RELATIONS BETWEEN TRAUMA SYMPTOMS, RELATIONSHIP QUALITY, AND FUTURE EXPECTATIONS FOR YOUTH IN THE CHILD WELFARE SYSTEM

by

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(Under the Direction of Anne Shaffer and Thania Galvan)

ABSTRACT

The way in which youth conceptualize their future and form beliefs related to what they can attain or achieve has important implications for later outcomes. For youth in the child welfare system that endorse varying levels of trauma severity, it is unclear what may buffer its impact on their future expectations. This study examined youths' perceived relationship quality with their primary caregiver as well as their peers to explore whether they may have a moderating influence on the relationship between youth trauma symptoms and their expectations for the future. Our nationally representative sample of child welfare-involved youth has a robust sample size (N = 928). Additionally, it is unique in its approach of highlighting the perceptions that adolescent youth have regarding their self-rated likelihood of meeting milestones related to future prosperity. Results confirmed a negative correlation between youth trauma symptoms and future expectations and identified that while youths' relationship quality with their primary caregiver and peers is significantly related to youth trauma symptoms and future expectations, those contextual social supports do not moderate that relationship. The findings support the need to continue examining contextual factors that may play a role in strengthening or diminishing the future expectations of youth at higher risk for developing symptoms of trauma.

INDEX WORDS: trauma; parent-child relationship; adolescent; child maltreatment; future expectations; future orientation

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CHAPTER 1

INTRODUCTION

Exposure to the child welfare system represents a major risk to the psychological well-being of youth, particularly in terms of trauma-related stress. Due to the experiences that precipitate involvement with child welfare services as well as the challenges inherent in the child welfare system, these youth are more susceptible to developing trauma symptoms and may endure long-lasting negative effects on their attitudes, behavior, and other aspects of functioning (Sciaraffa, Zeanah, & Zeanah, 2018; Zeanah & Humphreys, 2018). Specifically, a domain that may be adversely impacted by traumatic experiences and symptoms is how youth frame their expectations for the future. Youths' orientation to the future is described through processes of motivation (i.e., youths' future interests), planning (i.e., how youth plan to fulfill their interests in a future context), and evaluation (i.e., the extent to which youths' interests are expected to be fulfilled; Nurmi, 1991). Adolescents who maintain positive expectations for their future have been shown to have better health (e.g., decreased sexual risk-taking behaviors, lower involvement in violence, and reduced drug use) and vocational (e.g., active engagement in career exploration activities) outcomes (Borowsky, Ireland, & Resnick, 2009; Gushue et al., 2006; Seginer, 2009). While it is widely understood that youth involved in the welfare system may experience symptoms of trauma, how this may be related to their future-oriented cognitions is less clear. This study, thus, aims to examine the relations between trauma symptoms and future expectations in a nationally representative study of child welfare-involved youth (i.e., NSCAW-II) and to identify factors in the social context that may buffer these relations.

Trauma in the Child Welfare System

A primary function of the child welfare system is to investigate claims of suspected child abuse and neglect. Across all child-serving systems (e.g., education and healthcare systems), the child welfare system likely reaches the largest number of youths with a trauma history (Ko et al., 2008). On account of this, the population of child welfare-involved youth are at risk for elevated trauma symptoms (Gallitto et al., 2017; Roberts et al., 2018). Issues like abuse and neglect that jeopardize youth safety and well-being often precipitate the youth encountering the child welfare system. Prior literature utilizing the nationally representative dataset for the current study indicates over one third of youth within the welfare system (34.4%) experienced three or more adverse childhood experiences (ACEs; Garcia et al., 2017). ACEs were originally defined as "childhood abuse and household dysfunction" as these factors were shown to be predictive of negative physical and mental health risk factors in previous research (Felitti et al., 1998). The presence of ACEs for youth are associated with higher levels of traumatic symptoms (Goldenson, Kitollari, & Lehman, 2021), with greater exposure to cumulative adversity also being linked with greater trauma-related distress (Racine et al., 2020; Suliman et al., 2009). Relatedly, a high proportion of child welfare-involved youth have experienced maltreatment, a risk that increases consistently as the number of reports grow (Kim & Drake, 2019). However, it is important to recognize that experiencing one or more adverse childhood experiences (ACEs) does not equate to the development of trauma symptoms.

Traumatic symptoms related to the experience of childhood adversity, including maltreatment, have widespread implications for youth development. One way this has been observed is through harmful effects on youths' cognitive schema of themselves, people around them, and the world (McKay et al., 2021). In a national sample of adolescents followed into

adulthood, maltreatment (i.e., categorized as supervision neglect, physical neglect, physical assault, and contact sexual abuse) was associated with an increased likelihood of regular alcohol use and binge drinking during adolescence. Additionally, Hussey and colleagues (2006) indicated a history of supervision neglect, physical neglect, and contact sexual abuse among youth was linked with adolescent violent behavior. A "review of reviews" also identified several factors associated with child maltreatment including increased risk of psychopathology, obesity, smoking, and participating in high-risk sexual behaviors from a decade of child abuse and neglect research spanning 6000 original papers (Lang et al., 2020). In sum, child maltreatment and its associated risks have well-documented, negative implications for youths' adjustment and functioning.

While ultimately developed to promote youth safety and well-being, the child welfare system itself can introduce instability and adversity for involved youth. Due to limited research, it is unclear whether involvement in the child welfare system itself is associated with the development, or exacerbation, of youth trauma symptoms. Further evaluation of this is necessary due to stressors that can accrue once in the child welfare system, like chronic placement instability which can undermine youths' well-being (Konijn et al., 2019). To this end, one recent study sought to understand the independent consequences of contact with child protective services on youth delinquency, substance use, and academic and mental health outcomes, and found worse outcomes across all domains including internalizing and externalizing behaviors and school suspensions or expulsions (Evangelist, Thomas, & Waldfogel, 2023). Existing qualitative studies have also referenced the harm associated with foster care involvement, where youth have retroactively reported on their experiences. Specifically, Masuda and Helm (2024) identified system involvement as playing a direct role in exacerbating youths' existing trauma

and introducing additional forms of trauma while in foster care. In another study, less than half of youth sampled endorsed having a close relationship with an adult where they felt comfortable confiding in them, and approximately one-third reported instances of maltreatment while in foster care (Pecora et al., 2006). Similarly, additional literature has demonstrated the presence of systems-based trauma (i.e., trauma that has onset from exposure to organized systems), for child welfare-involved youth (Riebschleger, Day & Damashek, 2015; Strolin-Goltzman, Kollar, & Trinkle, 2010; Jones, Bowen, & Ball, 2018; Billoups, 2021).

Additional literature suggests child welfare-involved youth exposed to multiple forms of trauma experience higher clinical levels of posttraumatic stress (Collin-Vézina et al., 2011). While some youth who experienced trauma will meet diagnostic criteria for PTSD with significant distress and impairment, subclinical levels of trauma symptoms can also be developmentally meaningful. Specifically, youth are not adequately assessed for the impact of low-magnitude stressors, as greater attention is placed on extreme stressors consistent with Criterion A trauma exposure (Copeland et al., 2010). Therein lies the problem that subclinical symptoms left unaddressed can worsen and become more treatment resistant. In a study examining differential treatment responses of individuals with varying levels of trauma symptoms, findings indicated that individuals with subclinical symptoms reported similar levels of distress and impairment to those meeting criteria and demonstrated more comprehensive and rapid symptom reduction following treatment intervention (Korte et al., 2016).

It is also beneficial to ensure youth endorsing varying levels of trauma severity are included in research because of ongoing debates about limitations of the current diagnostic classification system (Scheeringa et al., 2006, Scheeringa et al., 2011). One way this has been addressed is by Bessel Van der Kolk (2009), who advocated for the introduction of

developmental trauma disorder (DTD), to describe chronically traumatized youth who experienced ongoing danger, maltreatment, and inadequate caregiving systems in their development. Specifically, DTD is proposed as a complex PTSD syndrome for youth and is aimed to extend the way mental health providers conceptualize and treat youth with trauma. DTD is shown to be uniquely associated with traumatic emotional abuse and caregiver separation which is especially relevant for child welfare-involved youth (Spinazzola, Van der Kolk, & Ford, 2021). Another reason why youth endorsing a range of trauma symptoms should be examined is that underreporting of trauma symptoms was found to be prevalent in a study examining the frequency of both clinical and subclinical PTSD in at-risk youth (Miele & O'Brien, 2010). Similarly, adolescents in family-based (i.e., foster and kinship) care were shown to systematically under-report their mental health difficulties when surveyed in population studies (Tarren-Sweeney, 2019). While the impact of trauma symptoms on youth development has been clearly articulated in the literature, how this relates to youths' expectations for the future is less clear.

Implications of Adversity on Future Expectations

Youths' conceptualization of their future and beliefs related to what they can attain or achieve are important. A person's ability to anticipate future events, attribute personal meaning, and engage in behaviors consistent with their expectations, provides a basis for one's orientation to the future (Nurmi, 1991). In this paper, we have used the term "future expectations" given its specificity; however, "future orientation" is a broader term often used interchangeably and will be referenced here if research cited preferred it. Previous research has sought to understand whether youths' future expectations are predictive of outcomes later in life. Holding negatively oriented beliefs appears to coincide with deleterious outcomes (Gilman, Dooley, & Florell, 2006). In

contrast, positive future expectations predict enhanced socioemotional adjustment, internal locus of control (i.e., the belief that individuals have control over their own actions and outcomes) and reduced distress (Wyman et al., 1993). While other contexts (i.e., negative upbringing conditions, lower socioeconomic status) document associations between factors of adversity and negative future expectations, less is known about the links between trauma symptoms and future expectations, particularly among at-risk youth (Halleröd, 2011; Nguyen et al., 2012).

Examining future expectations among youth entering adolescence is particularly salient, given adolescence is marked by a period of identity development and a desire for greater autonomy (Branje et al., 2021). In a longitudinal study of adolescents, youths' initial endorsement of hope was predictive of academic achievement even two years later (Marques, Pais-Ribeiro, & Lopez, 2011). Research has also indicated that adolescents themselves develop more positively oriented expectations for the future with age (Nurmi, 1991). However, adolescents who have experienced adverse childhood experiences may have worsened expectations regarding their potential for future success (Thompson et al., 2012), hold more cognitions of hopelessness (Sipsma et al., 2015), and endorse feeling more pessimistic toward their future outlook (Herrenkohl, Lee, & Hawkins, 2012).

Future expectations among youth have been measured in different ways. Studies have predominantly examined participant's future expectations via self-report surveys. In the context of adversity, open-ended items assessing hope for the future (i.e., "In the future, I hope...") received largely optimistic responses while general expectations of the future (i.e., "For me, the future...") received more pessimistic responses in a sample of at-risk, unhoused youth in Brazil (Raffaelli & Koller, 2005). Another study of youth endorsing high scores on a measure of future expectations found that being hopeful about one's future adult roles predicts positive

developmental outcomes, like the ability to self-regulate (e.g., manage goals). These results demonstrate that positive future orientation is meaningful toward translating goals for the future into present behaviors (Schmid, Phelps, & Lerner, 2011).

Previous research using the NSCAW datasets have examined future expectations with a focus on future age, educational, and occupational expectations among adolescent participants aged 11-18. Findings demonstrated that more positive future expectations were associated with lower emotional and behavioral problems (Rajendran, 2008). Another study indicated that the interaction between physical neglect and positive future expectations had a negative impact wherein youth were at greater likelihood of being classified in a group with clinical levels of poor behavior (Merritt & Snyder, 2015). In 2018, Oshri and colleagues explored the developmental course of future orientation trajectories. From the three groups that emerged, findings indicated that youth at greater likelihood of attaining young adulthood developmental milestones (e.g., independent living skills, employment, higher weekly income) fell within the high persistent (i.e., high future orientation at baseline with minimal change over time) and low start/increasing (i.e., low levels of future orientation at baseline and positive change over time) trajectories. Furthermore, future orientation was shown to be a protective factor for youth with a history of maltreatment (Oshri et al., 2018). Given positive future expectations can be beneficial to vulnerable youth, it is important to identify contextual factors that can promote positive future expectations.

Contextual Social Supports

Youth are embedded in social systems that also influence how they develop. Bronfenbrenner's bioecological theory underscores the role of an individual's surrounding environments and contextual factors in their developmental outcomes (i.e., macro-, meso-, exo-,

and micro-systems; Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2007). While literature acknowledges that each of the four systems critically influence youth within the child welfare system (Davidson et al., 2019; Flynn, 2020; Richardson et al., 2018), less is known about the effects of interpersonal processes for these youth, particularly those who experience trauma symptoms. Social support and high relationship quality among peers and caregivers may be particularly salient for youth involved in the child welfare system. The beneficial outcomes associated with supportive parent-child relationships are well established in developmental psychology (e.g., Hair et al., 2008; Owens, 2022). In a national dataset (i.e., NSCAW-II), adolescents in foster care who had been exposed to violence, and perceived higher emotional security in their relationship with their caregivers, reported lower trauma symptoms (Rayburn, Withers, & McWey, 2017). In another child welfare-involved sample, youth reported on their perception of caregiver supportiveness, where greater caregiver support was linked to avoiding high-risk behavior, moving beyond "survival mode", and developing future goals. In contrast, youth that reported lower caregiver support faced negative implications for their feelings of belonging and self-worth (Storer et al., 2014).

For child welfare-involved youth, primary caregivers' involvement may also be unreliable, absent, or otherwise compromised due to situations where parental rights have been revoked or if a caregiver has been incarcerated. In a review of the developmental impact of parent-child separation, the effects on youths' social-emotional development, well-being, and mental health were found to be consistently negative, and more severe for prolonged separation or when coupled with other forms of victimization (Waddoups, Yoshikawa, & Strouf, 2019). In addition, another study found universally negative effects of separation from parents on youth, including neurological change from psychological trauma, physical and sexual abuse, neglect,

and poor peer relations, that did not differ by reason for separation (Crittenden & Spieker, 2023). Further research has identified that in the face of necessity, youths' removal from their home remains traumatic in nature, regardless of how inadequate parental care may have been (Ainsworth & Hansen, 2012).

Youth involved in the child welfare system are also more susceptible to experiencing placement instability following initial parent-child separation. Data from 48 states in the U.S. showed that 113,324 youth received foster care services in 2021 as outlined in the Child Maltreatment report collected through the National Child Abuse and Neglect Data System (NCANDS). Youth placed in foster care (i.e., with nonrelative and nonadoptive caregivers), typically experience recurring disruptions in living arrangements (Webster, Barth, & Needell, 2000; Wulczyn, Kogan, & Harden, 2003) that are linked to negative emotional and physical well-being over time (Villodas et al., 2016). Specifically, unanticipated placement changes for youth are commonly associated with complex trauma (Sankaran, Church, & Mitchell, 2018). Interestingly, for justice-involved youth, increased positive familial experiences in childhood were associated with more optimistic, and positive orientations toward the future, and found to be compensatory in that they offset the effect of ACEs (Mueller, Cavitt, & Carey, 2023). This finding underscores the relevance of examining whether high relationship quality among and caregivers may also afford advantages for at-risk youth in the child welfare system.

Peer relationship quality for youth involved in the child welfare system may also serve as a protective factor in the relationship between youths' endorsement of trauma symptoms and negative future expectations. Existing literature has identified positive associations among friendship and youths' reported satisfaction with life, especially in the context of peer victimization (Martin & Heubner, 2007; Martin, Huebner, & Valois, 2008). Relatedly, hopeful

thoughts tend to bolster positive feelings, and adolescents engaging in determined goal pursuit report more positive emotional states and well-being (Ciarrochi et al., 2015). Hope was cited as one of the positive emotional states, an orientation that is theorized to promote positive future expectations (Sun & Shek, 2012). Hershberger & Jones (2018) examined maltreated adolescents sampled from NSCAW-II and found that their perceptions of relationship quality with both parents and peers significantly predicted academic achievement, which has served as a positive predictor of employment and earnings in adulthood (Woessmann, 2016). This provides useful context into understanding how youths' relationship quality with peers may be related to future adaptive outcomes. Lastly, in a study of youth in the foster care system, separation from parents, siblings, and other family members were often viewed as traumatic losses (Herrick & Piccus, 2005). In the absence of familial contact, connection through friendship may be especially supportive.

The Current Study

The first aim of this study was to understand whether youths' self-reported trauma symptoms were related to their expectations for the future. Based on previous research, it was expected that youth trauma symptoms would be negatively correlated with youth reported expectations for their future educational and occupational attainment. The secondary aim of this study was to determine whether youths' perception of relationship quality with their primary caregiver and their peers may moderate the relationship between their experience of trauma symptoms and future expectations. It was expected that caregiver-youth relationship quality would buffer against the effect of trauma symptoms on future expectations such that high, positive levels of youth-reported relationship quality with their caregiver would attenuate the relations between youth trauma symptoms and expectations for the future. Similarly, I

hypothesized that high, positive levels of youth-reported relationship quality with peers would buffer the relations between youths' trauma symptoms and future expectations.

CHAPTER 2

METHOD

Sampling Procedures & **Data Collection**

The current study used secondary data analysis from the second installment of the National Survey of Child and Adolescent Well-Being (NSCAW-II). NSCAW-II is a nationally representative, longitudinal study that used a complex sampling design to examine the functioning, service needs, and service use of youth in contact with the United States child welfare system over a period of three years. The full sample includes 5,873 youth that came in contact with the child welfare system between March 2008 and September 2009. Youth ranged from birth to 17.5 years old at baseline. Sampled families from each participating CPS agency were contacted in line with relevant state or agency policies to invite them to participate in the study. Eligible participants completed face-to-face interviews at three time points (i.e., baseline, 18 months, 36 months) and information was collected from multiple informants (i.e., youth, youths' caregivers, youths' teachers, and youths' CPS caseworkers).

The current study utilized a subsample of youth participants from the NSCAW-II baseline dataset. Participants were retained in the sample regardless of whether claims were found to be substantiated or unsubstantiated. For the purposes of this study, youth needed to be at least 11 years old to ensure that they had provided data on all the key variables of interest. Additionally, youth who were not in school or home-schooled at baseline were excluded from analyses.

Measures

Trauma Symptoms

Trauma symptoms were assessed by the 10-item traumatic stress subscale of the Trauma Symptom Checklist for Children (TSCC; Briere, 1996). This measure assesses trauma symptoms that may develop following youths' experiences of distressing life events. For each item, youth were asked to report how often they experienced that symptom using a Likert-type scale (0 = never, to 3 = almost all of the time). Total scores were converted to standardized T-scores with higher scores indicating greater endorsement of trauma symptoms. This measure demonstrated good reliability in this sample ($\alpha = .88$).

Future Expectations

Youth self-reported their future expectations through a 6-item scale adapted from the Expectations about Employment, Education, and Life Span Inventory (Resnick et al., 1997) of the Adolescent Health Survey (Carolina Population Center, University of NC-Chapel Hill, 1998). Youth responded to questions related to what they thought would happen to them in the future on a Likert-type scale (1= no chance, to 5= it will happen). Specifically, youth were asked to estimate the perceived likelihood that they would live to be at least 35, graduate from high school, have a good job by age 30, be married by age 25, have children and raise a family when older, and have a child before age 18. For the purposes of this study, questions related to their perceived likelihood of “graduating high school", and “having a good job by age 30” were used as indicators of youths’ perceptions of future prosperity, with higher scores on each indicating a more positive future orientation. These two items were also extracted for analyses due to their hypothesized relation to youths’ academic and occupational motivations.

Youth Relationship with Caregiver

Youths' perception of the relationship quality with their primary caregiver was assessed using the Rochester Assessment Package for Schools (RAPS; Lynch & Cichetti, 1997). Youth responded to 12 items that measured their perceptions of emotional security, parental involvement in their lives, parental support of youth independence, and consistent rule setting and enforcement. Participants responded on a Likert-type scale to indicate how true each statement was (1= not at all true, to 4= very true). Items were summed to create a total score with higher scores indicating a better perceived relationship quality. This measure demonstrated good reliability in this sample ($\alpha = .86$).

Youth Relationship with Peers

Youth reported on their overall satisfaction with peer relationships using the 16-item Loneliness and Social Dissatisfaction Questionnaire for Young Children (Asher & Wheeler, 1985). Notably, NSCAW-II opted to condense the original 24 items by removing eight "filler" items included to help youth feel more open and relaxed (e.g., "I like to read"). Responses were obtained via a Likert-type scale where youth provided their rating of the frequency at which each item was true about them (1= never, to 5= always). Items were reverse scored and summed to create a total score with higher values indicating more satisfaction in peer relationships. This measure demonstrated good reliability in this sample ($\alpha = .90$).

Participant Characteristics

Participants included 928 youth (M_{age} = 12.94 years, SD = 1.15 years). Within the sample, 55.9% identified as White, 30.4% Black or African American, 8.3% American Indian/Alaska Native, 2% Native Hawaiian/other Pacific Islander, and 1.8% Asian. All other participants either reported that they did not know their race and ethnicity or refused to respond. Additionally,

23.6% of the sample identified as Spanish/Hispanic/Latino. Gender composition included 56.4% identifying as female and 43.6% male. Participants were recruited across 81 counties in the United States. As for youths' academic grade level, 9.1% were in elementary school (i.e., 3-5th grade), 49% were in middle school (i.e., 6-8th grade) and 41.4% were in high school (i.e., 9-12th grade).

Data Analysis

Analyses were conducted using IBM SPSS statistics (version 29). To begin, descriptive statistics (e.g., mean, standard deviation) and bivariate correlations were used to explore patterns in the data and to determine which covariates were necessary to include in subsequent analyses. Due to their statistically significant relationship and theoretical importance to youths' future expectations, youth gender and academic grade level were included as covariates in analyses. Correlational analyses were also conducted to determine significant bivariate relations between the variables of interest. Preliminary data analyses revealed that all data assumptions of normality were confirmed.

Then, the hypothesized relationships were tested using regression modeling. Hierarchical linear regression models were used to examine the relations among youth trauma symptoms, relationship quality with their primary caregiver and peers, and their future expectations (i.e., likelihood of getting a good job by age 30, and likelihood of graduating high school). Separate models were created for each of the future expectations outcomes, as well as for caregiver and peer relationship quality variables. This yielded four models that were tested as described below.

Step 1 for the four models included all main effects and covariates. In step 2, the interaction terms (i.e., trauma symptoms*caregiver relationship quality; trauma symptoms*peer relationship quality, respectively) were added to the model. Model fit was assessed by examining

the statistical significance of the overall model. Then, the R^2 value was examined to show how much of the variance in the future expectation items was accounted for by the tested model. The results of each individual pathway were interpreted through standardized regression coefficients and their statistical significance.

CHAPTER 3

RESULTS

Correlational Analyses

Results of bivariate correlational analyses are presented in Table 1. Youth trauma symptoms were negatively correlated with youths' perceived likelihood of graduating high school $r(923) = -.123$, $p < .001$, and their perceived likelihood of getting a good job by age 30 $r(923) = -.129$, $p < .001$. These results suggest that as youths' reported trauma symptoms increased, their perceived likelihood to graduate high school or have a job by the age of 30 decreased. Furthermore, perceived likelihood of graduating high school was positively correlated with perceived likelihood of having a good job by age 30 $r(928) = .505$, $p < .001$, indicating that as youths' perceived chances of graduating high school increased, so too did their perceived chances of having a good job by 30.

Youth trauma symptoms were negatively correlated with caregiver relationship quality $r(914) = -.289$, $p < .001$, revealing that as youths' reported trauma symptoms increased, relationship quality with their primary caregiver decreased. Furthermore, youths' perceived likelihood of graduating high school was positively correlated with caregiver relationship quality $r(916) = .125$, $p < .001$, indicating that as youths' perceived likelihood of graduating high school increased, relationship quality with their primary caregiver increased. Similarly, as youths' perceived likelihood of having a good job by age 30 increased, relationship quality with their primary caregiver also increased $r(916) = .147$, $p < .001$.

Regarding youths' peer relationships, perceived likelihood of graduating high school was positively correlated with peer relationship quality $r(888) = .271$, $p < .001$, suggesting that as

youths' satisfaction in peer relationships increased, their perceived likelihood of graduating high school increased. Youths' perceived likelihood of having a good job by age 30 was positively correlated with peer relationship quality $r(888) = .304$, $p < .001$, indicating that as youths' perceived likelihood of having a good job by age 30 increased, their satisfaction in peer relationships increased. Youth trauma symptoms were negatively correlated with peer relationship quality, revealing that as youths' report of trauma symptoms increased, reported satisfaction in peer relationships decreased $r(885) = -.319$, $p < .001$. Lastly, a positive correlation was found among youths' relationship quality with their primary caregiver and peers, such that as youths' relationship quality with their primary caregiver increased, reported satisfaction in peer relationships increased $r(879) = .272$, $p < .001$.

Hierarchical Regression Analyses

Trauma Symptoms, Likelihood of Graduating High School, & Caregiver Relationship Quality

The model examining the relations between youth trauma symptoms, their likelihood of graduating high school, and their perceived caregiver relationship quality was significant and explained 3% of the variance in youths' perceived likelihood of graduating high school, $F(4, 913) = 8.75$, $p < .001$, *Adjusted* $R^2 = .03$ (Table 2). More specifically, results of step 1 showed a main effect of trauma symptoms, $\beta = -.09$, $t(913) = -2.57$, $p = .01$, indicating that as trauma symptoms increased, youths' perceived likelihood of graduating high school decreased. Results also showed a main effect of caregiver relationship quality, $\beta = .11$, $t(913) = 3.23$, $p = .001$, indicating that as relationship quality with caregiver increased, perceived likelihood of graduating high school increased. Main effects were also seen across covariates of youth gender, $\beta = .08$, $t(913) = 2.50$, $p = .01$, and youth academic grade level, $\beta = .07$, $t(913) = 2.11$, $p = .04$, suggesting that male youth, and youth in higher grade levels, reported greater likelihood of

graduating high school. The model adding the interaction term for perceived caregiver relationship quality and youth trauma symptoms was significant, $F(5, 913) = 7.01$, $p < .001$, *Adjusted* $R^2 = .03$; however, this model did not explain significant additional variance in youths' perceived likelihood of graduating high school ($p = .80$). As such, no significant interaction effects were found. This model retained significant main effects for youth gender, $\beta = .08$, $t(913) = 2.49$, $p = .01$, and youth academic grade level, $\beta = .07$, $t(913) = 2.11$, $p = .04$.

Trauma Symptoms, Likelihood of Having a Good Job by Age 30, & Caregiver Relationship Quality

The model examining the relations between youth trauma symptoms, their likelihood of having a good job by age 30, and their perceived caregiver relationship quality was significant and explained 3% of the variance in youths' perceived likelihood of having a good job by age 30, $F(4, 913) = 8.36$, $p < .001$, *Adjusted* $R^2 = .03$ (Table 3). More specifically, results of step 1 showed a main effect of trauma symptoms, $\beta = -.09$, $t(913) = -2.52$, $p = .01$, indicating that as trauma symptoms increased, youths' perceived likelihood of having a good job by age 30 decreased. Results also showed a main effect of caregiver relationship quality, $\beta = .13$, $t(913) = 3.75$, $p < .001$, indicating that as relationship quality with caregiver increased, perceived likelihood of having a good job increased. The model adding the interaction term for perceived caregiver relationship quality and youth trauma symptoms was significant, $F(5, 913) = 6.83$, $p < .001$, *Adjusted* $R^2 = .03$; however, this model did not significantly explain additional variance in youths' perceived likelihood of having a good job by age 30 ($p = .40$). As such, no significant interaction effects were found. This model did not retain significant main effects.

Trauma Symptoms, Likelihood of Graduating High School, & Peer Relationship Quality

The model examining the relations between youth trauma symptoms, their likelihood of graduating high school, and their perceived peer relationship quality explained 8% of the variance in youths' perceived likelihood of graduating high school, $F(4, 884) = 21.06$, $p < .001$, *Adjusted* $R^2 = .08$ (Table 4). More specifically, results of step 1 showed a main effect of peer relationship quality, $\beta = .25$, $t(884) = 7.19$, $p < .001$, indicating that as youths' reported satisfaction with peer relationships increased, perceived likelihood of graduating high school increased. Results also showed a main effect of youth gender, $\beta = .08$, $t(884) = 2.44$, $p = .02$, indicating that male youth reported greater perceived likelihood of graduating high school. The model adding the interaction term for perceived peer relationship quality and youth trauma symptoms was significant, $F(5, 884) = 16.85$, $p < .001$, *Adjusted* $R^2 = .08$; however, this model did not significantly explain additional variance in youths' perceived likelihood of graduating high school ($p = .76$). As such, no significant interaction effects were found. This model retained significant main effects for peer relationship quality, $\beta = .29$, $t(884) = 1.99$, $p = .05$, and youth gender, $\beta = .08$, $t(884) = 2.44$, $p = .02$.

Trauma Symptoms, Likelihood of Having a Good Job by Age 30, & Peer Relationship Quality

The model examining the relations between youths' trauma symptoms, their likelihood of having a good job by age 30, and their perceived peer relationship quality was significant and explained 10% of the variance in youths' perceived likelihood of having a good job by age 30, $F(4, 884) = 24.11$, $p < .001$, *Adjusted* $R^2 = .10$ (Table 5). More specifically, results of step 1 showed a main effect of peer relationship quality, $\beta = .29$, $t(884) = 8.56$, $p < .001$, indicating that as youths' reported satisfaction with peer relationships increased, perceived likelihood of having a good job by age 30 increased. The model adding the interaction term for perceived peer

relationship quality and youth trauma symptoms was significant, $F(5, 884) = 19.50$, $p < .001$, *Adjusted* $R^2 = .10$; however, this model did not significantly explain additional variance in youths' perceived likelihood of having a good job by age 30 ($p = .30$). As such, no significant interaction effects were found. This model retained significant main effects for peer relationship quality, $\beta = .44$, $t(884) = 3.01$, $p = .003$.

CHAPTER 4

DISCUSSION

Youth involved with child welfare services are exposed to a range of adversities that may increase their risk for trauma symptoms and subsequently undermine their positive expectations for the future. Guided by Bronfenbrenner's bioecological framework, this study examined the role of youths' relationship quality with their primary caregiver and peers and the relationship between trauma symptoms and future expectations. The first study aim was to understand whether youths' experience of trauma symptoms was related to their expectations for the future. Specifically, it was hypothesized that trauma symptoms would be negatively associated with future expectations. The first hypothesis was supported, such that youth endorsing greater trauma symptoms were associated with decreased future expectations. This finding was expected given literature that suggests trauma symptomology, regardless of severity, can have detrimental effects on youths' well-being and pose challenges into adulthood (Collin-Vézina et al., 2011; McKay et al., 2021).

The current study underscores the value in examining future expectations, an understudied construct that has been associated with optimism and goal pursuit. The developmental salience of examining hopes for the future in an adolescent sample is valuable given its relation to milestone achievement. Specifically, it has been indicated in the literature that hopes for the future translate to engaging in behaviors that increase the likelihood of goal attainment (Schmid, Phelps, & Lerner, 2011). The current study provides evidence that assessing the future expectations of youth in the child welfare system will help identify individuals that may benefit most from early intervention. As children transition to late adolescence, their future

expectations have been shown to become more stable, suggesting that this is a window of time where youth with poorer future expectations may be more amenable.

Recently, much emphasis has been placed on creating trauma-informed systems of child welfare among implementation scientists. Due to the disproportionately high number of youths who have endured traumatic experiences, screening for trauma exposure is often the first step designed to enhance quality of care. Integrating trauma-informed care has also involved training staff how to identify and respond to those youth who have been exposed to distressing life events and improving access to evidence-based trauma-focused interventions (Lang et al., 2016; Zhang et al., 2021). Adaptations like these have been implemented to minimize the negative impact that the child welfare system can have on youth. As trauma-informed care is sensitive to the experiences many at-risk youths have had upon encountering the system, it can be protective against further trauma exposure and stress. Ultimately, it is crucial that future expectations be further investigated given their relevance to the well-being of at-risk youth and potential implications for intervention programming.

The second study aim was to determine whether youths' perception of relationship quality with their caregiver and peers may moderate the relationship between their experience of trauma symptoms and future expectations. It was hypothesized that high relationship quality with peers and youths' primary caregiver would buffer the relation between trauma symptoms and future expectations. Main effects indicated that youth-reported trauma symptoms have significant relations with both the expected likelihood of graduating high school and having a good job by age 30 when accounting for relationship quality with primary caregiver, but not peers. Additionally, youths' relationship quality with their primary caregiver and peers was shown to have a consistent main effect on perceived likelihood of graduating high school and

having a good job by age 30. Nevertheless, youths' perceived relationship quality with their primary caregiver and peers was not found to significantly moderate the relationship between trauma symptoms and future expectations. These findings support the need to continue examining contextual factors that may play a role in strengthening or diminishing the future expectations of youth at higher risk for developing psychopathology.

This study has several strengths that work together to offer a meaningful contribution to the existing literature. Firstly, using a large, nationally representative sample should allow for generalization of findings across youth in the United States who are involved in the child welfare system. Uniquely, future expectations were self-reported by youth, instead of relying on caregiver perceptions of youths' prospects. While caregivers play a large role in setting up opportunities for youth, and supporting their growth and development, affording youth the autonomy to discuss their own perceptions of what they expect to achieve in the future has been overlooked in existing research. Our approach of examining the quality of the most salient relationships in a youths' life (i.e., primary caregiver and peers), was pursued with this in mind.

Findings should be considered in the context of study limitations. It appears likely that some participants may have underreported symptoms of trauma due to the low percentage in comparison to national estimates. Future research should focus on reliable assessment methods for capturing current trauma symptoms and any associated impairment in child welfare-involved youth. Of value to this area of research would also be assessments that are more sensitive to nuances in trauma symptom reporting, especially for at-risk youth whose baseline may be higher than the general population of youth that assessments may be traditionally modeled after. Additionally, the current study is cross-sectional as the study variables were only assessed at baseline, meaning a causal relationship cannot be established. Future research can consider these

questions in prospective longitudinal studies examining future expectations over time. Lastly, youths' self-report was the only methodology utilized in the current study. Further research should consider assessing caregiver and caseworker perceptions of youths' future expectations, in addition to youths', to provide new insight.

The current study investigated the role of contextual social support in the relationship between trauma symptoms and future expectations within a sample of child welfare-involved youth. Rooted in Bronfenbrenner's bioecological framework, this study explored both youths' perceived relationship quality with their primary caregiver as well as their peers, thus advancing prior literature examining either caregiver or peer relationship quality individually. Future work should identify additional moderators (i.e., satisfaction with service utilization, or community environment) that may inform intervention efforts among youth exhibiting trauma symptoms in the child welfare system. Future work should also investigate best practices for assessing the future expectations of child welfare-involved youth and consider measures that encapsulate future expectations across specific domains of living (e.g., school, job, family). A qualitative approach to gathering youth report would allow researchers to receive information about what youth consider as they form expectations for the future. This could assist in identifying other opportunities to intervene with service referral, and provide insight into why some youth respond to adversity with resilience (e.g., optimism for the future). In sum, this work highlights the relationship between youth trauma symptoms and their future expectations and has provided preliminary evidence for further exploration of caregiver and peer relationship quality in this context.

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Tables

Table 1

Descriptive Statistics and Correlations for Main Study Variables and Covariates

Variable	*M*	*SD*	1	2	3	4	5	6	7
1. Trauma	49.8	10.2	-						
2. Chances to graduate high school	4.4	1.0	-.123**	-					
3. Chances to have a good job by 30	4.1	1.0	-.129**	.505**	-				
4. Caregiver relationship quality	39.5	7.2	-.289**	.125**	.147**	-			
5. Peer relationship quality	67.0	10.7	-.319**	.271**	.304**	.272**	-		
6. Gender[a]	1.6	0.5	-.054	.089**	.061	-.119**	.029	-	
7. Academic grade	7.9	1.9	-.052	.093**	.060	-.068*	.128**	.139**	-

Note. [a] youth gender: 1 = male, 2 = female.

*$p < .05$, **$p < .01$.

Table 2

Results of Hierarchical Multiple Regression Analyses for the Moderating Influence of Relationship Quality with Caregivers on the Relation Among Trauma Symptoms and Perceived Likelihood of Graduating High School

Variables	*B*	*t*	*p*	*β*	*95% CI*	*F*	*df*	*p*	*Adjusted R^2*
Model 1 (Main Effects Model)						8.75	4	< .001	0.03
Constant	3.67	10.70	< .001	-	2.30 – 4.34				
Trauma Symptoms	-0.01	-2.57	.01	-.09	-.02 – -.002				
Caregiver Relationship Quality	0.02	3.23	.001	.11	0.01 – 0.02				
Gender	0.16	2.50	.01	.08	0.04 – 0.29				
Grade	0.04	2.11	.04	.07	0.003 – 0.07				
Model 2 (Interaction Effects Model)						7.01	5	< .001	0.03
Constant	3.88	4.42	< .001	-	2.16 – 5.60				
Trauma Symptoms	-0.01	-0.78	.43	-.13	-0.04 – 0.02				
Caregiver Relationship Quality	0.01	0.46	.65	.07	-0.03 – 0.05				
Gender	0.16	2.49	.01	.08	0.03 – 0.29				
Grade	0.04	2.11	.04	.07	0.003 – 0.07				
Trauma Symptoms X Caregiver Relationship Quality	0.0	0.26	.80	.05	-0.001 – 0.001				

Note. Dependent variable is perceived likelihood of graduating high school. CI = Confidence Interval for *b*.

Table 3

Results of Hierarchical Multiple Regression Analyses for the Moderating Influence of Relationship Quality with Caregivers on the Relation Among Trauma Symptoms and Perceived Likelihood of Having a Good Job by Age 30

Variables	*B*	*t*	*p*	*β*	*95% CI*	*F*	*df*	*p*	*Adjusted R^2*
Model 1 (Main Effects Model)						8.36	4	< .001	0.03
Constant	3.47	9.92	< .001	-	2.78 – 4.15				
Trauma Symptoms	-0.01	-2.52	.01	-.09	-0.02 – -0.002				
Caregiver Relationship Quality	0.02	3.75	< .001	.13	0.01 – 0.03				
Gender	0.12	1.81	.07	.06	-0.01 – 0.25				
Grade	0.03	1.48	.14	.05	-0.01 – 0.06				
Model 2 (Interaction Effects Model)						6.83	5	< .001	0.03
Constant	2.78	3.11	.002	-	1.02 – 4.53				
Trauma Symptoms	0.01	0.30	.77	.05	-0.03 – 0.04				
Caregiver Relationship Quality	0.04	1.64	.10	.26	-0.08 – 0.08				
Gender	0.12	1.84	.07	.06	-0.01 – 0.25				
Grade	0.03	1.47	.14	.05	-0.01 – 0.06				
Trauma Symptoms X Caregiver Relationship Quality	0.00	-0.84	.40	-.16	-0.001 – 0.00				

Note. Dependent variable is perceived likelihood of having a good job by age 30. CI = Confidence Interval for *b*.

Table 4

Results of Hierarchical Multiple Regression Analyses for the Moderating Influence of Relationship Quality with Peers on the Relation Among Trauma Symptoms and Perceived Likelihood of Graduating High School

Variables	*B*	*t*	*p*	*β*	*95% CI*	*F*	*df*	*p*	*Adjusted R^2*
Model 1 (Main Effects Model)						21.06	4	< .001	0.08
Constant	2.75	8.39	< .001	-	2.11 – 3.39				
Trauma Symptoms	-0.01	-1.65	.10	-.06	-0.01 – 0.001				
Peer Relationship Quality	0.02	7.19	< .001	.25	0.02 – 0.03				
Gender	0.15	2.44	.02	.08	0.03 – 0.27				
Grade	0.03	1.62	.11	.05	-0.01 – 0.06				
Model 2 (Interaction Effects Model)						16.85	5	< .001	0.08
Constant	2.50	2.77	.01	-	0.73 – 4.26				
Trauma Symptoms	-0.001	-0.03	.97	-.01	-0.03 – 0.03				
Peer Relationship Quality	0.03	1.99	.05	.29	0.00 – 0.05				
Gender	0.15	2.44	.02	.08	0.03 – 0.28				
Grade	0.03	1.64	.10	.05	-0.01 – 0.06				
Trauma Symptoms X Peer Relationship Quality	0.00	-0.31	.76	-.06	-0.001 – 0.00				

Note. Dependent variable is perceived likelihood of graduating high school. CI = Confidence Interval for *b.*

Table 5

Results of Hierarchical Multiple Regression Analyses for the Moderating Influence of Relationship Quality with Peers on the Relation Among Trauma Symptoms and Perceived Likelihood of Having a Good Job by Age 30

Variables	*B*	*t*	*p*	*β*	*95% CI*	*F*	*df*	*p*	*Adjusted R^2*
Model 1 (Main Effects Model)						24.11	4	< .001	0.10
Constant	2.34	7.01	< .001	-	1.69 – 3.00				
Trauma Symptoms	-0.004	-1.17	.24	-.04	-0.01 – 0.003				
Peer Relationship Quality	0.03	8.56	< .001	.29	0.02 – 0.03				
Gender	0.10	1.61	.11	.05	-0.02 – 0.23				
Grade	0.01	0.46	.64	.02	-0.03 – 0.04				
Model 2 (Interaction Effects Model)						19.50	5	< .001	0.10
Constant	1.46	1.60	.11	-	-0.33 – 3.26				
Trauma Symptoms	0.01	0.77	.44	.13	-0.02 – 0.04				
Peer Relationship Quality	0.04	3.01	.003	.44	0.01 – 0.07				
Gender	0.11	1.65	.10	.05	-0.02 – 0.23				
Grade	0.01	0.52	.61	.02	-0.03 – 0.04				
Trauma Symptoms X Peer Relationship Quality	0.00	-1.03	.30	-.19	-0.001 – 0.00				

Note. Dependent variable is perceived likelihood of having a good job by age 30. CI = Confidence Interval for *b*.