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How Economic Disadvantage Affects the Availability and Nature of Mentoring Relationships During the Transition to Adulthood

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Abstract

Supportive non-parental adults, particularly non-familial adults, provide critical support during the transition to adulthood, opening doors to educational and career paths. The current study examined whether economic disadvantage shapes access to these relationships. Results showed that low-income adolescents had reduced access to naturally-occurring mentors, and the relationships they did form tended to be close bonds with family and friends, rather than non-familial adults. Their mentors were more likely to focus on practical support, and less likely to serve as role models or provide career advice. These effects of socio-economic status on natural mentoring relationships remained evident, even when accounting for youth race/ethnicity. Findings suggest that networks of support differ depending on a youth's socio-economic context in ways that could perpetuate social and economic inequalities.

Keywords

mentoring; longitudinal; poverty; Add Health

Supportive, non-parental adults (i.e., natural mentors) play a critical role in the lives of adolescents and young adults, helping them navigate their identities and opening doors to educational and career opportunities (Hurd, Sanchez, Zimmerman, & Caldwell, 2012; Miranda-Chan, Fruiht, Dubon, & Wray-Lake, 2016; Stanton-Salazar, 2011). In doing so, relationships with teachers, coaches, afterschool staff, and other adults have the potential to offset considerable individual and contextual risks. Indeed, even when accounting for baseline functioning and demographic variables, youth who can identify at least one supportive adult within their social networks have better outcomes across a range of important academic, behavioral, and health domains (Dubois & Silverthorn, 2005; Erickson et al., 2009; Hurd & Zimmerman, 2010; Kogan et al., 2011; Stanton-Salazar & Spina, 2003).

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Conflict of Interest Disclosure

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Supportive, non-parental adults are thought to be particularly influential during late adolescence and the transition to adulthood. The transition to adulthood is a developmental stage characterized by increased personal freedom, as well as elevated rates of depression and risky behaviors for many youth (Arnett, 2000; Kessler, Foster, Webster, & House, 1992; Merikangas et al., 2010). At the same time, young adults are faced with decisions about higher education and career trajectories as they take on new responsibilities and adult roles (Masten et al., 2004). As a result, navigating this transition successfully is particularly crucial for an individual's future emotional and social well-being, and can influence educational and economic success.

In part, natural mentors might offset the emerging risks of adolescence and young adulthood by serving as an additional source of monitoring for adolescent behavior, and by providing advice and guidance around risky decisions such as substance use. However, naturally-occurring mentors can also play a critical role in fostering youth competencies and actively promoting a successful transition to adulthood, consistent with theories of positive youth development (Catalano et al., 2004; Lerner et al., 2005). Mentors provide youth with a close, emotionally supportive relationship that can enhance youth socio-emotional functioning by contributing to improved interpersonal skills and emotional well-being (Hurd & Zimmerman, 2010; Miranda-Chan et al., 2016; Rhodes et al., 2006). Moreover, mentors can support youth identity development during the transition to adulthood by serving as a role model and by providing guidance and motivation as youth are faced with important decisions about the future (Greeson, 2013; Miranda-Chan et al., 2016; Rhodes et al., 2006). Finally, mentors can contribute to youth cognitive and academic development during the transition to adulthood, by teaching practical skills and by connecting youth to relevant educational and vocational opportunities (Miranda-Chan et al., 2016; Rhodes et al., 2006). These mechanisms of natural mentoring might be even more potent in promoting positive developmental trajectories for lower-income youth. For example, in the domain of socio-emotional development, natural mentors can provide much needed validation and support in the face of discrimination-related stressors (Hurd, Albright, Wittrup, Negrete, & Billingsley, 2017). Moreover, mentors can be a critical source of support for cognitive development for economically disadvantaged youth, by providing the socio-cultural knowledge and capital necessary to open doors to certain educational and career opportunities (Stanton-Salazar, 2003; 2011).

Evidence supports these theories about the positive impact of natural mentors on youth development during the transition to adulthood. Emerging adults who are able to identify at least one supportive adult within their social network show reduced risk-taking behavior, improved psychological functioning, and greater resilience across a wide variety of academic, behavioral, vocational, and health domains (Dubois & Silverthorn, 2005; Fruiht & Wray-Lake, 2013; Hurd, Sanchez, Zimmerman, & Caldwell, 2012; McDonald & Lambert, 2014). Moreover, these benefits of natural mentoring relationships appear to extend to the unique stressors encountered by underrepresented college students. Interaction with natural mentors predicts reduced psychological distress, as well as better academic and vocational outcomes, in samples of young adults from underrepresented racial/ethnic and socioeconomic backgrounds (Erickson et al., 2009; Hurd et al., 2012; Hurd, Tan, & Loeb, 2016; Hurd & Zimmerman, 2010; Timpe & Lunkenheimer, 2015).

Fortunately, natural mentoring relationships are relatively common. Findings from large samples of adolescents with racial, ethnic, geographic, and socioeconomic diversity representative of the United States adolescent population suggest that anywhere from 62% (Bruce & Bridgeland, 2014) to three quarters of youth report having a natural mentor (Dubois & Silverthorn, 2005). In contrast, only 15% of youth report having a formal mentor assigned through a structured mentoring program like Big Brothers Big Sisters at some point during during their childhood (Bruce & Bridgeland, 2014). Unlike formal mentors, natural mentors are often adults from youths' neighborhoods, schools, and extended family or fictive kin networks. Because both youth and mentor "opt into" the relationship through a mutual sense of connection, rather than being assigned to one another, these relationships are also likely to last longer and serve as a more enduring source of support than formal mentoring relationships (Hurd & Zimmerman, 2010; Zimmerman et al., 2005).

Yet, with classroom overcrowding, class-based segregation, and diminishing public support for extracurricular programs and enrichment activities, opportunities for extended interaction between youth and supportive non-parental adults have diminished, and it is the youth in the bottom income sectors who suffer the most (Putnam, 2015; Ready, Lee, & Welner, 2004; Snellman, Silva, & Putnam, 2015). While wealthier families have been able to compensate for these changes with private sources of support and enrichment, poorer families have fewer resources to invest. Although they often stand to gain the most, youth from the lowest socio-economic (SES) quartile appear least likely to endorse having a natural mentor (Putnam, 2015; Zimmerman, Bingenheimer, & Behrendt, 2005). This unequal distribution of natural mentoring relationships, in turn, can serve to compound socioeconomic disadvantage.

Moreover, the natural mentoring relationships that are forged by youth from low-income backgrounds may be qualitatively different than those forged by more privileged youth. Researchers have theorized about the types of social relationship networks that are necessary for psychological, educational, and vocational development, including the degree of homophily in the network and the balance of strong and weak ties (Granovetter, 1973). Strong ties involve relationships with close family and friends who are relatively homogenous in terms of race and social class, while weak ties involve a broader network of heterogeneous relationships with non-familial others, such as teachers, coaches, and employers.

Of note, a network that includes weak ties appears to be particularly important for bridging youth to the kinds of connections, knowledge, and expertise that facilitate upward mobility from lower socioeconomic backgrounds to more privileged socioeconomic positions (Erickson et al., 2009; Gallup, 2014; Kahne & Bailey, 1999; Lin et al., 1981; MacDonald, Shildrick, Webster, & Simpson, 2005). This "bridging" capital is particularly important during the transition to adulthood, when issues of identity and career paths take on particular salience (Putnam, 2015; Holland, Reynolds, & Weller, 2007). However, when the social roles of natural mentors have been compared for low- and high-SES youth, rates of natural mentoring were found to be equivalent only for strong ties such as extended family members or neighbors (Bruce & Bridgeland, 2014). Such adults, while often vitally important sources of support and reciprocity, are typically less able to connect youth to educational and

occupational opportunities, and tend to be more focused on ensuring the child's safety and regulating problem behavior (Lareau, 2006; Putnam, 2015).

The current study was designed to further explore the ways in which economic disadvantage might influence youth access to natural mentoring relationships. Past research on this topic has relied on cross-sectional designs that include retrospective accounts of support from natural mentors. The current study therefore sought to examine how economic disadvantage prospectively shapes access to natural mentors and influences the role, content, and quality of these relationships during the transition to adulthood. Analyses draw on two waves of data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), a large, nationally-representative sample of youth followed from adolescence through the transition to adulthood.

Multiple indicators of socioeconomic disadvantage were used in order to assess the effects of poverty across different contexts of an adolescent's life. In particular, family income and reliance on public assistance were assessed, given the well-documented negative effects of lower family income on youth development, especially within achievement domains where youth may miss out on opportunities to forge mentoring relationships with teachers and other school staff (Brooks-Gunn & Duncan, 1997; Leventhal & Brooks-Gunn, 2000). In addition, we included an indicator of neighborhood poverty, given evidence that neighborhood SES is associated with factors such as access to social, learning, and vocational resources, as well as the structure and closeness of community relationships (Leventhal & Brooks-Gunn, 2000), all of which can in turn impact access to natural mentors. Finally, given the close link between race/ethnicity and socioeconomic status within the United States (LaVeist, 2005), we ran additional models to determine whether unique effects of socioeconomic disadvantage on natural mentoring persisted when accounting for the role of youth race/ethnicity.

We hypothesized that family and neighborhood economic disadvantage would predict a lower likelihood of identifying a natural mentor during late adolescence and the transition to adulthood. Moreover, we hypothesized that indicators of economic disadvantage would also predict a different structure of social support from natural mentors, such that the natural mentoring relationships of lower-income youth would more often be close relationships with strong ties (e.g., extended family members) characterized by frequent contact, rather than the weak ties more commonly associated with provision of bridging capital (e.g., teachers, employers; Bruce & Bridgeland, 2014; Putnam, 2015). Finally, we coded youths' open-ended descriptions of their natural mentoring relationships to explore whether the functional roles (e.g., emotional support versus practical help) and support domains (e.g., support around financial, employment, or household needs) fulfilled by natural mentors differed according to the socioeconomic background of the youth. Although exploratory, we expected that endorsement of functions typically served by weak ties, such as practical help around work decisions, would be less common for lower income youth, while functions typically served by close ties, such as provision of emotional support or help with household matters, would be more common for these youth.

Method

Participants and Procedure

Participants were drawn from the National Longitudinal Study of Adolescent to Adult Health (Add Health), which used a multi-stage, school-based cluster probability sampling design. Stratification methods selected 80 participating high schools that were nationally representative of schools in the United States based on geographic region, urbanicity, school size and type, and ethnic composition. In addition, 52 “feeder schools” (middle or junior high schools that sent a substantial number of graduates to participating high schools) were included, resulting in a final sample of 132 schools.

Students attending these schools who were between grades 7 and 12 during the 1994–1995 school year were eligible for participation in structured, face-to-face, in-home interviews. Students were stratified by grade and sex, and randomly selected within each stratum for participation. The Wave I in-home interview (conducted between April and December of 1995) covered a range of topics, including health status and behaviors, familial and peer networks, romantic and sexual partnerships, substance use, criminal activities, educational experiences and aspirations, and employment experience. A parent (preferably the residential mother) completed a Wave I questionnaire on topics such as neighborhood characteristics, education and employment, and household income and economic assistance. Finally, contextual data at the state, county, census tract, and census block levels were derived for each participating youth based on home address at Wave I.

Youth participated in follow-up, in-home interviews in 1996 (Wave II) and again in 2001–2002 (Wave III). Wave III interviews included a series of questions about experiences with a non-parent adult mentor since the age of 14. Data for the present analyses come primarily from Wave I (respondent in-home report, parent report, and the contextual database that contains data on the Census units in which respondents reside) and Wave III (respondent in-home report). A total of 20,745 youth completed the Wave I in-home interview, of which 15,197 (77.4%) completed the Wave III in-home interview.

Consistent with Add Health data analysis guidelines to make analyses nationally representative of the US, as well as previous mentoring studies using Add Health data (Chen & Chantala, 2014; Dubois & Silverthorn, 2005; Erickson et al., 2009; McDonald et al., 2007), we only included the 14,322 Wave III participants for whom valid sample weights were available. Respondents were excluded from analyses if they did not report whether they had a mentor, reported having a mentor that was younger than them, or we could not determine the age the mentor became important ($N = 172$). Additionally, we excluded respondents who reported that their mentor became important before the Wave I data collection ($N = 4,498$). This allowed us to focus on mentors acquired during adolescence, and it also ensured temporal ordering of poverty and the acquisition of mentoring relationships in the data. The final analytic sample included 9,652 respondents. Although our exclusion criteria resulted in a reduced sample size, this sample is the largest available for examining questions around youth mentoring, and its size is sufficient to preclude power issues resulting in the identification of exaggerated effect sizes.

Participants in the analytic sample were between age 18 and 28 with a mean age of 21.8 years at the Wave III follow-up. A slight majority of respondents were females (52% of respondents). Participants were ethnically diverse: 52% were non-Hispanic white, 20% non-Hispanic black, 17% Hispanic, 8% Asian or Pacific Islander, and 3% other race. All analytic procedures were reviewed and exempt by the [XXX] institutional review board due to the use of secondary data analysis with de-identified data.

Measures

Economic disadvantage—As noted above, economic disadvantage was assessed using three indicators. Family income comes from the parent report, and its metric is in units of $10,000. This item asked each parent, “How much income, before taxes, did your family receive in [past year]? Include your own income, the income of everyone else in your household, and income from welfare benefits, dividends, and all other sources.” The responding parent also reported whether they received public assistance in any of the following forms: Social Security or Railroad Retirement, Supplemental Security Income (SSI), Aid to Families with Dependent Children (AFDC), food stamps, unemployment or worker’s compensations, or a housing subsidy or public housing. Endorsement of any of these items was considered presence of public assistance for the family. If the parent report was missing, we attempted to capture this information from the respondent in-home report. Neighborhood poverty comes from the Wave I contextual data and is the percent of households in the census block for the home address that fell below the federal poverty line. Its metric is in 10 percentile points per unit.

Presence of a natural mentor—At Wave III, participants were asked, “Other than your parents or step-parents, has an adult made an important positive difference in your life at any time since you were 14 years old?” Participants with more than one mentor were asked to identify the single most important mentor.

Mentoring relationship characteristics—For youth who endorsed having a natural mentor, follow-up items asked a series of close-ended questions about the youth’s most influential mentoring relationship. A question regarding the mentor’s relationship with the participant was coded to indicate whether the mentor was a strong tie (i.e., older brother or sister; grandparent; aunt or uncle; spouse or partner; or friend) versus weak tie (i.e., teacher or guidance counselor; coach or athletic director; minister, priest, rabbi, or other religious leader; employer; coworker; neighbor; friend’s parent; doctor, therapist, or social worker; or other). Additional questions asked about the duration of the mentoring relationship in years, frequency of in-person or face-to-face visits (from 0 “not at all” to 7 “everyday”), frequency of not in-person contact such as email, phone calls, or letters (from 0 “not at all” to 7 “everyday”), and feelings of closeness to the mentor (from 0 “not at all to 4 “very close”).

Mentoring relationship content—For youth who endorsed having a natural mentor, an open-ended item asked, “What did [your mentor] do to help you?” A coding scheme was inductively developed from their responses based on a group of randomly-selected cases. Each response was coded separately for the mentor’s functional role and the domain of support. An individual’s response could be coded in more than one category for both

functional role and domain. Permitting individual responses to be coded this way facilitated accurate coding of cases that would otherwise be ambiguous due to the presence of multiple elements.

The *mentor's functional role* was coded as guidance (e.g., "guided me on life decisions"), emotional support (e.g., "she's always there for me"), practical help (e.g., "paid the fees for me to play on a sports team"), like a friend (e.g., "just been a friend"), like a parent (e.g., "acted like a mom to me"), and/or role model (e.g., "an inspiration in my life" or "I tried to follow in his footsteps"). The *domain of mentoring* was coded as household (e.g., "helped care for my child"), religion (e.g., "strengthens my faith in God"), life (e.g., "gave me direction in life" or "helped me learn to have the right priorities"), money (e.g., "has given me money to pay the bills"), work (e.g., "got me started in a job opportunity"), and school (e.g., "helped me with my schoolwork").

Two coders applied the scheme independently to 55 percent of the responses each. This resulted in ten percent of the cases being coded by both coders, and these cases were then used to calculate inter-rater reliability. Kappas ranged from .79 to .96, indicating a high degree of coder agreement (Elder, Pavalko, & Clipp, 1993).

Demographic covariates—Analyses co-varied for participant gender and race/ethnicity. Gender was coded 1 for "female" and 0 for "male". Consistent with past studies using Add Health data, youth race/ethnicity included categories for non-Hispanic white, non-Hispanic black, Hispanic, Asian, and Other. Dummy codes were created for these categories, and non-Hispanic white was used as the reference category in all models that included youth race/ethnicity.

Analytic Procedures

Prior to analyses, missing data were treated with multiple imputation using chained equations. Removing observations with missing values (complete case analysis or listwise deletion) reduces the efficiency of estimates and can result in biased estimates if data are not Missing Completely at Random (MCAR), an assumption that is unlikely to hold with survey data. Multiple imputation with chained equations makes the more realistic Missing at Random (MAR) assumption and allows for imputation conditional on the distribution of the missing data (e.g., nominal, binary, continuous, etc.). Because the variables representing characteristics of mentoring relationship do not exist for respondents who reported not having a mentor, we estimated separate imputation models for respondents who reported having a mentor and those who reported not having a mentor (Enders & Gottschall, 2011). For the mentor group, the imputation model included all variables included in the analyses reported here, as well as the respondents' age, race, and parents' education as auxiliary variables. For the group of youth with no mentor, the imputation excluded the mentoring variables, because those variables are not missing, but instead do not exist. Twenty imputed datasets were created (Graham, Olchowski, & Gilreath, 2007) using *mi impute* in Stata. Datasets were separated by 200 iterations because graphical diagnostics indicated the imputation model converged well before that point (Enders, 2010).

All models were estimated on the resulting datasets separately and then combined using Rubin's rules using Stata's *mi estimate* prefix. Stata's *svy* prefix was also used to incorporate the weights and sampling design. As a result, estimates are nationally representative of the US and standard errors are adjusted to account for the clustered (by school) sampling design (Chen & Chantala, 2014). Linear and logistic regression analyses were used to prospectively predict presence and quality of natural mentoring relationships from the three indicators of economic disadvantage. All models were run both with and without race/ethnicity as a covariate to determine the unique effects of socioeconomic disadvantage on natural mentoring outcomes, and gender was included as a covariate in all analyses.

Results

Descriptive statistics for key study variables are presented in Table 1, and full correlation matrices for key study variables are presented in Table 2. Overall, 64% of participants in the sample reported having a natural mentor during adolescence (respondents who reported a mentor became important before the Wave I data collection were excluded from these analyses). Results from logistic regression analyses (see Table 3; Figure 1) suggested that lower family income ($OR = 1.04$, $p < .01$), receiving public assistance ($OR = .79$, $p < .05$), and greater neighborhood poverty ($OR = .88$, $p < .001$) all predicted a lower likelihood of acquiring a natural mentor during adolescence and the transition to adulthood. In models co-varying for youth race/ethnicity, lower family income and greater neighborhood poverty remained significant predictors of a lower likelihood of acquiring a natural mentor, and non-Hispanic black youth ($OR = .74$, $p < .001$) and Hispanic youth ($OR = .66$, $p < .001$) were also less likely to endorse having a natural mentor than non-Hispanic white youth.

The socioeconomic disadvantage indicators were also related to multiple characteristics of natural mentoring relationships. Higher rates of neighborhood poverty predicted closer ($b = .09$, $p < .001$) and longer-lasting ($b = .12$, $p < .05$) mentoring relationships, as well as more frequent in-person visits with one's mentor ($b = .11$, $p < .001$; see Table 4). Similarly, higher family income predicted less frequent in-person meetings with one's mentor ($b = -.03$, $p < .001$), while receiving public assistance predicted closer relationships with natural mentors ($b = .18$, $p < .05$; see Table 4). When youth racial/ethnic categories were included in these models, results remained largely unchanged in terms of their pattern and significance. In addition, even when accounting for socio-economic factors, non-Hispanic black youth reported greater closeness ($b = .37$, $p < .001$), longer duration ($b = .74$, $p < .001$), and greater frequency of talking with one's mentor ($b = .39$, $p < .01$) than non-Hispanic white youth, while Asian American youth reported less frequent in-person visits with their mentors than white youth ($b = -.44$, $p < .05$).

When the social roles of natural mentors were examined, greater poverty within one's neighborhood ($OR = 1.08$, $p < .001$) predicted a greater likelihood of having a mentor coded as a "strong" tie (family member or friend) versus a "weak" tie (teacher or community member; see Table 5). Although only marginally statistically significant, lower family income ($OR = 1.28$, $p = .06$) and public assistance ($OR = 1.28$, $p = .06$) also trended towad predicting a greater likelihood of having a mentor coded as a strong tie. With race/ethnicity

in the models, the odds ratio for neighborhood poverty was no longer significant; however, non-Hispanic black (*OR* = 1.61, $p < .001$) and Hispanic (*OR* = 1.29, $p < .05$) youth were both more likely to report having a "strong" tie mentor than non-Hispanic white youth.

Economic disadvantage also predicted the types of mentoring support (see Table 6) youth reported receiving from their natural mentors. Receiving public assistance (*OR* = 1.74, $p < .01$) and family income (*OR* = .94, $p < .05$) predicted greater likelihood of receiving practical advice from one's mentor, as well as a lower likelihood of identifying one's mentor as a role model (public assistance: *OR* = .50, $p < .05$; family income: *OR* = 1.03, $p < .01$). Including race/ethnicity in the models did not change these odds ratios in terms of magnitude or significance. Non-Hispanic black youth were more likely than white youth to report receiving practical help (*OR* = 1.55, $p < .05$), and race was not related to identifying a mentor as a role model.

With respect to domains of mentoring content, lower family income (*OR* = 1.02, $p < .05$) and greater neighborhood poverty (*OR* = .80, $p < .001$) both predicted decreased likelihood of discussing work-related issues with a natural mentor, and lower family income also predicted a greater likelihood of discussing money-related issues with one's natural mentor (*OR* = .92, $p < .05$; see Table 7). When youth race/ethnicity were included in models, results were similar, and non-Hispanic black youth were also more likely to discuss money-related issues (*OR* = 1.56, $p < .05$) and less likely to discuss work-related issues (*OR* = .69, $p < .05$) with their mentors than non-Hispanic white youth. Interestingly, non-Hispanic black youth (*OR* = 1.77, $p < .001$), Hispanic youth (*OR* = 1.40, $p < .05$), and Asian American youth (*OR* = 2.05, $p < .001$) were also all more likely to discuss school-related issues with their natural mentors than non-Hispanic white youth (see Table 7).

Discussion

The current project used prospective, longitudinal analyses and a large, nationally representative sample of adolescents to explore how economic disadvantage shapes the availability and nature of mentoring relationships during the transition to adulthood. Results suggest that adolescents from lower-income families and/or neighborhoods have less access to natural mentors during this critical period in development. The natural mentoring relationships they do form tend to be close and supportive bonds with adults in their family or family friend networks, rather than ties with caring adults outside the family, such as teachers or employers. Moreover, their relationships are more likely to focus on practical support around issues like finances and less likely to be sources of role modeling and career advice. Although youth race/ethnicity also appear to play a role in predicting the formation and quality of natural mentoring relationships during adolescence, socioeconomic disparities in natural mentoring relationships remain even when accounting for the effects of race/ethnicity.

To our knowledge, this study is the first to use a nationally representative dataset to examine the ways that family- and neighborhood-level disadvantage prospectively influence the formation, quality, and content of natural mentoring relationships during the transition to adulthood. The findings are consistent with past research which has shown increasing class-

based segregation with the U.S., accompanied by diminishing access to social resources and upward social mobility among poorer youth (Putnam, 2015; Zimmerman et al., 2005). Despite the fact that approximately two-thirds of adolescents in the U.S. endorse having a natural mentor (Beam et al., 2002; McDonald et al., 2007), results suggest that youth from low-income families and/or neighborhoods are less likely to have a natural mentor during this critical period in development.

These results are discouraging, given the well-documented positive impact of natural mentors on a host of outcomes, particularly for youth from low-income and ethnic minority backgrounds (e.g., Erickson et al., 2009; Hurd & Zimmerman, 2010; Kogan et al., 2011). During the transition to adulthood, mentors have the potential to shape the psychosocial, educational, and career trajectories of youth, by providing social support and serving as vital role models who influence young adults' perceptions of who they might become or would like to become (i.e., "possible selves"; Markus & Nurius, 1986). Interacting with caring adults who represent and encourage new possibilities can promote social, financial, and academic success; yet, findings suggest that the youth who are in most need of bridging capital to facilitate upward social mobility across socioeconomic strata might be least likely to obtain it.

Results also showed that lower-income families and neighborhoods are more likely to support youth in forging close bonds with adults in their family or friend networks, marked by frequent in-person contact, rather than ties with caring adults outside these close networks. Moreover, youth from low-income backgrounds are more likely to report that their natural mentoring relationships focus on more immediate, prosaic issues, such as money-related issues. There are several reasons why strong ties with close family members and friends might be more prevalent for young adults from low-income families. These individuals are disproportionately likely to be living in over-crowded, urban areas and to live with extended family members (Angel & Tienda, 1982; Evans, 2004). Given that youth in lower-income families also tend to be more involved in family assistance (e.g., household chores, childcare; Hofferth & Sandberg, 2001), and by definition are exposed to greater family financial struggles, it also makes sense that these individuals' natural mentors would focus on providing practical, instrumental support.

Although these close ties play an important role in supporting the growth and development of adolescents as they transition to adulthood, it is a network of weak ties that has been linked to upward social mobility (Erickson et al., 2009; Gallup, 2014; MacDonald et al., 2005). Mentors from diverse socio-economic backgrounds may model desired career paths that youth can draw on to construct their sense of identity (Darling, Hamilton, Toyokawa, & Matsuda, 2002). In doing so, these weak ties can provide both social and cultural capital in the form of knowledge (Museus & Quaye, 2009), helping youths to make use of community resources and opening doors to educational or occupational opportunities (Darling et al., 2002). When youth from low-income backgrounds are denied access to these weak ties, the social capital essential to socioeconomic success tends to cluster for adolescents who are already in a more socioeconomically privileged position (Erickson et al., 2009; Putnam, 2015; Stanton-Salazar, 2011).

It is important to note that current findings also highlight the unique (although likely interacting) effects of economic disadvantage at the family and neighborhood levels on adolescent development (Leventhal & Brooks-Gunn, 2000). For example, lower family income, family receipt of public assistance, and greater neighborhood poverty all uniquely predicted reduced access to natural mentors during adolescence, even when examined as simultaneous predictors. In contrast, neighborhood poverty appeared to have to strongest independent effect on the social role of the natural mentor (i.e., close versus weak tie). It is therefore crucial for future research on poverty and adolescent development to include assessment of the youth's socioeconomic stressors at multiple levels, and to attempt to untangle the diverse mechanisms by which poverty across various contexts (e.g., one's family, school, or neighborhood) prospectively shapes close relationships with non-parental adults.

Furthermore, although often highly correlated with socioeconomic status (LaVeist, 2005), youth race/ethnicity did not fully account for the observed effects of lower income families and neighborhoods on the availability and content of natural mentoring relationships. In fact, with few exceptions, identifying with a minority racial/ethnic group appeared to have independent effects on natural mentoring relationships that were relatively consistent with patterns observed for socioeconomic status. Non-Hispanic black and Hispanic youth showed lower rates of natural mentoring during adolescence, and black youth showed higher rates of strong ties marked by greater closeness and an increased focus on more practical mentoring functions. Further research should seek to more precisely model the independent and interactive contributions of socioeconomic disadvantage and racial/ethnic identity to the formation of supportive relationships with natural mentors during adolescence.

Public support for inclusive extracurricular activities, such as sports teams, science and technology programs, or art programs, is likely to be one key factor in ensuring access to a broad range of caring adults for all youth. It is also essential that all youth be equipped with the skills and sense of entitlement necessary to reach out and form relationships with caring adults. Past research has shown that navigating relationships and seeking support within institutions like colleges or workplaces can be particularly difficult for young adults from low-SES and minority backgrounds (Museus & Quaye, 2009; Tinto, 1994). As a result, programs designed to teach networking skills and discuss barriers to help-seeking are particularly important in facilitating connections between low-income youth and caring adults outside of their home communities (Schwartz & Rhodes, 2016).

The present study was limited in several ways. First, assessments of the quality and content of mentoring relationships were based solely on youth perceptions of the relationship. Incorporating the reports of mentors and other key informants, such as teachers, will be essential to fully understanding how socioeconomic context influences natural mentoring relationships. Similarly, a single item about the mentor's social role (e.g., uncle, teacher, employer) was used as a measure of whether the mentor might serve as a strong versus weak tie. A mentor's social role is likely to be a reasonable proxy for the bridging capital provided by the mentor based on past conceptualizations of strong versus weak ties (e.g., Granovetter, 1973), and this assumption was consistent with findings about the functional roles provided by mentors. Nevertheless, it will be important for future research to more thoroughly assess

the capacity of a natural mentor to connect youth with resources during the transition to adulthood, regardless of their relationship with the adolescent.

In addition, only one natural mentoring relationship (the most important or strongest) was examined per youth, and these relationships were assessed at a single time point. Likewise, because our focus was on the acquisition of mentors during adolescent years, relationships that were forged during early childhood were not taken into account. Because some youth likely have relationships with multiple caring adults, and relationships are constantly evolving and changing during the transition to adulthood, additional longitudinal studies that explore the impact of socioeconomic disadvantage on the trajectories of multiple natural mentoring relationships are necessary. Moreover, it is important to remember that close relationships with natural mentors are just one example of a host of assets and resilience factors that can contribute to positive youth development. The interactive influence of other variables associated with the youth's broader family, school, and community contexts (e.g., family cohesion, access to extracurricular activities) should also be taken into account when examining the long-term impact of natural mentoring (e.g., Theokas & Lerner, 2006).

Finally, natural mentoring relationships and their quality were not directly tested as potential mechanisms of career and educational advancement. Past research has consistently linked natural mentors to improved resilience in adolescence (e.g., Dubois & Silverthorn, 2005; Erickson et al., 2009; Hurd & Zimmerman, 2010); however, future research should also examine how the influences of socioeconomic disadvantage on natural mentor type and quality might affect longer-term outcomes. Despite these limitations, findings highlight that networks of support from caring adults differ depending on youth's socio-economic context. Although findings are preliminary, research should continue to explore factors that might undermine the potential for natural mentoring relationships to serve as a powerful tool for ameliorating social and economic inequalities.

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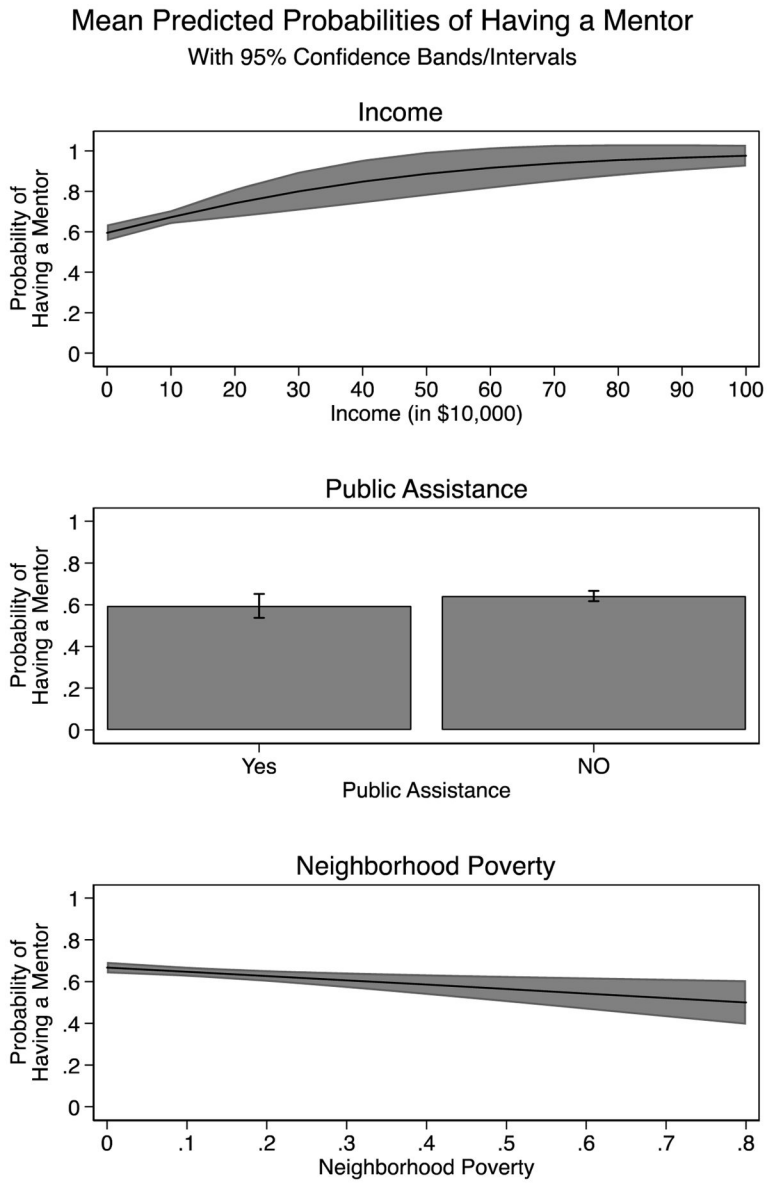

Figure 1.

Figure 1 presents the respondents' average predicted probabilities of reporting having a natural mentor for the sample range of values for annual family income, receiving public assistance, and neighborhood poverty. The relationship between income and the probability of having a natural mentor is slightly curvilinear, with the probability of having a mentor increasing at a lower rate at higher values of income. Respondents whose parents reported receiving public assistance were less likely to report having a natural mentor. Neighborhood poverty was negatively related to having a natural mentor, with those in non-poverty neighborhoods reporting mentors about 70 percent of the time and those in neighborhoods characterized by 80 percent poverty reporting mentors about 50 percent of the time.

Note:

Predictions based on model in Table 3

Model variables other than those on the x-axis were respondents' reported values
Neighborhood Poverty is proportion in poverty in Census block
Source: *National Longitudinal Study of Adolescent to Adult Health*

Table 1

Means or Proportions[a], Minimum, Maximum, and Percent Imputed of Study Variables, by Mentor Status

	No mentor	Mentor	Minimum	Maximum	Percent Imputed
Mentoring variables[b]					
Mentor	.36	.64	.00	1.00	.00
Tie type					
Strong		.41	.00	1.00	.13
Weak		.41	.00	1.00	.13
Met through tie type					
Strong		.35	.00	1.00	.16
Weak		.13	.00	1.00	.16
Relationship descriptors					
Duration		4.44	1.00	26.00	.08
Visit		3.74	.00	7.00	2.85
Talk		3.34	.00	7.00	3.05
Closeness		2.36	.00	4.00	2.69
Functional role					
Guidance		.63	.00	1.00	.00
Emotional support		.39	.00	1.00	.00
Practical support		.09	.00	1.00	.00
Like a parent		.03	.00	1.00	.00
Like a friend		.07	.00	1.00	.00
Role model		.11	.00	1.00	.00
Domain of support					
Life		.04	.00	1.00	.00
Housing		.04	.00	1.00	.00
Religion		.05	.00	1.00	.00
Money		.06	.00	1.00	.00
Work		.10	.00	1.00	.00
School		.13	.00	1.00	.00
Independent variables[c]					

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	No mentor	Mentor	Minimum	Maximum	Percent Imputed
Female	.45	.50	.00	1.00	.00
Race-ethnicity					
Non-Hispanic white	.58	.69	.00	1.00	.01
Non-Hispanic black	.18	.13	.00	1.00	.01
Hispanic	.16	.11	.00	1.00	.01
Asian	.04	.04	.00	1.00	.01
Other	.03	.03	.00	1.00	.01
Family income (in $10,000)	4.08	4.95	.00	99.90	24.25
Public assistance	.12	.08	.00	1.00	.93
Neighborhood poverty	1.62	1.30	.00	8.18	.84

Note:

[a] Proportions are presented for categorical variables

[b] $N = 6{,}137$ for mentoring variables except whether respondent had a mentor

[c] $N = 9{,}652$

Table 2

Mentoring Characteristics by Income Variables

	Income[a]			Public Assistance		Neighborhood Poverty[b]		
	Low	**Med**	**High**	**Yes**	**No**	**Low**	**Med**	**High**
Mentor	.55	.65	.71	.52	.65	.69	.66	.56
Relationship descriptors								
Duration	4.78	4.23	4.35	4.99	4.39	4.28	4.30	4.76
Visit	3.97	3.74	3.54	4.19	3.70	3.58	3.59	4.10
Talk	3.52	3.28	3.24	3.79	3.30	3.26	3.17	3.62
Closeness	2.52	2.28	2.30	2.68	2.34	2.27	2.26	2.59
Tie type								
Strong	.47	.39	.37	.50	.40	.37	.40	.46
Weak	.47	.39	.37	.50	.40	.37	.40	.46
Met through tie type								
Strong	.40	.34	.32	.43	.34	.32	.33	.40
Weak	.12	.15	.12	.12	.13	.13	.15	.12
Functional role								
Guidance	.62	.62	.65	.65	.63	.65	.64	.59
Emotional support	.41	.38	.38	.40	.39	.39	.37	.41
Practical support	.12	.08	.06	.16	.08	.08	.09	.10
Like a parent	.03	.03	.03	.04	.03	.02	.03	.04
Like a friend	.06	.07	.06	.05	.07	.07	.06	.07
Role model	.10	.10	.13	.05	.11	.13	.10	.10
Domain of support								
Life	.05	.04	.04	.05	.04	.04	.04	.05
Housing	.05	.04	.04	.05	.04	.04	.04	.05
Religion	.05	.04	.05	.04	.05	.05	.05	.04
Money	.09	.06	.04	.11	.06	.06	.06	.07
Work	.08	.10	.12	.07	.10	.12	.11	.07
School	.11	.13	.13	.09	.13	.13	.14	.11
Group N	3,319	3,269	3,064	865	8,787	3,218	3,230	3,204

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Note:

[a] Income tertiles: Low = 0 – 2.51, Med = 2.51 – 5.01, High = 5.01 – 99.91

[b] Neighborhood poverty tertiles: Low = 0 – .57, Med = .57 – 1.45, High = 1.45 – 8.18

Table 3

Predictors of Having a Mentoring relationship: Odds Ratios from Logistic Regression

	Model 1	Model 2
Female	1.23***	1.23***
Family income (in $10,000)	1.04**	1.03**
Public assistance	.79*	.81
Neighborhood poverty	.88***	.92**
Race/ethnicity[a]		
Non-Hispanic white		--
Non-Hispanic black		.74***
Hispanic		.66***
Asian		.83
Other		.85

Note:

N = 9,652

[a]For models including race/ethnicity, non-Hispanic white is coded as the reference group.

Table 4

Duration, Frequency of Visits, Frequency of Talking, and Mentor Relationship Closeness: Unstandardized Coefficients from OLS Regression

	Closeness		Duration		Visit		Talk	
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**
Female	.30***	.29***	.31*	.31*	.15	.15	.64***	.63***
Family income (in $10,000)	−.01	−.01	−.01	−.00	−.03**	−.03**	−.02	−01
Public assistance	.18*	.17*	.41	.36	.22	.23	.32	.30
Neighborhood poverty	.09***	.06*	.12*	.05	.11***	.10**	.06	.02
Race/ethnicity								
Non-Hispanic white		--		--		--		--
Non-Hispanic black		.37***		.74***		.09		.39**
Hispanic		−.10		.25		−.24		.00
Asian		−.06		−.06		−.44*		.05
Other		−.14		.06		−.17		−.38
Constant	2.13***	2.14***	4.13***	4.09***	3.68***	3.73***	3.01***	3.01***

Note:

N = 6,137

* p < .05,

** p < .01,

*** p < .001

Table 5

Strong vs. Weak Ties: Odds Ratios from Logistic Regression

	Strong tie relationship		Met through a strong tie	
	Model 1	**Model 2**	**Model 3**	**Model 4**
Female	1.23*	1.23*	1.20*	1.20*
Family income (in $10,000)	.98	.98	.98	.99
Public assistance	1.28	1.24	1.28	1.26
Neighborhood poverty	1.08***	1.03	1.05	1.01
Race/ethnicity				
Non-Hispanic white		--		--
Non-Hispanic black		1.61***		1.39**
Hispanic		1.29*		1.13
Asian		.99		.94
Other		1.18		1.23

Note:

N = 6,137

* p < .05,

** p < .01,

*** p < .001

Table 6

Functional Role of Mentor: Odds Ratios from Logistic Regression

	Guidance		Emotional		Practical		Like Parent		Like Friend		Role Model	
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
Female	.69***	.69***	2.14***	2.13***	.79	.79	1.99*	1.99*	1.10	1.11	1.02	1.02
Family income (in $10,000)	1.01	1.01	1.00	1.00	.94*	.94*	1.00	1.00	.98	.97	1.03**	1.03**
Public assistance	1.24	1.23	1.03	1.03	1.74**	1.74**	1.29	1.33	.67	.69	.50*	.49*
Neighborhood poverty	.95	.95	1.01	1.01	1.01	.97	1.05	1.10	1.01	1.10	.98	.98
Race/ethnicity												
Non-Hispanic white		--		--		--		--		--		--
Non-Hispanic black		.98		1.01		1.55*		.67		.32***		.88
Hispanic		1.24		.95		.76		.69		.89		1.19
Asian		1.48**		.90		1.10		1.63		1.16		.83
Other		1.05		.67		.94		1.24		1.40		1.17

Note:

N = 6,137

* p < .05,

** p < .01,

*** p < .001

Table 7

Domain of Support Provided by Mentor: Odds Ratios from Logistic Regression

	Life		House		Religion		Money		Work		School	
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**	**Model 10**	**Model 11**	**Model 12**
Female	.85*	.85*	3.01***	3.01***	1.04	1.04	.84	.84	.59***	.59***	1.49***	1.50***
Family income (in $10,000)	1.01	1.01	.99	.99	1.00	1.00	.92*	.92*	1.02*	1.02*	1.01	1.01
Public assistance	1.03	1.04	1.26	1.26	.76	.76	1.44	1.43	1.00	1.03	.73	.70
Neighborhood poverty	1.00	1.00	.98	.97	1.05	1.04	.99	.95	.80***	.82***	.97	.92
Race/ethnicity												
Non-Hispanic white		--		--		--		--		--		--
Non-Hispanic black		1.06		1.16		1.19		1.56*		.69*		1.77***
Hispanic		.85		.89		.95		.85		.99		1.40*
Asian		1.27		1.25		1.24		1.12		.94		2.05***
Other		.95		.66		.81		.87		.91		.94

Note:

N = 6,137

* p < .05,

** p < .01,

*** p < .001