earning a GED or not completing high school, sometimes because student records or credits do not transfer from one school to another

(Clemens et al., 2016; Clemens et al., 2017). Another concern is that school changes can disrupt school-based services under an Individual Education Plan (D'Andrade, 2005; Schormans, Coniega, & Renwick, 2006; Geenen & Powers, 2006). School stability in ninth and twelfth grades may be particularly important for high school completion (Clemens et al., 2016). However, one study found no impact of school instability on high school completion among youth in foster care (White et al., 2018).

### ***Special Education***

Researchers estimate that 40-47% of youth in foster care experience the additional risk factor of having one or more mental or physical disabilities, indicated by receipt of special education services (Geenen & Powers, 2006; Slayter, 2016; Westat, Inc., 1991). The intersection of foster care and special education is complex. First, youth with disabilities are overrepresented in the child welfare system as they are more likely to experience maltreatment and at times maltreatment leads to disability (Vig & Kaminer, 2002). There are also shared contextual factors, such as poverty, that increase the risk of both maltreatment and disability (Vig & Kaminer, 2002). Compared to the general population, children in foster care are less likely to be performing at grade-level and more likely to be placed in special education (Seyfried, Pecora, Downs, Levine, & Emerson, 2000; Trout et al., 2008). Boys and youth of color in foster care are even more likely to be placed in special education (Slayter, 2016). Notably, compared to the general population of youth in special education, youth in foster care who receive special education are more likely to have a primary diagnosis of emotional disturbance and less likely to have a learning disability as their primary diagnosis, suggesting the need for attachment-sensitive treatment and services (Hill & Lightfoot, 2018; LaLibertre & Crudo, 2013).

In general, youth who receive special education are more likely to dropout or earn an alternative credential (Almond et al., 2017). Youth in foster care with disabilities are at even greater disadvantage regarding academic achievement, stability, well-being, and transition outcomes compared to youth in foster care without these experiences (Ancil, McCubbin, O'Brien, Pecora, & Anderson-Harumi, 2007; Clemens, et al., 2017; Geenen & Powers, 2006; Slayter, 2016; Smithgall et al., 2005). One study of youth in foster care found that those who receive special education are more likely to earn an alternative credential within 4 years of entering high school but are not more likely to dropout (Clemens, et al., 2016). Another study showed that only 16% of foster youth receiving special education services graduated from high

school, and 18% left school because they were incarcerated (Smithgall et al., 2005). A qualitative study of seven transition-aged youth in foster care who were also receiving special education found that most youth had aspirations for college yet experienced educational barriers (Quest et al., 2012). For example, some youth perceived that teachers at their schools had low expectations of them, and some youth ended up on track towards a modified diploma which would disqualify them for enrollment in a 4-year institution. Still others were placed in alternative schools which did not provide them with a curriculum that would prepare them for college (Quest et al., 2012).

### **Current Study**

Little is known about the experiences of transition-aged youth in foster care with their caseworkers. Further, the relationship between youth and caseworkers in association with youth outcomes, particularly academic outcomes, remains understudied (O'Higgins et al., 2017; Ungar, 2013). To date, no studies have examined the differential impact of youth-caseworker relationships on high school completion of youth with different levels of risk, such as receipt of special education. These knowledge gaps are important to understand because qualitative studies show that the experiences that youth have with their caseworkers can potentially impact their academic outcomes (Harker et al., 2004; Pinkney & Walker, 2020; Rutman & Hubberstey, 2018). Further, youth-caseworker relationships may be a viable point of intervention to increase the probability that youth in foster care will have more positive outcomes. The current study aimed to address these gaps and was guided by the following research questions:

1. What experiences do transition-aged (16-20 years) youth in foster care report having with their caseworkers (i.e. knowledge of caseworker, communication frequency, perceived relationship quality, responsiveness to needs, helpfulness with transition plan, stability) and which characteristics are associated with youth-perceived relationship quality?
2. Does caseworker helpfulness with transition plan predict any high school completion or receipt of a regular diploma versus alternatives (i.e. modified diploma or GED) controlling for personal (gender, race, special education, posttraumatic symptoms, failing a class, extracurricular activity) and contextual (caseworker stability, school stability) characteristics of transition-age youth in foster care?
3. Does the association between caseworker helpfulness with youth transition plan and any high school completion or receipt of a regular diploma versus alternatives differ for youth receiving special education compared to their counterparts?

## Methods

The current study is a secondary data analysis of a previously merged data set from two methodologically rigorous, large-scale randomized trials of the *My Life* mentoring program funded by the National Institutes of Health (NIH) and the U.S. Department of Education (IES: Institute of Education Sciences) (Blakeslee & Keller, 2018). The NIH study involved adolescents in the child welfare system in general and the IES study involved adolescents involved both in the child welfare system and in special education. The two studies had parallel designs and common measures, making it possible to combine the data for secondary analyses. Data were collected at three time points, each a year apart. The current study focused primarily on predictors at time 2, when the majority (84%) of youth were in 12<sup>th</sup> grade and were still in foster care (75%), and with high school completion measured at time 3.

## Procedure

**Recruitment.** The state foster care agency generated a list of all youth who met eligibility requirements and all were approached for participation, except in rare instances in which a caseworker expressed a concern (e.g. youth was in crisis, in the process of moving out-of-state, or non-English speaking, etc.) or the youth was in a placement that did not allow access to the community as required for the intervention (e.g. youth was incarcerated or in a locked residential treatment setting). Over 90% of youth assented to the study following an orientation meeting and the state child welfare agency provided consent. All study procedures, consents and protocols were reviewed and approved by the Institutional Review Board of the University, the DHS Child Welfare Research Unit, and the Research Review Committees of partnering school districts. To ensure that the intervention and control groups would be relatively similar on key demographic variables, prior to randomization, youth were blocked on whether they participated in the Independent Living Program (ILP) or received special education or Developmental Disability services. While participation in the state ILP was based on youth self-report at baseline, special education status was provided by the partnering school districts and developmental disability status was provided by the county-level Developmental Disability Services agency. Data sharing agreements were established with all partnering agencies at the beginning of the study to enable this sharing of information.

**Intervention.** Primary components of the *My Life* intervention were: 1) individualized mentoring with a focus on applying self-determination skills; and 2) group mentoring workshops

addressing transition topics (Powers, et al., 2012). Youth met weekly with their individual mentors for 60-90 minutes.

The control group received typical transition services, which can include general and special education classes, special education case managers, individualized transition planning, and extracurricular activities. Typical transition services for foster youth include the Independent Living Program (ILP), with classes designed to prepare youth for independent living and one-on-one work with an ILP case manager to develop a transition plan.

**Data Collection.** In both studies, youth (i.e., 16-17 years old) completed a comprehensive baseline assessment (Time 1), were randomly assigned to the control condition or to receive *My Life* mentoring for one year, completed a post-intervention assessment (12 months, or Time 2), and then completed a follow-up assessment one year after conclusion of the program (24 months, Time 3). Academic records were also examined at each time point.

### **Sample**

There were three inclusion criteria for the 293 youth in the combined sample: (a) 16.5 to 18.5 years of age, (b) under the guardianship of Oregon DHS (with at least 90 days in foster care) and (c) residing in the study's target geography. The sampling of all eligible foster youth in three counties yielded a sample that is geographically diverse, reflecting the primarily urban population of Multnomah County (Portland), primarily suburban population of Washington County, and primarily rural population of Clackamas County. The average age of youth was 17.31 years, 54% were female, 46% White, 18% were Hispanic/Latino, 17% Black or African American, and 27% multi-racial/other. 64% were in a non-relative foster home placement, 26% in a relative/kin placement, and 10% in other settings. 38% had a placement change in the previous year. 60% were in special education.

### **Outcome Measures**

**High School Completion.** Academic records at time 3 were examined for high school completion and the type of credential received. By time 3, all youth were 18-21 years old and cultural expectations are for youth to complete high school by this age. Two categorical dependent variables were created: (a) Any high school completion versus non-completion; and (b) Regular diploma versus a modified diploma or GED. Earning a regular high school diploma will be set as the reference category because it is generally accepted that this is the most ideal (Clemens et al., 2016).

## Predictor Measures

**Youth-Caseworker Relationship.** Youth reported on six items about their relationship with their caseworker. The items and response options were as follows: (a) “Do you know who your caseworker is?” (0= *no*, 1= *yes*); (b) “Do you know how to contact your caseworker?” (0= *no*, 1= *yes*); (c) “How often do you communicate with your caseworker?” (0= *not at all* – 5= *Weekly*); (d) “Do you feel you can talk to your caseworker when needed?” (0= *no*, 1= *yes*); (e) “How good is your relationship with your caseworker?” (0= *very bad* - 4= *very good*); (c) “How well does your caseworker respond to your needs?” (0= *very bad* - 4= *very well*); (d) “How helpful is your caseworker in helping you meet the goals of your transition plan?” (0= *not helpful at all* - 4= *very helpful*). All items had face-validity. Test-retest reliability for each item was examined using correlations of time 1 and time 2 reports for youth who did not have caseworker change. Correlations ranged from medium to strong (i.e. .45 to .81).

**Demographics.** Youth reported their gender (0= *male*, 1= *female*) and race (re-coded as 1 = *non-Hispanic White* and 2 = *Youth of Color*). Academic records were examined for receipt of special education (0= *no*, 1= *yes*).

**Posttraumatic Symptoms.** Youth completed the Child Report of Post-Traumatic Symptoms (CROPS) (Greenwald & Rubin, 1999). The 25-item measure has a range is 0-50 and scores of 19 and above suggest clinical attention, though not necessarily diagnosis. The CROPS has been normed with youth who were incarcerated or had an incarcerated parent, where 30-40% exceeded the cutoff, with scores of 16-19 on average (e.g., Arditti & Savla, 2015; Bockneck, Sanderson, & Britner, 2008; Perkins et al., 2016). Youth were asked to indicate how true each item was for them in the past week. Example items include, “I feel strange or different than other kids,” and “I worry that bad things will happen.” Response options included 1= *none*, 2 = *some*, and 3 = *lots*. Items were summed Cronbach’s alpha = .89.

**Class Failure.** Academic records were examined for whether youth had failed a class.

**Extracurricular Activity.** Youth reported their participation in any extracurricular activity (0= *no*, 1= *yes*).

**Caseworker Stability.** Youth reported the number of months that they had the same caseworker. A variable was created which converted months to years. A second variable was created to indicate whether youth had a caseworker change in the past year.

***School Stability.*** Youth reported the number of months they had been at their current school. A variable was created which converted months to years. Youth also reported the number of schools they had attended in the past 6 months.

***Covariates.*** The *My Life* intervention is not the focus of the current study. Therefore, treatment condition was a covariate in multivariate analyses. Demographics, posttraumatic symptoms, class failure, extracurricular activity, caseworker stability, and school stability were explored in bivariate analyses and were covariates in multivariate analyses.

## **Analysis & Results**

***Preliminary.*** All analyses were completed in Stata Version 16 (Stata Corp, 2019). Some items were not applicable to all youth at every time point due to not being in school or not having a caseworker. Analysis of time 2 predictors was chosen because the majority (75%) were still in foster care with a caseworker, (54%) of youth were still in school (84% in 12<sup>th</sup> grade), and reports of caseworker helpfulness with transition planning had the least missingness (55%). Missingness of all study variables at wave 2 ranged from <1%-55%. In multivariate analysis, full information maximum likelihood (FIML) methods were used to address missing data. FIML uses all available data from each participant. Missing values are not replaced or imputed, rather missingness is handled in the analysis model such that the population parameters are estimated that would most likely produce the estimates from the sample data. FIML is superior to listwise deletion and mean imputation in multiple regression analysis, yielding less biased results (Enders, 2001; Schäfer & Graham, 2002).

Table 2.1 displays sample demographics. At wave 2, 60% of youth had ever received special education services, 33% of youth had clinical posttraumatic symptoms, 26% had failed a class, 33% participated in extracurricular activities, and youth had attended an average of 1.21 (SD=.51) schools during the past six months and had been attending their current school for an average of 1.87 (SD=1.41) years. School administrative records indicated that 18% had left high school without a credential, 22% had received an alternative credential (i.e. modified diploma, GED), and 35% had received a regular diploma.

***Primary.*** The first research question asked about the experiences of transition-aged youth in foster care with their caseworkers and the association of youth-caseworker relationship characteristics with youth-perceived relationship quality. Table 2.2 provides a description of

each caseworker item at each time point. At each time point, over 95% of youth knew who their caseworker was and knew how to contact them.

At time 1, 34% of youth had changed caseworkers in the past year and had their current caseworker for an average of 2.19 ( $SD=2.47$ ) years. Most (84%) felt that they could talk to their caseworker when needed and on average communicated with their caseworker slightly less than once per month ( $M=3.77$ ,  $SD=1.11$ ). On average, youth reported that caseworkers were nearly “well” at responding to their needs ( $M=2.76$ ,  $SD=1.10$ ), and were slightly better than “pretty helpful” with meeting the goals of youth transition plans ( $M=2.21$ ,  $SD=.94$ ). On average, youth reported a slightly better than “okay” relationship quality with their caseworkers ( $M=2.67$ ,  $SD=1.07$ ).

At time 2, 20% of youth had changed caseworkers in the past year and had their current caseworker for an average of 2.90 ( $SD=2.71$ ) years. Most (87%) felt that they could talk to their caseworker when needed and on average communicated with their caseworker slightly less than once per month ( $M=3.57$ ,  $SD=1.27$ ). On average, youth reported that caseworkers were nearly “well” at responding to their needs ( $M=2.86$ ,  $SD=1.03$ ) and reported just under “good” relationship quality with their caseworkers ( $M=2.83$ ,  $SD=1.03$ ). There was substantial variation. About 7% reported “bad” or “very bad” relationship quality, 36% reported “okay,” and 58% reported “good” or “very good.” On average, youth reported that their caseworkers were nearly “pretty helpful” with meeting the goals of their transition plans ( $M=1.69$ ,  $SD=1.24$ ). Still, 27% reported that their caseworkers were “not helpful at all,” 34% reported “a little helpful” or “pretty helpful,” and 40% reported “very helpful.”

At time 3, 22% of youth had changed caseworkers in the past year and had their current caseworker for an average of 3.04 ( $SD=2.66$ ) years. Most (85%) felt that they could talk to their caseworker when needed on average communicated with their caseworker slightly less than once per month ( $M=3.75$ ,  $SD=1.14$ ). On average, youth reported that caseworkers were nearly “well” at responding to their needs ( $M=2.95$ ,  $SD=1.03$ ). On average, youth reported that their caseworkers were nearly “pretty helpful” with meeting the goals of their transition plans ( $M=1.79$ ,  $SD=1.18$ ). On average, youth reported just under “good” relationship quality with their caseworkers ( $M=2.83$ ,  $SD=1.10$ ).

Correlations were examined to explore the association of caseworker items with youth-perceived quality. Table 2.3 provides correlations among all study variables, including

caseworker items at time 2. There was not enough variation in caseworker knowledge or knowledge of how to contact caseworker to examine in bivariate analysis. Youth perceived relationship quality was significantly and positively related to communication frequency ( $r=.32$ ,  $p<.05$ ), feeling able to talk to caseworker when needed ( $r=.44$ ,  $p<.05$ ), responsiveness to needs ( $r=.80$ ,  $p<.05$ ), and helpfulness with transition planning ( $r=.68$ ,  $p<.05$ ). Neither length of time with current caseworker nor changing caseworkers in the past year were related to youth perceived relationship quality.

The second research question asked whether caseworker helpfulness with transition planning predicts high school completion. This caseworker item was chosen for further analysis because it is highly relevant to transition-aged youth in foster care. The final research question asked whether the association between caseworker helpfulness with transition planning and high school completion differ for youth receiving special education compared to their counterparts.

A series of linear probability analyses were conducted to answer the final research questions and are displayed in Table 2.4. Two models predicted the binary outcome of any high school completion versus non-completion, and two models predicted the binary outcome of receipt of a regular diploma versus alternative (i.e. modified diploma or GED). Linear probability models produce coefficients that are very similar to marginal effects in logistic models (Holm et al., 2015) and are used widely in some fields, such as economics, because the coefficients are more interpretable than those produced by logistic models (Breen, Karlson, & Holm, 2018). Robust standard errors were used to adjust for heteroskedasticity in the linear probability models (Breen et al., 2018). All analyses controlled for treatment condition as well as personal (gender, race, special education, posttraumatic symptoms, failing a class, extracurricular activity) and contextual (caseworker stability in terms of years with current caseworker and school stability in terms of years at current school) characteristics.

In Model 1, caseworker helpfulness with transition plan did not significantly predict any high school completion versus non-completion. Special education status was significantly related to a 13% increase in the probability of high school completion ( $p<.05$ ). Failing a class was significantly related to a 37% decrease in the probability of completion ( $p<.01$ ). Being at the same school for a year longer was related to an 8% increase in the probability of completion ( $p<.05$ ). This model explained 30% of the variance in high school completion.

Model 2 added the interaction of caseworker helpfulness with special education status, which was not a significant predictor of any high school completion versus non-completion.

In Model 3, a one-unit increase in caseworker helpfulness with transition plan was significantly related to an 8% increase in the probability of regular diploma receipt versus alternative ( $p < .05$ ). Being a youth of color was significantly related to a 20% decrease in the probability of regular diploma receipt ( $p < .05$ ). Special education was significantly related to a 42% decrease regular diploma receipt ( $p < .01$ ). Extracurricular activity was significantly related to a 16% increase in the probability of regular diploma receipt ( $p < .05$ ). This model explained 33% of the variance in regular diploma receipt.

Model 4 added the interaction of caseworker helpfulness with special education status, which was a significant predictor of regular diploma receipt versus alternative. This model explained 40% of the variance in regular diploma receipt. Predicted margins were calculated to probe the interaction effect. Figure 1 shows the interaction with estimates for caseworker helpfulness generated at plus or minus one standard deviation for high and low approximations, and special education status was set at 1 for receipt and 0 for non-receipt. Youth with high caseworker help and who were not receiving special education had the highest probability (85%) of receiving a regular high school diploma compared to an alternative credential, although youth not receiving special education and with low caseworker help had a similar probability (82%). Youth receiving special education and with low caseworker help had the lowest probability (11%) of receiving a regular diploma. Youth receiving special education and with high caseworker help had a higher probability (59%) of regular diploma receipt compared to their counterparts with low caseworker help, but the probability was still much lower than youth not receiving special education with any level of caseworker help.

## **Discussion**

This study adds to the dearth of literature on youth experiences with their caseworkers and the influence of caseworkers on positive academic outcomes for youth in foster care. The study aimed to describe the experiences of transition-aged youth in foster care with their caseworkers. A second aim was to examine the association of youth-caseworker relationships with high school completion. Finally, the study examined the differential impact of youth-caseworker relationships on high school completion.

### ***Experiences of Transition-Aged Youth with Their Caseworker***

On average, youth reported a relatively high relationship quality with their caseworkers with substantial variation. Each characteristic of caseworker relationship was also examined.

*Emotional support.* Emotional support as measured by youth reports of whether they felt able to talk to their caseworker when needed and over 80% of youth said responded ‘yes.’ This was positively associated with youth perceived relationship quality, responsiveness to needs, and helpfulness with transition plan. Findings are congruent with studies showing that youth value having their voices heard by service providers, including caseworkers, having autonomy and input in decision making, and having service providers who take an interest in their lives (Harker et al., 2004; Pinkney & Walker, 2020; Quest et al., 2012; Ungar et al., 2013).

*Instrumental support.* Caseworkers act as “institutional agents” for youth by providing instrumental support and transmitting valuable resources, opportunities, and privileges to youth (Goerge, 1994; Lipsky, 1980; Ryan et al., 2006; National Resource Center for Family-Centered and Permanency Planning, 2008; Stanton-Salazar, 2011). The current study examined instrumental support via youth reports of how responsive their caseworkers were to their needs and how helpful caseworkers were with meeting the goals of their transition plan. Each was strongly related to youth perceived relationship quality. Further, these items had stronger associations with youth perceived relationship quality than contact with caseworker. These findings suggest that although emotional support is valued among youth, instrumental support and the role of caseworkers as “institutional agents” are particularly important for building positive relationships. Additionally, the amount of contact appears to not be as important as the quality of contact.

*Caseworker Stability.* The current study examined caseworker stability in two ways: change of caseworker and time with current caseworker. Neither was associated with youth perceived relationship quality. These findings are inconsistent with theory (Pinkney, 2018) and some studies showing an interruption in the quality of services and relationships with youth when caseworkers change (GAO, 2003; Zlotnik, 2011). One reason for null findings could be that different youth experience a change in caseworker in different ways. In qualitative studies, a change of caseworker lead to loss of trust by some youth while a few others reported a welcomed change that resulted in increased communication or a more involved caseworker (Bell, 2002; Strolin-Goltzman et al., 2010). This suggests that stability in and of itself does not influence

youth-caseworker relationship quality. Stability in combination with youth-caseworker relationship quality or caseworker skill is important to consider. In addition, perhaps the timing of a caseworker change in the life of a youth has more explanatory power, or it may have a differential impact for youth with different levels of risk.

*Contact.* Caseworker contact encompasses having caseworker contact information and frequency of communicating with caseworker. Almost all transition-aged youth knew how to contact their caseworkers. Communication frequency was positively associated with youth-perceived relationship quality and caseworker responsiveness to needs.

Current findings imply that it may be particularly important to provide instrumental support during the transition to adulthood. Transition-age youth must make decisions about staying in school, continuing special education, the type of credential to work towards, whether to stay in foster care when they reach the age of majority, and whether to participate in extended services, such as independent living programs. They must also navigate multiple complex service systems having different and often conflicting requirements (Osgood et al., 2005). Qualitative studies indicate that transition-aged youth want more autonomy to make these decisions, which is normative for this age group, and yet they need continued scaffolding by adults in order to make informed decisions (Quest et al., 2012; Osgood et al., 2005). Qualitative studies show that transition-aged youth in foster care struggle with the decision to emancipate from foster care, partly because the services provided are perceived as inadequate or as stigmatizing to them and their biological families (Quest et al. 2012). They struggle with the decision to stay in high school and which credential to work towards given school instability and accompanying hardships, such as when credits do not transfer from one school to another (Quest et al., 2012). Service providers, including caseworkers, play a role in these decisions and can be important especially during transition points in the life of a youth in foster care (Hass, Allen & Amoah, 2014). Often youth of transition-age have abrupt cutoffs of support from family and social services (Greenen & Powers, 2007), and caseworkers may be best positioned to inform youth about the costs and benefits of a particular service ending or of opportunities for a new service given their interactions with multiple service providers and adults in a youth's life.

#### ***Association of Caseworker Helpfulness with Transition Plan & High School Completion***

This study adds to the limited literature on the influence of caseworkers on positive academic outcomes for youth in foster care. Specifically, caseworker helpfulness with meeting

youth goals of their transition plan was associated with increased probability of high school completion in bivariate analysis and was related to receipt of a regular diploma versus alternatives (modified diploma or GED) controlling for personal and contextual factors. These findings are congruent with studies showing that the quality of relationships with service providers, including caseworkers, can impact academic outcomes (Tillbury et al., 2014; Ungar et al., 2013). It is also consistent with qualitative studies detailing the ways in which youth in foster care benefit from the support and access to resources that come with positive caseworker relationships (Harker et al., 2004; Pinkney & Walker, 2020; Rutman & Hubberstey, 2018).

More research is needed to uncover the specific and nuanced ways that positive youth-caseworker relationships lead to improved school engagement. Findings from the Federal Child and Family Services Review, a state monitoring system for child welfare program alignment with federal requirements (Children's Bureau, 2003), showed that the frequency and quality of caseworker visits with youth and families was related to caseworker assessment of risk and needs, parent involvement in case-planning, service provision, and youth outcomes. A report by the Child Welfare Capacity Building Collaborative (CWCBC, 2017) used these findings to generate a theoretical model linking quality interactions between youth and caseworkers lead to trusting relationships, improved caseworker assessment of risk and needs, joint development of case plans, shared understanding of progress towards goals, and improved youth and family engagement and empowerment. In turn safety, permanency, and well-being outcomes improve (CWCBC, 2017).

Following this theory, when caseworkers listen and respond to the needs and problems of youth, this leads to better assessments and greater levels of trust in the relationship. Trust has been hypothesized as a key factor for children and youth in foster care to communicate their needs to adults (Pinkney, 2018). Caseworkers may then become more aware of educational needs and can link youth with available services. Caseworkers may advocate for youth and they may communicate with caregivers or teachers about what the youth needs. Caseworkers may also acknowledge and encourage academic achievement directly to the youth. Qualitative research indicates that youth in foster care feel supported in their educational success when caseworkers show a genuine interest in their education (Harker et al., 2004). Finally, caseworkers may act as institutional agents by improving educational supports in foster home placements (e.g. link foster parents to trainings, ensure that moves are in the best interest of

education, advocating for youth needs), or enabling access to learning supports, such as tutoring or permissions and funds for extracurricular activities. In the current study, caseworker responsiveness to needs was related to extracurricular participation. In turn, extracurricular activity participation is related to academic achievement, including high school completion in the current studies and in other studies (Khambati et al., 2018; White et al., 2018).

### ***Special Education & Differential Impact***

Special education receipt was not related to high school completion versus non-completion in bivariate analysis. Though, when controlling for other factors, special education receipt was weakly related to higher probability of high school completion with any type of credential. However, youth who received special education had a lower probability of obtaining a regular diploma versus alternative (i.e. modified diploma or GED). This is similar to findings in other studies of youth in foster care who also receive special education (e.g. Clemens, et al., 2016). Notably, participation in extracurricular activities, closely tied to school engagement, did not differ by special education status. This finding suggests that a lack of individual investment and involvement in school is not the reason why youth in special education have poor achievement outcomes. It is likely that youth in special education experience contextual risks and barriers to academic achievement. For example, a qualitative study of seven transition-aged youth in foster care who were also receiving special education found that most youth had aspirations for college yet experienced educational barriers, such as low teacher expectations and being tracked towards a modified diploma which 4-year institutions may not accept (Quest et al., 2012). Still others were placed in alternative schools which did not provide them with a curriculum that would prepare them for college (Quest et al., 2012).

In support of differential impact theory (Ungar, 2018), transition-aged youth with high caseworker help and not receiving special education had the greatest probability of receiving a regular high school diploma versus alternative credential. However, the probability was similar for youth not in special education with low caseworker help, suggesting that caseworkers play a minimal role in high school completion for such youth. Youth with more risk (i.e. receiving special education) and with lower caseworker help had the lowest probability of receiving a regular diploma. Caseworker help was associated with a greater probability for the youth in special education, suggesting that caseworkers can make a difference for youth receiving special education. This is contrary to expectation based on a qualitative study of transition-aged youth in

foster care who were also receiving special education who reported receiving inadequate support from their caseworkers (Quest et al., 2012). The current study suggests that caseworkers may be instrumental in connecting youth in special education to available services both during their foster care stay and during their transition out of foster care. Youth in special education had their current caseworker for a longer period compared to their counterparts, perhaps because youth with disabilities spend more time in the foster care system compared to their counterparts (Slayter, 2016). In turn, more years with current caseworker was related to youth perceived caseworker helpfulness with transition plan. Caseworkers may also encourage and communicate with youth about the benefits of a regular diploma versus alternatives. However, at the same level of caseworker help, the probability of regular diploma receipt was still much lower among youth in special education compared to youth not in special education, suggesting that more resources and supports are needed for youth in special education to catch-up to their counterparts.

Attention to larger systems, including child welfare, education, and disability is necessary to understand the differential impact of youth-caseworker relationships on youth outcomes. In particular, the of lack resources, strict requirements for special education services, and lack of cross-system collaboration likely inhibits caseworker impact for some youth in foster care.

An audit of the Oregon Child Welfare System (Richardson & Memmott, 2018) detailed numerous deficits that contribute to caseworker inability to meet youth needs, particularly high-risk youth. First, many caseworkers have high caseloads and report high demands and inadequate training and support, leading to a high rate of turnover. This results in relatively new and inexperienced caseworkers taking on complex cases, including youth with disabilities or mental health challenges. These poor working conditions, in combination with DHS mandate to place children immediately following removal and the growing lack of foster homes and residential facilities, can lead to caseworkers making hasty placement decisions with little to no consideration of a youth's mental and physical health or trauma experiences. Returning to caseload, when caseworkers have too many cases to manage, their effectiveness suffers. Overworked caseworkers have limited time to build relationships with youth and caregivers and to properly assess the needs of youth. The audit found that the mandated visitation frequency of once per month did not always occur and few youth in foster care considered their caseworker to be an adult they could turn to with needs or questions (Richardson & Memmott, 2018).

The education system may also inhibit caseworker impact. Current findings are that youth who had been at their current school for a longer period had a higher probability of high school completion versus non-completion. Other studies also show that school stability is particularly important for youth in foster care during high school (Clemens et al., 2016). Youth in foster care revealed in a qualitative study that sometimes credits do not transfer from one school to the next, which negatively impacted their motivation to continue high school (Quest et al., 2012). A lack of collaboration across schools contributes to this problem. Another aspect of the education system is the tendency to track youth in foster care in general, and especially those in special education, into earning alternative credentials, a practice that begins as early as middle school (Elmore, 2009; Johnson et al., 2007). While educators may have good intentions, for example making high school completion more attainable for at-risk youth, a lack of research on the long-term educational and employment outcomes associated with the modified diploma is concerning (Johnson et al., 2007), and there is a documented disadvantage of receiving a GED (Grubb, 1999; National Center on Education Statistics, 2003; Smith, 2003).

Strict eligibility requirements for special education services is another concern. In addition to accommodations in the classroom, special education status is a gateway to a number of targeted education topics and services, such as reproductive health, substance abuse, anger management, conflict resolution, violence prevention, teen parenting, and transition planning (Osgood et al., 2005). Undoubtedly, the whole of the child welfare population may benefit from such services, yet eligibility requirements may be too strict to include them, or youth may not be adequately assessed. For example, disabilities are sometimes misdiagnosed as a mental health issue (Haight et al., 2013). Misdiagnosis means that youth are unlikely to receive appropriate treatment and their needs remain unmet. In education systems, youth who have experienced trauma do not necessarily meet any of the eligibility requirements for special education services. Many teachers may view such youth as defiant, disruptive, and unwilling to learn, rather than as a youth who have experienced trauma and who are in need of accommodations and supports. Even when youth do qualify for special education services, there are still many who do not access these services and youth with emotional disturbance are reported by educators to have the lowest rate of use (Osgood et al., 2005). One reason could be that disability services are provided across a variety of complex systems including education, health, child welfare, and employment. These systems can have incompatible eligibility requirements and sometimes complex processes

for establishing eligibility. High cost, inaccessibility, inadequate services to meet demand, and a lack of coordination across systems in general, and across youth-oriented services in schools and child welfare and adult-oriented services in the community, pose additional barriers for youth with disabilities (Osgood et al., 2005).

### **Implications**

The current findings have implications for the study of resilience as a complex process involving the interaction of personal and contextual risks and resources, supporting the usefulness of an ecological approach (Liu et al., 2017; Titterton et al., 2017; Ungar, 2011; Ungar et al., 2013). The role of service providers, including caseworkers, in youth outcomes warrants further investigation.

These studies demonstrate that youth in foster care receiving special education are at increased risk for negative academic outcomes and need more supports. There are several implications for child welfare, education, and mental health practice and policy. Appropriate assessment of youth should include attention to risk as well as the personal and contextual resources and strengths of youth. When caseworkers and teachers focus on deficits, youth recognize this and perceive such people as unhelpful (Quest, et al. 2012). Further, evidence suggests a focus on strengths and positive expectations characterize “turnaround people” who support at-risk youth to make positive changes in their lives, such as pursuit of higher education (Benard, 2004; Hass et al., 2014). In their research of child welfare practice, Lou and colleagues (2008) found that some of the existing well-being frameworks were too focused on deficits or did not account for the youth’s personal and contextual strengths and resources that facilitate coping with adversity (Lou et al., 2008). In a similar vein, Elmore (2009) argues that the institution of school uses test scores and grades to actively sort youth into distinct class levels and “tracks” based on the idea that they have an innate aptitude for schoolwork, thus ignoring not only the impact of trauma, but also ignoring youth strengths in other areas and the potential for improvement given the right supports. Tracking is reflected in the rise of modified diplomas and encouragement of youth receiving special education to seek alternative credentials (Johnson et al., 2007; Quest et al., 2012).

This study demonstrated the potential of positive youth-caseworker relationships to support positive academic outcomes among youth in foster care. This implies that the quality of interactions between youth and caseworkers matters and state monitoring of the frequency and

quality of caseworker visitations with youth is a step in the right direction (Children's Bureau, 2003). To ensure high quality interactions, the Child Welfare Capacity Building Collaborative (2017) suggests that child welfare administrators should set standards and policies for quality contacts, build agency capacity, review performance, and introduce strategies for improvement. Considering the serious challenges of working within the Oregon Child Welfare system (Richardson & Memmott, 2018), these findings are a testament to the resilience of caseworkers and their ability to find a way to positively impact the lives of the youth they serve.

### **Limitations**

Current findings should be interpreted considering limitations. First, this study is correlational, and the direction of causation is not clear. It could be that youth who are doing better in school are more likely to have positive perceptions of their caseworkers, or perhaps caseworkers perceive such youth more positively and thus are more willing to provide support. Longitudinal analysis and experimental studies of interventions aimed at youth-caseworker relationship enhancement would help clarify the direction of causation. Another limitation is the relatively weak-moderate correlations, which may be stronger for certain subgroups of youth in foster care. A third limitation is the measurement of youth experiences with their caseworker. Relatively few items were used, and constructs were measured with only one item. However, some studies demonstrate that single-item measures have the same predictive ability as multiple-item measures when measuring constructs like "customer satisfaction" (Ittner & Larker, 1998; Sarstedt & Wilczynski, 2009; Van doorn et al, 2013) and "quality of life" (Hyland & Soderger, 1996). Another study demonstrated that a single-item measure of self-efficacy had the same validity as a multiple-item measure (Hoeppner et al., 2012). The current measures of youth-caseworker relationship were also lacking specific questions about trust, help with education, and conflict and are important to confirm theories herein. Finally, several contextual factors were not examined and may influence youth-caseworker relationships and/or academic outcomes, including caseworker skills or experience, child welfare agency characteristics, youth placement type, pre-foster care experiences, resources available to caregivers, school context, and other youth relationships with caregivers, biological family, peers, and adults at school.

### **Strengths**

Examination of youth-caseworker during the transition to adulthood is a key strength as this is a critical time in the life of youth with the potential to change the trajectory of their lives.

The current studies also focused on positive outcomes and included an examination of personal and contextual strengths and resources that contribute to resilience while previous studies have tended to focus on only risk factors. Finally, the current study focused on youth voices, which researchers increasingly consider to be essential for both youth empowerment and improvement of systems that serve youth (Liebmann & Madden, 2010; Nybell, 2013).

### **Future directions**

Several future directions would improve and build upon the current work. Youth in foster care are a heterogeneous population with a diversity of experiences and having a variety of personal and contextual risks and resources. Further, youth experience the same systems and caseworker characteristics differently (Stabler et al., 2019; Ungar et al., 2013). To better understand this heterogeneity and design effective interventions, person-centered analysis and subpopulation analysis are needed (Goemans et al., 2018). An intersectional examination of youth characteristics may also clarify which youth experience the most educational risk (Cole, 2009; Kothari et al., 2018). Examining the timing of school changes and caseworker changes may lend clarity on how instability affects youth in foster care. Finally, analysis of youth-caseworker relationships over time would aid in the understanding of youth experiences and impact on youth outcomes.

### **Conclusion**

Findings suggest that positive youth-caseworker relationships can bolster academic resilience among youth in foster care. Specifically, caseworkers may be able to support high school completion and receipt of a regular diploma. However, receipt of a regular diploma may require more caseworker attention for youth in special education.

Table 2.1

*Sample Description at Time 2*

Variable	Mean	SD	Min	Max	Skew	Kurtosis
Years at current school	1.87	1.41	0	7	.50	2.73
Total Schools	1.21	.51	1	4	2.79	11.29
	<b>Frequency</b>	<b>Valid</b>				
	<b>Yes</b>	<b>% Yes</b>				
In Foster Care	183	74%				
Ever Special Education	175	60%				
Extracurricular Activity	82	33%				
Clinical Posttraumatic Symptoms	79	33%				
<i>Grade</i>						
9 <sup>th</sup>	1					
10 <sup>th</sup>	1					
11 <sup>th</sup>	16					
12 <sup>th</sup>	112					
Repeating 12 <sup>th</sup>	4					
Not in school	112					
<i>High School Completion</i>						
Non-complete	53	24%				
Modified Diploma or GED	65	30%				
Regular diploma	100	46%				

*Note.* High School Completion Measured at Time 3

Table 2.2

*Descriptive statistics for youth-caseworker relationship characteristics at each time point*

<b>Caseworker Item</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>	<b>Skew.</b>	<b>Kurt.</b>	<b>N/A N (%)</b>	<b>Missing N (%)</b>
Relationship Quality 1	2.67	1.07	0	4	-.529	2.95	3 (1%)	7 (2%)
Relationship Quality 2	2.77	.98	0	4	-.41	2.79	52 (18%)	49 (17%)
Relationship Quality 3	2.83	1.03	0	4	-.45	2.69	84 (28%)	63 (21%)
Responds Needs 1	2.76	1.10	0	4	-.63	2.89	3 (1%)	8 (3%)
Responds Needs 2	2.86	1.03	0	4	-.71	3.06	52 (18%)	49 (17%)
Responds Needs 3	2.95	1.03	0	4	-.82	3.17	84 (28%)	63 (21%)
Help Transition 1	2.21	.94	0	3	.29	4.57	13 (4%)	197 (67%)
Help Transition 2	1.70	1.25	0	3	-.25	1.43	20 (7%)	162 (55%)
Help Transition 3	1.79	1.18	0	3	-.33	1.60	11 (4%)	167 (57%)
Communication Frequency 1	3.77	1.11	0	5	-1.76	6.70	3 (1%)	8 (3%)
Communication Frequency 2	3.57	1.27	0	5	-1.42	4.63	51 (17%)	48 (16%)
Communication Frequency 3	3.75	1.14	0	5	-1.63	6.01	84 (28%)	65 (22%)
Years with Caseworker 1	2.19	2.47	0	18.67	2.96	16.43	6 (2%)	34 (12%)
Years with Caseworker 2	2.90	2.71	.08	16	1.77	7.00	52 (18%)	60 (20%)
Years with Caseworker 3	3.04	2.66	0	11	1.07	3.48	84 (28%)	74 (25%)
	<b>Frequency Yes</b>	<b>Valid % Yes</b>	<b>Frequency No</b>	<b>Valid % No</b>	<b>N/A N (%)</b>	<b>Missing N (%)</b>		
Know Caseworker 1	279	98%	7	2%	3 (1%)	6 (2%)		
Know Caseworker 2	193	99%	3	2%	52 (18%)	47 (16%)		
Know Caseworker 3	143	97%	5	3%	84 (28%)	63 (21%)		
Know How to Contact 1	269	95%	15	5%	3 (1%)	8 (3%)		
Know How to Contact 2	186	95%	10	5%	51 (17%)	48 (16%)		
Know How to Contact 3	87	34%	168	66%	84 (28%)	63 (21%)		
Feel Can Talk 1	237	84%	46	16%	3 (1%)	9 (3%)		
Feel Can Talk 2	170	87%	26	13%	51 (17%)	48 (16%)		
Feel Can Talk 3	125	85%	22	15%	84 (28%)	64 (22%)		
Changed Caseworker Past Year 1	87	34%	168	66%	6 (2%)	34 (12%)		
Changed Caseworker Past Year 2	37	20%	146	78%	52 (18%)	60 (20%)		
Changed Caseworker Past Year 3	30	22%	107	78%	84 (28%)	74 (25%)		

Note. 1= Time 1/Baseline, 2=Time2/1-Year post-baseline, 3=Time3/2-years post-baseline

Table 2.3

*Correlations among high school completion, youth-caseworker relationship, personal and contextual characteristics*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.Any High School Completion	-																
2.Regular Diploma vs Modified/GED	.01	-															
3.Relationship Quality	0.01	0.13	-														
4.Communication Frequency	-0.10	0.18*	0.32*	-													
5.Feel Can Talk	-0.08	0.13	0.44*	0.31*	-												
6.Responsiveness to Needs	0.07	0.21*	0.80*	0.39*	0.50*	-											
7. Helpfulness with Transition Plan	0.22*	0.22*	0.74*	0.19	0.52*	0.78*	-										
8.Female	0.06	-0.15	-0.01	0.25*	0.05	-0.03	-0.01	-									
9.Youth of Color	-0.05	-0.15	-0.02	0.04	-0.10	-0.08	-0.02	0.09	-								
10.Special Education	0.11	-0.41*	0.04	-0.10	0.00	0.00	-0.01	-0.21*	-0.12*	-							
11.Clinical Posttraumatic Symptoms	-0.13	0.24*	-0.12	-0.11	-0.07	-0.19*	-0.09	0.08	0.00	0.03	-						
12.Extracurricular Activity	0.15*	0.19*	0.12	0.01	0.00	0.17*	0.13	-0.04	-0.11	0.01	-0.05	-					
13.Fail a Class	-0.38*	0.01	0.03	-0.11	-0.08	-0.04	-0.13	-0.11	0.16*	0.01	-0.10	-0.20*	-				
14.Years with Caseworker	0.01	-0.02	0.07	-0.11	0.05	0.01	-0.29*	-0.10	-0.03	0.15*	0.04	0.06	-0.16	-			
15.Changed Caseworker Past Year	0.00	-0.06	-0.06	0.04	0.08	0.06	0.11	0.06	0.10	-0.14	-0.03	0.04	0.04	-0.46*	-		
16.Years at Current School	0.34*	0.15	-0.05	-0.33*	0.04	-0.02	0.12	-0.03	-0.06	0.03	-0.16	0.16	0.01	0.12	-0.10	-	
17.Total Schools Past 6 Months	-0.12	-0.10	0.08	0.08	0.00	0.06	0.11	0.02	0.01	-0.02	-0.02	0.01	-0.10	-0.08	0.06	0.36*	-
18.Treatment Condition	-0.01	-0.09	0.03	0.09	0.01	0.03	-0.14	0.07	0.06	0.00	-0.01	-0.04	0.01	0.16*	-0.09	0.07	-0.10

\*p<.05

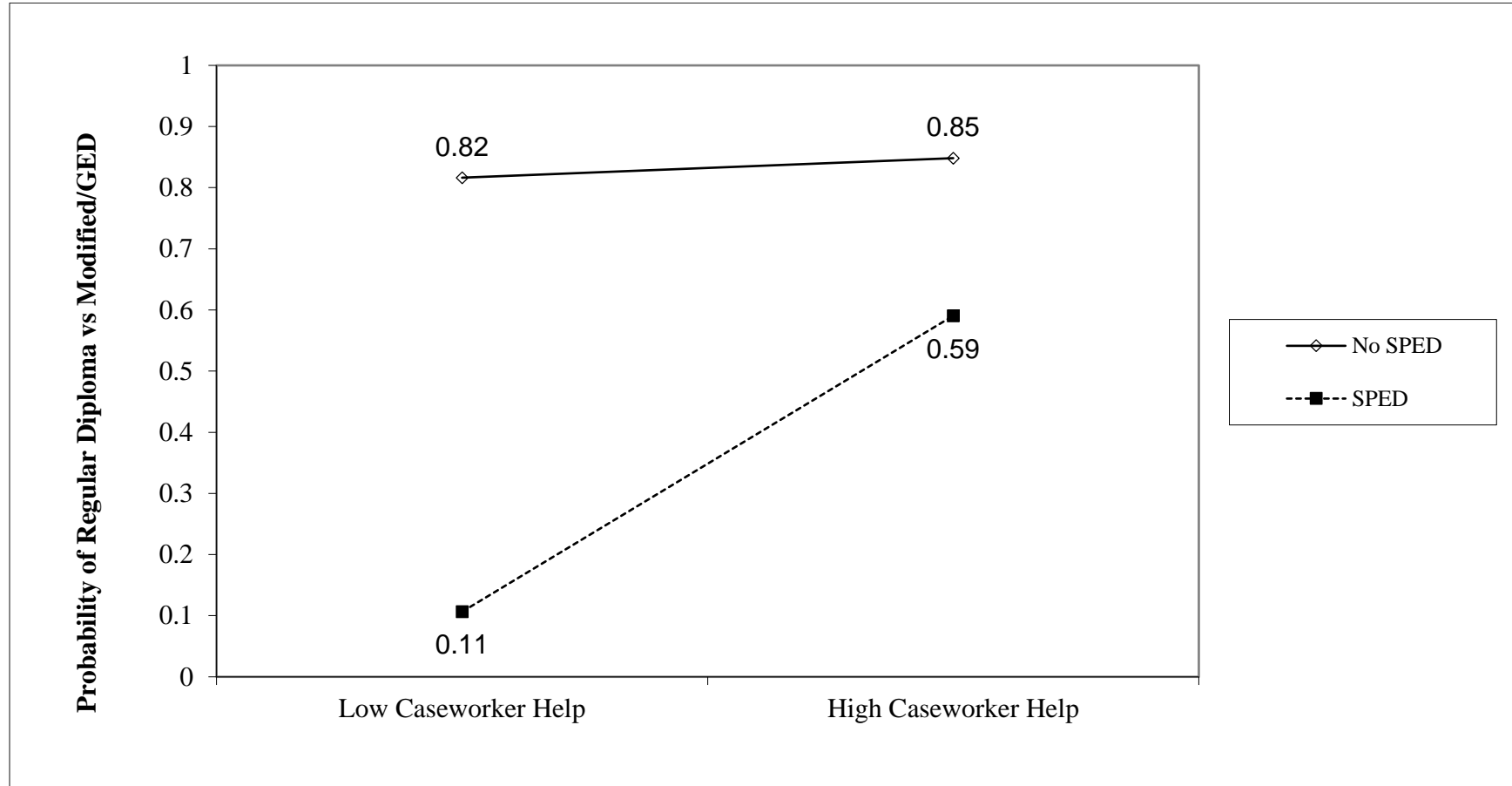
Table 2.4  
*Predicting High School Completion (N=257)*

Variable	Model 1A Any High School Completion			Model 1B Any High School Completion Interaction			Model 2A Regular Diploma versus Alternative			Model 2B Regular Diploma versus Alternative Interaction		
	<i>B</i>	<i>Robust t SE B</i>	$\beta$	<i>B</i>	<i>Robust SE B</i>	$\beta$	<i>B</i>	<i>Robust t SE B</i>	$\beta$	<i>B.</i>	<i>Robust SE B</i>	$\beta$
Caseworker Helpfulness with transition plan	0.05	0.04	0.15	0.08	0.04	0.23	0.08*	0.03	0.22	0.01	0.04	0.03
Female	0.06	0.06	0.03	0.06	0.06	0.04	0.08	0.07	0.09	0.07	0.07	0.07
Youth of Color	0.01	0.06	0.04	0.03	0.06	0.06	-0.18*	0.07	-0.19	-0.20*	0.07	-0.21
Special Education	0.13*	0.06	0.11	0.28	0.18	0.28	-0.42***	0.07	-0.41	-0.80***	0.21	-0.79
Clinical Posttraumatic Symptoms	-0.15	0.08	-0.10	-0.13	0.08	-0.09	-0.16	0.08	-0.15	-0.15	0.09	-0.14
Extracurricular Activity	0.01	0.06	0.02	0.02	0.06	0.03	0.16*	0.08	0.15	0.13	0.08	0.13
Fail a class	-0.37**	0.10	-0.40	-0.40***	0.11	-0.42	0.20	0.12	0.16	0.31*	0.13	0.26
Years with caseworker	-0.01	0.02	-0.06	-0.01	0.02	-0.09	0.02	0.02	0.13	0.04*	0.02	0.22
Years at current school	0.08*	0.03	0.28	0.09*	0.04	0.29	0.02	0.04	0.05	-0.01	0.04	-0.02
Treatment Condition	0.02	0.06	0.02	0.02	0.06	0.02	-0.08	0.07	-0.08	-0.08	0.08	-0.08
Constant	0.56***	0.15	1.32	0.50***	0.15	1.20	0.62***	0.16	1.28	0.81***	0.18	1.64
Caseworker X Special Education				-0.08	0.09	-0.23				0.17*	0.08	0.46
R <sup>2</sup>	0.30			0.31			0.33			0.40		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Figure 2.1

*Interaction of caseworker helpfulness with transition plan and special education status on receipt of regular diploma versus an alternative*



## CHAPTER 4: CONCLUSION

The current studies used a resilience framework to examine secondary data from two of the largest randomized control trials to date involving youth in foster care. These studies sampled youth across three developmental periods (i.e. preadolescence, adolescence, and the transition to adulthood). Both took place in the Portland, Oregon metropolitan area and explored academic outcomes and used similar measures. The current studies aimed to describe several characteristics of youth-caseworker relationships as perceived by youth (knowledge of caseworker, contact, relationship quality, emotional support, instrumental support, & stability) across preadolescence, adolescence, and the transition to adulthood. A second aim was to examine the association of youth-caseworker relationships with positive academic outcomes (i.e. school engagement & high school completion). Finally, the studies examined the differential impact of youth-caseworker relationships on youth academic outcomes by level of youth risk (i.e. high posttraumatic symptoms & special education).

### **Experiences of Youth with Their Caseworkers**

***Youth-Caseworker Relationship Quality.*** The current studies examined youth-perceived relationship quality with their caseworkers. Both study 1 and study 2 indicated relatively high youth-caseworker relationship quality averages with substantial variation. Age explained some of this variation in study 1, with more youth ages 14-16 years (as compared to 7-13 years) reporting low relationship quality and fewer reporting high relationship quality. Study 2 found that slightly more than half (57%) of transition-aged youth (16-20 years) reported high relationship quality while only 7% report low relationship quality. This suggests that going forward, 14-16-year-olds are an important age group for caseworkers to focus on relationship-building. In study 1, this age group reported low levels on every aspect of caseworker-youth relationships. Developmental implications are discussed in a later section.

***Emotional support.*** In addition to overall relationship quality, the current studies examined emotional support as measured by youth reports of how well caseworkers listen to them and whether youth feel able to contact and talk to their caseworkers when needed. Listening was only measured in study 1 for preadolescents and adolescents and was positively associated with perceived relationship quality, caseworker responsiveness to needs, and caseworker helpfulness with problems. Over 80% of youth in both studies said they felt able to

contact or talk to their caseworker when needed and this was positively associated with relationship quality, responsiveness to needs, and helpfulness with problems and meeting goals of transition plan. These findings are congruent with studies showing that youth value having their voices heard by service providers, including caseworkers, having autonomy and input in decision making, and having service providers who take an interest in their lives (Harker et al., 2004; Pinkney & Walker, 2020; Quest et al., 2012; Ungar et al., 2013).

***Instrumental support.*** Caseworkers act as “institutional agents” for youth by determining the kind, amount, and quality of services provided by child welfare, regulating eligibility for services, and communicating the complexities of the child welfare system so that youth can make informed decisions (Goerge, 1994; Lipsky, 1980; Ryan et al., 2006; National Resource Center for Family-Centered and Permanency Planning, 2008; Stanton-Salazar, 2011). An important role of institutional agents is to provide instrumental support by transmitting valuable resources, opportunities, and privileges to youth (Stanton-Salazar, 2011). The current studies examined instrumental support via youth reports of how responsive their caseworkers were to their needs and how helpful caseworkers were with their problems and with meeting the goals of their transition plans.

Caseworker responsiveness to needs was strongly related to youth perceived relationship quality in both studies. Likewise, caseworker helpfulness with problems in study 1, and helpfulness with meeting the goals of youth transition plan in study 2, were strongly associated with youth perceived relationship quality. In both studies, caseworker responsiveness to needs and helpfulness both had stronger associations with youth perceived relationship quality than contact with caseworker. Among transition-aged youth in study 2, caseworker responsiveness to needs and helpfulness with transition plan were also more strongly associated with relationship quality than caseworker emotional support or stability. These findings suggest that although emotional support is valued among youth, instrumental support and the role of caseworkers as “institutional agents” are particularly important for building positive relationships, especially as youth approach the transition to adulthood. The amount of contact appears to not be as important as the quality of contact, further supported by the finding that among transition-aged youth, caseworker responsiveness to needs and feeling able to talk to a caseworker when needed were positively related to youth perceived caseworker helpfulness with transition plan while frequency of communication was not related.

***Caseworker Stability.*** The current studies examined caseworker stability in two ways: change of caseworker and time with current caseworker. Change of caseworker was not related to youth-caseworker relationship quality in either study. This finding is inconsistent with theory (Pinkney, 2018) and some studies showing an interruption in the quality of services and relationships with youth and families when caseworkers change (GAO, 2003; Zlotnik, 2011). One reason for null findings could be that different youth experience a change in caseworker in different ways. In qualitative studies, a change of caseworker lead to loss of trust by some youth while a few others reported a welcomed change that resulted in increased communication or a more involved caseworker (Bell, 2002; Strolin-Goltzman, Kollar, & Trinkle, 2010). This suggests that stability in and of itself does not influence youth-caseworker relationship quality. Stability in combination with youth-caseworker relationship quality or caseworker skill is important to consider. In addition, perhaps the timing of a caseworker change in the life of a youth has more explanatory power, or it may have a differential impact for youth with different levels of risk.

Time with current caseworker has been hypothesized as an important factor for building trust and positive relationships with youth in foster care (Pinkney, 2018). The current studies did not show an association of time with caseworker and youth-caseworker relationship quality. However, transition-aged youth perceived caseworkers to be more helpful with their transition plan when they had been with their current caseworker for a longer period. It is likely that when caseworkers have more time with a youth, they can get to know them and their circumstances, such as their supports and risks, and can make better recommendations that fit with youth strengths and needs. Time with current caseworker may well lead to more trust among youth, which in turn could lead to better communication of needs, but trust was not examined in the current studies.

***Contact.*** Caseworker contact encompasses having caseworker contact information, frequency of seeing caseworker, and frequency of communicating with caseworker. In study 2, almost all transition-aged youth knew how to contact their caseworkers, but in study 1 only 56% of adolescent and preadolescents had their caseworker's contact information with older youth being more likely to have it. It could be that caseworkers are more likely to give older youth their contact information, reflecting increasing autonomy with age. Regarding preadolescents, caseworkers may be more reliant on caregivers to contact them if any concerns arise in-between

visitations. Caseworkers might also find that preadolescents are more likely to communicate in-person. Indeed, frequency of communication was related to how often preadolescents and adolescents saw their caseworker, suggesting that communication happened mostly during caseworker visitations and perhaps was not common in-between visitations. Preadolescents and adolescents who saw their caseworker more often also reported higher relationship quality, but frequency of communication was unrelated. Qualitative studies indicate that regular caseworker presence and “showing up” are valued by youth (Stabler, et al., 2019). Whether preadolescents would benefit from having their caseworker’s contact information and the autonomy to initiate conversations in-between visitations deserves further study. Additionally, the finding that communication frequency is not related to youth-perceived relationship quality suggests that the kind of conversations that caseworkers typically have with preadolescent and adolescent youth may not be engaging on their level. Perhaps caseworkers are more engaging with transition-aged youth as study 2 found that communication frequency was positively associated with youth-perceived relationship quality and caseworker responsiveness to needs.

***Developmental Differences in Youth-Caseworker Relationships.*** A key strength of the current studies was the examination of youth-caseworker relationships across three developmental periods (i.e. preadolescence, adolescence, and transition to adulthood). Findings suggest that the role of caseworkers varies by the developmental stage of youth. For example, study 1 indicated that during preadolescence (7-12 years), physical presence or seeing caseworkers may be particularly important for relationship quality. Youth in this developmental period reported higher levels of overall relationship quality and both emotional and instrumental support compared to adolescents. This suggests that caseworkers are doing well with this age-group or it could be that preadolescent youth are less critical in their evaluation of relationships with adults. It could also be that preadolescent youth are less aware of their own unmet needs for emotional and instrumental support.

Adolescence emerged as an important age group for caseworkers to focus on relationship-building as more 14-16-year-olds reported low relationship quality and fewer reported high relationship quality. They reported lower on every aspect of youth-caseworker relationships, suggesting an overall need for more caseworker focus. Adolescence is a period of increased transitions (e.g. from elementary to middle school and middle to high school) with accompanying changes in adult expectations and at times poor fit of school culture with

developmental changes (Elmore, 2009; Wang & Eccles 2012). Profound changes in brain development mean that adolescents are on par with adults in terms of cognition and they seek more autonomy, but they remain emotionally and socially immature which can lead to impulsivity and overreacting (Steinberg et al., 2009). It is also a period of increased risk-taking behavior, such as substance abuse (Gramkowski et al., 2009), and increased influence of peers compared to caregivers (Brown & Larson, 2009). Research on adolescent development suggests that these developmental changes can lead to an increase in conflict with adults, but that the reaction of youth depends on the relationship quality with adults; In less supportive relationships, disagreement may be interpreted by youth as a hostile attack that triggers an antagonistic response (Larsen & Collins, 2009). Caseworkers may benefit from more training and education related to adolescent development. In addition to these normative developmental changes, adolescents in foster care are likely to experience more contextual risks compared to preadolescents. For example, placement breakdowns, placement in group homes, and lower probability of being re-united with birth families or being adopted and these stressors may have a particularly detrimental impact on the development of brain areas most important to functioning in interpersonal relationships (Festinger, 2002; Snowden, 2008; Strijker, Zandberg, & van der Muelen, 2011). This could mean that adolescents are more critical of their relationships with caseworkers and may be less trusting or ready to communicate their needs. This suggests a need for more caseworker time and effort in case evaluation and understanding the complex needs of adolescents and meeting them at their level. More research with adolescents and what they find valuable in a caseworker is warranted.

Turning to transition-aged youth (16-21 years), current findings indicated that it may be particularly important to provide instrumental support during this developmental period. Transition-age youth must make decisions about staying in school, continuing special education, the type of credential to work towards, whether to stay in foster care when they reach the age of majority, and whether to participate in extended services, such as independent living programs. They must also navigate multiple complex service systems having different and often conflicting requirements (Osgood et al., 2005). Qualitative studies indicate that transition-aged youth want more autonomy to make these decisions, which is normative for this age group, and yet they need continued scaffolding by adults in order to make informed decisions (Quest et al., 2012; Osgood et al., 2005). One qualitative study showed that transition-aged youth in foster care

struggle with the decision to emancipate from foster care, partly because the services provided are perceived as inadequate or as stigmatizing to them and their biological families (Quest et al. 2012). They struggle with the decision to stay in high school and which credential to work towards given school instability and accompanying hardships, such as when credits do not transfer from one school to another (Quest et al., 2012). Service providers, including caseworkers, play a role in these decisions and can be important especially during transition points in the life of a youth in foster care (Hass, Allen & Amoah, 2014). Often youth of transition-age have abrupt cutoffs of support from family and social services (Greenen & Powers, 2007), and caseworkers may be best positioned to inform youth about the costs and benefits of a particular service ending or of opportunities for a new service given their interactions with multiple service providers and adults in a youth's life.

### **Association of Youth-Caseworker Relationship with Academic Resilience**

These studies add to the dearth of literature on the influence of caseworkers on positive academic outcomes for youth in foster care. Specifically, study 1 showed that positive youth-caseworker relationship quality was related to greater emotional, behavioral, and cognitive school engagement for preadolescents and adolescents in foster care, controlling for personal and contextual factors. Study 2 showed that caseworker helpfulness with meeting youth goals of their transition plan was associated with increased probability of high school completion in bivariate analysis and was related to receipt of a regular diploma versus alternatives (modified diploma or GED) controlling for personal and contextual factors. Numerous studies have shown the protective benefits of school engagement (Bender, 2012; Cheung et al., 2017; Conn et al., 2014; Hershberger & Jones, 2018; Khambati, Mahedy, Heron, & Emond, 2018; Mihalec-Adkins & Cooley, 2019; Oshri et al., 2018; Pears et al., 2013; Snyder & Smith, 2015; Williams & Nelson-Gardell, 2012) and high school completion (Pecora et al., 2003; Smith, Ireland, Elwyn, & Thornberry, 2013), and the added benefits of receiving a regular diploma versus alternatives (Grubb, 1999; National Center on Education Statistics, 2003; Smith, 2003). Current findings suggest that caseworkers can support these resilience processes to set youth in foster care on a positive life trajectory.

These findings are congruent with studies showing that the quality of relationships with service providers, including caseworkers, can impact academic outcomes (Tillbury et al., 2014; Ungar et al., 2013). It is also consistent with qualitative studies detailing the ways in which youth

in foster care benefit from the emotional support and instrumental support that come with positive youth-caseworker relationships (Harker et al., 2004; Pinkney & Walker, 2020; Rutman & Hubberstey, 2018). More research is needed to uncover the specific and nuanced ways that positive youth-caseworker relationships lead to improved academic outcomes. Findings from the Federal Child and Family Services Review, a state monitoring system for child welfare program alignment with federal requirements (Children's Bureau, 2003), showed that the frequency and quality of caseworker visits with youth and families was related to caseworker assessment of risk and needs, parent involvement in case-planning, service provision, and youth outcomes. A report by the Child Welfare Capacity Building Collaborative (CWCBC; 2017) used these findings to generate a theoretical model linking quality interactions between youth and caseworkers to trusting relationships, improved caseworker assessment of risk and needs, joint development of case plans, shared understanding of progress towards goals, and improved youth and family engagement and empowerment. In turn safety, permanency, and well-being outcomes improve (CWCBC; 2017).

Following this theory, when caseworkers listen, respond to the needs and problems of youth, and provide instrumental support it may lead to better assessments and greater levels of trust in the relationship. Trust has been hypothesized as a key factor for children and youth in foster care to communicate their needs to adults (Pinkney, 2018). Caseworkers may then become more aware of educational needs and can link youth with available services. Caseworkers may also advocate for youth and they may communicate with caregivers or teachers about what the youth needs. Caseworkers may also acknowledge and encourage academic achievement directly to the youth. Qualitative research indicates that youth in foster care feel supported in their educational success when caseworkers show a genuine interest in their education (Harker et al., 2004). Finally, caseworkers may act as institutional agents by improving educational supports in foster home placements (e.g. link foster parents to trainings, ensure that moves are in the best interest of education, advocating for youth needs), or enabling access to learning supports, such as tutoring or permissions and funds for extracurricular activities. In the current studies, caseworker responsiveness to needs was positively related to greater school engagement among preadolescents and adolescents and was related to extracurricular participation among transition-aged youth. In turn, school engagement and extracurricular activity participation is related to

academic achievement, including high school completion in the current studies and in other studies (Khambati et al., 2018; White et al., 2018).

The current studies did not find a significant association between change of caseworker and academic outcomes. This finding is inconsistent with theory (Pinkney, 2018) and some studies showing an interruption in the quality of services and relationships with youth and families when caseworkers change (GAO, 2003; Zlotnik, 2011). Again, one reason for null findings could be that different youth experience a change in caseworker in different ways. In qualitative studies, a change of caseworker lead to loss of trust by some youth while a few others reported a welcomed change that resulted in increased communication or a more involved caseworker (Bell, 2002; Strolin-Goltzman et al., 2010). This suggests that stability in and of itself may not influence youth outcomes and other factors must be jointly considered. Indeed, study 2 revealed that time with current caseworker, not caseworker change, was related to increased probability of receiving a regular diploma versus an alternative credential when other personal and contextual factors were controlled in multivariate analysis. Other factors to consider may be the timing of a caseworker change in the life of a youth. It could also be that change of caseworker has a differential impact on youth with more risk. Additionally, it could be that caseworker change has a stronger direct influence on youth outcomes in other domains, such as social or behavioral domains.

### **Caseworker Differential Impact by Level of Risk**

The theory of differential impact helps to explain why some youth in foster care do well in one or more outcome domain and others do not. Ungar (2018) describes three principles of differential impact theory. First, environments cause individuals to adapt. If meaningful supports and services are provided to youth who experience adversity, they are more likely to change and adapt in positive ways. Second, the impact of an intervention (e.g. foster care) will depend on the interaction of risk level (e.g. high posttraumatic symptoms or special education) and resource level (e.g. positive youth-caseworker relationship or caseworker helpfulness with transition plan). Third, more complex adversity requires more complex supports and services to nurture resilience (Ungar, 2018). Current studies support Ungar's theory: youth-caseworker relationships had a differential impact on academic outcomes of youth in foster care with different levels and different types of risk. High posttraumatic symptoms and special education were examined as indicators of increased risk.

***Posttraumatic symptoms.*** Youth in foster care are at risk for posttraumatic symptoms and other mental health challenges for a host of reasons, such as maltreatment, exposure to violence, and placement in foster care (Heneghan et al., 2013; Kolko et al., 2010; McMillen et al., 2005; Turner, Finkelhor, & Ormrod, 2006). Studies have documented substantial variation in the prevalence of clinical posttraumatic symptoms among youth in foster care. For example, a study of youth aged 8-14 years investigated by child welfare found that about 12% had clinically significant posttraumatic symptoms as measured by the Trauma Symptom Checklist for Children and the prevalence was 19% among those placed in foster care (Kolko et al., 2010). The authors noted that this prevalence was lower than other studies of at-risk populations which range from 15%-64% but higher than the general population. They also found children and adolescents had different correlates of elevated symptoms (Kolko et al., 2010).

The current studies used the Child Report of Posttraumatic Symptoms, which has been normed with youth who were incarcerated or had an incarcerated parent, where 30-40% exceeded the clinical cutoff of 19 (Arditti & Savla, 2015; Bockneck, Sanderson, & Britner, 2008; Perkins et al., 2016). In study 1, the prevalence of clinical symptoms across preadolescents and adolescents in foster care was 58% with youth of color and those receiving special education reporting more symptoms compared to their counterparts. In study 2, the prevalence of clinical symptoms was 33% among transition-aged youth in foster care but none of the examined factors were related to level of symptoms. Together these findings suggest that younger youth experience more posttraumatic symptoms. Kolko and colleagues (2010) also found that among 8-14-year-olds involved with child-welfare, younger youth were more likely to have clinical posttraumatic symptoms. Authors reasoned that preadolescents have not yet developed the cognitive and emotional coping mechanisms to understand their traumatic experiences and may also lack peer support, suggesting that preadolescents in foster care may not recognize their own needs and may be less able to articulate these needs to adults. The finding that youth of color and those in special education report more posttraumatic symptoms could be because these groups experience more cumulative traumas or more severe traumas due to systemic inequalities both before and during their foster care placement. For example, youth in foster care receiving special education experience more contextual risk factors than their counterparts, such as placement in group homes (Slayter, 2016), and youth of color in foster care are more likely to have experienced poverty and neighborhood disadvantage prior to foster care in addition to culturally

insensitive services while in foster care (Center for the Study of Social Policy, 2009; Font, Berger, & Slack, 2012).

The current studies indicated that higher posttraumatic symptoms were associated with lower levels of emotional and behavioral school engagement and a lower probability of regular diploma receipt versus alternative. This is in line with other studies showing an elevated risk of poor academic outcomes among youth in foster care with high posttraumatic symptoms or mental health challenges (Choice et al., 2001; Flynn et al., 2013; Goemans et al., 2018; Mihalec-Adkins & Cooley, 2019; Pears et al., 2013; Perzow et al., 2013; Shin, 2003; Threlfall et al., 2017). Researchers have posited that posttraumatic symptoms can negatively impact peer and teacher relationships at school, partly due to withdrawn and/or aggressive behavior (Threlfall et al., 2017). In turn youth may feel a lack of support and belonging in school and may be less motivated to engage in school engagement behaviors (Appleton, Christenson, & Furlong, 2008). Indeed, posttraumatic symptoms have been associated with externalizing behaviors in school and more frequent suspensions (Gellman & DeLucia-Waack, 2006; Lipschitz et al., 2000; Saigh, Yasik, Oberfield, Halamandaris, & McHugh, 2002). Older adolescents with higher posttraumatic symptoms have been found to have more negative attitudes toward their school and teachers (McGill et al., 2014) and are more likely to have negative beliefs about the future (Allwood, Esposito-Smythers, Swenson, & Spirito, 2014). These issues may manifest as difficulties in developing and maintaining relationships with peers and teachers (Haight et al., 2013).

In terms of high school completion with an alternative credential, it could be that youth with higher posttraumatic symptoms are being perceived by adults as less able to meet the requirements of a regular diploma. Studies also show that youth with more mental health challenges experience more placement instability (Barth et al., 2007; Oosterman et al., 2007) which may correspond to more school instability, possibly interrupting academic progress and transfer of credits. Both of these possibilities may lead adults in the school system and child welfare system to encourage youth to work towards alternative credentials (Quest et al., 2012).

Supporting differential impact theory, study 1 indicated that youth with more resources (i.e. higher youth-caseworker relationship quality) and lower risk (i.e. lower posttraumatic symptoms) had the greatest levels of emotional school engagement while youth with higher risk had lower school engagement levels at both high and low resource level. Emotional school engagement is relevant to both academic work and the social aspect of school, and qualitative

research shows this dimension to be particularly impacted by experiences of maltreatment (Frederick & Goddard, 2009). Caseworker emotional and instrumental support may be adequate for youth with fewer posttraumatic symptoms to facilitate coping with traumatic experiences and enabling them to be perceived more positively by peers and teachers at school. Caseworkers may be unaware of the higher posttraumatic symptoms faced by some youth they serve, or they may misinterpret their symptoms. Another likely reason higher caseworker relationship quality was not associated with improved emotional school engagement among the high-risk youth is that such youth have more complex needs that require more complex resources to facilitate positive outcomes. It could be that caseworkers lack the time and resources to thoroughly assess youth or it could be that adequate or appropriate services may not be accessible, an issue discussed further in a later section.

***Special Education.*** Researchers estimate that 40%-47% of youth in foster care experience the additional risk factor of having one or more mental or physical disabilities, indicated by receipt of special education services (Geenen & Powers, 2006; Slayter, 2016; Westat, Inc., 1991). Study 1 indicated that 32% of preadolescent and adolescent youth received special education, and 60% of transition-aged youth received special education in study 2 because the original study purposely recruited youth in foster care who were also receiving special education.

Youth with disabilities are more likely to experience maltreatment (Vig & Kaminer, 2002), shared contextual risk factors, such as poverty, increase the risk of both maltreatment and disability (Vig & Kaminer, 2002), and compared to the general population, children in foster care are more likely to be placed in special education (Seyfried et al., 2000; Trout et al., 2008). Boys and youth of color in foster care are even more likely to be placed in special education (Slayter, 2016), which the current studies also found, and is deserving of further study to determine whether more causes of disability are experienced by boys and youth of color, or if they are subject to systemic bias in child welfare placement, diagnosis, and/or tracking by school systems.

In general, youth who receive special education are more likely to dropout or earn an alternative credential (Almond et al., 2017). Youth in foster care with disabilities are at even greater disadvantage regarding academic achievement, stability, well-being, and transition outcomes compared to youth in foster care without these experiences (Ancil, McCubbin,

O'Brien, Pecora, & Anderson-Harumi, 2007; Clemens, et al., 2017; Geenen & Powers, 2006; Slayter, 2016; Smithgall et al., 2005). Compared to the general population of youth in special education, youth in foster care who receive special education are more likely to have a primary diagnosis of emotional disturbance and less likely to have a learning disability as their primary diagnosis (Hill & Lightfoot, 2018; LaLibertre & Crudo, 2013). Youth with emotional disturbance are more likely to engage in risk behaviors like substance abuse, are more likely to have unplanned pregnancy at a young age and are more likely to experience communication problems in social relationships (Osgood, 2005).

The current studies had mixed findings regarding academic outcomes of youth in foster care who received special education. In study 1, special education receipt was not related to any of the three types of school engagement (i.e. emotional, behavioral, cognitive). In study 2, special education receipt was not related to high school completion versus non-completion in bivariate analysis. Though, when controlling for other factors, special education receipt was weakly related to higher probability of high school completion with any type of credential. However, youth who received special education had a lower probability of obtaining a regular diploma versus alternative (i.e. modified diploma or GED). This is similar to findings in other studies of youth in foster care who also receive special education (e.g. Clemens, et al., 2016).

Taken together, these findings suggest that a lack of individual investment and involvement in school is not the reason why youth in special education have poor achievement outcomes. Indeed, study 2 did not find that transition-aged youth in special education differed in their participation in extracurricular activities, which is closely related to school engagement. It is likely that youth in special education experience contextual risks and barriers to academic achievement. For example, a qualitative study of seven transition-aged youth in foster care who were also receiving special education found that most youth had aspirations for college yet experienced educational barriers, such as low teacher expectations and being tracked towards a modified diploma which 4-year institutions may not accept (Quest et al., 2012). Still others were placed in alternative schools which did not provide them with a curriculum that would prepare them for college (Quest et al., 2012).

In support of differential impact theory, study 2 found that transition-aged youth with higher resource (i.e. high caseworker help) and lower risk (i.e. not receiving special education) had the greatest probability of a positive outcome (i.e. receiving a regular high school diploma

verses alternative credential) though the probability was similar for low-risk youth with low resource, suggesting that caseworkers play a minimal role in high school completion for youth who were not receiving special education. Youth with more risk (i.e. receiving special education) and with lower resource (i.e. low caseworker help) had the lowest probability of a positive outcome (i.e. receiving a regular diploma) but caseworker help was associated with a greater probability of positive outcome for the high-risk group, suggesting that caseworkers can make a difference for youth receiving special education. Caseworkers may be instrumental in connecting youth in special education to available services both during their foster care stay and during their transition out of foster care. Results indicated that youth in special education had their current caseworker for a longer period of time compared to their counterparts, perhaps because youth with disabilities spend more time in the foster care system compared to their counterparts (Slayter, 2016). In turn, more years with current caseworker was related to youth perceived caseworker helpfulness with transition plan. Caseworkers may also encourage and communicate with youth about the benefits of a regular diploma versus alternatives. However, at the same level of caseworker help, the probability of regular diploma receipt was still much lower among youth in special education compared to youth not in special education, suggesting that more resources and supports are needed for youth in special education to catch-up to their counterparts.

Taken together, these studies suggest that the type of risk that youth in foster care experience is important to consider. In study 1, caseworkers had almost no impact on academic outcomes of youth with high posttraumatic symptoms while they appeared to improve outcomes for low-symptom youth. However, the opposite pattern emerged in study 2 such that caseworkers had a greater positive impact on academic outcomes of youth in special education and almost no impact on youth who were not receiving special education. Part of this difference could be that special education is more easily recognizable than posttraumatic symptoms because it is documented in school records and involves regular IEP meetings with caregivers. Disability has a relatively longer history of research and efforts to increase accessibility and services within child welfare and education systems for youth who have disabilities (Osgood et al., 2005). In contrast, trauma-informed research and service is still gaining traction (Griffin et al., 2011). This could mean that there simply is not an adequate supply of trauma-related services for caseworkers to connect youth with.

In addition to accommodations in the classroom, special education status is a gateway to a number of targeted education topics and services, such as reproductive health, substance abuse, anger management, conflict resolution, violence prevention, teen parenting, and transition planning (Osgood et al., 2005). Undoubtedly, youth with high posttraumatic symptoms would also benefit from these services, as might the whole of the child welfare population, yet eligibility requirements may be too strict to include them, or youth may not be adequately assessed. Attention to larger systems, including child welfare, education, mental health, and disability is necessary to understand the differential impact of youth-caseworker relationships on youth outcomes. In particular, the of lack resources, lack of trauma-informed practice, and lack of cross-system collaboration likely inhibits caseworker impact for some high-risk youth in foster care.

***Systems Influencing Caseworker Impact.*** An audit of the Oregon Child Welfare System (Richardson & Memmott, 2018) detailed numerous deficits that contribute to caseworker inability to meet youth needs, particularly high-risk youth. First, many caseworkers have high caseloads and report high demands and inadequate training and support, leading to a high rate of turnover. This results in relatively new and inexperienced caseworkers taking on complex cases, including youth with disabilities or mental health challenges. These poor working conditions, in combination with DHS mandate to place children immediately following removal and the growing lack of foster homes and residential facilities, can lead to caseworkers making hasty placement decisions with little to no consideration of a youth's mental and physical health or trauma experiences. Returning to caseload, when caseworkers have too many cases to manage, their effectiveness suffers. Overworked caseworkers have limited time to build relationships with youth and caregivers and to properly assess the needs of youth. The audit found that the mandated visitation frequency of once per month did not always occur and few youth in foster care considered their caseworker to be an adult they could turn to with needs or questions (Richardson & Memmott, 2018).

The education system may also inhibit caseworker impact. Study 2 demonstrated that youth who had been at their current school for a longer period had a higher probability of high school completion versus non-completion. Other studies also show that school stability is particularly important for youth in foster care during high school (Clemens et al., 2016). Youth in foster care revealed in a qualitative study that sometimes credits do not transfer from one

school to the next, which negatively impacted their motivation to continue high school (Quest et al., 2012). A lack of collaboration across schools contributes to this problem. Another aspect of the education system is the tendency to track youth in foster care in general, and especially those with mental health problems or in special education, into earning alternative credentials, a practice that begins as early as middle school (Elmore, 2009; Johnson et al., 2007). While educators may have good intentions, for example making high school completion more attainable for at-risk youth, a lack of research on the long-term educational and employment outcomes associated with the modified diploma is concerning (Johnson et al., 2007), and there is a documented disadvantage of receiving a GED (Grubb, 1999; National Center on Education Statistics, 2003; Smith, 2003).

A lack of trauma-informed practice in education and mental health systems is another concern. Regarding mental health practice, youth with posttraumatic symptoms may be misdiagnosed with behavioral disorders, and disabilities are sometimes misdiagnosed as a mental health issue (Griffin et al., 2011; Haight et al., 2013). Misdiagnosis means that youth are unlikely to receive appropriate treatment and their needs remain unmet.

In education systems, youth who have experienced trauma do not necessarily meet any of the eligibility requirements for special education services. Many teachers may view such youth as defiant, disruptive, and unwilling to learn, rather than as youth who have experienced trauma and who are in need of accommodations and supports. Even when youth do qualify for special education services, there are still many who do not access these services and youth with emotional disturbance are reported by educators to have the lowest rate of use (Osgood et al., 2005). One reason could be that disability services are provided across a variety of complex systems including education, health, child welfare, and employment. These systems can have incompatible eligibility requirements and sometimes complex processes for establishing eligibility. High cost, inaccessibility, inadequate services to meet demand, and a lack of coordination across systems are additional barriers to service use. In particular, the lack of coordination across youth-oriented services in schools or child welfare and adult-oriented services in the community makes the transition to adulthood more difficult for youth with disabilities (Osgood et al., 2005).

## Implications

The current findings have implications for the study of resilience as a complex process involving the interaction of personal and contextual risks and resources, supporting the need for an ecological approach (Liu et al., 2017; Titterton et al., 2017; Ungar, 2011; Ungar et al., 2013). Similarly, researchers should examine the strengths and resources of at-risk populations, such as positive relationships, in order to fully understand resilience processes. Finally, the role of service providers, including caseworkers, in youth outcomes warrants further investigation.

These studies demonstrate that youth in foster care with high posttraumatic symptoms and/or receiving special education are at increased risk for negative academic outcomes and need more supports. There are several implications for child welfare, education, and mental health practice and policy. Appropriate assessment of youth should include attention to risk, both the level and the type of risk, as well as the personal and contextual resources and strengths of youth. When caseworkers and teachers focus on deficits, youth recognize this and perceive such people as unhelpful (Quest, et al. 2012). Further, evidence suggests a focus on strengths and positive expectations characterize “turnaround people” who support at-risk youth to make positive changes in their lives, such as pursuit of higher education (Benard, 2004; Hass et al., 2014). In their research of child welfare practice, Lou and colleagues (2008) found that some of the existing well-being frameworks were too focused on deficits or did not account for the youth’s personal and contextual strengths and resources that facilitate coping with adversity (Lout et al., 2008). In a similar vein, Elmore (2009) argues that the institution of school uses test scores and grades to actively sort youth into distinct class levels and “tracks” based on the idea that they have an innate aptitude for schoolwork, thus ignoring not only the impact of trauma, but also ignoring youth strengths in other areas and the potential for improvement given the right supports. Tracking is reflected in the rise of modified diplomas and encouragement of youth receiving special education to seek alternative credentials (Johnson et al., 2007; Quest et al., 2012).

All systems that serve youth in foster care should be trauma-informed, given the high prevalence of clinical posttraumatic symptoms reported in the current studies. Griffin and colleagues (2011) argue that child welfare agencies should adopt policies that require the measurement of traumatic events and posttraumatic symptoms during screenings and assessments, require mental health professionals to address the impact of trauma before

diagnosis of mental illness, and require evidence-based, trauma-focused treatment to begin when a youth demonstrates posttraumatic symptoms (Griffin et al., 2011). Effective implementation of such policies would require caseworkers to be adequately trained and supported and to collaborate with mental health professionals.

These studies demonstrated the potential of positive youth-caseworker relationships to support positive academic outcomes among youth in foster care. This implies that the quality of interactions between youth and caseworkers matters and state monitoring of the frequency and quality of caseworker visitations with youth is a step in the right direction (Children's Bureau, 2003). To ensure high quality interactions, the Child Welfare Capacity Building Collaborative (2017) suggests that child welfare administrators should set standards and policies for quality contacts, build agency capacity, review performance, and introduce strategies for improvement. Considering the serious challenges of working within the Oregon Child Welfare system (Richardson & Memmott, 2018), these findings are a testament to the resilience of caseworkers and their ability to find a way to positively impact the lives of the youth they serve.

### **Limitations**

Current findings should be interpreted considering limitations. First, these studies are correlational and the direction of causation is not clear. It could be that youth who are doing better in school are more likely to have positive perceptions of their caseworkers, or perhaps caseworkers perceive such youth more positively and thus are more willing to provide support. Longitudinal analysis and experimental studies of interventions aimed at youth-caseworker relationship enhancement would help clarify the direction of causation. Another limitation is some relatively weak-moderate correlations in the current studies, which may be stronger for certain subgroups of youth in foster care. A third limitation is the measurement of youth experiences with their caseworker. Relatively few items were used, and some constructs were measured with only one item. However, some studies demonstrate that single-item measures have the same predictive ability as multiple-item measures when measuring constructs like "customer satisfaction" (Ittner & Larker, 1998; Sarstedt & Wilczynski, 2009; Van doorn et al, 2013) and "quality of life" (Hyland & Soderger, 1996). Another study demonstrated that a single-item measure of self-efficacy had the same validity as a multiple-item measure (Hoeppner et al., 2012). The current measures of youth-caseworker relationship were also lacking specific questions about trust, help with education, and conflict and are important to confirm theories

herein. Finally, several contextual factors were not examined and may influence youth-caseworker relationships and/or academic outcomes, including caseworker skills or experience, child welfare agency characteristics, youth placement type, pre-foster care experiences, resources available to caregivers, school context, and other youth relationships with caregivers, biological family, peers, and adults at school.

### **Strengths**

Despite limitations, the current studies have several strengths. First, the current studies examined youth-caseworker relationships across three developmental periods (i.e. preadolescence, adolescence, and transition to adulthood). This allowed for examination of relevant academic outcomes for youth in different stages of development as well as an exploration of how caseworkers may be perceived differently by youth as they age or how they may serve different roles during different stages of development. The current studies also focused on positive outcomes and included an examination of personal and contextual strengths and resources that contribute to resilience while previous studies have tended to focus on only risk factors. Finally, the current studies centralized youth voices, which researchers increasingly consider to be essential for both youth empowerment and improvement of systems that serve youth (Liebmann & Madden, 2010; Nybell, 2013).

### **Future directions**

Several future directions would improve and build upon the current work. Youth in foster care are a heterogeneous population with a diversity of experiences and having a variety of personal and contextual risks and resources. Further, youth experience the same systems and caseworker characteristics differently (Stabler et al., 2019; Ungar et al., 2013). To better understand this heterogeneity and design effective interventions, person-centered analysis and subpopulation analysis are needed (Goemans et al., 2018). An intersectional examination of youth characteristics may also clarify which youth experience the most educational risk (Cole, 2009; Kothari et al., 2018). Examining the timing of school changes and caseworker changes may lend clarity on how instability affects youth in foster care. Finally, analysis of youth-caseworker relationships over time would aid in the understanding of youth experiences and impact on youth outcomes.

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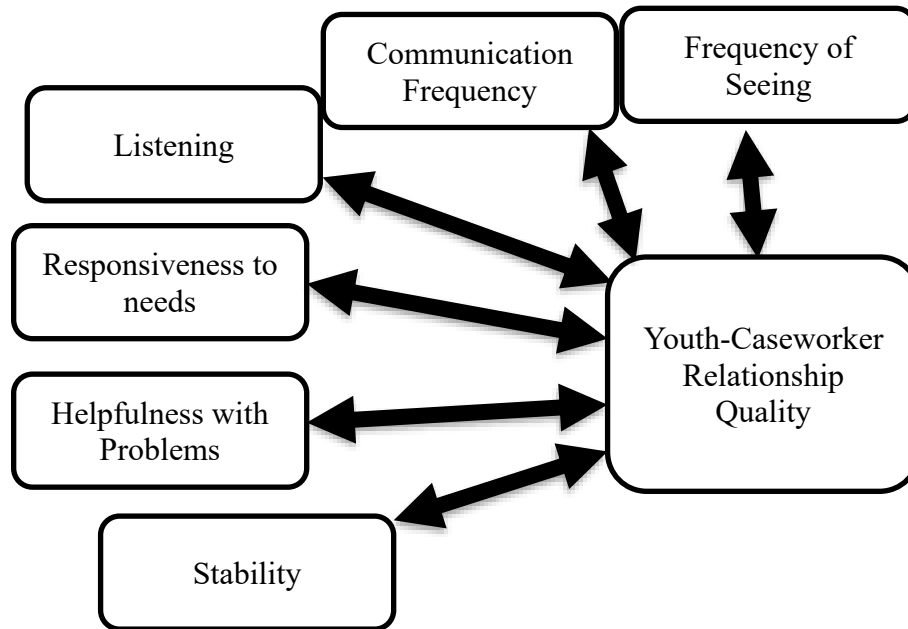
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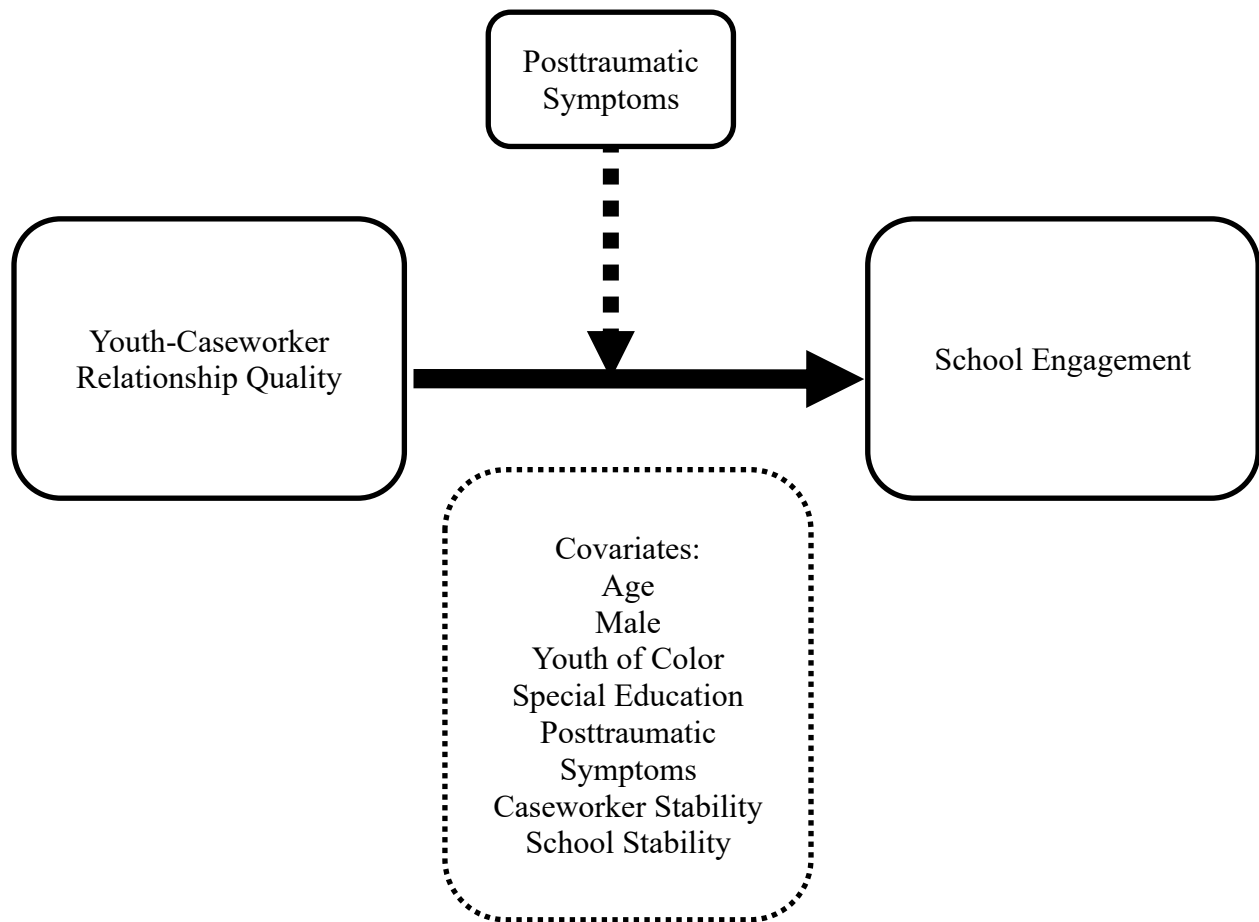
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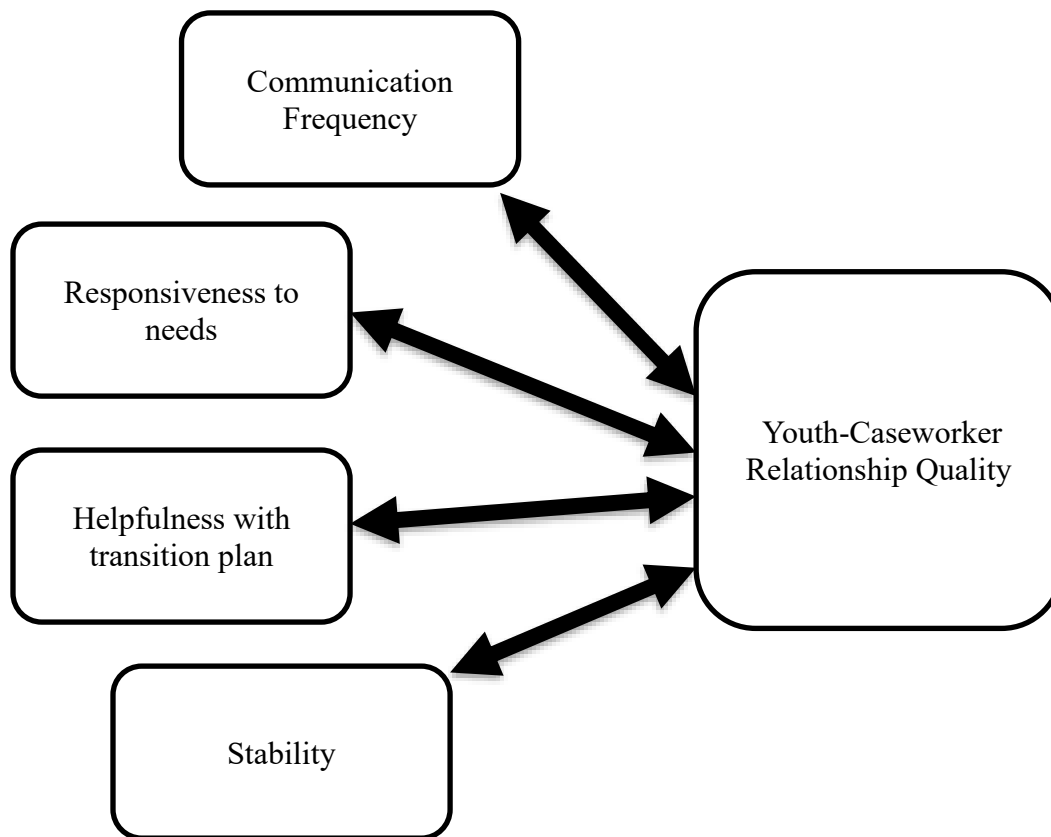
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**APPENDIX A: CONCEPTUAL MODEL FOR STUDY 1 RESEARCH QUESTION 1**

**APPENDIX B: CONCEPTUAL MODEL FOR STUDY 1 RESEARCH QUESTIONS 2 & 3**

**APPENDIX C: CONCEPTUAL MODEL FOR STUDY 2 RESEARCH QUESTION 1**

**APPENDIX D: CONCEPTUAL MODEL FOR STUDY 2 RESEARCH QUESTIONS 2 & 3**