

REVIEW ARTICLE

Can Social Capital Protect Adolescents from Delinquent Behavior, Antisocial Attitudes, and Mental Health Problems?

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ABSTRACT

Social capital theory suggests that the norms, obligations, and information adolescents receive from their social relationships act as a form of capital that can be traded in social situations. The implications of this theory are clear when considering growth in positive outcomes: more social capital should provide greater growth. However, the implications are less clear when considering potential protective effects against negative outcomes. We conduct a systematic review of the literature on social capital to examine the evidence for these protective effects. We discuss what social capital is and how it has been applied to youth previously before moving to a review of the relevant literature linking social capital and a number of negative outcomes. We find evidence that social capital does generally protect youth from negative outcomes; however, the evidence for some outcomes, such as mental health, are mixed. We review the implications of our findings and suggest avenues for future research.

1. Introduction

A robust literature suggests that investment in youth social capital is useful, at least when linking social capital to growth in desirable outcomes such as academic attainment and achievement. The evidence

as to whether social capital is effective in protecting youth from problematic outcomes is less clear. In this paper, we first outline what social capital is, what we mean by youth social capital, and why social capital in theory should provide protective

effects for adolescents. We then describe the existing literature on whether social capital is associated with lower levels of delinquency, violence and aggression, risk taking, and attitudinal and mental health concerns among adolescents. Finally, we explore future directions for how scholars could reconcile mixed social capital findings and expand the reach of social capital theory to better explore ways to protect youth from negative life outcomes.

1.1 What Is Social Capital?

Social capital refers to relationships among actors, as well as resources that pass across the ties that connect them (Coleman 1988; 1990). Like financial capital and human capital, social capital can be exchanged to facilitate a range of social outcomes (Dufur, et al., 2016a; Parcel & Bixby, 2016; Parcel, Dufur, & Zito, 2010). While social capital can be conceptualized both as relationships among individuals and as relationships between individuals and institutional actors, we focus here primarily on the social capital created and exchanged between individual youth and other individual actors in their lives. Social capital can be operationalized both by the actual ties between actors and as the resources that flow across those ties, as well as by subjective relationships contingent upon trust, reciprocity, or other positive emotions (Paxton, 1999). Furstenberg's (2005:810) definition of social capital as a "stock of social goodwill created through shared social norms and a sense of common membership" provides a good overview of the social resources available to adolescents.

As is true for financial or human capital, social capital theory is characterized by fungibility, exchangeability, and durability (Dufur, et al., 2016b; Robison, Schmid, & Siles, 2002). Social capital resources should be able to be traded for desirable outcomes across multiple settings, exchanged with different kinds of actors, and, when continually refreshed, should not lose value. Thinking of these common characteristics of capital helps make sense of investment language we use when describing financial or human capital as applied to social actions and resources. This in turn implies actors' motivation for purposeful investment in social ties. It is this purposeful investment that separates social capital from other perspectives that view outcomes as natural or unintended byproducts of social contact. For example, in Coleman's (1988) seminal treatment of social capital, he described how parents must affirmatively choose to invest time, training, and interaction in their children in order to pass their human capital from adult to child. In describing social capital, Coleman focused specifically on the information, obligations, and norms that are transmitted through social ties, resources that help children learn about and internalize appropriate behavior. Social capital theory, then, claims that individuals invest in one another intentionally, in ways such as building trust that others will meet their obligations, passing on norms that build a common understanding of acceptable behavior and effective sanctions for norm violation, and sharing information. This investment framework is also useful because, in addition to identifying opportunities for investment in social

resources, it also helps explain how resources can be diluted or diffused.

1.2 Youth Social Capital

Given the active ways adults invest in children and youth across multiple settings, it makes sense that social capital theory might explain how such investments benefit youth. As the first context children experience is their home, much of the research on youth social capital has focused on the bonds between parents and children. Social investments that parents make have significant and long-term consequences for children. Following Coleman's (1988) articulation of how parents must invest in social capital connections with their children that allow for the flow of human capital from parent to child, scholars have articulated a number of ways parents might build social capital at home. Family social capital is comprised of the bonds between parents and children, which include the time and attention parents spend interacting with children, investment in their activities, and promotion of their well-being (Dufur et al., 2016a; Dufur, Parcel, & Troutman, 2013; Kim & Schneider, 2005). Such interactions can begin at birth, and are refreshed through childhood and adolescence as parents monitor and enhance children's activities and engage in concerted cultivation of desirable outcomes (Lareau, 2011). These investments build cumulative trust within the family, another aspect of social capital (Adler & Kwon, 2002). Social capital invested by parents in their children might be an example of what Putnam (2000) describes as bonding social capital, or close bonds created within tight, closed networks. Adult investment in

children is more than mere supervision; it creates the social mechanisms by which children are socialized and educated.

In addition to social capital built specifically between parents and their children, there is considerable empirical evidence that children build and use social capital through the social ties they and their parents have with neighbors, church co-congregants, school personnel, family friends, and work colleagues (Crosnoe, 2004; Dufur, Parcel, & McKune, 2008, Dufur et al., 2015; Dufur et al., 2016a; Hoffmann & Dufur, 2008; Johnson et al., 2001; Parcel & Dufur, 2001a, 2001b). These connections illustrate bridging social capital (Putnam, 2000; see also Granovetter's [1977; 1983] classic take on how weak ties in open networks bring new information into systems); when children have stronger connections to these actors, they also have greater social resources on which to draw.

Youths' own connections to school personnel, peers, and neighbors also illustrate important potential reservoirs of bridging social capital (Cleveland, et al., 2012; DeCoster, Heimer, & Wittrock, 2006; Dufur et al., 2016a; Hoffmann & Dufur, 2018, Kreager, Rulison, & Moody, 2011; Parcel et al., 2010). Such ties might take the form of close connections between teachers and students, investment by non-family adults in neighborhood youth, or warm relationships between adolescents and their friends' parents. In each of these examples, adults can invest in ties with adolescents, transmit norms for prosocial behavior, and share useful information. As a result, youth

have access to valuable social capital across many different contexts.

1.3 How Has Social Capital Theory Been Applied to Adolescent Life?

Because of its utility in explaining both desirable youth outcomes and connections between adolescents and other actors in their lives, a robust body of research applies social capital theory to adolescent experiences. Much of this research focuses on ways social capital might facilitate growth, particularly within academic settings. This research strongly suggests that social capital promotes educational achievement. Research looking at both children and adolescents finds that social capital in both the family and the school is associated with greater math and reading achievement (Dufur et al., 2013a; Parcel & Dufur, 2001a, 2001b). Similar work links social capital to higher high school grade point average (Carbonaro, 1998; Hao & Bonstead-Bruns, 1998; Roth, 2013; von Otter & Stenberg, 2013) and standardized test scores (Carbonaro, 1998; Hao & Bonstead-Bruns, 1998; Israel, Beulier & Harless, 2001; McNeal, 1999; Ream & Palardy, 2008; Wright, Cullen, & Miller 2001), including increases in math test scores across time (Morgan & Sørensen, 1999). These patterns hold for both boys and girls, and for both white and minority students (Dufur et al., 2016a).

Perhaps because of this clear connection to various forms of academic achievement, social capital is also associated with greater educational attainment. For example, both bonding and bridging social capital are associated with school retention

(Carbonaro, 1998; Croninger & Lee, 2001; McNeal, 1999; Teachman, Paasch, & Carver, 1996, 1997; White, 2000). In addition, students who have higher levels of social capital are more likely to graduate from high school in both the U.S. (Hofferth, Boisjoly, & Duncan, 1998; Muller & Ellison, 2001) and Germany (Schmitt & Kleine, 2010). Alignment between parent and child educational ambitions and norms, representing how social capital has successfully transmitted information and norms from parent to child, is also connected to college enrollment (Kim & Schneider, 2005).

Research looking at growth in academic settings also highlights the importance of social capital by demonstrating what happens when that capital is diluted. For example, Swanson and Schneider (1999) suggest that moving to either a new school or a new home, which disrupts social capital connections within families and with teachers, peers, and neighbors, has negative consequences for student achievement.

Despite this strong body of work, not all research ties social capital to academic achievement. Domina (2005) found that parental financial capital and prior child achievement often explain the effects of other forms of capital. Overall, however, a large body of research connects social capital to adolescent growth in academic settings. When adolescents have little of the social capital needed to transmit human capital, their academic growth suffers (Parcel et al., 2010; Parcel & Bixby 2016).

2. Potential Protective Effects of Adolescent Social Capital

While much research on adolescents is concerned with promoting growth and maximizing academic outcomes, adults are also focused on protecting adolescents from negative social outcomes. This might include protecting youth from engaging in delinquent or violent behavior, from using or abusing illegal substances (which for adolescents include alcohol and tobacco), or from indulging in risky recreational or sexual behaviors. In addition, many mental health concerns emerge in adolescence and young adulthood, leading to efforts to cushion youth from potential negative effects of mental illness.

Social capital should provide key resources not only to encourage adolescent growth, but to protect youth from negative outcomes. Coleman's (1988; 1990) configuration of social capital as a mechanism that moves information, obligations, and norms from adults to children outlines a clear pathway through which such capital might decrease antisocial behavior. Just as parents would be unable to transmit their human capital to youth without the ties of social capital, they would presumably be unable to transmit their norms or expectations for appropriate behavior without social capital ties. In social capital terms, strong attachments improve child internalization of parentally-favored norms. For example, when conventional bonds between adults and adolescents are strong, it is more likely that adults and youth will communicate well, or that adolescents will listen to and internalize adult instructions about

normative expectations and behaviors (Akers, 1998; Hovee et al., 2009; Sokol-Katz, Dunham, & Zimmerman, 1997). Indeed, Collishaw et al. (2012) show that the affectionate ties best suited to transmitting parent-favored norms are dependent upon the creation and maintenance of the basic social ties that are characteristic of social capital. According to social capital theorists, parent-child connections are necessary for discussing important or sensitive issues, and it is during such discussions or similar social capital-building activities that norms and expectations about appropriate behavior are shared and internalized (Wright, Cullen, & Miller, 2001).

The protective effects of social capital also extend outside of the parent-child bond. Parents who are more involved in their children's schools are better able to inculcate in their children educational commitment that dampens the attractiveness of delinquent or risky behaviors (Dufur et al., 2015, 2013b; Jenkins, 1995). Parents who are involved in their children's schools are more likely to associate with other parents who have similar opinions about and commitments to prosocial behavior or to create closed networks with their children's teachers. Such parents may use the social capital they build with other adult actors to jointly transmit norms that discourage delinquency (Dufur et al., 2015; 2013b).

Similarly, social capital and network closure among non-familial adults can also work to transmit prosocial norms to youth (Rudasill et al. 2010; Wang, Brinkworth, & Eccles, 2013). Such extrafamilial social

capital includes adolescents' connections with actors at schools, churches, neighborhoods, and in peer groups. Take as an example social capital built in adolescents' school environments. Social capital in the school reflects the bonds that adolescents have with teachers and other school personnel and the way those bonds facilitate the normative environment of the school (Dufur et al., 2008b, 2013b, 2016a). Such bonds might be directly measured between teachers and students, or perhaps through participation in extracurricular activities, which provide additional opportunities both for social bonding (Hirschi, 1969) and for explicit reinforcement of group norms (e.g., Hirschfeld & Gasper, 2011; Hoffmann & Xu, 2002). In the absence of strong school social capital, however, youth are less likely to be involved in or affected by the conventional social environment and might be at increased risk of delinquent behaviors (Lucia, Killias, & Junger-Tas, 2012). Similarly, connections among parents, school personnel, neighbors, co-congregants at church, and in other settings may allow adults to work together to provide extra protective resources to youth who face mental health challenges. For example, it may be the case that youth with higher levels of social capital are better able to trade that capital in order to receive emotional and psychological support, or that norms and obligations transmitted through their relationships encourage healthy behaviors and self-care. However, the pathways through which social capital may be associated with positive mental health outcomes in youth have received little to no attention, and it may be the case

that youth with higher levels of social capital may experience increased levels of stress or distress if they are not able to meet the norms and obligations that have been transmitted to them through their social relationships.

2.1 Linking Social Capital to Protective Effects for Youth

In the following sections, we outline the state of the research on how social capital might protect youth against delinquency, violent or aggressive behavior, substance use, risky sexual and recreational behaviors, and mental health concerns. In each section, we outline representative examples of research connecting social capital to protective effects. We examine whether the research is as unified in claiming protective effects of social capital as it is in claiming growth effects, and we explore what factors might explain a more mixed picture for protective effects.

2.2 Social Capital and Delinquency

One area in which social capital research has established strong evidence of protective effects is in association with delinquent behavior among adolescents. There is a robust body of literature that establishes that the norms and obligations transmitted through social relationships with youth protect them from antisocial behavior, particularly in terms of delinquent behavior.

Many researchers have found a significant negative relationship between social capital and delinquent behavior. For example, Han and Grogan-Kaylor (2015) demonstrate that increased family social capital significantly

lowered the likelihood of an adolescent engaging in delinquent behavior for the first time. Similarly, Hoffmann and Dufur (2018) found a negative association between social capital and delinquent behavior and that family social capital was a better predictor of delinquency than were family social bonds alone. Dufur and colleagues (2015) also indicated a significant negative association between social capital in both families and schools and adolescent delinquent behavior.

In addition, there is a significant body of research that, while not employing social capital theory explicitly, uses individual dimensions of social capital as predictors of delinquency. For example, Dornbusch, Erickson, Laird, and Wong (2001) examined the relationship between family attachment and delinquency and found that family attachment was linked to lower incidences of delinquency. Similarly, other studies have found negative associations between delinquent behavior and perceived parental monitoring (Rai et. al, 2003), levels of parental knowledge about adolescents' whereabouts and activities, (Laird, Pettit, Bates, & Dodge, 2003), and parental control (Harris-McKoy, 2016). While future inquiries examining such relationships could benefit from exploiting the investment concepts included within social capital theory, these findings paint a picture of pathways through which social capital protects youth against delinquent behavior.

While the majority of studies linking social capital and adolescent delinquent behavior have found evidence of a strong inverse relationship, several studies have found

weaker associations. For example, Weiss (2011) found that family social capital is no longer a significant predictor of delinquency when other adolescent and family factors are controlled. Similarly, despite finding a significant relationship between social capital and delinquency, when Salmi and Kivivuori (2006) controlled for self-control and cognitive ability, this association weakened. While it is possible that youth developed self-control or increased their cognitive ability through social capital ties that transmitted norms and human capital to them, this potential indirect relationship between social capital and delinquent behavior prompts skepticism about the degree to which social capital investments might be a fruitful avenue through which to discourage delinquency. Still, the bulk of research suggests that social capital can have protective effects against delinquent behavior in adolescence.

2.3 Social Capital and Violent or Aggressive Behavior

Given the ways social capital are effective in transmitting prosocial norms and connecting youth to other actors they feel obligated not to disappoint, it follows that social capital should provide protective effects against various forms of delinquency. However, it is possible that such norms and obligations are less effective in preventing violent and aggressive behavior, which may have stronger links to neurobiological causes or personality disorders than other types of antisocial behavior (Bushman et al., 2016).

Still, even when looking at more serious forms of antisocial behavior, there is

evidence that social capital has a protective effect against violent and aggressive behavior. When Wright and Fitzpatrick (2006) investigated social capital and its effect on aggression, fighting, and weapon use, they found that family social capital had a significant negative relationship with violent behavior. Similarly, McNulty and Bellair (2003) found that two out of three social capital variables they examined had a significant negative effect on fighting. Additionally, just as with delinquency, when individual potential indicators of social capital are utilized as predictors, the negative relationship between social capital and violent or aggressive behavior is still evident. For example, Rai et al. (2003) found that in three out of the four data sets they examined, parental monitoring had a protective effect against violence. Other indicators of social capital that have been found to have negative relationships with aggressive and/or violent behavior include perceived parental social support (Springer, Parcel, Baumler, & Ross, 2006), family attachment (Dornbusch, Erickson, Laird, & Wong, 2001), and parental control (Harris-McKoy, 2016).

Despite this evidence, there have been studies with contrary findings. DeCoster, Heimer, and Wittrock (2006) found that three out of four social capital variables they examined did not have a significant relationship with violent offenses. Additionally, while Hoffmann and Dufur (2018) found that social capital was a significant predictor of violent offenses, they found that it was a better predictor of property offenses, perhaps providing support for the idea that social capital is not

as effective at providing protection against more serious antisocial behavior.

Taken together, research on the association between social capital and violent or aggressive behavior is indicative of a significant protective effect, though the overall picture is less clear than the relationship between social capital and general delinquency.

2.4 Social Capital and Risk-Taking Behaviors

The negative outcomes against which social capital is protective are not limited to delinquent, violent, or aggressive behavior. Greater social capital should be connected with greater ability for adults to transmit expectations and norms that youth should avoid risk in a number of areas and, specifically, that they should delay sexual onset and avoid risky sexual behaviors. In addition, the affectionate ties that most efficiently transmit these norms should be characterized by trust that makes it easier for adults and youth to discuss sensitive matters such as sex (Coleman 1988; Paxton 1999). Crosby et al. (2003) found that social capital had a significant negative correlation with 10 of the 14 sexual behaviors the researchers looked at (for example, ever having sexual intercourse and whether sexual debut occurred before 13 years of age). A single study on risky gambling behavior found protective effects of a number of social capital indicators on adolescent gambling (Magoon & Ingersoll, 2006).

In much the same fashion as with delinquent, aggressive, and violent behaviors, research that uses single

indicators of social capital but that does not fully leverage social capital theory is also supportive of the idea that social capital can exert protective effects against risky behavior, especially when applied to sexual risk-taking. Studies by Li, Feigelman and Stanton (2000) and DiClemente et al. (2001) show that there is a significant negative association between parental monitoring and sexual risk-taking behaviors. Similarly, Markham et al. (2003) found that higher levels of family connectedness were associated with lower likelihood of having ever had sex, having recently had sex without a condom, or having been involved in a pregnancy.

While these studies are suggestive of protective effects of social capital against risk-taking behaviors, there are exceptions that call this relationship into question. A 2006 study by Smylie, Medaglia, and Maticka-Tyndale found that social capital's role as a predictor of risk-taking behaviors differed by gender of the respondent: for males, social capital was a stronger predictor than all of the demographic variables combined, while for females social capital effects were much weaker. Calling social capital "capital" implies that such capital should be able to be traded in similar ways in multiple settings, as money would be; findings that indicate greater salience of social capital indicators for one group might call into question the efficacy of social capital investment, at least for the outcomes in question. Still, this small body of research is suggestive that social capital could be a mechanism through which interested adults might discourage risky adolescent behavior. Given the important

payoffs that might be associated with avoiding risky behavior, such as preventing pregnancy, sexually-transmitted diseases, or difficult financial losses, further investigations into how social capital might prevent risk-taking behaviors would be useful.

2.5 Social Capital and Substance Use

Considering that social capital has significant associations with general delinquent behavior and other risky behaviors, it comes as no surprise that it might also related to adolescent substance use. When adolescents possess greater social capital, the transmission of norms and expectations concerning the safe, appropriate, and legal use of controlled substances should be stronger, and thus protective against substance use and abuse.

Researchers examining the association between social capital and substance use have largely validated this expectation. For example, when looking at a sample of over ten thousand adolescents Dufur and colleagues (2013b) found that social capital built within families and at schools has a protective effect against both alcohol and marijuana use. Similarly, other researchers have concluded that higher levels of social capital are associated with a lower likelihood of tobacco use and smoking by adolescents (Pérez et al., 2018; Thorlindsson, Valdimarsdottir, & Jonsson, 2012;). These relationships persist even when considering individual indicators of social capital such as parental monitoring (Barnes & Farrell, 1992; Bahr, Hawks, & Wang, 1993), parental knowledge of adolescent's activities (Fletcher, Steinberg,

& Williams-Wheeler, 2004), and parental bonds (Ford, 2009; Norman & Ford, 2015). These findings are particularly important when considering that early onset of alcohol and tobacco use predict riskier forms of substance use, as well as substance abuse in adulthood. In this case, the protective effects of social capital against substance use during adolescence reach far beyond the immediate associations.

While the association between social capital and substance use is relatively well established, some research has indicated that certain indicators of social capital are better predictors of substance use than others. When Wen (2017) studied the effects of three dimensions of social capital on smoking, alcohol consumption, and drug use, she found that only parental monitoring had a significant effect on the three outcomes. Similarly, a study by De Clercq and colleagues (2014) indicated that only what they describe as structural family social capital (e.g., having meals with parents), as opposed to cognitive social capital (e.g., parent-child communication), has a significant relationship with regular tobacco smoking. Despite this evidence that some indicators of social capital may be more salient to the use of certain substances than others, the overall relationship is clear: higher levels of social capital are protective against adolescent substance use.

The protective effects of social capital thus extend to a number of behaviors that can be considered antisocial or negative. The effects are evident when considering the association between social capital and delinquent, aggressive, violent, substance-related, and risky behaviors. While it is

apparent that norms and obligations transmitted across social relationships *should* provide these protective effects, with a few notable exceptions the existing literature provides a strong body of evidence that social capital investments actually do provide protection against undesirable antisocial behaviors. Social capital theory, then, does a good job of linking adult investment in youth with the successful transmission of norms, obligations, connections, and emotional embeddedness that discourage youth from engaging in undesirable behaviors. Taken in tandem with established patterns showing positive relationships between social capital and prosocial or growth-based outcomes, there appears to be a clear relationship between social capital investment and youth behavior.

2.6 Social Capital and Non-Behavioral Outcomes

It is less clear, however, how social capital might be connected to youth outcomes that are not behaviors, such as attitudes. This is in part because most research on youth is concentrated on behaviors in an effort to encourage actions that propel youth to prosperous adult lives. However, it is also true that the theoretical connections between social capital and non-behavioral outcomes can be less clear than connections between social capital and either prosocial or antisocial behaviors. In some cases, the connections should be obvious--greater social capital should transmit norms that adolescents adopt as their own. There are good theoretical reasons, then, to believe that social capital might be connected to

prosocial youth attitudes and protective against antisocial attitudes.

However, although a small body of research connects youth social capital to positive attitudes about civil engagement (Stolle & Hooghe, 2004), little research examines whether social capital provides protective effects against adolescent antisocial *attitudes*, rather than *behaviors*. An important exception is Hagen, Merken, and Boehnke's 1995 examination of youth in East Germany. These researchers found that in a context where youth were at high risk for adoption of right-wing extremist ideologies, social capital connections with parents, schools, and other adult actors decreased adoption of extremist views. Given increased political polarization across many countries, additional research into how social capital might provide protective effects against the adoption of antisocial attitudes could be valuable. If social capital is a successful pathway through which to discourage extremist attitudes, adult investment in youth in key contexts or at key times in their lives when they form attitudes about people who are not like themselves could be crucial.

It is less clear, however, how social capital theory might be connected to non-behavioral outcomes like mental health. While good mental health is an important antecedent to a number of other desirable outcomes, mental health may have stronger connections to genetic, physical, and personality causes than other outcomes we consider here (Patel et al., 2007). Thus, if biological mechanisms are the best predictors of adolescent mental health, social capital investments may not be

effective in addressing mental health needs. Still, a number of social and demographic factors are linked to adolescent mental health, such as poverty, minority racial or ethnic status, family or peer conflict, and negative school environments (Patel et al., 2007). And, importantly, some of these mental health risks can be connected directly to social capital. For example, Dufur, Parcel, and Hoffmann identify school environments as an important component of adolescent social capital (Dufur et al., 2008, 2015, 2016a; Hoffmann & Dufur 2008; Parcel & Dufur, 2001b). Considering this, investments in certain kinds of social capital might be a protective factor against negative mental health. Social capital in the form of information or obligations that flow across social ties might ameliorate the ways poverty or minority status contribute to adolescent mental health difficulties. For example, youth living in poverty might be able to activate social networks to acquire needed financial resources from family or friends. While the theoretical pathways potentially connecting social capital to mental health might exploit different components of social capital than did research connecting social capital and behavioral outcomes, where norm transmission was key to explaining protective effects, these components of social capital theory predict that investment in social capital should provide protection against negative effects of mental health problems. Thus, the role of social capital on mental health outcomes may be conditional on aspects of social status, such as lower socioeconomic status.

Though social capital theory predicts a protective relationship between social investments in adolescents and mental health, the empirical evidence for such a relationship is less clear than for other youth outcomes. When examining the association between social capital and mental health, some researchers have documented a significant positive relationship. One such study examined the effects of social capital as compared to human capital in the Russian Federation. Rose's (2000) New Russia Barometer study found that social capital explained more of the variance in emotional health than did human capital and demonstrated that higher levels of social capital were associated with better emotional health. Similar studies in other settings suggest a weaker relationship between social capital and mental health outcomes, but in a protective direction (Almedom, 2005).

However, other studies have found null results. Cutrona, Russell, Hessling, Brown, and Murry (2000) and Thomas (2004) find that the association between social capital and mental health is not statistically significant, although the effect estimates are in line with the studies that do find a protective effect of social capital. Despite this lack of consensus among the literature, the absence of evidence for an inverse relationship, significant or otherwise, does indicate that while the strength of the relationship between social capital and mental health is questionable, if such a relationship does exist then the effects are likely positive and protective.

Related results also suggest caution. The studies noted previously represent the

discussion of social capital at the micro level (individual/family), while other studies have examined the effects of social capital at a more macro/ecological level (neighborhood/community). As De Silva and her coauthors (2005) note, studies examining the association between social capital at the ecological level and mental illness were few and varied widely, but the results of the extant studies revealed no clear pattern or association. If social capital theory is suggestive of protective effects against mental health problems, then, it is important to consider where social investments in youth must be made to trigger those protective effects.

The paucity of agreement within the mental health literature may be explained by the complex nature of the concepts of both 'social capital' and 'mental health.' Both of these concepts have a plurality of definitions, assessments, and measurement scales, which suggests that studies have failed to measure both concepts in the same way. This may be connected to measuring non-behavioral outcomes: it is possible that the better outlined linkages between social capital and behavioral outcomes like delinquency or substance use might reflect closer protective pathways, or it might reflect more direct measurement available for behaviors.

At the ecological level, different levels of aggregation of data have been employed so that studies may be capturing different types of social capital. Therefore, a lack of agreement within the literature may reflect studies that are measuring different things, rather than a weak link between social capital and mental health. Additionally, the

aggregation of data to the ecological level may not reflect the definition of community that respondents may hold themselves. For example, when considering neighborhoods, adolescents might think about particular neighbors to whom they are close rather than interconnections across all neighbors. Lastly, and perhaps most importantly, the literature as currently comprised includes very little discussion concerning the causal mechanisms by which social capital may affect mental health. Because mental health outcomes may tap into different parts of social capital theory (such as information or physical resources that can pass across social ties) than do behavioral outcomes (where norms and obligations are operative), researchers may require more nuanced ways of measuring different components of social capital in order to determine whether such capital investments can protect against negative non-behavioral outcomes. A clearer explication of causal pathways between social capital and adolescent mental health or other non-behavioral outcomes could help determine how to adequately capture the most salient aspects of social capital and accurately assess their association with mental health outcomes.

2.7 Can Social Capital Lead to Negative Outcomes Rather Than Positive Outcomes?

Although the majority of research examining adolescent social capital points to positive outcomes both in terms of promoting growth and of protecting against problem behaviors, some research suggests that this may not always be the case. Social capital captures the norms and obligations

that are transmitted across social connections and relationships. For most of us, and for most outcomes, this has positive results. However, if the norms and obligations transmitted through an individual adolescent's specific social connections are not in line with positive social behavior, it is possible that an individual can generate or possess "negative" social capital. For example, gang culture consists of a network of individuals who share strong social ties through which certain types of information, obligations, and norms are passed; in one sense, these networks generate a large amount of social capital. However, the norms that comprise this social capital often encourage antisocial behavior, such as committing crimes to cement group membership (Portes & Landolt, 1996). Indeed, the social capital produced in such a network may be difficult to trade for positive outcomes in other settings, such as academic advantages, and likely does not provide the protective effects discussed above. Thinking of non-behavioral outcomes, it is possible that strong ties to adults or peers who hold extremist views could result in the transmission of antisocial attitudes in ways that reflect classic social capital theory, but that would lead to strongly negative outcomes.

The idea that social capital may not always be associated with positive outcomes has not received much attention. Despite this, some research does suggest that higher levels of social capital, particularly along certain dimensions of social capital, are associated with negative outcomes rather than providing protective effects. Two

studies, one examining youth in Crete, Greece (Koutra et al., 2014), and one studying youth in Diamantina, Brazil (Martins et al., 2013), each found that increased social capital, as measured by community attachment, was associated with higher levels of binge drinking. Both of these studies examined youth in social contexts in which regular drinking and binge drinking are normal parts of social behavior and are increasingly common. These results suggest that when the norms and obligations being passed through social connections are not positive, increasing social capital may not result in positive or protective outcomes.

While the evidence for negative social capital is sparse, the implications of such a relationship merit further investigation. Evidence suggests that increased social capital in a network that transmits anti-social norms and obligations is associated with anti-social outcomes (Koutra et al., 2014; Martins et al., 2013). What does this mean for individuals whose social network may consist largely of individuals who engage in antisocial behavior? Or who attend schools where teachers believe most students will not attend college? Future research on social capital should be designed with these populations in mind in order to develop a more robust understanding of what social capital means and how it operates in diverse populations.

3. Discussion

In this paper, we set out to establish what social capital is, how it has been used in the study of youth development, and if it provides protective effects against negative

outcomes. Social capital in the form of social ties, information, norms, and obligations does provide protective effects against a variety of negative outcomes such as delinquent behavior, substance use, and sexual risk-taking behaviors. However, when considering outcomes where the link between the outcome and norms and obligations is less apparent, the evidence is mixed.

It is less evident exactly how the transmission of norms and obligations may be directly related to non-behavior outcomes. The protective effects of social capital on negative outcomes such as poor mental health are mixed at best, though their directionality is suggestive of protective effects. It may be that the norms and obligations youth receive in relation to other outcomes introduce a level of stress that adversely affects the mental health of youth rather than providing protection. It may also be the case that mental health reveals an important point for the “nature vs. nurture” discussion, where mounting evidence shows that mental health is a complex balance of chemicals and processes in the brain (Bendelow, 2009; Cockerham, 1996; Kirk & Kutchins, 1992; Raabe, 2010) and therefore may be less malleable to the social location of or social investments in the individual.

While examining non-behavioral outcomes calls into question whether social capital is an efficacious investment for all adolescent outcomes, non-behavioral states like mental health are not the only areas that suggest a need for more nuanced research. While social capital theory has been validated by the bulk of studies we present here, a

number of studies present findings inconsistent with the idea that social capital uniformly provides protection for adolescents. One reason for these exceptions may be the complex nature of social capital. Social capital has been defined in many ways, and there is not yet a universally agreed-upon way to measure the social capital an individual possesses. Conflicting findings may be the result of conflicting measurement strategies.

Additionally, the level at which social capital is measured may have important implications. Is social capital a construct that should be measured within the individual? Alternatively, because social capital requires social relationships for transmission, is it something that can and/or should be measured at an aggregate level? If so, to what level should social capital be aggregated? These and similar questions reveal areas in which social capital theory has not been sufficiently developed.

Although social capital theory is an elegant tool, then, future research still has questions to resolve. Critics of social capital theory contend that it fails to specify how families and individuals “generate, accumulate, manage, and deploy” social capital (Furstenberg, 2005: 809; Portes, 2000). In addition to these concerns, future research utilizing social capital theory should explore the question of the mechanisms through which social capital may influence outcomes not directly related to behaviors. Additionally, researchers would do well to engage the measurement of social capital and develop a way to appropriately measure social capital at appropriate levels of aggregation

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