

Assessing the Relationship Between Parental Influences and Wellbeing Among Low Income African American Adolescents in Chicago

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Abstract

Background African American youth in urban centers often reside in poorly resourced communities and face structural disadvantage, which can result in higher rates of poor behavioral health factors such as mental health problems, juvenile justice system involvement, substance use, risky sex and lower school engagement. While parental monitoring has been shown to be protective with regards to these risk factors, less understood are the effects of parental warmth in conjunction with monitoring.

Objective This study examined whether parental monitoring and warmth had a main or mediated relationship to behavioral health factors among low income African American youth.

Method African American youth (n = 638) completed self-administered questionnaires on parenting factors (i.e., monitoring and warmth), mental health, juvenile justice system involvement, substance use, school engagement, and sexual risk behaviors.

Results Participants reported higher mean parental monitoring versus warmth. Parental monitoring was correlated with lower substance use, delinquency, unsafe sex and higher school engagement. Higher parental warmth in contrast was uniquely correlated with better youth mental health but also higher rates of alcohol, cigarette and marijuana use.

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Conclusions Monitoring their youth at high levels appears to be a common and effective strategy by parents in poorly resourced communities and was associated with lower behavioral health risks. By contrast, parental warmth had both positive and negative associations with behavioral health, suggesting that more research is needed to clarify the circumstances within which parental warmth may be protective or not.

Keywords Parental monitoring and warmth · African American youth · Drug use · Sexual risk · School engagement · Juvenile justice system involvement

Introduction

Many researchers have argued that parenting has a significant impact on the developmental trajectories of youth (Eisenberg et al. 2005; Kim-Spoon et al. 2012; Whittle et al. 2014). However, clarifying the ways that parenting may affect specific behavioral problems for adolescents remains an important task for researchers and practitioners. In this paper, we are especially concerned with the relative protective aspects of the parental practices of monitoring and warmth (see also Baumrind 1971; Darling and Steinberg 1993) as well as their respective styles (e.g., high versus low levels of monitoring and/or warmth) for African American youth living in low resourced urban communities (Darling and Steinberg 1993).

Ascertaining the relative protective aspects of varying dimensions of parenting is crucial for clarifying developmental outcomes of youth in low resourced urban communities. In such communities, youth are exposed to high rates of community violence (Dillon et al. 2008; Sang et al. 2014), street drugs (Buckner et al. 2003; Dillon et al. 2008), elevated prevalence of sexually transmitted infections (STIS), and low access to health services (Odgers et al. 2012; Wilson et al. 2012).

Further, African American youth in low income communities experience even more severe challenges than other racial/ethnic groups, including higher rates of low school engagement (e.g., positive student teacher relationships, school completion) (Areepattammannil 2010; Dearing et al. 2006) and mental health problems partly due to higher exposure to community violence and other environmental life stressors (Copeland-Linder et al. 2010; Fowler et al. 2009). Additionally, these youth bear a greater burden of rates of juvenile justice system involvement because of more policing and arrest rates (Ozkan 2016; Tapia 2010); and a higher incidence of sexually transmitted infections (STI) partially due to lower health care access and the presence of higher community STI viral loads (Dittus et al. (2004); Rodgers and McGuire 2012). Clarifying how parenting monitoring and style might be correlated with a reduction in these challenges remains an urgent and important topic.

However, we argue that while existing research on parenting has elucidated important linkages to adolescent development, researchers and practitioners can benefit from more research on the relative protective aspects of parental monitoring and warmth especially as it relates to low income African American youth behavioral health concerns. To address this gap, we examined the relative protective aspects of parenting monitoring and warmth in terms of youth behavioral health factors. Before turning to the study design and results, we first briefly summarize the important extant literature on parental monitoring and warmth on youth behavioral health.

Parental Monitoring and Youth Behavioral Health

Parental monitoring is the most extensively studied parental practice (Dittus et al. 2015; Dittus et al. 2010; Racz and McMahon 2011), and consists of parental awareness of a child's activities and whereabouts and communication to the child of that parental awareness (Dishion and McMahon 1998). This large body of research generally shows that more parental monitoring is associated with less youth problems (DiClemente et al. 2001; Lac and Crano 2009).

Specifically, in terms of delinquency, cross sectional (Dillon et al. 2008; Mann et al. 2015; Tilton-Weaver et al. 2013) and longitudinal studies (Barnes et al. 2006; Harris-McKoy and Cui 2013; Wang et al. 2013) have shown high rates of parental monitoring correlated with lower rates of adolescent delinquency. With regards to parental monitoring and youth mental health, cross sectional (Crossley and Buckner 2012; Molina et al. 2010; Van Loon et al. 2015) and longitudinal studies (Goldner et al. 2014; Ramos-Olazagasti et al. 2013; Van Loon et al. 2015) have also shown that high parental monitoring was positively associated with better youth mental health outcomes. In terms of risky sexual practices, studies have shown that higher parental monitoring is related to lower rates of youth sexual risk behaviors (Hawkins et al. 1999; Pequegnat et al. 2001; Stanton et al. 2000), later onset of sexual activity (Huang et al. 2011), having safer sex, condom use with sex partners, and using a condom during last penile-vaginal intercourse (Crosby et al. 2015). These results have been consistent across cross sectional (Hadley et al. 2011; Hadley et al. 2015; Sang et al. 2014) and longitudinal studies (Baptiste et al. 2007; Huang et al. 2011; Wang et al. 2015). In terms of substance use, several studies have indicated that higher parental monitoring is associated with lower rates of substance use (Clark et al. 2012; Sullivan et al. 2004; Voisin et al. 2012; Westling et al. 2008).

Parental Warmth and Youth Behavioral Health

Parental warmth has been described as a parental practice where interactions with a child are compassionate, supportive, and sympathetic to the child's needs while exhibiting positive empathy (Zhou et al. 2002). Studies examining the protective effects of parental warmth, have indicated that more warmth is associated with lower delinquency (Church et al. 2012; Fletcher et al. 2004), less dating violence perpetration and victimization through delinquency (Tyler et al. 2011), decreased mental health problems such as depression (Loeber et al. 2009), increased self-regulation (Baker and Hoerger 2012), and lower sexual risk behavior (Rodgers and McGuire 2012).

However, the protective aspects of warmth are complex especially in terms of youth sexual risk behavior and substance use. For example, one study showed that boys reared in low control/high warmth homes and girls reared in high control/low warmth homes were at increased risk for early sexual behaviors (Kapungu et al. 2006), while another study showed that parental warmth was a stronger predictor of sexual risk behavior for females more than for males (Kincaid et al. 2012). In some studies, higher levels of warmth were associated with reduced adolescent drug use (Broman et al. 2006; Tandon et al. 2014), but other studies showed the opposite. Pires and Jenkins (2007) found that parental warmth was associated with increased drug use among younger children but associated with lower levels of drug use for older youth.

Study Contributions

The extant literature shows that generally parental monitoring is protective with regards to youth behavioral problems, while warmth has shown inconsistent effects. This study aims to further examine the relative protective effects of monitoring and warmth for one of the most vulnerable youth populations in the U.S., African American youth living in low resourced urban communities. A gap exists in the extant literature given that few studies comprising of all or mostly African American youth participants have examined the associations between both parental warmth and monitoring and a broad range of youth behavioral health problems across a single sample. This study aims to fill this gap in the extant literature by providing a more detailed portrait of the relative protective effects of parental warmth and monitoring. These findings can advance current knowledge by enabling parents and practitioners to more clearly understand how different strategies may correlate with youth behavioral problems.

Study Aims

Parental monitoring and/or warmth may have main and additive relationships with youth behavioral problems. The main effect hypotheses posits that higher levels of parental monitoring or warmth would be significantly and independently associated with lower rates of youth delinquency, juvenile justice system involvement, low school engagement, substance use and risky sexual behaviors. Social control theory (Chen and Jacobson 2013; Fagan et al. 2013) would posit that caregivers would have better knowledge and supervision of their youth, resulting in lower behavioral health risk indices. Social learning theory posits youth would adopt positive behaviors from their parents due to observation, imitation and modeling (Kawabata et al. 2011), suggesting that parental warmth would result in youth adopting more of their guardians' positive behavioral messages.

The additive hypothesis is based on the premise that monitoring and warmth together would be related to more positive youth functioning given that parental monitoring efforts that occur in the presence of a warm and supportive relationship may be more effective in gaining youth's cooperation. The additive hypothesis is in line with research which suggests that the combination of these two parenting approaches is highly effective in promoting positive youth development and reducing problem behaviors (Steinberg et al. 2006; Lamborn et al. 1991). This study tested both hypotheses.

When testing these two hypotheses, we control for age, gender, sexual orientation and socioeconomic status, and household status. Studies have shown that the prevalence of youth behavioral problems vary by gender and age, such that older youth and boys have higher behavioral health risks (Gorman-Smith et al. 2004; Wilson et al. 2012). In addition, behavioral health risks are more pronounced in lower resourced communities (CDC 2015), and stigmatized groups such as sexual minority youth experience higher rates of mental illness, STIs, and other youth concerns (Hatzenbuehler 2009; Tolou-Shams et al. 2013). Finally, youth in single versus two-parent households may vary with regards to the amount of parental resources within in the home (Waldfoegel et al. 2010).

Methods

Sample and Setting

Between August 2013 and January 2014, a cross sectional study comprised of a convenience sample of African American youth was conducted in Chicago, Illinois to explore the correlates of exposures to community violence. Youth were recruited in three high schools, one youth church group, two community youth programs, and four public venues frequented by youth such as parks, fast food outlets, and movie theaters. Youth were eligible for study participation if they self-identified as African American and were between the ages of 13–24 years. Minors provided informed assent, and had a legal caregiver who provided informed consent and those over age 18 and older provided consent. This age range was selected because it covers early to late adolescence. The following are the number of persons approached at each site, and the persons who enrolled: schools (606/579), community centers (42/38), churches (49/44) and public venues (56/39). The overall response rate was 87 % based on the 753 participants who were initially invited to enroll in the study.

Participants were recruited from low-income communities consisting of predominantly African American residents, where the average annual median incomes ranged from \$24,049 to \$35,946, with the city average being \$43,628. Communities were predominantly classified as racially and socioeconomically homogenous. The percentage of single-female headed households in these areas ranged from 28.9 to 32.3 %, with the city average being 13.9 % (City Data, 2015).

Procedure

Permission was obtained from school principals and leaders of church groups and youth programs to recruit participants for the study. Flyers describing the study were posted at each of these locations, and trained research assistants introduced the study to potential participants in these settings. The research was introduced to potential participants as a study seeking to identify factors that protect youth from risky behaviors. All research assistants that distributed the surveys completed human subjects training, which included informed consent protecting the rights and privacy of study participants and limits to confidentiality. Each participant was provided with a detailed letter describing the study along with parental consent forms. Youth who returned signed consent forms were enrolled in the study. Youth recruited in public venues were only asked to participate if a parent or guardian was present to provide consent. Questionnaires were administered in small groups when possible.

Research assistants supervised all participants completing the self-administered questionnaire to minimize interruptions and to maintain confidentiality. Those recruited from schools, community programs, and churches were administered the questionnaire in those respective locations in spaces assigned by the venue. The few individuals who were recruited in public venues (e.g., parks and fast food venues) were administered the questionnaire in quiet spaces at or near those venues. In such instances, questionnaires were only administered if a parent or guardian was present to provide consent and the questionnaire could be immediately administered. Youth participants took up to 45 minutes to complete the questionnaire and they were each compensated \$10.00.

This study was approved by the University of Chicago Institutional Review Board and adheres to all of the University's Institutional Review Board's ethical guidelines as well as

those of the American Psychological Association. No potential conflicts of interest that may affect the publication of this paper have been found.

Measures

Demographics

Information was collected on several demographic variables such as age, gender (male/female), sexual orientation (How do you identify yourself? 1 = heterosexual, 2 = other), and household composition (Who is living in your household? 1 = both mother and father, 2 = mother only, 3 = father only, 4 = other).

Parental Monitoring

Parental monitoring was assessed by Parental Monitoring Scale (Steinberg et al. 1992). This 10 item scale assessed the degree to which both parents monitor their youth. Sample items include, “how well do your parents know who your friends are?”, “how well do your parents know where you are most afternoons after school?” and “how well do your parents know what you do with your free time?”. Responses were recorded using a five-point scale (not at all, very little, somewhat, quite a bit, very much). A composite score was calculated by summing the responses for the 10 items, with higher scores indicating higher levels of parental monitoring. The reliability coefficient using Cronbach’s alpha was 0.85.

Parental Warmth

Parental warmth was measured by a measure previously utilized from the National Longitudinal Study of Adolescent Health (Harris et al. 2009). The scale contained 8 items to examine the degree to which youth shared time and activities with their parents. Sample items include, “who do you talk to about personal problems?”, “who do you talk to about someone you are dating, or a party you went to?”, and “who do you talk to about your school work or grades?”. Response options were a three-point scale (1 = neither, 2 = either mother or father, 3 = both parents). A composite parental warmth score was calculated by summing the responses for the 8 items, with higher scores indicating higher levels of warmth with their parent(s). The reliability coefficient using Cronbach’s alpha was 0.86.

School Engagement

School engagement is a multidimensional construct, which reflects the degree to which students identify as learners and are invested emotionally, behaviorally and academically in school (e.g., attendance, school bonding, grades, graduation, college enrollment) (Furlong and Christenson 2008). Based on available measures, this study assessed two constructs: school bonding and student–teacher connectedness. School bonding was measured by 5 items from the School Bonding Scale (Fleming et al. 2010) (e.g., “how much do you like school?”). Cronbach’s alpha for the current sample was 0.92. A median split was conducted to categorize levels of school bonding into low and high groups (median = 15, range 0–20, SD 4.16). The Student Assessment of Teachers Scale (Klem and Connell 2004; McNeely and Falci 2004) asked participants to respond to ten items measured on a

five-point scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”) (e.g., “teachers at my school care about me”). Higher scores on the scale indicated greater student–teacher connectedness. Cronbach’s alpha for the sample was 0.87. A median split was conducted to categorize levels of student–teacher connectedness into low and high groups (median = 37, range 10–50, SD 7.95).

Mental Health

Mental health behaviors were assessed with the Brief Symptom Inventory (Derogatis 2000), which contains 18 items about mental health symptoms during the past 7 days (e.g., “nervousness of shakiness inside”, “spells of terror or panic”, “thoughts of ending your life”). Response options were based on a five-point scale (“not at all”, “a little bit”, “moderately”, “quite a bit”, or “extremely”). A composite mental health score was calculated by summing the responses for the 18 items. Cronbach’s alpha was 0.92. For the logistic regression analysis, the composite score was dichotomized into poor or good mental health, based on the median split of 8.0 (range 0–61, SD 12.41).

Delinquency

Delinquency history was assessed by using two variables: delinquent behaviors and juvenile justice system involvement. Delinquent behaviors were assessed using a revised version of an instrument assessing delinquency in a prior study (Chen et al. 2013). These 10 items evaluated the frequency of illegal, norm-violating, and aggressive behaviors in the last 12 months (e.g., “used a knife or gun or some other thing [such as a bat, pipe, razor, taser, mace] to get something from a person”). Responses were rated on a six-point scale (0 times, 1–2 times, 3–5 times, 6–8 times, 9–11 times, and 12 or more times). A composite delinquent behaviors score was calculated by summing the responses for all 10 items. Cronbach’s alpha was 0.90. For the logistic regression analysis, the composite score was dichotomized into low and high delinquent behaviors based on the median split of 0 (56.5 % of all participants reported no delinquent behaviors; range 0–37, SD 4.74). History of juvenile justice system involvement was assessed by one item, “have you ever had a case in the juvenile justice system?” The response option was “no”/“yes”.

Substance Use

Cigarettes, alcohol, marijuana, ecstasy and cocaine use history was assessed. Participants were asked whether in the past they had ever taken these drugs (“yes”/“no”) and if so, how many times they had taken these drugs in the past 30 days. Responses for the frequency of substance use were rated on a seven-point scale (0, 1, 3–5, 6–9, 10–19, 20–29 and 30 days) (DiClemente et al. 2004).

Sexual Behaviors

Risky or unsafe sexual behaviors were defined as “having sex while high on alcohol/drugs”, “having sex while high without condoms”, and “having sex without condoms in the past 12 months”. All items were recoded into dichotomous variables where 0 = “never engaged in the sexual risk behavior”, and 1 = “engaged in the sexual risk behavior at least one time” (DiClemente et al. 2004).

Analyses

Univariate analyses were used to describe the overall sample. Next, linear regression and logistic regression were conducted to examine the relationship between parental monitoring and/or warmth and school engagement, mental health, delinquency, substance use, and sexual risk behaviors. Linear regressions were used for continuous variables and logistic models computed for dichotomous variables.

To test the main effect hypothesis, stepwise procedures were utilized to create seven models to estimate the individual and then added relationship of the variables on the five dependent variables. More specifically, Models A to D were unadjusted and examined the independent relationship between each covariate (i.e., age, gender, sexual orientation, SES proxy, and household composition and the five dependent variables). Models E and G were also unadjusted and examined the independent relationship between each parental influence (i.e., parental monitoring and parental warmth) and the five dependent variables. Finally, Model G adjusted for all covariates and estimated the simultaneous relationship of parental monitoring and parental warmth to youth school engagement, mental health, delinquency, substance use and sexual risk behaviors. To test the additive hypothesis, a combined term (parental monitoring + warmth) was created and entered into the previous models. Adjusted odds ratios and 95 % confidence intervals were calculated for all logistic models. All analyses were performed using SPSS (version 22.0). This study includes original data obtained by the first author. The first author accepts responsibility for the integrity of this data as well as the data analyses.

Results

The analytic sample was composed of 638 participants. Among all participants, 46.1 % were male and 53.8 % were female, and the mean age was 15.85 years old (SD 1.42). Slightly over three-fourths (76.5 %) of the overall sample qualified for free or reduced school lunch, indicating that the majority of participants resided in low-income families. With regards to sexual orientation the majority of participants (81.2 %) self-identified heterosexual. Approximately, 31 % of youths lived with both parents, 55 % with mother only, and 2.5 % with father only. Participants reported higher overall parental monitoring 28.7 (range 0–40, SD 8.6) compared to warmth 8.9 (range 0–16, SD 3.54). Table 1 displays descriptive statistics of the overall sample relative to all major study variables.

Hypothesis one posited that parental monitoring and warmth would show independent relationships to behavioral health factors. Tables 2 and 3 presents the unadjusted and adjusted findings related to testing this hypothesis.

School Engagement

Tables 2 and 3 presents the unadjusted and adjusted findings related to testing hypothesis one. In unadjusted models, only sexual orientation was related to any of the school engagement variables such that youth who reported sexual identities other than being heterosexual reported lower student teacher connectedness. Also in unadjusted models, both parental warmth and monitoring were related to student–teacher connectedness and school expectations. Participants reporting higher parental warmth were 1.1 times more likely to report higher student–teacher connectedness (AOR 1.06; 95 % CI 1.01–1.11) and

Table 1 Descriptive statistics of the overall sample (N = 638)

Variable	% (yes)
Mental health	
Poor mental health	47.6
Delinquency history	
Delinquent behaviors	43.5
History of juvenile justice involvement	11.3
School engagement	
Low school bonding	49.8
Low student–teacher connectedness	45.3
Substance use	
Cigarette use	12.9
Alcohol use	48.6
Marijuana use	39.2
Ecstasy use	3.9
Cocaine use	2.4
Sexual behaviors	
Sex without condoms last 12 months	17.9
Sex while high on alcohol/drugs	12.4
Sex while high without condoms	7.4
Parental influences	
Parental monitoring	55.0
Parental warmth	66.9

1.1 times more likely to report higher school bonding (AOR 1.05; 95 % CI 1.00–1.10). In addition, participants reporting higher parental monitoring were 1.1 times more likely to report more positive student–teacher connectedness (AOR 1.08; 95 % CI 1.05–1.10) and 1.1 times more likely to report stronger school bonding (AOR 1.06; 95 % CI 1.04–1.08).

After adjusting for covariates namely age, gender, sexual orientation, and household composition, and simultaneously comparing the significance of both parental warmth and parental monitoring, only monitoring was significantly correlated with student–teacher connectedness and school bonding. Participants who reported higher levels of parental monitoring were 1.1 times more likely to report stronger student–teacher connectedness (AOR 1.08; 95 % CI 1.05–1.11) and 1.1 times more likely to report higher school bonding (AOR 1.07; 95 % CI 1.04–1.10).

Mental Health

Unadjusted logistic regression models indicated that better mental health was positively correlated with being female and identifying as heterosexual. In unadjusted models, both parental monitoring and warmth were related to youth mental health. Participants reporting higher parental warmth were less likely to report poorer mental health (AOR 0.90 95 % CI 0.85–0.94). In addition, participants reporting higher parental monitoring were less likely to report poorer mental health (AOR 0.97 95 % CI 0.95–0.99). Logistic modeling controlling for all covariates indicated that only parental warmth was significantly correlated with youth mental health such that those reporting higher parental warmth were less likely to report poorer mental health (AOR 0.92 95 % CI 0.86–0.97).

Table 2 Relationship between parental influences and substance use among African American youth (n = 638)

	Poor mental health Odds ratio (95 % CI)	Delinquent behaviors Odds ratio (95 % CI)	Juvenile justice involvement Odds ratio (95 % CI)	Student–teacher connection Odds ratio (95 % CI)	School bonding Odds ratio (95 % CI)	Sex without condom last 12 months Odds ratio (95 % CI)	Sex while high on alcohol/drugs Odds ratio (95 % CI)	Sex while high without condoms Odds ratio (95 % CI)
Model A	1.06 (0.94–1.19)	1.00 (0.90–1.12)	1.27** (1.07–1.51)	0.98 (0.87–1.09)	0.94 (0.84–1.05)	1.61*** (1.32–1.98)	1.38** (1.13–1.69)	1.53** (1.19–1.97)
Model B	1.73** (1.24–2.42)	0.58** (0.42–0.81)	0.64† (0.39–1.05)	1.02 (0.74–1.41)	1.15 (0.84–1.58)	1.24 (0.77–2.00)	0.60† (0.35–1.02)	0.64 (0.34–1.23)
Model C	2.68*** (1.66–4.32)	1.58* (1.03–2.44)	2.74** (1.55–4.84)	0.68† (0.44–1.06)	0.95 (0.62–1.46)	1.45 (0.80–2.64)	1.83† (0.99–3.39)	1.67 (0.80–3.50)
Sexual orientation (hetero)								
Model D	1.33 (0.93–1.90)	0.77 (0.54–1.09)	1.13 (0.66–1.94)	1.01 (0.78–1.56)	0.98 (0.69–1.37)	1.27 (0.75–2.15)	1.24 (0.70–2.21)	1.15 (0.58–2.31)
Household composition (both parents)								
Model E	0.90*** (0.85–0.94)	1.02 (0.97–1.07)	0.94† (0.87–1.01)	1.06* (1.01–1.11)	1.05* (1.00–1.10)	0.98 (0.92–1.05)	0.94† (0.87–1.01)	0.92† (0.84–1.00)
Parental warmth	0.97** (0.95–0.99)	0.97** (0.95–0.99)	0.96** (0.94–0.99)	1.08*** (1.05–1.10)	1.06*** (1.04–1.08)	0.97* (0.95–1.00)	0.93*** (0.91–0.96)	0.93*** (0.90–0.96)
Model F	0.92** (0.86–0.97)	1.08* (1.02–1.14)	1.02 (0.93–1.12)	0.98 (0.93–1.04)	0.98 (0.93–1.04)	1.04 (0.95–1.14)	1.06 (0.96–1.17)	1.03 (0.92–1.17)
Parental monitoring (PM)	0.98 (0.96–1.01)	0.96** (0.94–0.98)	0.97* (0.93–1.00)	1.08*** (1.05–1.11)	1.07*** (1.04–1.10)	0.98 (0.94–1.01)	0.94*** (0.90–0.97)	0.95* (0.91–0.99)
PM + PW + age + gender + sexual orientation + household composition	0.99* (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.01* (1.00–1.02)	1.00 (1.00–1.01)	1.00 (0.99–1.01)

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 3 Relationship between parental influences and multiple youth factors among African American youth (n = 638)

	Poor mental health Odds ratio (95 % CI)	Delinquent behaviors Odds ratio (95 % CI)	Juvenile justice involvement Odds ratio (95 % CI)	Student–teacher connection Odds ratio (95 % CI)	School bonding Odds ratio (95 % CI)	Sex without condom last 12 months Odds ratio (95 % CI)	Sex while high on alcohol/drugs Odds ratio (95 % CI)	Sex while high without condoms Odds ratio (95 % CI)
Model A	1.06 (0.94–1.19)	1.00 (0.90–1.12)	1.27** (1.07–1.51)	0.98 (0.87–1.09)	0.94 (0.84–1.05)	1.61*** (1.32–1.98)	1.38** (1.13–1.69)	1.53** (1.19–1.97)
Model B	1.73** (1.24–2.42)	0.58** (0.42–0.81)	0.64† (0.39–1.05)	1.02 (0.74–1.41)	1.15 (0.84–1.58)	1.24 (0.77–2.00)	0.60† (0.35–1.02)	0.64 (0.34–1.23)
Model C	2.68*** (1.66–4.32)	1.58* (1.03–2.44)	2.74** (1.55–4.84)	0.68† (0.44–1.06)	0.95 (0.62–1.46)	1.45 (0.80–2.64)	1.83† (0.99–3.39)	1.67 (0.80–3.50)
Sexual orientation (hetero)								
Model D	1.33 (0.93–1.90)	0.77 (0.54–1.09)	1.13 (0.66–1.94)	1.01 (0.78–1.56)	0.98 (0.69–1.37)	1.27 (0.75–2.15)	1.24 (0.70–2.21)	1.15 (0.58–2.31)
Household composition (both parents)								
Model E	0.90*** (0.85–0.94)	1.02 (0.97–1.07)	0.94† (0.87–1.01)	1.06* (1.01–1.11)	1.05* (1.00–1.10)	0.98 (0.92–1.05)	0.94† (0.87–1.01)	0.92† (0.84–1.00)
Parental warmth	0.97** (0.95–0.99)	0.97** (0.95–0.99)	0.96** (0.94–0.99)	1.08*** (1.05–1.10)	1.06*** (1.04–1.08)	0.97* (0.95–1.00)	0.93*** (0.91–0.96)	0.93*** (0.90–0.96)
Model F	0.92** (0.86–0.97)	1.08* (1.02–1.14)	1.02 (0.93–1.12)	0.98 (0.93–1.04)	0.98 (0.93–1.04)	1.04 (0.95–1.14)	1.06 (0.96–1.17)	1.03 (0.92–1.17)
Parental monitoring (PM)	0.98 (0.96–1.01)	0.96** (0.94–0.98)	0.97* (0.93–1.00)	1.08*** (1.05–1.11)	1.07*** (1.04–1.10)	0.98 (0.94–1.01)	0.94** (0.90–0.97)	0.95* (0.91–0.99)
PM + PW + age + gender + sexual orientation + household composition	0.99* (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.01* (1.00–1.02)	1.00 (1.00–1.01)	1.00 (0.99–1.01)

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Delinquency History

Unadjusted logistic models indicated that males and participants were identified as LGBT reported higher rates of delinquency and juvenile justice involvement. Unadjusted models indicated that higher parental monitoring was correlated with lower delinquent behaviors and juvenile justice involvement. Participants who reported higher parental monitoring were less likely to report delinquent behaviors (AOR 0.97; 95 % CI 0.95–0.99) and less likely to report ever being involved in the juvenile justice system (AOR 0.96; 95 % CI 0.94–0.99). After adjusting for all covariates, parental monitoring was related to decreased delinquency (AOR 0.96; 95 % CI 0.94–0.98) and juvenile justice system involvement (AOR 0.97; 95 % CI 0.93–1.00).

Substance Use

Unadjusted linear regression indicated that overall drug use history was related to being older, male and identifying as LGBT. Unadjusted analyses revealed that higher parental warmth was associated with decreased frequency of ecstasy ($\beta = -0.09$, $p < .05$) and cocaine ($\beta = -0.10$, $p < .05$) use in the last 30 days. Higher parental monitoring was also significantly associated with a lower frequency of cigarette ($\beta = -0.27$, $p < .01$), alcohol ($\beta = -0.21$, $p < .001$), marijuana ($\beta = -0.21$, $p < .001$), ecstasy ($\beta = -0.27$, $p < .001$) and cocaine ($\beta = -0.27$, $p < .001$) use in the last 30 days. After adjusting for all covariates, higher parental monitoring was correlated with lower rates of all drug use ever and in the past 30 days. In addition, higher parental warmth was correlated with increased marijuana use history.

Sexual Behaviors

Unadjusted models indicated that being older was correlated with higher rates of sexual risk behaviors. Unadjusted models also indicated that higher parental monitoring was correlated with lower rates of all sexual risk behaviors. After adjusting for all covariates only parental monitoring decreased sexual risk behaviors such that those reporting higher monitoring were less likely to report not using condoms in the past 12 months (AOR 0.98; 95 % CI 0.94–1.01), being high on alcohol or other drugs then having sex (AOR 0.94; 95 % CI 0.90–0.97), having sex while high on alcohol/drugs without using condoms (AOR 0.95; 95 % CI 0.91–0.99). There was no significant relationship between parental warmth and sexual risk behaviors.

Hypothesis two posited that the relationship between parental monitoring together with warmth would be more protective with regards to youth behavioral health factors. Overall findings indicated that the additive term monitoring + warmth was protective with regards to poor mental health (AOR 0.99; 95 % CI 0.99–1.00) and sex without condoms in the past 12 months (AOR 1.01; 95 % CI 1.00–1.02).

Discussion

This study extends the current literatures on the relationship between parental monitoring and warmth as that may relate to a broad number of behavioral health among African American youth in low resourced urban communities. Prior studies have documented that

parental monitoring is associated with a reduction in all of the behavioral health problems that were the target of this study (Goldner et al. 2014; Martins et al. 2008; Tilton-Weaver et al. 2013; Voisin et al. 2015). Additionally, a number of studies suggested that parental warmth was related to lower mental health problems (Baker and Hoerger 2012), juvenile justice system involvement (Prather and Golden 2009) substance use (Tandon et al. 2014), risky sex (Kendler and Aggen 2014), and school achievement problems (Wang et al. 2014). However, these existing studies did not examine the additive influence of parental monitoring and warmth nor concentrated on African American youth in early to late adolescence.

The overall results from this study indicated that when parental warmth and monitoring were independently and additively assessed, that monitoring alone had a stronger and broader protective relationship with regards to juvenile justice involvement, substance use, risky sex and poor school achievement. These findings corroborated those of prior ethnically diverse studies (Chen and Jacobson 2013; Donaldson et al. 2015; Lowe and Dotterer 2013). The broad spectrum of behavioral health protection associated with parental monitoring alone versus warmth, or combined monitoring and warmth might be attributed to the higher environmental risk factors prevalent many low income communities (Buckner et al. 2003; Odgers et al. 2012; Wilson et al. 2012; Goldner et al. 2014). In many such communities, partly due to structural and economic violence there are higher rates of drug activity, gangs, and community STI rates. Therefore, higher levels of monitoring and supervision versus warmth and empathy might correlate with more positive youth outcomes. Consequently, when African American parents exercise strong parenting influences with regards to monitoring, irrespective of warmth, this might correlate with better youth behavioral health factors. Monitoring more so than warmth might be especially critical during the developmental years of early to late adolescence when youth, especially those in poor resourced communities are navigating significant threats to positive youth development. The null findings for parental warmth might suggest other intervening variables (e.g., more nuanced parenting influences such as authoritative, authoritarian, permissive approaches) might be operating here. For instance, other studies have documented that more authoritarian versus permissive parenting styles are correlated with better behavioral outcomes for African American youth (Kapungu et al. 2006; Kincaid et al. 2012).

In addition, current findings also indicated that higher parental warmth – but not monitoring – was correlated with lower mental health problems. Notably, several of the extant study findings that documented that higher parental monitoring and mental health were positively correlated did not account for the potential effects of parental warmth (Copeland-Linder et al. 2010; MacKay et al. 2009; Ramos-Olazagasti et al. 2013), which may have confounded results. These results might suggest that parental warmth as opposed to monitoring is more central to supporting positive youth mental health. Youth may need compassionate, supportive and sympathetic responses from parental figures – as opposed to supervision and surveillance – when it comes to promoting positive mental health, especially if they are residing in poorly resourced, dangerous communities. For instance, existing studies have documented that parental monitoring and warmth were differentially related to youth mental health (i.e., internalizing and externalizing symptoms) depending on neighborhood danger, such that in dangerous communities greater warmth not monitoring was related to less internalizing problems (Goldner et al. 2014). Future studies using qualitative approaches might be used to explore and illuminate why monitoring versus warmth was more protective with regards to a broader number of youth co-morbid concerns.

Along similar lines, the current study indicated that higher levels of parental warmth were correlated with higher cigarette, alcohol and marijuana use, and sex without condoms in the past 12 months. This finding might suggest that other variables confound the relationship between parental warmth and use of these specific drugs, such as permissive parenting styles, parents' own drug use or parents' age. Supporting this assumption are other study findings showing that higher parental warmth was associated with increased drug use among younger youth while it was associated with lower levels of drug use for older youth (Pires and Jenkins 2007) and evidence showing that parent drug use and treatment history along with parenting styles are correlated with youth substance use (Arria et al. 2012). These variables were not assessed in this study and future studies should explore these assumptions. Overall findings from this current study generally supported the main effect hypothesis for parental monitoring with varying results about parental warmth.

Implications for Intervention

The results from our study indicate that multiple outlets for intervention might exist to reduce problem behaviors for youth and families living in communities with high levels of structural disadvantage. Our findings reinforce the evidence that suggests that targeting parental monitoring is an effective strategy for reducing individual problem behaviors such as drug use (Lac and Crano 2009), some sexual risk behaviors (Dittus et al. 2015), and delinquency (Tilton-Weaver et al. 2013).

Our study also suggests that increasing parental warmth might be an effective strategy for improving youth mental health concerns, which might be especially important for stigmatized subgroups within this African American youth sample. Little intervention research has been conducted targeting parental warmth, which is surprising given evidence that this parental quality is an important factor in youth functioning (Bean et al. 2003, 2006). Our results suggest that parental warmth might be an important avenue for interventions that seek to improve youth mental health.

However, these intervention implications should be considered in the context of the sample. A number of studies with African American families have found that economic hardship is related to increased emotional distress from caregivers, which in turn relates to disrupted parenting practices and lower child functioning (Conger et al. 2002; Conger et al. 2010). A multi-systemic understanding of the relation between parenting practices and youth behaviors is important; interventions are likely to be most effective when increasing supports for caregivers to reduce their own emotional distress.

Limitations and Future Research

Despite the strengths of this study, there are several study limitations. All data were cross-sectional and therefore findings do not suggest or provide any casual inferences. It is possible that many of the relationships observed in this study were be bi-directional or the causal ordering may be different. Future studies should extend this study with a longitudinal sample.

In addition, the present study drew on a convenience sample of African American youth. The youth targeted in this sample reside in neighborhoods with considerable structural disadvantage, and are at higher risk of the problem behaviors examined in this study. Additionally, as mentioned above, the structural disadvantage in these neighborhoods places significant stress on parents. As a result, findings related to the relation

between parenting and problem behaviors are likely limited to similar populations of African American youth.

The present study additionally is limited in its measures. All findings are based on self-report youth measures and having parent data on monitoring and warmth may be equally important. Some have argued however that youth and parent reports of monitoring and warmth are not always congruent and that it is youth perception of monitoring and warmth that drives their behaviors (Pires and Jenkins 2007; Zhou et al. 2002). Nevertheless, future studies would benefit from drawing on multiple reports of these constructs, including both parental and youth reports, to triangulate parent-youth dynamics. This study documented that parental influences especially with regards to monitoring was associated with lower behavioral health problems among low income African American youth. However, in many African American and other low resourced families, parenting functions are carried out by many individuals, including but not limited to biological and/or step parents, grandparents, and older siblings (Chase-Lansdale et al. 1999; Goodman and Silverstein 2006) some of whom have custodial responsibilities and others not. This study was limited in capturing these dynamics, suggesting more detailed research is needed that incorporates mixed methods to develop suitable, reliable, and valid measures. Finally, there is some debate in the developmental literature that the measure typically used to assess monitoring is really evaluating parental knowledge that can come from parental monitoring or from adolescents volunteering information to their parents (Kerr and Stattin 2000). However, this remains a contention in the literature and this current measure is still widely used (Lac and Crano 2009; Racz and McMahon 2011).

This study suggests several additional directions for future research. First, and most important, more research is needed to examine the “ecosystem” of parenting for low resourced families, and how the likely variation in monitoring and warmth constitute dynamics for more clearly understanding how monitoring and/or warmth affect youth behavioral problems. Second, extant studies suggest that there might be a gender interaction between monitoring and warmth from father and mother to boys and girls with specific youth problems (Bean et al. 2006; Lowe and Dotterer 2013). The present study did not examine interactions based on parent and child gender given lack of sufficient data on father or male guardian involvement. Identifying youth problems where parental intervention might be most effective from either the father/male guardian or mother/female guardian is an important step for intervention work.

Conclusions

In summary, the present study suggests that parental monitoring and warmth matter differently depending on the youth problem. Both appeared to have an important connection to youth mental health, but when considered additively, it was only warmth that was a significant correlate. Conversely, warmth appeared to have a relation to school engagement, but when assessed relative to monitoring, only monitoring was significantly related to school functioning. These findings underscore that studies that consider only one dimension of parent/guardian-child relationships might misattribute or overstate the influence of that dimension on a particular youth problem. This study additionally contributed to a literature that has considered problem behaviors in isolation. Across six youth problem areas, with the exception of youth mental health, monitoring emerged as a more consistent correlate of problem behaviors than warmth. Our study suggests that focusing on

parental monitoring as a point of intervention might have health promoting influence among African American youth across multiple problem areas but more research is needed to clarify whether the likely multiple caregivers and guardians are contributing to the results reported here.

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