Published in final edited form as:

J Early Adolesc. 2018 October ; 38(8): 1142–1169. doi:10.1177/0272431617725196.

South African Adolescents' Neighborhood Perceptions Predict Longitudinal Change in Youth and Family Functioning

Nicholas Tarantino, Ph.D.¹, Nada M. Goodrum, M.A.², Christina Salama, Ph.D.³, Rebecca H. LeCroix, M.A.², Karie Gaska, M.S.W, Ph.D.², Sarah L. Cook, Ph.D.², Donald Skinner, Ph.D.⁴, and Lisa P. Armistead, Ph.D.²

¹Department of Psychiatry and Human Behavior, Alpert Medical School of Brown University, Providence, Rhode Island

²Department of Psychology, Georgia State University, Atlanta, Georgia

³Kennedy Krieger Institute, John Hopkins School of Medicine, Baltimore, Maryland

⁴Unit for Research on Health & Society, Stellenbosch University, Stellenbosch, South Africa

Abstract

This study examined South African early adolescent youth (aged 10 to 14) and their female caregivers ($N = 99$ dyads) participating in an HIV prevention intervention over a period of eight months. We examined youth perceptions of neighborhood cohesion, safety, and collective monitoring as they related to concurrent and longitudinal associations with youth (externalizing behavior and hope about the future) and family (parent-youth relationship quality, parental involvement, and parental responsiveness to sex communication) functioning while controlling for baseline characteristics. Neighborhood perceptions were significantly associated ($p < .05$) with short- and longer-term outcomes. Gender differences suggested a greater protective association of perceived neighborhood conditions with changes in functioning for boys versus girls. Unexpected associations were also observed, including short-term associations suggesting a link between better neighborhood quality and poorer family functioning. We account for the culture of this South African community when contextualizing our findings and conclude with recommendations for interventions targeting neighborhood contexts.

Keywords

adolescence; parenting; neighborhood; South Africa; gender differences

Introduction

Neighborhood quality can have lasting effects on child adjustment. Some South African settings provide important contexts for examining the influence of neighborhood quality on the well-being of young people given that youth are exposed to numerous community-level risk factors (Otwombe et al., 2015). For example, exposure to violence is a significant concern in South African cities, including Cape Town and its surrounding areas (Kaminer,

du Plessis, Hardy, & Benjamin, 2013). In one study, South African adolescents reported witnessing high rates of interpersonal violence in their neighborhoods, ranging from hearing gunshots in the neighborhood (95%) to seeing someone killed (32%; Kaminer et al., 2013). At the same time, young people in these environments are also exposed to community-level protective factors such as a feeling that neighbors are socially connected (Marshall et al., 2014). In each case, neighborhoods have the potential to influence young people and their families in positive and negative ways. This largely depends on cultural context. For example, in South Africa, gender roles related to labor division may dictate who spends the most time outside the home and exposed to neighborhood factors (Jewkes & Morrell, 2010).

Dimensions of perceived neighborhood quality can include cohesion, safety, and collective monitoring (Cutrona, Russell, Hessling, Brown, & Murry, 2000). Neighborhood cohesion refers to one's perceptions of supportive interactions and social ties among community members (Wickes, Hipp, Sargeant, & Homel, 2013), while collective monitoring refers to community members' supervision of youth activities within the neighborhood (Wallace, 2013). Neighborhood safety may be conceptualized as an individual's perceptions of the level of risk or danger within the community, including perceptions of neighborhood watch programs and the safety of open areas in the neighborhood.

Theoretical Considerations

Previous research on these neighborhood factors has typically been guided by ecological frameworks including ecological systems theory (Bronfenbrenner, 1979) and family stress theory (Conger et al., 2002), and is quite extensive (see Cuellar et al., 2013 for a review). Ecological systems theory posits that youth development occurs within multiple nested environments (e.g., microsystems, exosystems), which interact to influence youth well-being. This includes family interactions occurring as a result of living in varying neighborhood conditions. Similarly, family stress theory asserts that economic and environmental stress affects youth well-being by influencing caregiver and family functioning. Whereas a growing body of literature documents neighborhood effects on youth and family functioning in the U.S., relatively few studies have examined these processes in South Africa. Additionally, the majority of neighborhood research, both in the U.S. and elsewhere, is cross-sectional, precluding inferences about change over time. Furthermore, despite the value of examining youths' neighborhood perceptions (Zuberi, 2016a), few studies have included youth reports of their neighborhoods, particularly among early adolescents. The current investigation used an ecological framework—guided broadly by ecological systems theory and specifically by family stress theory—to fill these gaps by examining youth-reported neighborhood quality as a longitudinal predictor of youth adjustment, parenting quality, and family functioning among Black South African parent-youth dyads.

Neighborhood Research in the United States

Based U.S. research, youth residing in risky neighborhoods exhibit adverse adjustment outcomes, including worse physical health (Esteban-Cornejo et al., 2016), decreased school self-efficacy and academic achievement (Galster, Santiago, Stack, & Cutsinger, 2016), more internalizing symptoms (Gonzalez, Jones, Kincaid, & Cuellar, 2012), and more externalizing

behaviors (Jocson & McLoyd, 2015). For example, in a sample of African American single mothers and their adolescent children, mothers who perceived their neighborhoods as having a low sense of community and high crime rates had children who reported high levels of hopelessness and externalizing behaviors (Gonzalez et al., 2012).

Neighborhood risk may negatively impact youth for a number of reasons consistent with ecological systems theory. This includes problems in their exosystem such as reduced access to services and less social connectedness among community members (Christian et al., 2017). Of particular importance is the possibility that high-risk neighborhoods compromise parenting practices, an assumption made more specifically in family stress theory. Consistent with this theory, research in the U.S. suggests that neighborhood risk may contribute to parental psychological distress, reductions in parental warmth, and the use of harsh and inconsistent discipline (Jocson & McLoyd, 2015). Although much of the extant literature indicates that neighborhood risk compromises parenting quality (see Cuellar et al., 2013, for a review), other studies have observed that poorer neighborhood quality leads to increases in certain aspects of protective parenting, such as parental monitoring (Zuberi, 2016b). Studies have also found slightly higher rates of control-oriented parenting among African American mothers compared to White mothers (Laird, Marrero, & Sentse, 2010); although, these differences are likely explained by disparities in socioeconomic status and neighborhood quality. Caregivers living in unsafe neighborhoods, which typically have fewer resources, may monitor their children's whereabouts more closely out of necessity. However, the same neighborhood risks may also disrupt protective parenting through heightening parent and youth stress and depleting coping resources.

Neighborhood Research in South Africa

Few studies have examined these same associations in South Africa. For example, youth who witnessed community violence reported higher levels of psychological distress, relative to youth who did not (Shields et al., 2009). Community stressors and material deprivation have also been linked to HIV risk behavior (Kamndaya, Thomas, Vearey, Sartorius, & Kazembe, 2014), an important consideration given the alarmingly high rate of infection among young South Africans (Zuma et al., 2016). In a third study, among Cape Town adolescents between the ages of 11 and 17, exposure to public drunkenness was positively associated with excess drinking in youth (Parry, Morojele, Saban, & Flisher, 2004). In addition, community social disorder and neighborhood cohesion were significantly related to risky sexual behaviors among adolescent and young adult South Africans living in KwaZulu-Natal (Burgard & Lee-Rife, 2009). Moreover, using the current South African sample, Tarantino et al. (2014) showed an interaction between parent-reported neighborhood quality and maternal social support in predicting parent-youth communication about sex. Further, within the current sample, neighborhood quality was negatively related to youth sexual risk (i.e., pre-coital behaviors and intentions to engage in sexual behaviors) indirectly via positive parenting (Goodrum, Armistead, Tully, Cook, & Skinner, in press). These cross-sectional studies provide important initial glimpses into associations between neighborhood conditions and youth adjustment; however, they are unable to demonstrate how neighborhoods are associated with changes in youth adjustment over time. We assume that

as time passes youth are increasingly exposed to their neighborhood conditions which can result in more or less change in youth and family functioning.

Even less is known about how gender interacts with neighborhood environments to affect youth outcomes. For example, gender role expectations are different for males and females, which may influence adolescents' exposure to neighborhood environments. In South Africa, adherence to traditional gender roles in South Africa is common, such as females staying home to raise the family and males working outside the home (Jewkes & Morrell, 2010). This division of labor likely extends to adolescents—across many cultures, girls have more household chores than boys (Anxo et al., 2011). Given safety concerns and gender norms, girls in African countries are more likely to experience high levels of parental monitoring (Bastien, Kajula, & Muhwezi, 2011). Thus, boys are spending more time in the community and less time at home with their families, which may elevate their exposure to neighborhood conditions.

Current Study

The current study examined a sample of Black South African parent-youth dyads who had participated in a parent-based HIV prevention intervention called *Imbadu Ekhaya*. The six session group intervention focused on strengthening protective parenting practices in order to prevent youth HIV risk. A pilot trial of *Imbadu Ekyaha* showed that the intervention had promising effects when it was compared to a waitlist control condition (Armistead et al., 2014). Guided by ecological systems and family stress theories, the current study explored the longitudinal associations between neighborhood quality and youth and family functioning among these parent-youth dyads at three time points: baseline (T1), two months post-baseline (T2), and eight months post-baseline (T3). The timeframes were chosen for the original study in order to test the intervention's immediate effects on protective parenting practices as well as to determine whether the effects were maintained for a period of time consistent with previous HIV prevention trials (e.g., Forehand et al., 2007). Given that our measures of neighborhood quality do not specify a timeframe, it can be assumed that they are assessing participants' perceptions of their current neighborhood quality. Thus, the possible associations between neighborhood factors and our outcomes over a relatively brief period of time can be likely attributed to more recent neighborhood influences rather than the lasting, “weathering” effects on well-being that have been observed across longer spans of development due repeated and prolonged exposures to neighborhood environments (Ellen, Mijanovich, & Dillman, 2000). These more immediate effects can be highly influential, however; for example, studies observe statistically large associations between exposure to recent (within the past six months) community-level risk factors and youth functioning (Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009).

For our study, we examined the relations between youth-reported neighborhood safety, cohesion, and collective monitoring, and family and youth functioning (i.e., degree of hope and externalizing behaviors). Family outcomes included level of parental involvement, parent-youth relationship quality, and responsiveness to parent-youth communication about sex. Consistent with ecology systems theory, neighborhood quality, as a product of both a family's interactions with their immediate environment (i.e., microsystem) and with broader

social systems (e.g., exosystem), should influence youth and family functioning. We chose family systems theory to predict the direction of these effects; that is, high levels of neighborhood cohesion, safety, and monitoring should benefit families by reducing their experience of environmental stress. Specifically, we hypothesized that higher baseline levels of neighborhood quality would be related to youth reporting greater hope and less externalizing behaviors at all time points. We also hypothesized that greater neighborhood quality at T1 would be related to greater parental involvement, better parent-youth relationship quality, and greater parental responsiveness at T2 and T3. Finally, we explored gender differences in these relations.

Method

Design

A repeated-measures design was utilized with a six-session intervention component ($n = 57$) and a wait-list control group ($n = 42$). Baseline data (T1) were collected from both the intervention and control groups before conducting the intervention. Follow-up data were also collected one to four weeks post-intervention (T2) and at six months following intervention (T3).

Participants

Participants were 99 parent-youth dyads composed of Black South African female caregivers and their 10-14 year old adolescents. Women are typically the primary caregivers of youth in South Africa, and thus only female caregivers were recruited. Additionally, researchers chose to focus on female caregivers based on the current study's formative work, which suggested that single-gender groups ease intervention facilitation.

All participants lived in Langa, the oldest Black community in Cape Town. Seventy percent of the sample lived in brick homes, 10% lived in a flat, hostel, or room/garage, 11% lived in a shack, and 8% were homeless. Eligibility criteria included living in Langa for at least one year, being a female caregiver ($M_{age} = 42.7$ years, $SD = 12.0$ years), having a 10-14 year old in the household ($M_{age} = 11.7$ years, $SD = 1.4$ years; 53% female), spending most nights per week with the youth, and speaking either English or Xhosa (approximately 60% of parents and 30% of youth chose to complete assessments in Xhosa). The adult was not required to be the youth's biological mother, but was required to be legally responsible for and provide for the youth's primary care. The sample consisted of biological mothers (70%), grandmothers (16%), aunts (6%), and great-grandmothers (2%), with one cousin and one foster mother. Participants' ethnic identifications included Xhosa (84%), Zulu (11%), Sotho (3%), and other (2%).

Procedure

Study procedures were approved by Institutional Review Boards in both the United States and South Africa. Study activities took place at worksites within Langa. Initially, informed consent was obtained from each parent, followed by assent by each youth, both in either English or Xhosa. All measures, except the Household Economic and Social Status Index (HESSI), were administered through audio computer-assisted self-interviews (ACASI),

which allowed the researchers to personalize each assessment with the youth's name throughout the assessment. Two interviewers administered the HESSI verbally to caregivers due to its complexity.

Parents and youth were assessed separately, and parents were compensated with a grocery voucher valued at R70 (approximately \$10). Youth were compensated with a small gift (valued at approximately \$3). Parents completed the assessments in about 60-90 minutes, and youth completed the assessments in less than 60 minutes. Dyads were then randomly assigned to either the intervention or the wait-list control group. Approximately half received the intervention, and all participants were contacted to complete follow-up assessments.

Measures

Formative work drawing from the literature and researchers' cultural knowledge resulted in modification of U.S.-based instruments for the parents and youth. Specifically, we modified the measures considerably to address the sample's cultural context. Modifications were informed by input from South African researchers, family service providers, and parents and youth living in the target area. South African investigators, research personnel, and Cape Town Youth Welfare Society (CTCWS) staff reviewed all measures line by line, and each was modified based on their feedback. Subsequent to this formative work, the measures were translated from English to Xhosa and back, using the back-translation technique by Brislin (1970).

Family resources—The Household Economic and Social Status Index (HESSI; Barbarin & Khomo, 1997) is a 17-item parent measure created in South Africa to assess family resources—an indicator of socioeconomic status—including housing quality, number of consumer goods (e.g., refrigerator), financial assets, and food supply. Participants responded to 13 items with yes (1) or no (0). The remaining items had ordinal response sets (e.g., “In what type of house do you and your youth live;” item response range = 0 to 5). Items were summed to create a scale score, which could range from 0 to 28. Higher scores indicated greater resources.

Perceived neighborhood variables—A neighborhood quality measure assessed youth perceptions of neighborhood cohesion, safety, and collective monitoring using separate subscales. Items were taken in part from the Community Disorder Index (Cutrona et al., 2000). Additional items were created and existing ones modified based on formative work in the region.

The *neighborhood cohesion* subscale resulted in a 17-item measure of respondents' perceptions of social ties, trust, and a general sense of community among neighbors. The majority of items were true (1) or false (0) such as “When there is a problem around here, the neighbors get together to deal with it.” One item had a 3-point response of “very easy” (2), “sort of easy” (1), and “not easy” (0) to the question “How easy is it for you to pick out people who are outsiders or who obviously don't live in your neighborhood?” that was dichotomized (0 = not easy; 1 = easy) by combining “very easy” with “sort of easy”. Higher

mean scores equated to greater perceived neighborhood cohesion. Cronbach's α was .64 for this subscale.

Nine items made up the *neighborhood safety* subscale. Due to poor internal consistency reliability ($\alpha = .36$), three items were dropped. The remaining items (true/false) assessed degree of perceived safety in one's neighborhood's physical environment (e.g., "The open area closest to where you live is safe during the day"), and the presence and respect of a neighborhood watch and/or street committee organization. Higher mean scores equaled greater safety and α was .63.

Collective monitoring was assessed by three items that measured the extent to which adults in the neighborhood monitored deviant youth behavior (e.g., "If a group of neighbourhood children were skipping school and hanging out on a street corner how likely is it that your neighbours would do something about it?"). Responses included "very unlikely" (0), "unlikely" (1), "likely" (2), and "very likely" (3) so that higher mean scores equaled greater collective monitoring. Cronbach's α was .70 for this subscale.

Parenting and parental responsiveness—Parenting was measured using both parent and youth report. Both measures assessed parenting behavior currently (T1), since completing the intervention (T2), and six months following the intervention (T3). To assess *parent-youth relationship quality*, the Interaction Behavior Questionnaire (IBQ)-Short Form (Prinz, Foster, Kent, & O'Leary, 1979) was used. It consisted of 19 items and evaluated communication-conflict behavior between a parent and youth. Sample items included "Your child/caregiver does not listen to you" and "Your caregiver often seems angry with you." Responses were dichotomous (yes/no), and were averaged, with total scores ranging from 0 to 1. Higher scores indicate a better relationship quality. Good internal consistency and discriminant validity have been reported in U.S. samples (Prinz et al., 1979; Robin & Weiss, 1980), and the measure has been used in a previous study of Black South African mothers living with HIV (Palin et al., 2009). The IBQ demonstrated adequate reliability for both parents ($\alpha = .80$) and youth ($\alpha = .78$).

Parental involvement was measured using 12 items from the Inventory of Parental Involvement (Hawkins et al., 2002) and 12 items the research team created during formative work. Items assessed parental involvement (e.g., "How often do you attend events at [child's] school?"), as well as aspects of parental monitoring (e.g., "How often do you know where [child] is when s/he is not with you?"), with equivalent items for youth. Parents and youth responded to most items using a 3-point Likert scale of never, sometimes, or often. Three items used a 4-point Likert scale and were weighted. A scale mean was used so that scores could range from 0 to 2. Higher scores indicated greater parental involvement and monitoring. Good reliability of the scale was found ($\alpha = .83$ for parents and $\alpha = .86$ for youth).

Parents rated themselves and youth rated their parents on *how responsive parents were currently to questions about sex*. The scale for parents was comprised of 22 items using a 3-point scale (not at all true, a little true, and very true). Sample items for parents included "I feel comfortable talking to my youth about sex topics." The twelve items used for youth

were similar but not identical and used a 3-point scale (true, maybe, and false) response for questions such as “I would be comfortable asking my caregiver a question about sex.” A version of this scale has been used in the U.S. and sub-Saharan Africa (Forehand et al., 2007; Vandenhoudt et al., 2010). From Forehand et al.'s original measure, 16 items were selected for the parent scale. Six items specific to South Africans (e.g., “I don't need to talk to [child] about sex because s/he will learn about it during their initiation”) were added. Factor analysis of parent and child items suggested a single responsiveness scale for youth (*responsiveness*) but two subscales for parents that we characterized as *comfort* with discussing sex (11 items) and openness to the discussing sex (9 items). Only the comfort subscale was used in the current study given its slightly higher internal consistency reliability. A mean scale was used so that scores ranged between 0 and 2. Higher scores indicated greater responsiveness. Reliability for the youth scale was lower ($\alpha = 0.65$) than for the parent scale ($\alpha = 0.85$ for comfort).

Youth externalizing behavior—Externalizing behavior was measured using items from the Youth Behavior Checklist Youth Self-Report (CBCL; Achenbach, 1991). This self-report measure has been previously used with youth in South Africa and found to have good reliability ($\alpha = .88$; Palin et al., 2009). The version of the CBCL used in the current study had a 3-point response (not at all true, a little true, and very true) measuring externalizing behavior such as stealing, getting in trouble, fighting, and having a hot temper. The final measure included 11 original items from the CBCL and 2 additional items developed by the researchers. Other domains of the CBCL were not administered to youth to reduce participant burden while focusing on externalizing behavior. Mean scores were obtained and could range from 0 to 2 with greater values indicating more externalizing behaviors. The scale's alpha was .75.

Youth hope—Current youth hope was measured through self-report using the Children's Hope Scale (Snyder et al., 1997), a 6-item scale used in studies of South African youth (Savahl, Isaacs, Adams, Carels, & September, 2013). Hope as conceptualized by Snyder et al. is the ability of children “to initiate and sustain action toward a desired goal” and children's “perceived capability to produce routes to those goals.” Youth answered questions such as “I think the things I have done in the past will help me in the future” with a 5-point response that ranged from “none of the time” to “all of the time.” Mean scale scores ranged from 0 to 4 with higher scores indicating greater hope. Cronbach's α for this scale was .62.

Plan of Analysis

First, the associations between neighborhood variables and gender with parent-youth and youth outcomes at baseline (T1) were examined. Next, a series of regressions examining the short- (T2) and longer-term (T3) longitudinal associations of neighborhood variables and gender with parent-youth and child outcomes were conducted. Two sets of these longitudinal analyses were conducted: T1 variables predicting T2 outcomes and T1 variables predicting T3 outcomes. In each model, the outcome was regressed on the target neighborhood variable and gender, adjusting for the baseline levels the outcome. Associations with each outcome are therefore interpreted as residualized change scores.

All models controlled for youth age, family resources, and study condition. Age was chosen as a covariate because of its potential association with exposure to neighborhood environments and outcomes (e.g., responsiveness to sex communication). Family resources were controlled for as to not confound socioeconomic status with perceived neighborhood context.

Interactions between neighborhood variables and gender on outcomes were explored given evidence to suggest neighborhood context is associated with differential youth outcomes for boys and girls (Fagan & Wright, 2012; Burgard & Lee-Rife, 2009). Interactions were examined using SPSS macros that also tested for the significance of conditional associations (Hayes & Matthes, 2009). Only interactions which were significant were included final regression models. At the item-level, available-item-analysis was used to account for missing data at baseline given the reliability of this approach when missing data is low (Parent, 2013). One score (safety) was mean imputed (1%) due to incompleteness of any items on the scale.

Results

Descriptives, Bivariate Correlations, and Gender Comparisons

Demographic covariates (family resources, child age) and gender included in all multivariate models were assessed for their bivariate associations with neighborhood and outcome variables at T1. Only family resources had a significant correlation ($r = .25$) with any variable (i.e., child report of relationship quality). Descriptive data and associations between neighborhood predictor and outcome variables at T1 are presented in Table 1. Most correlations are in expected directions with the exception of a negative association ($r = -.33$) between parent reports of relationship quality and comfort with sex communication. It is possible that parents who were comfortable with this type of communication felt this way out of necessity because their adolescent was already sexually active or discussing sex with them, which, in turn, can cause family conflict and problems in relationship quality. Differences on study variables between boys and girls were also examined (see Table 2). Only one significant difference was found; girls reported higher rates of parental involvement at T3 compared to boys.

Concurrent and Longitudinal Associations with Neighborhood Variables

Parent report (Table 3)—Only one concurrent association between neighborhood and parent-reported parenting variables was observed. Neighborhood cohesion had a small positive association with parents' comfort discussing sexual topics (squared semi-partial correlation [sr^2] = .04). From T1 to T2, collective monitoring was associated with decreased relationship quality ($sr^2 = .02$). There were also three significant interaction terms, each explaining between 2 to 4% additional variance in their respective T1→T2 models. Neighborhood safety at T1 predicted worse relationship quality at T2 for girls ($B = -.19$, 95% $CI = -.34, -.05$, $p = .01$), whereas the association for boys was non-significant. Similarly, neighborhood cohesion at T1 predicted an increase in relationship quality for boys and a decrease for girls at T2; however, neither conditional association was significant (boys, $p = .25$; girls, $p = .09$). Neighborhood cohesion was negatively associated with parental

comfort with talking about sex for boys ($B = -.90$, 95% $CI = -1.77, -.03$, $p = .04$) but not girls. Only one longer-term (T1 to T3) significant association was observed for parent report of outcomes—neighborhood cohesion had a positive relation with relationship quality from T1 to T3 for boys ($B = .33$, 95% $CI = .00, .65$, $p = .05$) and a non-significant relation for girls (Figure 1).

Youth report (Table 4)—Several significant concurrent associations between neighborhood quality and youth-reported parenting variables were observed in the expected directions. Neighborhood safety was positively associated with parental involvement ($sr^2 = .07$) and responsiveness ($sr^2 = .09$), and negatively associated with adolescent externalizing behaviors ($sr^2 = .12$). Neighborhood cohesion was positively related to all three parent-youth variables with small to medium effect sizes ($sr^2 = .06$ to $.12$). Finally, collective monitoring had a negative concurrent association with externalizing behavior ($sr^2 = .05$).

Significant short term longitudinal associations were seen from T1 to T2. The interaction term of safety $\times$ gender explained 3% of the variance in the model predicting parental involvement, suggesting that association between safety and involvement was different for boys versus girls. However, neither conditional association (positive for boys, negative for girls) was significant. Greater safety was also positively associated with hope ($sr^2 = .13$). In addition, there was a significant interaction between neighborhood cohesion and gender when predicting parental involvement, explaining 6% additional variance in the model. Higher cohesion predicted more parental involvement for boys ($B = .96$, 95% $CI = .40, 1.52$, $p = .001$) and had a non-significant association for girls. In addition, small ($sr^2 = .04$) to medium ($sr^2 = .11$) positive associations were observed between neighborhood cohesion and parental responsiveness and adolescent report of hope, respectively. Finally, from T1 to T2, greater collective monitoring predicted decreased youth externalizing behavior ($sr^2 = .06$) and had a differential association with adolescent hope by gender, predicting a significant increase in hope for girls ($B = .35$, 95% $CI = .07, .63$, $p = .01$) but not boys.

Significant longer-term associations were also revealed. As hypothesized, greater neighborhood safety was related to greater relationship quality; however, this association was limited to boys ($B = .14$, 95% $CI = .01, .28$, $p = .04$; Figure 2). The safety $\times$ gender interaction term explained 3% of additional variance in this model and approached significance ($p = .06$). Consistent with the short-term association, living in a neighborhood perceived to be of relatively high safety was related to a longer-term increase in youth hope, yet the effect size was smaller ($sr^2 = .05$). Greater neighborhood cohesion was associated with better relationship quality during this time period ($sr^2 = .05$); unlike the influence of neighborhood safety, this association was consistent across gender. Greater cohesion continued to be positively related to parental involvement for boys only ($B = .83$, 95% $CI = .28, 1.38$, $p = .004$; change in R^2 due to addition of cohesion $\times$ gender interaction term = $.04$; Figure 3). Cohesion also had a protective association with externalizing behavior over time that was limited to boys ($B = -.49$, 95% $CI = -.93, -.04$, $p = .03$; Figure 4). This interaction term explained 5% extra variance in its model. No longer-term associations were observed between collective monitoring and outcomes. e

Intervention effects (not tabled)—The effects of the intervention were also included in every regression model. Parents in the intervention arm reported increases in parental involvement from T1 to T2 ($\beta s = .21, ps < .05$) and youth in the intervention arm reported increases in parental responsiveness from T1 to T2 ($\beta s = .28, ps < .05$) and T1 to T3 ($\beta s = .27, ps < .05$) compared to families in the control condition across neighborhood characteristics.

Discussion

Research conducted in the U.S. demonstrates the far-reaching impact of neighborhood quality on youth and families. Our study extended this work to South Africa. The legacy of apartheid, accompanied by high levels of poverty, violence, and HIV, result in great disparity among many South African neighborhoods. Relative to other areas, research on neighborhood influences in these settings is therefore perhaps even more critical.

Descriptive analyses showed that youth perceived their neighborhoods differently across contexts, as evidenced by the wide range of scores on neighborhood variables. Thus, children at this age are able to form distinct interpretations of the social world outside their homes. Further, it reflects the diversity of settings and experiences in Langa, Cape Town—from shack-dwelling communities to brick home neighborhoods. Perceptions of neighborhood characteristics were associated with one another with small to medium effect sizes, which demonstrates that these are related but distinct qualities. To our knowledge, our study is the first to examine these perceptions among early adolescents in South Africa in relation to family functioning. This is an important consideration given that studies conducted elsewhere have found that youth neighborhood perceptions matter more than parents' perceptions, particularly when it comes to predicting youth behavior (Byrnes, Chan, Miller & Maguin, 2007).

Similar to U.S.-based studies (Byrnes & Miller, 2012), we showed associations between neighborhood characteristics—in particular, perceived neighborhood cohesion and safety—and change in all parent-youth outcomes. Consistent with family stress theory (Conger et al., 2002), many of these associations were positive; for example, over time, youth living in relatively cohesive and safe neighborhoods had short and longer-term increases in parent-youth relationship quality and parental involvement. Supported by a close-knit community, one in which youth feel safe, parents may have less conflict with their children, making forming healthy relationships with them easier. In addition, while many of these associations persisted across the longer-term time period, some were only evident in the short-term. Two explanations for this occurrence are possible. First, participants' perceptions of their neighborhood quality could have changed over time (e.g., due to moving residences) which influences these associations. Second, family and youth functioning could have also altered, either as a result of experiencing less or more family stress, changing their susceptibility to neighborhood conditions across time periods.

Gender Differences

While some of the longitudinal associations reported were constant across gender, many more were not. Contrary to studies demonstrating how parents living in the riskiest

neighborhoods tend to monitor their children more closely (Armistead et al., 2002), we found the opposite to be true, at least for boys. Parents of boys residing in the safest and most socially connected neighborhoods are perhaps not burdened by fear and isolation, increasing their ability to more actively involve themselves in their children's lives and monitor their behavior. Although not measured in the current study, the reverse may also be true; that is, consistent with family stress theory, parental distress stemming from poor social conditions could lead to disruptions in positive parenting practices like parental involvement. With girls, given universally high safety concerns and traditional norms, parents may practice heightened parental monitoring regardless of community characteristics.

Neighborhood perceptions were also influential of early adolescents' thoughts and behavior. These findings underscore how all systems (e.g., exosystem) embedded in the ecological systems model (Bronfenbrenner, 1979), not just the family environment, should be considered in relation to youth well-being. More immediate longitudinal increases in hope about the future were found as a result of living in neighborhoods perceived to be relatively cohesive and safe, and with a high degree of collective monitoring (girls only). We extend longitudinally a finding from a U.S.-based study linking perceived local crime levels with youth hopelessness (Gonzalez et al., 2012). A sense of neighborhood safety allows youth to hope and plan for their future without being restricted by daily safety concerns. Our longitudinal findings also showed a negative longitudinal association between collective monitoring and externalizing behavior (T1 to T2) and neighborhood cohesion and externalizing behavior (T1 to T3; boys only), consistent with a cross-sectional investigation in the region (Burgard & Lee-Rife, 2009). Communities strengthened by social ties and enforced prohibitions against deviant youth behavior are able to manage youth problem behavior when it occurs, making future instances less likely to happen, and residents may model prosocial behavior to young people. Boys, in particular, are perhaps more affected by their neighborhood social environment because of the increased time they spend outside the home compared to girls (Gennetian et al., 2012).

Other findings were not consistent family stress theory—namely, some beneficial neighborhood characteristics did not positively influence our outcomes—and deserve attention. Higher perceived neighborhood safety was associated with a significant short-term decline in parent-youth relationship quality for girls. It is possible that with a safer neighborhood, girls spend more time away from the family, which, because of traditional gender role norms barring such behavior, causes conflict with parents. In addition, parents of boys reporting high levels of neighborhood cohesion had declines in their degree of comfort in having parent-youth sex discussions. Given that close-knit communities tend to be more stable over time, it is possible that higher neighborhood cohesion was indicative of a community with a longstanding adherence to traditional cultural norms such as a rule prohibiting parents discussing sex with their children. Parents may therefore feel uncomfortable with these conversations, particularly with sons. This explains why researchers find higher rates of mother-daughter compared to mother-son sex communication in South Africa (e.g., Namisi et al., 2008). Finally, across child gender, we found a decrease from T1 to T2 in parent-youth relationship quality that was associated with high levels of collective monitoring. Parents living in these communities may hold protective attitudes and use a more control-oriented parenting style which can sometimes lead to

parent-youth conflict and disruptions in relationship quality. These findings highlight the need for researchers to consider broader theoretical frameworks (e.g., ecological systems theory) which account for cultural factors and multiple levels of influence when examining these neighborhood associations.

Limitations

This study is limited by reliance on a relatively small convenience sample of primarily Xhosa-speaking Black South Africans. All participants hail from a single township, albeit one that is relatively large, at approximately 50,000 people. The data were collected as part of a pilot efficacy trial of an HIV prevention intervention, and the period of time over which participants were assessed was only eight months. Numerous analyses were conducted, which increases the risk of Type 1 error, and some effect sizes were small, although the latter is not uncommon in research examining the influence of neighborhood factors on youth and their families. In addition, all data is self-report. While many studies find that perceptions of neighborhoods have stronger associations with individual well-being than objective measures (e.g., Wen, Hawkley, & Cacioppo, 2006), future studies should examine the impact of structural indicators of neighborhood quality (e.g., crime rates) on family and youth well-being. Finally, though we exerted considerable effort to ensure that measures were appropriate for this sample, many have not been previously tested in the South African context. Indeed, some of our measures had lower than desired internal reliability consistency (e.g., $\alpha < .70$) and thus our results should be interpreted with caution. Given the absence of similar research conducted in this setting with early adolescences, however, we believe that our findings still deserve attention as a starting point for future investigations. This research is urgently needed as families in the region face high rates of exposure to community-level risks.

Conclusions

We demonstrated that early adolescents' perceptions of their neighborhoods can promote healthy changes in family and child functioning, despite resource limitations in this South African community. We urge researchers to extend our work by conducting longer longitudinal studies. It is important to determine the ways in which social neighborhood contexts influence youth as they age into later adolescence and young adulthood, a time when behavioral health risks become increasingly prevalent. Moreover, families are essential tools for reducing youth risk, and thus studying the stress and resiliency of families living in varying neighborhoods contexts is critical. Female South African caregivers are often burdened by living with interpersonal violence, poverty, and HIV risk; yet despite these conditions, many are able to thrive and offer protective parenting (Armistead et al., 2014). Our findings would suggest the need to move beyond the individual or family to consider the importance of neighborhood context. While this is important for all young people, our study found that neighborhood conditions may be most influential of families with boys. Whereas parents often restrict access to unmonitored time in the community due to safety concerns and cultural norms, boys are given greater freedom and thus may face increased exposure to neighborhood risks. Future youth risk-prevention and health promotion efforts should focus on community-level interventions that target strengthening mother's social capital (e.g., Campbell, Williams, & Gilgen, 2002), empowering neighborhood organizations, and

reducing violence locally. Moreover, studies in the region highlight the importance of engaging youth as active participants in the social and economic growth of their communities (Campbell, Foulis, Maimane, & Sibiya, 2005).

References

- Achenbach TM. Manual for Child Behavior Checklist 4–18 and 1991 profile. Burlington: University of Vermont, Department of Psychiatry; 1991.
- Anxo D, Mencarini L, Pailhe A, Solaz A, Tanturri ML, Floor L. Gender differences in time use over the life course in France, Italy, Sweden, and the U. S. *Feminist Economics*. 2011; 17:159–195. DOI: 10.1080/13545701.2011.582822
- Armistead L, Cook S, Skinner D, Toefy Y, Anthony ER, Zimmerman L, Chow L. Preliminary results from a family-based HIV prevention intervention for South African youth. *Health Psychology*. 2014; 33(7):668. [PubMed: 24977310]
- Armistead L, Forehand R, Brody G, Maguen S. Parenting and child psychosocial adjustment in single-parent African American families: Is community context important? *Behavior Therapy*. 2002; 33(3): 361–375. DOI: 10.1016/S0005-7894(02)80033-8
- Barbarin OA, Khomo N. Indicators of economic status and social capital in South African townships: What do they reveal about the material and social conditions in families of poor children? *Childhood: A Global Journal of Child Research*. 1997; 4(2):193–222. DOI: 10.1177/0907568297004002005
- Bastien S, Kajula LJ, Muhwezi WW. A review of studies of parent-child communication about sexuality and HIV/AIDS in sub-Saharan Africa. *Reproductive Health*. 2011; 8:25–42. [PubMed: 21943095]
- Brislin R. Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*. 1970; 1(3):185–216. DOI: 10.1177/135910457000100301
- Bronfenbrenner U. *The ecology of human development: Experiments by nature and design*. Cambridge, Mass: Harvard University Press; 1979.
- Burgard SA, Lee-Rife SM. Community characteristics, sexual initiation, and condom use among young Black South Africans. *Journal of Health and Social Behavior*. 2009; 50(3):293–309. DOI: 10.1177/002214650905000304 [PubMed: 19711807]
- Byrnes HF, Chen MJ, Miller BA, Maguin E. The relative importance of mothers' and youths' neighborhood perceptions for youth alcohol use and delinquency. *Journal of Youth and Adolescence*. 2007; 36(5):649–659. [PubMed: 25165406]
- Byrnes HF, Miller BA. The Relationship Between Neighborhood Characteristics and Effective Parenting Behaviors The Role of Social Support. *Journal of Family Issues*. 2012; 33(12):1658–1687. [PubMed: 23794774]
- Campbell C, Foulis CA, Maimane S, Sibiya Z. The impact of social environments on the effectiveness of youth HIV prevention: A South African case study. *AIDS Care*. 2005; 17(4):471–478. [PubMed: 16036233]
- Campbell C, Williams B, Gilgen D. Is social capital a useful conceptual tool for exploring community level influences on HIV infection? An exploratory case study from South Africa. *AIDS Care*. 2002; 14(1):41–54. [PubMed: 11798404]
- Christian H, Zubrick SR, Knuiman M, Nathan A, Foster S, Villanueva K, Giles-Corti B. Nowhere to go and nothing to do but sit? Youth screen time and the association with access to neighborhood destinations. *Environment and Behavior*. 2017; 49(1):84–108.
- Conger R, Wallace L, Sun Y, Simons RL, McLoyd VC, Brody GH. Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology*. 2002; 38(2):179–193. DOI: 10.1037//0012-1649.38.2.179 [PubMed: 11881755]
- Cuellar J, Jones DJ, Sterrett E. Examining parenting in the neighborhood context: a review. *Journal of Child and Family Studies*. 2013; doi: 10.1007/s10826-013-9826

- Cutrona CE, Russell DW, Hessling RM, Brown PA, Murry VM. Direct and moderating effects of community context on the psychological well-being of African American women. *Journal of Personality and Social Psychology*. 2000; 79(6):1088. [PubMed: 11138756]
- Ellen IG, Mijanovich T, Dillman KN. Neighborhood effects on health: exploring the links and assessing the evidence. *Journal of Urban Affairs*. 2001; 23(3-4):391–408. DOI: 10.1111/0735-2166.00096
- Esteban-Cornejo I, Carlson JA, Conway TL, Cain KL, Saelens BE, Frank LD, Sallis JF. Parental and Adolescent Perceptions of Neighborhood Safety Related to Adolescents' Physical Activity in Their Neighborhood. *Research quarterly for exercise and sport*. 2016; 87(2):191–199. [PubMed: 27030158]
- Fagan AA, Wright EM. The effects of neighborhood context on youth violence and delinquency: Does gender matter? *Youth Violence and Juvenile Justice*. 2012; 10(1):64–82.
- Forehand R, Armistead L, Long N, Wyckoff SC, Kotchick BA, Whitaker D, Kelly A. Efficacy of a parent-based sexual-risk prevention program for African American preadolescents: a randomized controlled trial. *Archives of Pediatrics & Adolescent Medicine*. 2007; 161(12):1123–1129. [PubMed: 18056556]
- Fowler PJ, Tompsett CJ, Braciszewski JM, Jacques-Tiura AJ, Baltes BB. Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Development and Psychopathology*. 2009; 21(01):227–259. [PubMed: 19144232]
- Galster G, Santiago A, Stack L, Cutsinger J. Neighborhood effects on secondary school performance of Latino and African American youth: Evidence from a natural experiment in Denver. *Journal of Urban Economics*. 2016; 93:30–48.
- Gennetian LA, Sanbonmatsu L, Katz LF, Kling JR, Sciandra M, Ludwig J, Kessler RC. The long-term effects of Moving to Opportunity on youth outcomes. *Citiescape: A Journal of Policy Development and Research*. 2012; 14:137–167.
- Goodrum NM, Armistead LP, Tully EC, Cook S, Skinner D. Parenting and youth sexual risk in South Africa: The role of contextual factors. Manuscript in revision.
- Gonzalez M, Jones DJ, Kincaid CY, Cuellar J. Neighborhood context and adjustment in African American youths from single mother homes: The intervening role of hopelessness. *Cultural Diversity & Ethnic Minority Psychology*. 2012; 18(2):109–17. DOI: 10.1037/a0026846 [PubMed: 22506815]
- Hawkins AJ, Bradford KP, Palkovitz R, Christiansen SL, Day RD, Call VRA. The Inventory of Father Involvement: A Pilot Study of a New Measure of Father Involvement. *The Journal of Men's Studies*. 2002; 10(2):183–196. DOI: 10.3149/jms.1002.183
- Hayes AF, Matthes J. Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods*. 2009; 41:924–936. [PubMed: 19587209]
- Jewkes R, Morrell R. Gender and sexuality: Emerging perspectives from the heterosexual epidemic in South Africa and implications for HIV risk and prevention. *Journal of the International AIDS Society*. 2010; 13:6–16. DOI: 10.1186/1758-2652-13-6 [PubMed: 20181124]
- Jocson RM, McLoyd VC. Neighborhood and housing disorder, parenting, and youth adjustment in low-income urban families. *American journal of community psychology*. 2015; 55(3-4):304–313. [PubMed: 25753403]
- Kaminer D, du Plessis B, Hardy A, Benjamin A. Exposure to violence across multiple sites among young South African adolescents. *Peace And Conflict: Journal Of Peace Psychology*. 2013; 19(2): 112–124. DOI: 10.1037/a0032487
- Kamndaya M, Thomas L, Vearey J, Sartorius B, Kazembe L. Material deprivation affects high sexual risk behavior among young people in urban slums, South Africa. *Journal Of Urban Health: Bulletin Of The New York Academy Of Medicine*. 2014; 91(3):581–591. DOI: 10.1007/s11524-013-9856-1 [PubMed: 24481587]
- Laird RD, Marrero MD, Sentse M. Revisiting parental monitoring: Evidence that parental solicitation can be effective when needed most. *Journal of Youth and Adolescence*. 2010; 39(12):1431–1441. DOI: 10.1007/s10964-009-9453-5 [PubMed: 19763801]

- Marshall BD, Astone N, Blum RW, Jejeebhoy S, Delany-Moretlwe S, Brahmabhatt H, Wang Z. Social capital and vulnerable urban youth in five global cities. *Journal of Adolescent Health*. 2014; 55(6):S21–S30. DOI: 10.1016/j.jadohealth.2014.08.021 [PubMed: 25453999]
- Namisi FS, Flisher AJ, Overland S, Bastien S, Onya H, Kaaya S, Aarø LE. Sociodemographic variations in communication on sexuality and HIV/AIDS with parents, family members and teachers among in-school adolescents: a multi-site study in Tanzania and South Africa. *Scandinavian Journal of Public Health*. 2008; 37:65–74. DOI: 10.1177/1403494808086986
- Otwombe KN, Dietrich J, Sikkema KJ, Coetzee J, Hopkins KL, Laher F, Gray GE. Exposure to and experiences of violence among adolescents in lower socio-economic groups in Johannesburg, South Africa. *BMC Public Health*. 2015; 15:450.doi: 10.1186/s12889-015-1780-8 [PubMed: 25930034]
- Palin FL, Armistead L, Clayton A, Ketchen B, Lindner G, Kokot-Louw P, Pauw A. Disclosure of maternal HIV-infection in South Africa: Description and relationship to child functioning. *AIDS and Behavior*. 2009; 13(6):1241–52. DOI: 10.1007/s10461-008-9447-4 [PubMed: 18770026]
- Parent MC. Handling item-level missing data: Simpler is just as good. *The Counseling Psychologist*. 2013; 41(4):568–600.
- Parry CDH, Morojele NK, Saban A, Flisher AJ. Brief report: Social and neighbourhood correlates of adolescent drunkenness: a pilot study in Cape Town, South Africa. *Journal of Adolescence*. 2004; 27(3):369–74. DOI: 10.1016/j.adolescence.2003.09.005 [PubMed: 15159095]
- Prinz R, Foster S, Kent R, O'Leary K. Multivariate assessment of conflict in distressed and nondistressed mother–adolescent dyads. *Journal of Applied Behavior Analysis*. 1979; 12(4):691–700. DOI: 10.1901/jaba.1979.12-691 [PubMed: 541311]
- Robin A, Weiss J. Criterion-related validity of behavioural and self-report measures of problem-solving communication skills in distressed and non-distressed parent–adolescent dyads. *Behavioural Assessment*. 1980; 2:339–352.
- Savahl S, Isaacs S, Adams S, Carels CZ, September R. An exploration into the impact of exposure to community violence and hope on children's perceptions of well-being: A South African perspective. *Child Indicators Research*. 2013; 6(3):579–592.
- Shields N, Nadasen K, Pierce L. A comparison of the effects of witnessing community violence and direct victimization among children in Cape Town, South Africa. *Journal of Interpersonal Violence*. 2009; 24(7):1192–208. DOI: 10.1177/0886260508322184 [PubMed: 18701745]
- Snyder CR, Hoza B, Pelham WE, Rapoff M, Ware L, Danovsky M, et al. The development and validation of the Children's Hope Scale. *Journal of Pediatric Psychology*. 1997; 22(3):399–421. [PubMed: 9212556]
- Tarantino N, Anthony B, Zimmerman L, Armistead LP, Cook S, Skinner D, Toefy Y. Talking to young people about sex in South Africa: Neighborhood and social influences. *Journal of Community Psychology*. 2014; 42(6):656–672. DOI: 10.1002/jcop.21644
- Vandenhoudt H, Miller KS, Ochura J, Wyckoff SC, Obong'o CO, Otswana NJ, Buvé A. Evaluation of a US evidence-based parenting intervention in rural Western Kenya: from parents matter! To families matter! *AIDS Education and Prevention*. 2010; 22(4):328–343. [PubMed: 20707693]
- Wallace G. African-American mothers' community social capital and parenting quality: Does personal outlook make a difference? *Sociological Perspectives*. 2013; 56(2):261–285.
- Wen M, Hawkey LC, Cacioppo JT. Objective and perceived neighborhood environment, individual SES and psychosocial factors, and self-rated health: An analysis of older adults in Cook County, Illinois. *Social Science & Medicine*. 2006; 63(10):2575–2590. DOI: 10.1016/j.socscimed.2006.06.025 [PubMed: 16905230]
- Wickes R, Hipp JR, Sargeant E, Homel R. Collective efficacy as a task specific process: Examining the relationship between social ties, neighborhood cohesion and the capacity to respond to violence, delinquency and civic problems. *American Journal of Community Psychology*. 2013; 52(1-2):115–127. [PubMed: 23812906]
- Zuberi A. Feeling safe in a dangerous place: Exploring the neighborhood safety perceptions of low-income African American youth. *Journal of Adolescent Research*. 2016a; :1–27. DOI: 10.1177/0743558416684948

- Zuberi A. Neighborhoods and parenting: Assessing the influence of neighborhood quality on the parental monitoring of youth. *Youth & Society*. 2016b; 48(5):599–627. DOI: 10.1177/0044118X13502365
- Zuma K, Shisana O, Rehle TM, Simbayi LC, Jooste S, Zungu N, Abdullah F. New insights into HIV epidemic in South Africa: key findings from the National HIV Prevalence, Incidence and Behaviour Survey, 2012. *African Journal of AIDS Research*. 2016; 15(1):67–75. [PubMed: 27002359]

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Figure 1.

The association between neighborhood cohesion (T1) and parent-youth relationship quality (T3) controlling for relationship quality at baseline, family resources, youth age, and study condition. The x-axis is centered at the mean of neighborhood cohesion and extends -1 standard deviation (SD) and +1 SD in either direction.

Figure 2.

The association between neighborhood safety (T1) and parental involvement (T3) controlling for parental involvement at baseline, family resources, youth age, and study condition. The x-axis is centered at the mean of neighborhood safety and extends -1 standard deviation (SD) and +1 SD in either direction.

Figure 3.

The association between neighborhood cohesion (T1) and parental involvement (T3) controlling for parental involvement at baseline, family resources, youth age, and study condition. The x-axis is centered at the mean of neighborhood safety and extends -1 standard deviation (SD) and +1 SD in either direction.

Figure 4.

The association between neighborhood cohesion (T1) and adolescent externalizing behavior (T3) controlling for externalizing behavior at baseline, family resources, youth age, and study condition. The x-axis is centered at the mean of neighborhood cohesion and extends -1 standard deviation (SD) and +1 SD in either direction.

Table 1
Descriptives and Correlations Between Predictor and Outcome Variables at T1

	1	2	3	4	5	6	7	8	9	10	11
Neighborhood Perceptions											
1. Safety											
2. Cohesion	.53										
3. Monitoring	.19	.20									
Parent-Youth Outcomes											
4. Relationship quality (Parent)	-.06	-.08	.12								
5. Relationship quality (Youth)	.06	.22	.07	.23							
6. Involvement (Parent)	.03	-.18	.09	.42	.16						
7. Involvement (Youth)	.24	.20	.16	.14	.45	.24					
8. Comfort (Parent)	.19	.22	.12	.33	.00	.09	.03				
9. Responsiveness (Youth)	.28	.32	.00	.11	.33	.10	.21	-.03			
Youth Outcomes											
10. Externalizing behavior	-.35	-.12	-.22	-.11	-.31	-.20	-.25	-.13	-.13		
11. Hope	.03	-.02	-.02	.05	.18	.11	.29	.10	.09	-.09	
Mean	.63	.68	1.90	.69	.68	2.48	1.40	.96	1.11	.37	2.45
Standard Deviation	.28	.18	.95	.20	.15	.25	.35	.53	.36	.30	.73
Range	0-1	.18-.94	0-3	.11-1	.11-.94	1.83-3	.22-2.03	0-2	.25-1.83	0-1.15	.83-4.00

Note. Bolded correlations are significant ($p < .05$).

Table 2
Gender Comparisons of Predictor and Outcome Variables Across Time Points

	T1			T2			T3		
	Boys (n = 47)			Girls (n = 52)			Boys (n = 47)		
	M	SD		M	SD		M	SD	
Neighborhood Perceptions									
Safety	.65	.29		.61	.28				
Cohesion	.71	.18		.66	.17				
Monitoring	1.77	1.02		2.08	.87				
Parent-Youth Outcomes (Parent)									
Relationship quality	.69	.21		.69	.20		.79	.23	.78
Involvement	2.47	.25		2.50	.26		2.54	.27	2.51
Comfort	.97	.54		.96	.52		.82	.50	.78
Parent-Youth Outcomes (Youth)									
Relationship quality	.67	.15		.69	.16		.72	.12	.72
Involvement	1.37	.34		1.42	.35		1.33	.40	1.54
Responsiveness	1.04	.36		1.17	.35		1.11	.35	1.26
Youth Outcomes (Youth)									
Externalizing behavior	.39	.32		.35	.28		.35	.33	.28
Hope	2.44	.74		2.46	.74		2.69	.72	2.68

Note: Gender comparisons were tested for significance ($p < .05$) using t-tests. There was only one significant difference (bolded). Girls at T3 reported a higher mean level of parental involvement than boys: $t(83) = -2.85, p = .01$.

Table 3

Summary of Regressions Predicting Outcomes (Parent Report)

T1 (N = 99)	Relationship Quality		Involvement		Comfort	
	β	p-value	β	p-value	β	p-value
Female	.03	.80	.09	.41	.02	.83
Safety	-.06	.59	.02	.86	.17	.10
Female	.02	.86	.06	.57	.05	.66
Cohesion	-.07	.49	-.17	.10	.22	.04
Female	.02	.88	.08	.47	.00	.98
Monitoring	.11	.32	.08	.47	.12	.23
<hr/>						
T1 → T2 (N = 88)	Relationship Quality		Involvement		Comfort	
	β	p-value	β	p-value	β	p-value
Female	.29	.14	.03	.76	-.03	.74
Safety	-.07	.56	-.08	.37	-.13	.17
Safety*Female	-.43	.04				
Female	.57	.09	.04	.68	-.93	.03
Cohesion	.13	.25	.01	.95	-.29	.04
Cohesion*Female	-.65	.05			.92	.03
Female	-.05	.53	.04	.64	-.03	.76
Monitoring	-.16	.04	-.04	.63	.11	.28
<hr/>						
T1 → T3 (N = 85)	Relationship Quality		Involvement		Comfort	
	β	p-value	β	p-value	β	p-value
Female	.04	.70	-.03	.74	-.02	.83
Safety	.07	.47	-.05	.57	-.12	.24
Female	.81	.04	-.03	.77	.00	.99
Cohesion	.28	.05	-.02	.87	.02	.87
Cohesion*Female	-.77	.05				
Female	.03	.77	-.02	.80	-.01	.92
Monitoring	-.01	.88	-.01	.96	.06	.52

Note: Significant standardized effects are bolded. Interactions were only included in model if significant. All models control for study condition, family resources, and child age, and longitudinal models also control for baseline levels of the outcome.

Table 4

Summary of Regressions Predicting Outcomes (Youth Report)

T1 (N = 99)	Relationship Quality		Involvement		Responsiveness		Externalizing		Hope	
	β	p-value	β	p-value	β	p-value	β	p-value	β	p-value
Female	.09	.36	.08	.42	.20	.05	-.11	.26	.00	.99
Safety	.07	.49	.26	.01	.30	<.01	-.35	<.01	.04	.73
Female	.13	.18	.10	.31	.24	.02	-.11	.29	.00	.97
Cohesion	.27	.01	.24	.02	.36	<.01	-.13	.22	.03	.80
Female	.08	.41	.05	.63	.18	.08	-.06	.54	.00	.99
Monitoring	.04	.72	.13	.20	-.02	.81	-.23	.03	-.01	.94
<hr/>										
T1 → T2 (N = 88)	Relationship Quality		Involvement		Responsiveness		Externalizing		Hope	
	β	p-value	β	p-value	β	p-value	β	p-value	β	p-value
Female	.03	.77	.50	.02	-.01	.93	.06	.58	.03	.74
Safety	.11	.22	.19	.11	.04	.68	-.03	.76	.36	<.01
Safety*Female			-.45	.04						
Female	.04	.48	1.17	<.01	.04	.63	.05	.62	.06	.56
Cohesion	.12	.68	.38	<.01	.22	.01	-.05	.65	.34	<.01
Cohesion*Female			-1.04	<.01						
Female	.01	.91	.12	.14	-.03	.72	.09	.36	-.58	.05
Monitoring	.02	.84	-.10	.21	.14	.12	-.27	.01	-.05	.71
Monitoring*Female									.56	.04
<hr/>										
T1 → T3 (N = 85)	Relationship Quality		Involvement		Responsiveness		Externalizing		Hope	
	β	p-value	β	p-value	β	p-value	β	p-value	β	p-value
Female	.42	.09	.30	<.01	.13	.16	-.11	.28	.02	.84
Safety	.30	.04	.07	.46	-.06	.51	-.07	.55	.22	.03
Safety*Female	-.49	.06								
Female	.05	.63	1.14	.01	.17	.08	-1.04	.01	-.02	.84
Cohesion	.30	<.01	.40	<.01	.11	.26	-.31	.03	.04	.71
Cohesion*Female			-.82	.04			.94	.03		

T1 (N = 99)	Relationship Quality	Involvement	Responsiveness	Externalizing	Hope				
Female	.00	1.00	.29	<.01	.15	.10	.31	-.02	.89
Monitoring	-.15	.14	-.01	.92	-.09	.34	.04	.72	.62

Note: Significant standardized effects are bolded. Interactions were only included in model if significant. All models control for study condition, family resources, and child age, and longitudinal models also control for baseline levels of the outcome.