

Natural mentoring as an effective public health intervention to promote positive adolescent development among adolescents: A Review Paper

By Melanie Sadur

A paper presented to the faculty of The University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of (Master of Science in) Public Health in the Department of Maternal and Child Health. Chapel Hill, N.C

November 13, 2015

Approved by:

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ABSTRACT

The following literature review is a review of natural mentoring in the United States, and its association with numerous adolescent developmental outcomes. Natural or informal mentoring relationships are relationships in which mentors and mentees are connected through pre-existing social networks and communities. The role of natural mentoring is a relatively new area of research, and a variety of scholars have conducted studies to investigate the effects natural mentoring has on adolescents' academic, emotional, psychological, and health outcomes. The following literature review presents a review of 20 articles with a focus on natural mentoring among adolescents, and demonstrates the association between natural mentoring and academic and psycho-emotional health outcomes. The review concludes with implications for the field of public health.

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INTRODUCTION

Adolescent youth in the United States face a variety of risk factors as they transition into new schools, new roles, and a new sense of self.¹ These risk factors include but are not limited to substance use, risky sexual behavior, illegal behavior, peer pressure, lack of parental supervision, disengagement from school, and the onset of mental and emotional problems. Adolescents from low-income (< 200% federal poverty level) and poor (< 100% federal poverty level) households² may face significantly higher risks during these transitional years compared to higher-income youth.³ Poverty may increase the aforementioned risk factors and negatively affect children's academic and health outcomes.³ Children living in poverty are more likely to live in single-family homes, drop out of high school,³ lack access to affordable healthcare, and have poor health status. These are risks for negative adult outcomes, including poor financial, mental, and physical health⁴, indicating the importance of intervening among children to promote positive adult outcomes. Additionally, children of color are disproportionately burdened by negative adolescent developmental outcomes, including obesity, mental health disorders, drug and alcohol use, HIV/AIDs, and teenage pregnancy, as these youth face higher rates of racial discrimination, health and educational access barriers, and poverty compared to White youth.⁵ Therefore, it is essential to intervene among all adolescents, and specifically target youths of color and low-income youth, to promote positive academic and health outcomes at an early age through a variety of targeted interventions.

Family, peers, school, neighborhoods, communities, and other social environments influence adolescents' behaviors and health outcomes.⁴ Therefore, interventions that focus on these social environments have the potential to significantly impact adolescents' health and academic outcomes. For example, adolescents who have strong communication with a parent, adult family member, or other adult are less likely to engage in risky behaviors, compared to

adolescents who do not have strong communication with an adult.⁴ Adolescents who live in neighborhoods characterized by poverty, crime, and poor infrastructure may have poor physical and mental health outcomes, compared to adolescents who grow up in safe and well-resourced neighborhoods.⁴ Therefore, well-designed youth development interventions focused on influencing children's interpersonal relationships, families, schools, communities, and environments have the potential to promote positive developmental outcomes among adolescents.⁴ These interventions ensure that adolescents receive the opportunities, resources, and support they need to thrive during adolescence and become successful adults.

Mentoring programs are a common youth development intervention, and have demonstrated potential benefits in positively affecting adolescents' academic as well as socio-emotional outcomes.⁶ Many youth-focused programs across the United States incorporate formal mentoring, in which an adult volunteer is matched with a child, to provide support and guidance. Formal mentoring programs have shown mixed effectiveness,⁷ as youth often have to wait on waitlists to receive a mentor, mentor-mentee matches are not always successful, and these relationships may not be sustained over time.⁸ Consequently, formal mentoring relationships may benefit some youth, particularly higher income and White youth, but may not address some large barriers and needs among low-income and youth of color, due to the large barriers and hardships these youth often face. Natural mentoring, in contrast to formal mentoring programs, is an alternative mentoring type,⁸ and has been gaining more attention by researchers in recent years. Many children form relationships with non-parental adults, as a normative part of adolescent development,¹ and these non-parental adults often provide a strong sense of support and guidance to adolescent youth.⁹ Consequently, natural mentoring may promote adolescent developmental success among adolescents from a variety of backgrounds, including low-income

youth, by promoting already existing relationships and building social capital within communities.¹⁰

BACKGROUND

Adolescence is the period in which youth are between the ages of 10 and 19,⁴ and is marked by rapid psychological, social, and cognitive changes.¹ The transition into adolescence and early adulthood is marked by bodily changes, changes in parental and familial influences, and constant shifts in roles, responsibilities, employment, education, and relationships.¹¹ The prevalence, background, and risks of a variety of psychological, emotional, and academic outcomes in adolescence are discussed below.

PSYCHO-EMOTIONAL OUTCOMES IN ADOLESCENCE

Children transitioning into adolescence and into early adulthood may face a variety of academic, social, psychological, emotional, and behavioral changes that may lead to both positive and negative health outcomes. These health outcomes include a variety of mental health risks, including increased rates of depression, anxiety, and low self-esteem. According to mental health surveillance among adolescents in the United States from 1994-2011,¹² prevalence of mental health disorders among children ages 3-17 include attention-deficit/hyperactivity disorder (6.8%), behavioral or conduct problems (3.5%), anxiety (3.0%), and depression (2.1%). Furthermore, the adolescent suicide rate for individuals aged 10-19 years old was 4.5 suicides per 100,000 individuals in 2010.¹² Suicide is often the result of an interaction of mental health disorders, including but not limited to depression, anxiety, and low self-esteem, and was the leading cause of death among adolescents aged 12-17 years old in 2010.¹²

Mood and anxiety disorders become increasingly common as youth age into adolescence and early adulthood, and are characterized by feelings of fear, anxiety, depression, poor self-

esteem, or a mixture of these feelings.¹² These disorders are associated with numerous risky behaviors and negative health outcomes, including sexual risk-taking, criminal behavior, substance use or abuse, poor social skills, poor coping skills, poor psychosocial functioning, lower educational attainment, suicide attempts, and suicide.^{12,13} Mood and anxiety disorders may exacerbate risky behaviors, and risky behaviors may in turn increase the risk of these disorders.¹³ Major depression disorder (MDD) is a type of mood disorder, which is characterized by depressed mood, loss of interest or pleasure, and symptoms which cause distress or impairment to daily functioning.¹⁴ Approximately 2.6 million adolescents ages 12-17, or 10.7% percent of the U.S. adolescent population, had at least one major depressive episode in 2013.¹⁵ According to the 2011 National Youth Risk Behavior Survey, approximately 28% of high school students (ages 14-18 years) reported feeling hopeless or sad almost every day for two weeks or more¹² These feelings were higher among Hispanic students than non-Hispanic students, and higher among girls than boys. Depression rates increase among children during the adolescent years, specifically between the ages of 13 and 18,¹⁶ and rates of depression increase more for girls than boys.^{12,13,16} Consequently, pre-adolescence and early adolescence are essential time periods to intervene to prevent the onset of depression and other mood and anxiety disorders.

Depression and other mood and anxiety disorders may be more common among some adolescents than others. According to the National Survey on Drug Use and Health (2013),¹⁵ the prevalence of major depressive disorder was higher among females (16.2%) than males (5.3%), and higher among biracial adolescents (13.0%), Hispanic adolescents (11.4%) and non-Hispanic White adolescents (10.9%) compared to African American adolescents (8.6%).¹⁶ According to the National Health and Nutrition Examination Survey, mentally unhealthy days were more common among non-Hispanic Whites (9.6%) and African Americans (6.6%), compared to

Mexican-Americans (4.9%).¹² Additionally, mentally unhealthy days were most common for low income adolescents who were between 100% and 200% of the Federal Poverty Level and lower income individuals who were under 100% of the Federal Poverty Level, compared to adolescents with incomes above 200% of the Federal Poverty Level.¹² According to a survey of adolescents aged 15-19 years in 2013,¹⁷ adolescents who were raised in economically distressed neighborhoods had high levels of depression and posttraumatic stress, compared to adolescents raised in safer and higher-resourced neighborhoods.

These findings indicate that females and lower income individuals may be at higher risk of depression and mental health disorders, compared to males and higher income individuals. Although trends of depression and mentally unhealthy days are not consistent across races, African American and Hispanic adolescents may be at increased risk of mood disorders, specifically depression.¹⁸ This may be due to a variety of factors, including increased risk of health burdens, lack of health insurance, racism, trauma, and living in economically distressed neighborhoods.^{18,17} For example, Hispanic and African American adolescents are disproportionately low income and poor compared to White adolescents in the U.S., as 64% of Hispanic teenagers and 66% of African American teenagers lived in low-income families, compared to 31% of White teenagers in 2013.¹⁹ Therefore, poverty may disproportionately affect Hispanic and African American adolescents, leaving these youth at greater risk for developing mental health disorders.

ACADEMIC OUTCOMES IN ADOLESCENCE

Adolescence is an imperative time for improving academic success and achievement, as academic success is a strong predictor of positive adult health and economic outcomes.⁴ High school students who have higher grades are less likely to use alcohol or cigarettes, carry a weapon, and engage in risky sexual activity.²⁰ A variety of factors predict educational success,

including but not limited to individual attributes, schools, parents, peers, race, parent support, social support, neighborhood characteristics, student-teacher relationships, mentoring, and more.²¹

Prominent racial and income-related academic disparities exist in the United States. In 2011-2012, the average graduation rate for public high school students was 93% for Asian/Pacific Islanders, 85% for Whites, 76% for Hispanics, 68% for African Americans, and 68% for American Indian/Alaska Natives.²² Additionally, 2009 statistics on high school graduates' average grade point average (GPA) indicate distinct racial disparities.²³ The average GPA was 3.26 for Asian/Pacific Islanders, 3.09 for Whites, 2.85 for Hispanics, and 2.69 for African American students. The sample size was too small to provide reliable estimates for the GPA of American Indian/Alaska Natives.²² These findings demonstrate a similar pattern to racial trends in graduate rates. Average achievement levels of African American and Hispanic high school students are similar to the lowest achievement quartile among White students.²⁴ Hispanic and African American students have higher rates of drop-out, and lower rates of high school graduation and college degree attainment, compared to White students. These racial gaps in achievement are associated with a variety of factors, including but not limited to neighborhood poverty, institutional racism, school funding, parents' education levels, teacher expectations, and low resources. It is therefore essential to promote positive development interventions towards all adolescents, and specifically target Hispanic and African American adolescents, due to the variety of mental health and academic risk factors they face.

In addition to racial academic disparities, there is a large achievement gap between students from higher-income families (> 200% federal poverty level) compared to lower income families (<200% federal poverty level), when controlling for race.²⁵ Low income students often

achieve lower on grades, standardized test scores, and high school graduation rates, compared to high income students. Additionally, low-income students are less likely to attend or complete college compared to high-income students. Approximately 1 in 5 adolescents from low-income families drops out of high school, compared to 1 in 25 adolescents from higher income families.³ Furthermore, children living in poverty are more likely to live in single-parent families, compared to more affluent children.³ Children who grow up in single-parent families may be at higher risk of dropping out of high school, developing behavioral and psychological problems, and face economic hardship.²⁶ These statistics demonstrate the risks children who are poor face in academic achievement, and the urgency of targeting equitable interventions to low-income students.

INTERSECTION OF ACADEMIC & PSYCHO-EMOTIONAL OUTCOMES

Adolescents face an array of changes in their lives that may lead to academic and psychological distress or success. Additionally, academic and psychological outcomes may interact with each other.²⁷ High school students who screen positive for psychosocial dysfunction are more likely to see themselves as less academically competent and have increased rates of absenteeism and tardiness. Additionally, students who have emotional or behavioral disorders are more likely to have difficulty completing homework, are more likely to be suspended, and often score lower in math, writing, and reading²⁷. Students who have low grades are more likely to engage in numerous risk behaviors, and students who engage in risk behaviors are more likely to receive lower grades, suggesting a cycle of risk.²⁰ Consequently, interventions that focus on promoting adolescent academic achievement while also reducing adolescent mental health problems are essential to overall adolescent well-being,

SEARCH CRITERIA

The following literature review assesses findings of the association between natural mentoring and adolescent developmental outcomes. Articles that were included in this review were all peer-reviewed, scholarly articles, and written between 1992 and 2015. Search strategies were developed with assistance from a librarian from the UNC Health Sciences Library. UNC Articles Plus and Google Scholar search engines were used in August and September 2015, to include the following databases: PubMed, JMAEvidence, ERIC, PsychiatryOnline, and PsychInfo. Search inclusion criteria included articles on natural mentoring, incorporating terms such as “natural mentors,” “natural mentoring,” “informal mentors,” “very important non-parental adults,” “VIPs,” “non-parental adults,” combined with “adolescents,” “adolescence,” “young adults.” The initial search process consisted of one Masters student examining articles to assess whether they fell into the category of natural mentoring, rather than formal mentoring. After initial selection of natural mentoring articles, articles incorporating the following terms were included into article selection: health outcomes, academic outcomes, risk behaviors, mental health, or adolescent health. Articles on natural mentoring with homeless youth or youth in foster-care were excluded, as these specific subcategories of youth are outside of the scope of this literature review.

FINDINGS

The resulting search included twenty articles from the following journals: *American Journal of Community Psychology*, *American Journal of Public Health*, *Archives of Pediatrics & Adolescent Medicine*, *Cultural Diversity & Ethnic Minority Psychology*, *Health Education Research*, *Journal of Youth and Adolescence*, *Handbook of Youth Mentoring Natural Mentoring Relationships*, *Psychology in the Schools*, *Sociology of Education*, and *The Journal of*

Primary Prevention. For additional details on studies that were included, see Appendix 1. The following sections review and summarize the twenty included studies, including theories covered, adolescent outcomes from natural mentoring, and characteristics of natural mentoring relationships.

NATURAL MENTOR DEFINITION

Across the twenty included studies and articles, natural mentoring is characterized by supportive informal relationships between youth and older non-parental adults, which are developed through pre-existing social networks, rather than through a formal program.^{8,11,21,10,9,28-31} Non-parental adults may include family members, teachers, neighbors, friends, coaches, religious leaders, or other community adults a young person may interact with. These relationships are distinct from formal mentoring relationships in that they evolve naturally or authentically, and are often longer lasting than formal mentoring relationships.^{10,28} Natural mentoring relationships are often founded upon trust, mutual respect, and a strong emotional bond.¹⁰

Numerous studies have documented the high prevalence of natural mentors among adolescents, indicating these relationships may be a normative part of adolescent development.⁸ Estimates of informal mentoring prevalence range from 54% to 82% across studies of adolescents.⁸ According to the AOL Time Warner Survey, 68% of adolescents in the United States were mentored in an informal capacity in 2002.⁶ Natural mentoring relationships are common among youth from a variety of demographic backgrounds, including both advantaged and disadvantaged social backgrounds. According to a nationally representative study of 6,819 students in grades seven through twelve,²¹ adolescents who have more parental, peer, and personal resources are more likely to have mentors, but adolescents with fewer resources may benefit more from having mentors. Additionally, the presence of natural mentoring relationships

was higher among Whites, Asians, and higher income youth in this study.²¹ In contrast, other studies focus on the high prevalence and importance of natural mentoring relationships among African American¹¹ and Latino adolescents.⁷ African American youth may be more likely to have strong relationships with non-parental adults due to strong intergenerational relationships and kinship support often found within African American communities.^{11,32} Despite these inconsistencies in natural mentoring across demographic groups, researchers have demonstrated positive developmental outcomes associated with natural mentoring, across all racial, ethnic, and socioeconomic lines.¹ Natural mentors may provide advice, guidance, and support, and are often positive influences in children's transition into adolescence and adulthood.²¹ Natural mentors have been associated with positive academic outcomes^{1,7,21,10,28,6,33,34} as well as promoting positive psychological well-being and protecting against depression^{1,11,28,30,31,6} among adolescents. These associations are explored further below.

CONCEPTUAL FRAMEWORK

Natural mentors have the potential to influence socio-emotional skills, cognitive skills, and identity development among adolescent youth,³⁵ by providing social support, companionship, role modeling, and opportunities to engage in new activities.

^{10,28,35} Natural mentors are able to offer unique resources and support that parents and peers may not be able to provide, by providing positive adult support as well as peer-like qualities.⁸

Numerous theoretical frameworks have been used to explain why natural mentor relationships form (antecedents) and how these relationships affect developmental outcomes (consequences).⁹ According to the Handbook of Youth Mentoring,⁹ three key theoretical frameworks are common to natural mentoring research, including attachment theory, social support, and resiliency theory.

ATTACHMENT THEORY & PARENTAL SUPPORT: While the formation of close relationships with non-parental adults may be a normative part of adolescent development,⁸ some adolescents develop natural mentor relationships while others do not.³¹ The formation of natural mentor relationships relies on a variety of factors, including mentee and mentor characteristics, environmental factors, and neighborhood factors. Attachment theory may be a useful framework for understanding these antecedents of natural mentoring relationships. According to attachment theory, attachments made as a child may influence the way future relationships are developed.⁹ Therefore, positive early relationships with parents or caretakers may predict children's ability to form positive relationships later in life. Early parental attachment may lead to a strong sense of self-worth and acceptance by others, providing youth with the confidence and capacity to develop satisfying relationships during adolescence and adulthood.^{9,31} In addition, high levels of parental support may provide youth with a secure base that promotes the formation of mentoring relationships with adults. Alternatively, low levels of parental support may also lead adolescents to seek out natural mentoring relationships, in order to compensate for unavailable, unsatisfactory, or unsupportive parental ties.^{9,35} The relationship between having a natural mentor and parental support may therefore be a U-shape, as children with both strong and weak parental support and attachment may be more likely to form natural mentoring relationships, while children with a moderate amount of parental support and attachment may be less likely to do so.

SOCIAL SUPPORT: Social support is likely an important mechanism through which natural mentoring relationships promote positive adolescent development. Adolescents are surrounded by many individuals who may provide social support, including parents, non-parental adults, family members, and peers. Natural mentors may provide numerous types of social

support to mentees, including instrumental support (tangible and concrete aid), emotional support (caring, empathy, love), informational support (advice, guidance), and esteem/appraisal support (value-affirming).^{1,9} Social support may buffer or protect against stress and adolescent risks, and is associated with positive psychological and physical well-being.¹¹ Family and neighborhood adults who provide social support to adolescents have the potential to increase adolescents' hope and alleviate distress, suggesting social support is a potential intervention to increase adolescent resilience and reduce the risk of adolescent depression.¹⁷ Social support has also been shown to positively influence adolescents' self-esteem and attitudes towards school.¹ Social support therefore may promote positive mental health and reduce depression and psychological distress among youth transitioning into adolescence and into adulthood.³⁶

Numerous studies have documented the effect social support from natural mentors may have on promoting mentees' ability to obtain support from other adults in their lives.^{30,32,35,36} Social support from natural mentors may help youth in developing self-esteem, improved psychological outcomes, and interpersonal skills, which are associated with improved relationships among mentees and their other support-figures in their lives.^{32,36} In a cross-sectional study of young African American mothers, natural mentors assisted mentees in coping with and deriving benefits from other supportive relationships by providing positive support and helping to improve mentee's self-worth.³⁰ Additionally, positive relationships with non-parental adults may assist youth in developing positive associations and interactions with their parents.³² Alternatively, as adolescents rely more heavily on support from a natural mentor, the relationship between adolescents and their parents may weaken due to decreased reliance on parental support. Despite these alternate findings, it is evident that social support from natural mentors may influence the support adolescents seek out and receive from other support figures in their lives.

RESILIENCY THEORY: Resiliency theory is commonly used to understand how youth respond to a variety of risk factors in their lives, as resilience is a large factor in promoting positive youth development.³⁷ According to resiliency theory, youth encounter numerous risk factors and protective factors that contribute to their level of resilience. Risk factors are factors that increase the likelihood of developing problematic behaviors or health issues, such as poverty or trauma. Protective factors are those that lower the probability of negative health outcomes, such as parental support, social support, or strong coping skills. Numerous models exist within resiliency theory, including the compensatory model of resiliency and protective factor model.⁶ According to the compensatory model, positive factors may either neutralize or counteract the consequences of risk factors, thus promoting resiliency among youth. According to the protective factor model, protective factors may modify the relationship between risks and outcomes, thus lessening the effect of the risk factor and increasing the effect of positive factors.^{9,6} Resiliency theory posits that mentoring relationships may help develop and enhance mentee's internal and external assets, thus promoting healthy youth outcomes by protecting against risks and increasing positive developmental outcomes.¹¹

NATURAL MENTORING & ADOLESCENT OUTCOMES

The following section reviews findings from the review of articles, including cross-sectional and longitudinal studies of natural mentoring relationships regarding the association between natural mentoring and a variety of adolescent outcomes. Eight studies highlight the relationship between natural mentors and positive academic outcomes,^{1,7,21,10,28,6,33,34} and six studies demonstrate an association between natural mentors and psycho-emotional well-being among adolescents and emerging adults.^{1,11,28,30,31,6}

PSYCHO-EMOTIONAL OUTCOMES: Six studies were reviewed which demonstrated an association between natural mentoring and emotional outcomes, suggesting natural mentors may be able to help promote positive mental health among adolescents.^{1,11,28,30,31,6} In a cross-sectional study of 129 young African American mothers between the ages of 14 and 22 (M = 18.07, SD = 2.79), women with natural mentors reported lower levels of depression than those without natural mentors ($p < .05$) and higher levels of support were associated with lower rates of depression.³⁰ Natural mentors included aunts, uncles, grandparents, siblings, teachers, ministers, counselors, neighbors, and older friends. Participants were more likely to indicate a female mentor than a male mentor, suggesting gender matching may be common in choosing a natural mentor. A majority (89.7%) of these natural mentor relationships were characterized by positive non-conflictual support, based on emotional support, guidance, positive feedback, tangible assistance, and childcare assistance. In a similar cross-sectional study of 54 low-income Latina mothers between the ages of 13 and 22 (M = 18.1, SD = 1.5),³¹ women with natural mentors reported lower levels of depression ($p < .05$) and anxiety ($p < .05$), compared to women without natural mentors, even when controlling for stress exposure, relationship problems, and overall support resources. Additionally, participants with natural mentors reported stronger satisfaction with their social support, and more perceived maternal acceptance. These findings support the importance of attachment and parental support on adolescents' ability to form mentoring relationships.

While the two aforementioned studies demonstrated an association between natural mentoring and better psychological adjustment specifically among adolescent mothers, this association has been demonstrated among additional groups of adolescents and emerging adults as well. In a longitudinal study of 615 African American older adolescents, having a natural

mentor during the participants' senior year of high school was associated with greater decreases in depressive symptoms over time.¹¹ A majority (63%) of participants reported having a natural mentor, and approximately half (53%) of the mentors were family members and nearly half (47%) were non-familial mentors. In accordance with resiliency theory, natural mentoring was associated with reduced depression risk among respondents. More specifically, natural mentoring was associated with sharper decreases and less sharp increases in depression among males and females, respectively, compared to participants who did not have natural mentors. Finally, in a study of "very important person" (VIP) relationships among 201 diverse adolescent eleventh grade students from a high school in California (mean age = 16.7 years),²⁹ an inverse association was found between VIP's warmth and depressive symptoms ($p = 0.06$), demonstrating a modest association between non-parental support and depression.

Although there is not one distinct pathway through which natural mentoring is associated with depression among adolescents, natural mentors may be moderators between developmental risks and depression.¹¹ Non-parental adult mentors may act as a moderator between stress and depressive symptoms, by assisting youth in coping with stress, increasing feelings of self-worth, and discovering additional social resources. Natural mentors may serve as catalysts of support to youth, assisting children's capacity to benefit from existing support and deal with stress.³⁰

In addition to depression, numerous studies have revealed an association between natural mentoring and other indicators of psycho-emotional health, including self-esteem and life satisfaction. In a longitudinal study of 4,882 adolescents in grades 7-12,²⁸ having a natural mentor was associated with higher levels of self-esteem and life satisfaction, compared to participants without a natural mentor. Additionally, mentoring was associated with significantly lower levels of depressive symptoms, but that association only held true for youth without

individual or environmental risk. Additional studies have demonstrated an association between natural mentors and higher levels of self-esteem and more positive self-concept,¹ and few studies have disproven the association between natural mentors and higher self-esteem.

The relationship between natural mentors and psycho-emotional outcomes may not be straightforward, as some scholars find no association between natural mentors and depression,⁶ while others have demonstrated a potentially harmful relationship between natural mentors and depression and natural mentors and self-esteem.³⁸ It is possible that natural mentors who are depressed may be associated with higher levels of mentee depression, and natural mentors who exhibit problem behaviors may lead to decreased mentee self-esteem. Thus, it is not only the existence of a mentoring relationship that predicts positive psycho-emotional outcomes, but also the characteristics of that relationship.

ACADEMIC OUTCOMES: While research reports on the relationship between natural mentoring and psycho-emotional health are mixed, the association between natural mentoring and academic outcomes is more consistent across studies. That is, across eight reviewed research studies, findings have consistently demonstrated an association between natural mentoring and a variety of positive academic outcomes.^{1,7,21,10,28,6,33,34} These outcomes have included school attachment, attitudes towards school, academic engagement, grades, GPA, absences, high school completion, and college attendance.

In a study of 140 urban Latino adolescent high school seniors, natural mentoring demonstrated significant associations with fewer high school absences, higher educational expectations, and a greater sense of school belonging among participants who had a natural mentor.⁷ Respondents were allowed to identify up to three mentors, and a majority (69%) of respondents identified familial mentors, while 24% identified only non-familial mentors, and 7%

identified both familial and non-familial mentors. Natural mentors included siblings, extended family, and non-familial adults (friends, teachers, pastors). Additionally, higher educational levels among mentors predicted higher youth GPAs, and non-familial mentors had significantly higher educational levels than familial mentors. These findings demonstrate the potential natural mentoring has on promoting academic success.

Three included studies focused specifically on academic outcomes related to attitudes, feelings, and motivations towards school. In a study of 53,320 high school students from various ethnic backgrounds who completed a self-report questionnaire, school-based natural mentoring relationships were positively associated with school attachment ($p < .001$).¹⁰ School-based natural mentors were defined as adults or teachers at school who care about students, tell them they do a good job, listen to them, believe in their success, and with whom the student can talk to about things that are bothering him/her. School-based mentors may be beneficial to student academic success, as they can assist youth in forming positive emotions towards school, model prosocial attitudes and behaviors, and promote school engagement and attachment. Furthermore, in a longitudinal study of 770 urban adolescents,⁶ students with natural mentors had statistically higher reported attitudes towards school than those without natural mentors. This relationship remained strong even when participants' friends had negative school attitudes and behaviors, thus demonstrating natural mentors' ability to protect against negative peer influences. A majority of study participants in this study were African American (79.6%), and female (51.8%), and 53.8% of participants reported having a natural mentor. Additionally, a majority of natural mentors were extended family members, illuminating participants' ability to find natural mentors within their own kinship networks. Natural mentors were effective in promoting positive school attitudes while also discouraging mentees from participating in problem behaviors with peers.

Hurd and Sellers (2013) conducted a study focusing on African American adolescents with natural mentors, to demonstrate the relationship between natural mentoring and academic engagement.³⁴ Two hundred and fifty nine seventh, eighth and ninth grade students participated in the study, and all students identified as African American, African American, biracial, or multiracial.³⁴ Respondents were categorized as having a more connected mentoring relationship (longer relationship length, greater closeness, more frequent contact), less connected mentoring relationship (shorter relationship length, lower closeness, and less frequent contact), or no mentoring relationship. Respondents with more connected natural mentoring relationships demonstrated higher levels of academic engagement, compared to non-mentored respondents, due to higher social skills and increased psychological well-being. Academic engagement was self-reported by students and teachers, and included students' effort, attention, and persistence in completing academic responsibilities. Students with less connected relationships did not differ in academic engagement, social skills, or psychological well-being compared to non-mentored participants. Therefore, more connected mentoring relationships provided increased benefits to mentees, compared to low-connected or no mentoring relationship.

Two additional studies have focused on the effects of mentor relationships on grade achievement, high school completion, and college attendance. In a nationally representative longitudinal study of 6,819 adolescents, having a natural mentor was significantly positively associated with higher grade achievement, and higher likelihood of advancing to the next grade level, compared to youth without a mentor.²¹ This association remained strong even after controlling for other factors that affect academic outcomes, including parent, peer, teacher, and personal resources, as well as social background. When disaggregating between advantaged and disadvantaged youth, familial mentors predicted higher academic achievement for advantaged

youth and teacher mentors predicted higher educational attainment for disadvantaged youth. This finding may be due to the fact that advantaged youth may have family mentors who have higher educational levels and higher levels of resources, compared to disadvantaged youth. Finally, in a longitudinal study of 3,187 adolescents and young adults (aged 18-26),³³ having a natural mentor was associated with a greater likelihood of high school completion and attending college, compared to participants with no natural mentor. Additionally, non-familial mentors more strongly predicted high school completion rates, compared to familial mentors.

BEHAVIORAL OUTCOMES: While the primary focus of this literature review is on natural mentors' influence on academic, psychological, and emotional outcomes, behavioral outcomes from natural mentoring relationships exist as well. Three studies provide details on the association between natural mentoring and behavior problems, and these problems have included conduct problems, substance use, sexual activity, and risk activities. In a convenience sample of 294 adolescents, adolescents with mentors were significantly less likely to carry a weapon, use illicit drugs, smoke more than five cigarettes per day, and have sex with more than one partner in the past six months, compared to adolescents without mentors.³⁹ In a longitudinal study of 4,882 adolescents in grades 7-12, natural mentoring was associated with significantly less likelihood to hurt someone in a fight, take risks, or join a gang.²⁸ In a study of 615 African American emerging adults, natural mentoring was associated with less sexual risk behaviors ($p=0.05$).¹¹

RELATIONSHIP CHARACTERISTICS

While natural mentoring relationships are associated with a variety of positive youth outcomes, simply having a natural mentor may not be enough to promote positive adolescent development. Instead, specific youth characteristics, mentor characteristics, and mentoring

relationship qualities may mediate or moderate the relationship between natural mentoring and positive adolescent outcomes.²⁸

YOUTH CHARACTERISTICS: Little research has been conducted on the specific personal characteristics and resources youth have who benefit from natural mentoring relationships. Despite these gaps in research, what is known is that youth with stronger early attachment and more personal resources are more likely to engage in natural mentoring relationships.^{21,31} In a study of natural mentoring among Latina adolescent mothers, participants with natural mentors were more likely to recall their relationships with their own mothers as more accepting, compared to participants without natural mentors.³¹ These findings align with attachment theory, as strong early attachments may be vital antecedents for the formation of natural mentoring relationships. In addition, individual characteristics may predict the formation of natural mentoring relationships. Individuals who are competent and goal-oriented may be more likely to form natural mentoring relationships.²¹ Additionally, youth with more personal and social resources, including coaches, parents, peers, religious groups, and other resources may be more likely to form natural mentoring relationships, as these youth have access to numerous positive adults in their lives.²¹ Consequently, natural mentoring relationships may be a complementary resource for advantaged youth who already have many social and personal resources, and a compensatory resource for disadvantaged youth who may not have such resources. Additional research is necessary to determine whether specific adolescent characteristics may lead to forming natural mentor relationships.

MENTOR CHARACTERISTICS: In order to be most advantageous to youth, mentors may need to have specific demographic and behavioral qualities. Many adolescents with natural mentors have mentors who are gender and/or racially congruent to the adolescent.³⁴ Although

racial and gender similarities are not required of natural mentoring relationships, youth with demographically similar mentors may be more likely to develop closer mentoring ties.³⁴ In addition to race, mentors' educational levels may predict the effects of natural mentoring.⁷ Mentors who have higher education levels have predicted more positive youth outcomes, compared to those with lower educational outcomes, especially in influencing academic achievement.⁷ These higher educated mentors may be able to provide concrete advice about academic success, and increase connection to school and motivation to do well in school. In addition, mentors with backgrounds in teaching or helping professions may have an advantage in promoting positive developmental outcomes, by nature of their training and skills.³³

Finally, mentors' values and behaviors may be linked to adolescent values and behaviors.²⁹ Mentors who value education may lead to increases in the mentee's academic goals, commitment, and motivation.⁷ Additionally, adolescents' perceptions of their mentees' behaviors may be associated with adolescent behaviors. In a study of natural mentoring among high school students in California,²⁹ perceived mentor behavior that was illegal was a predictor of boys' self-reported misconduct and self-reported depression. Additionally, natural mentors who use substances may be modeling this negative behavior and promoting substance use among adolescents.¹¹ These findings suggest the behaviors and perceived behaviors of adult mentors influence adolescents' attitudes and behaviors. Adolescents may therefore benefit most from mentors who are demographically similar, have higher educational levels, and demonstrate positive behaviors and attitudes.

Additionally, mentors who are familial compared to non-familial may lead to different outcomes among adolescents. Natural mentoring relationships with family members may have numerous advantages as well as disadvantages. Many studies have demonstrated higher rates of

familial mentors compared to non-familial mentors, as these relationships form from natural kinship networks and may be sustained over a period of many years.^{7,6} Familial mentoring relationships may last longer than non-familial relationships, and may be of a closer and more connected nature compared to non-familial relationships. However, youth who are disadvantaged often have family members who are disadvantaged,²¹ and those family members may have lower educational levels and resources than non-familial mentors. Consequently, among low-income youth, mentoring relationships with non-familial adults may be associated with more favorable youth outcomes, as these mentors may be higher educated, have more resources, and may be able to assist the child in building social capital.³³ Additionally non-familial mentor relationships may be less conflictual and less complicated as familial mentoring relationships, as mentors within the youth's family may be experiencing similar stressors as the adolescent, that a non-familial mentor may not be facing. When assessing the benefits of familial versus non-familial natural mentors, it is important to look at the duration of the relationship, mentor education level, family stressors, and additional factors.

RELATIONSHIP QUALITIES: In addition to the personal qualities of mentors and mentees that may promote positive outcomes among adolescents, a variety of relationship characteristics have also been determined to moderate or mediate the relationship between mentoring relationships and positive developmental outcomes. These characteristics include the number of natural mentors, nature of the relationship, closeness, frequency of contact, and relationship duration.

A majority of studies on natural mentoring relationships have asked respondents to indicate one natural mentor they have in their lives.^{8,11,21,10,9,28-31,6,33,34,36,38-40} There is some evidence, however, that adolescents with multiple mentors may more positively benefit from

mentoring relationships compared to adolescents with only one natural mentor.⁷ In a study of natural mentoring among Latino adolescents,⁷ the number of mentors was positively associated with fewer absent days, higher educational expectations, and a higher sense of school belonging. This may be due to the fact that multiple mentors offer a larger range of support, and may communicate with each other to foster the positive development of the adolescent. More research is necessary to conclude whether there is a significant difference between one or more than one natural mentor.

Specific characteristics of the natural mentoring relationship may lead to more successful youth outcomes. Natural mentoring relationships that are low in conflict and high in respect have promoted positive outcomes among youth.⁸ Thus, natural mentoring relationships should be characterized by respect, mutual trust, and few to no arguments, in order to be most impactful to adolescents.¹⁰ Additionally, mentor-mentee closeness, duration of relationship, and frequency of contact may moderate or mediate the association between mentoring and youth outcomes. In a study of 259 African American adolescents,³⁴ more connected mentoring relationships had higher social skills and psychological well-being than youth with less connected mentoring relationships. More connected relationships were characterized by more frequent contact (2-5 times per week), longer duration (five years or more), and greater levels of closeness, compared to less connected relationships. Relationships that end after a short period of time may lead to an adolescent's feelings of loss or rejection, while longer relationships may enhance adolescent psychological wellbeing.³³ Additionally, relationship length and frequency of contact may help predict relationship closeness, as relationships that are based on longer frequency and more contact often are higher in reported closeness.³⁶ This strong sense of closeness assists mentees in building interpersonal skills, managing conflict, and establishing a strong sense of attachment.

According to Dubois & Silverthorn (2005a), a higher sense of relational closeness may lead to greater self-esteem and life satisfaction, and fewer depressive symptoms. However, a more connected relationship is not necessarily a guaranteed equation for positive youth outcomes. For example, in a study of 4,882 adolescents,³³ frequency of contact did not predict positive outcomes, but closeness and duration did. Additionally, in a study of Latino adolescents,⁷ natural mentoring relationships that were longer in duration and characterized by higher closeness were more likely to be with non-familial mentors. However, these familial mentors had lower educational levels compared to non-familial mentors. There is no evidence to show which exact combination of mentoring characteristics will lead to the best adolescent outcomes. However, based on the current evidence, strong early attachment to parents, racially and ethnically congruent mentors, highly educated mentors, non-conflictual relationships, and relationships that are high in frequency, duration and closeness may foster the positive adolescent outcomes. Additionally, youth may benefit from the early formation of natural mentoring relationships, as these relationships can help promote and foster positive developmental success throughout childhood, adolescence, and the transition to adulthood.³⁶

LIMITATIONS OF CURRENT LITERATURE

The current research on natural mentoring documents associations between mentoring and positive adolescent development. However, limitations exist within this literature review that raise questions about the validity of the findings. The inclusion of only one researcher/coder is problematic, as bias may exist in research and inclusion criteria processes. Additionally, only electronic databases were explored, and no printed journals were explored. It is possible that relevant articles were not included in the study, and that additional research on natural mentoring exists that was not incorporated into this review.

Additional limitations exist in the pool of research on natural mentoring. Researchers do not have a common or consistent definition of natural mentoring relationships across studies, which leads to variations in the characteristics of what qualifies as a natural mentoring relationship.⁹ The underlying characteristic of natural mentoring that all studies have is a supportive relationship with an adult, but the details regarding whom that adult is and what characterizes that relationship differ dramatically. A basic definition of natural mentoring has been “An important adult in your life other than your parents or a person who raised you who has taken a special interest in you and who you can go to for support and guidance”.³⁴ Some mentoring surveys use the word mentoring, while others use words that imply mentoring but do not use the specific term. For example, “is there an adult in your life you can turn to for help and advice”³⁹ does not include the word mentor, but a mentoring relationship is implied. As mentioned previously, some mentoring assessments allow respondents to describe one mentor, and others allow for numerous mentors.²¹ Studies that only allow youth to identify one mentor may not be capturing the entire range of mentoring support and social support in a young person’s life. Additionally, studies that ask for multiple mentors should assess whether mentors are connected to each other, to see if this affects youth outcomes.

Many definitions of natural mentoring relationships include specific age details regarding the age a mentor must be to be considered a natural mentor. Four studies included mentoring survey questions which asked adolescents or young adults if they have an adult in their life who has supported them or made a positive difference in their lives since they were fourteen years old.^{21,28,33,36} Additional studies specify that natural mentors must be 21 years old²⁹ or 25 years or older,^{11,6} and people who are younger are not considered natural mentors. Finally, some studies indicate a minimum age gap between mentor and mentee. For example, Rhodes, Ebert, & Fisch

(1992) required mentors to be no fewer than eight years older than the mentee. These variations in mentor age requirements are not consistent across studies, and may categorize someone as a natural mentor in one study but not others.

In addition to age requirements, additional studies require mentors to fall into certain support categories in order to be included into the natural mentor category. In a cross-sectional study of Latina adolescent mothers³¹ and a cross-sectional study of African American adolescent mothers,³⁰ participants had to feel that the mentor cares deeply about them, inspires them to do their best, could count on the mentor, and feel that knowing the mentor has affected their choices, to be counted as a natural mentor. Participants who did not check these categories were excluded from the natural mentor category.

Additional problematic definitions of natural mentors exist which may invalidate findings of natural mentoring. VIPs (very important persons), informal mentors, and supportive non-parental adults are all encapsulated under the definition of natural mentor. However, VIPs may differ slightly from natural mentors, as VIPs may include adults who are important to youth, but do not provide mentoring support.⁹ For example, a coach could be considered a VIP and provide guidance within the sport activity, but may not provide additional guidance outside of the sports context. Additionally, parents are not included in studies of natural mentoring, but other relatives such as uncles, aunts, older siblings, and grandparents do count as natural mentors. These inclusion criteria do not take into account whether the non-parental adult was the adolescent's main caretaker, as many children are raised by non-parental caretakers. Finally, the mentoring definition is often dichotomized between no mentor and mentor, and parents fall into the no mentor category but may provide similar types of support as other familial mentors provide.¹¹ Few studies have assessed the interactive effects of parenting and natural mentoring,³⁴ and it may

be necessary to consider parental support as a similar type of support to non-parental adult support. Natural mentoring relationships are often unique in that they are non-conflictual and provide positive support in children's lives. It may therefore be possible that parental and peer relationships that are categorized by these types of positive support may lead to similar outcomes as natural mentor support. Additional research is necessary to study the interaction between parental support and natural mentors, and to assess the role supportive parents and peers have towards adolescents. Finally, of the currently reviewed studies, all studies clearly defined natural mentors and the type of support provided, but no studies indicated the types of activities mentors and mentees did together. Future studies should include these details, so that successful mentoring relationships can be easily replicated.

Numerous limitations existed in the sampling and study design of the current literature, threatening the causality of findings. Studies that focused primarily on lower achieving youth who had 8th grade GPAs lower than 3.0,^{9,6} may threaten the validity of the sample, as higher achieving youth were not included in these studies. Finally, a majority of studies have not been based on random samples, but rather have been convenience samples, thus threatening the external validity.^{1,11,21,10,30,31,6,34}

Almost all studies of natural mentoring have been cross-sectional and observational studies.^{8,7,11,21,10,9,29,30,6,32,34,36,38-40} Additionally, most of the findings were retrospective self-reports by adolescents, and therefore recall bias³⁶ and social desirability bias⁶ may have skewed findings. The nature of these studies makes it difficult to establish causality, and the direction of causality among mentoring, adolescent outcomes, and parenting should be questioned.^{30,32} It is possible that certain youth may be more likely to form and sustaining mentoring relationships, regardless of the nature of the mentoring relationship.³⁰ There was little data collected on

participant (mentee) characteristics across studies, and it is possible that mentors did not positively affect mentees' social skills, but rather more resourceful and socially skilled youth were more likely to seek out a mentor.¹¹ It is also possible that adolescents with higher depression, poor behavior and poor grades may drive away potential supports. Additionally, parents and mentors may choose to be involved with adolescents who are perceived to be more psychologically healthy and have higher interpersonal skills.³⁴ Therefore, it is possible that natural mentoring relationships do not predict higher academic and psycho-emotional outcomes, but rather adolescents who choose to have natural mentors may already be on a more positive educational and psycho-emotional trajectory, compared to those who do not seek out natural mentors. Additionally, many natural mentoring relationships were characterized by helpful, positive, non-conflictual support, and it is possible that this particular pattern of support leads to positive adolescent outcomes, regardless of whether the support came from a mentor, parent, or peer.³⁰

IMPLICATIONS FOR FUTURE RESEARCH

Prospective longitudinal studies should be conducted to determine if natural mentors truly promote positive adolescent outcomes, if adolescents with positive outcomes are better able to elicit support from natural mentors, or if the direction of causality goes in both directions. Future research on natural mentoring should use a consistent definition, in order to compare findings across studies. Additionally, additional research is necessary to investigate the specific characteristics of adolescents who have natural mentors, allow adolescents to report more than one mentor to see if more mentors influence outcomes, and to investigate the interaction between parental support and natural mentor support to see if they complement each other. The current research on natural mentoring is rather broad, and further research is necessary to determine

whether natural mentoring is more or less effective among youth of varying demographic characteristics. Many of the studies that were included in this literature review focused on African American and Latino youth, but research is limited to determine if natural mentoring is more or less effective among youth from different races, ethnicities, and socioeconomic backgrounds. An entire literature review should be conducted solely on the benefits of natural mentoring on low-income youth of color, as these students face disproportionate risks during adolescence.⁵ Findings from this review would assist program planners in developing interventions to target specific youth.

The field of natural mentoring research is rather new and limited,¹⁰ and it is therefore necessary to continue to research the effects of natural mentoring on adolescents, using consistent definitions of mentoring and strong study designs.

POLICY IMPLICATIONS & SIGNIFICANCE FOR MCH

The current research suggests that natural mentoring is a potentially effective way to capitalize on adolescents' already existing kinship and community-based relationships with non-parental adults, among youth from a variety of backgrounds. These findings have strong implications for the fields of maternal and child health, adolescent health, and education, as interventions that promote strong parental attachment and natural mentoring across the life course may be beneficial in fostering positive adolescent outcomes.

Natural mentoring research points to the importance of strong early attachment to parents as an antecedent to strong attachments to other adults during adolescents.^{21,31} Therefore, early maternal and child health and health promotion programs that focus on effective parenting skills and increasing parent-child attachment among parents and their newborns, toddlers, and young children may be beneficial for natural mentoring formation during middle childhood.⁹

Many youth are assigned to mentors in formal programs, but these mentoring relationships are often short-lived, lack closeness in the relationship, and many youth must wait on waitlist or may be ineligible for formal mentoring programs.⁸ By focusing on the already existing relationships youth have in their environments, programs can assist youth in finding opportunities to interact with natural mentors who promote positive adolescent development.⁶ Afterschool, summer camp, public health, health promotion and prevention, and educational programs can develop policies to recruit and involve non-parental adults,^{1,33} and develop settings that include bringing in extended family members, older siblings, and promoting intergenerational interactions, to assist in the formation of strong natural mentoring relationships.^{7,11} Additionally, programs should assist youth in identifying mentors who may lead to more optimally effective natural mentoring relationships, by focusing on specific mentor and relational characteristics that have been demonstrated to be more effective (e.g. high education level of mentors, strong closeness in relationship, longer duration, more frequent contact).²⁸ Programs that focus on helping youth identify natural mentors they have in their lives, can then provide training, education, and services to those natural mentors to foster the natural mentoring relationship.^{1,8} Such training may include psychoeducation on social support types, to promote providing multiple forms of social support^{1,7} and coach effectiveness training.⁹ Additionally, programs can reach out to adults who come into high contact with youth in churches, community centers, and schools, to provide education and support to teachers, family members, religious leaders, and other adults who may have strong relationships with children in their communities. Additionally, there is evidence that teacher mentoring may be most beneficial for adolescents who are from low-income communities, as teachers may be able to provide academic and psychological support that families may not be able to provide on their own.²¹ Therefore,

promoting the development of natural mentoring relationships between teachers and low-income youth may be important for children whose familial non-parental adults have low-education, high problematic behaviors, or are simply unavailable for youth. Finally, formal mentoring programs may be a beneficial setting in which to involve natural mentors. Formal mentoring programs can incorporate natural mentors, so that the formal program mentor and the natural mentor interact and coordinate support, to enhance the system of support in the child's life.³³

CONCLUSION

Children face a variety of risks as they age into adolescence and early adulthood, and low-income and minority populations may face increased risks. A variety of interventions exist at the individual, family, school, community, and political level to reduce risks and to promote healthy adolescent outcomes. Although natural mentoring cannot single-handedly reduce all adolescent developmental risks, natural mentoring may be an effective, low-cost and achievable intervention for organizations and schools to explore to promote positive adolescent development. Natural mentoring is associated with positive academic, psychological, and emotional outcomes, and should be combined with additional interventions to meet the needs of youth in the nation. While, additional research is needed to strengthen the field of natural mentoring and adolescent health, the existing research indicates numerous initial associations that may influence the fields of public health, education, and mentoring.

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