Understanding and promoting rural adolescents' psychosocial development in the context of a unique social milieu

by

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A dissertation submitted to the Graduate Faculty of
Auburn University
in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy

Auburn, Alabama
August 6, 2016

Keywords: adolescence, rural, connectedness, identity, peer crowds

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Abstract

The need to belong is fundamental among human beings, and is associated with a variety of indices of wellbeing. Individuals can experience belonging in a variety of contexts. During adolescence, two of the most prominent contexts are the family and school contexts. Although prior research has explored the associations between indices of belongingness and a variety of socioemotional outcomes, fewer studies have examined links between adolescent indicators of belonging and outcomes beyond the high school years. Furthermore, fewer studies examine belongingness in rural contexts. Even less scholarly attention has been paid to the *promotion* of belongingness in rural areas for marginalized individuals. To extend inquiry on belongingness into rural areas and beyond late adolescence, the first paper in this dissertation examined two waves of nationally-representative data spanning ages 15-28. Specifically, we compared the links between urban, suburban, and rural adolescents' experiences of belongingness and their downstream (young adult) economic and educational outcomes. Belongingness was operationalized in terms of two salient developmental contexts: school and family connectedness. Results revealed school connectedness as a consistent predictor of young adult educational and occupational outcomes, especially among rural adolescents. Building on the importance of the school as a social hub in rural areas, the second paper addresses the need to cultivate climates of acceptance in rural schools. The second paper highlights intergroup contact theory (ICT) as a particularly relevant model to address the need for belonging among marginalized rural adolescents – a model that has not yet been studied with specific attention to

rural culture. We discuss the stratification of peer crowds and how this creates barriers to free social interaction, which threaten normal psychosocial development for those at the margins. This may be particularly problematic in rural areas with fewer social niches available. Next, we discuss the nuances of satisfying the initial conditions of ICT, addressing both challenges to and opportunities for its successful application in a rural community. Finally, we integrate and extend prior work by contending that ICT can be applied in rural areas to promote developmental assets among marginalized rural youth. The result is a theoretically and empirically-grounded model for use by researchers and practitioners in the study of an intervention with marginalized rural youth. Taken together, both papers represent initial steps into understanding and promoting belongingness among adolescents in the understudied context of rural communities.

Acknowledgements

Many individuals and groups were vital to my success throughout my graduate career as well as in writing this dissertation. My co-advisors, Dr. Adrienne Duke and Dr. Stephen Erath, demonstrated great patience and supportiveness in the preparation of my dissertation. They encouraged me to master the material presented in this document and helped refine my ability to demonstrate that mastery in written form. I also appreciate how good of a team they made. Our meetings often included all three of us, and I always noticed that my co-advisors demonstrated great synchrony and teamwork in advising me. I also wish to thank Dr. Tom Fuller-Rowell for his helpfulness in acquiring the dataset for Paper 1 and for his generosity in providing the space and equipment that were required to run the analyses. I wish to thank Dr. Francesca Adler-Baeder for her overall guidance and benevolence not only in the course of writing the dissertation, but especially in the past two years that I have been her graduate assistant. She trusted me with great responsibility to lead a program evaluation project. Through this experience I found my best professional fit – an invaluable gift for which I am deeply grateful.

I also wish to thank Dr. Gregory Pettit for the role he played in preparing me to be an academic. Although he was not on the advisory committee for this dissertation, he chaired my thesis and qualifying exam committees. I would not have made it this far without his initial guidance. Dr. Pettit, among other members of the HDFS faculty, was instrumental in teaching me to think developmentally – another important component of a human sciences scholar but also of this dissertation.

Finally, I must thank my friends and family members who have provided stress relief and emotional support throughout my graduate career. From taking care of my cat while I was out of town to simply being available to spend time or emotionally vent, I owe a great deal of my success to my social network. I know that I fit in very well with my group of friends here in Auburn, and that has been yet another invaluable experience. I am so grateful to have had the fulfilling family and friendship relationships that not everyone is lucky enough to have.

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I. General Introduction

Most human beings attempt to seek out satisfying, meaningful relationships with others. In their pivotal article on the importance of belonging to human health and wellbeing, Baumeister and Leary (1995) argued that the need to belong is powerful because it influences such a wide array of human experiences, from immediate emotions and cognitions to longer-term patterns of behavior in interpersonal relations. The two papers in this dissertation build upon the existing literature on the importance of belonging by focusing on the unique social environment of rural adolescents. The first study compares the relationship between adolescent belongingness and later educational and occupational achievements in urban, suburban, and rural subsamples. The second study integrates literatures on intergroup contact, identity, and peer crowd affiliation with the aim of developing a conceptual model for promoting belonging among rural adolescents. Although in recent decades scholars have brought more attention to rural populations, this population still remains significantly understudied when compared to suburban and urban populations. Understanding how belongingness may operate and be promoted uniquely for rural adolescents is an important step in addressing the needs of this understudied group.

Perceptions of life in rural areas are often stereotyped. If they are positive, they usually involve idyllic conceptions of farm life as the perfect environment for raising strong families (Struthers & Bokemeier, 2000; Valentine, 1997). On the opposite extreme, rural areas may present as hotbeds of destitution and youth drug use in the wake of previous decades' farm crises (Elder & Conger, 2000), or as areas that modernity has forsaken or failed (Corbett, 2006).

Although lay perceptions of life in rural areas may be constricted to overly-ideal or overly-pessimistic thoughts, a handful of existing studies address the social milieu in rural areas in greater depth. For example, youth in rural areas often develop in an environment where ties to the community are of paramount importance. Youth who develop positively have been found to have families who are embedded in the community through involvement in the traditions of the area, such as farming and church leadership (Elder & Conger, 2000). These historically important activities are carried out within the context of particular community values. For example, there is usually a community-wide emphasis on a particular worldview beyond religion or farming – in Elder and Conger's Iowa sample, this was an emphasis on anti-materialism and an ethic of "making do" with whatever means were available in the context of fluctuating economic circumstances. Studies of other regions of the United States (e.g., rural Appalachia) also suggest that these communities tend to emphasize a framework of social cohesion and togetherness over a sense of individualism (Gore, Wilburn, Treadway, & Plaut, 2011). These studies speak to the unique experience of belonging in rural areas that must be considered when studying this population. In particular, prior studies suggest that the nature of social interactions and feelings of connection that Baumeister and Leary (1995) conceptualized as belongingness may be qualitatively different in rural as opposed to non-rural areas.

Differences in the experience of belonging may be related to observed differences in how rural adolescents relate to family and peers. Peer crowds – reputation-based groups of individuals who may or may not spend time with one another – factor prominently into this context. Research has shown that rural youth define crowds differently than do urban youth (Hendry, Kloep, & Wood, 2002), with fewer identified sub-cultures than in urban areas and a more simple division between mainstream and non-mainstream youth. Elder and Conger's (2000) work

suggests that involvement in the community-sanctioned, mainstream lifestyle is perpetuated intergenerationally. For example, as their children mature into adolescents, parents offer their teens a chance to participate in particular youth groups at church. These groups, however, are populated by youth from other well-connected and usually well-adjusted families, sustaining the social structures put in place by previous generations (King, Elder, & Whitbeck, 1997). Families without strong connections to the area do not model similar involvement in the community; youth from these families may not be as involved without specific encouragement from parents (Fletcher, Elder, & Mekos, 2000). Taken together, prior research suggests that socially successful youth in rural areas are those who feel a sense of belonging both with family and in the broader community. In other words, it may not be enough for rural youth to develop *some* good relationships in order to feel like they belong. The most successful youth, including even those who plan to leave their rural homes, may need to connect socially at both family *and* school or peer levels. The need to connect to both family and peers for optimal wellbeing contrasts with studies involving urban and suburban youth, in which successful peer relations can offset the negative impact of poor family relations (e.g., Loukas, Roalson, & Herrera, 2010).

If belonging in a rural area involves maintaining quality, simultaneous relationships with all members of the community (Elder & Conger, 2000), youths who are not integrated at all levels will lack this sense of belonging. This may be particularly true of those who have peer difficulties, given the rising importance of peers for social support in adolescence (Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). Furthermore, the strong group cohesion of those who are part of the more mainstream rural community may make it particularly difficult for youths who are not well-integrated to make social connections. As suggested in Hendry and colleagues' (2002) study, rural youth who cannot be classified by others into the "normal" crowd are usually

lumped into other vague, undesirable categories such as “bad” or “sad”. With such few recognized social options, division and stratification among rural adolescents may be particularly intense. If non-mainstream rural youth are to be offered the same chance at success as their more integrated counterparts, interventions that allow for contact and friendship building across pre-established groups are needed. Although it is not feasible to mandate that non-mainstream youth integrate themselves in an identical manner to their mainstream peers, increasing the truly available pool of social partners may be particularly useful in building a sense of belonging for non-mainstream youth.

To date, the study of rural populations has been relatively sparse compared to that of urban and suburban populations, particularly concerning the study of concepts under the umbrella of belongingness. The existing literature has identified that the social climate of rural areas is often quite different from those of urban and suburban settings (e.g., Elder & Conger, 2000; Gore et al., 2011). Thus, more studies that examine adolescent development in rural areas are still necessary. One limitation of the existing studies of the social lives of rural adolescents is that they are usually focused on description of rural youths’ experience rather than direct comparison of similarly measured constructs between urban and rural areas (e.g., Elder & Conger, 2000; Hendry et al., 2002; King et al., 1997). When comparisons have been made, they largely concern drug use and other delinquent behavior (e.g., Elgar, Arlett, & Groves, 2003; Farrell, Sullivan, Esposito, Meyer, & Valois, 2005; Havens, Young, & Havens, 2011). This limits researchers’ ability to truly compare urban and rural youth on social factors other than delinquency. Comparing identically measured social processes across urban and rural contexts is an important step in being able to confidently articulate just how different or similar these two contexts may be. Study 1, in this dissertation, contributes to the need for longitudinal and

empirical studies that examine family and school connectedness in adolescence as it relates to young adult educational and occupational outcomes. The goal of the study is to determine whether having strong connections in family and school domains is particularly important for educational and occupational outcomes in rural areas compared to urban areas.

Although there has been some applied research targeting rural youth, many published studies of prevention and intervention activities target health risk outcomes such as nutrition, sex education, and drug addiction. To date, applied research in rural settings has examined programs that target socio-emotional problems, such as bullying, depression and career development (Lapan, Aoyagi, & Kayson, 2007; Limber, Nation, Tracy, Melton & Flerx, 2004; Puskar, Sereika, & Tusaie-Mumford, 2003). However, these studies do not integrate existing literature on the particulars of rural social life into their analyses; rural settings are merely the context of the intervention. For example, Limber and colleagues (2004) discuss a trial of the Olweus Bullying Prevention program in a sample of several rural counties in South Carolina. At the time, the program had already undergone several successful field trials and was also undergoing implementation and evaluation in other geographically diverse areas of the United States (see Olweus & Limber, 2010). Thus, rural areas seem to be included as a necessary step in establishing the (at the time) burgeoning evidence of the program's generalizability rather than an area of particular interest.

A potentially more efficient way of targeting social problems in rural areas, especially given the scarcity of applied research, would be to first consider what is already established about the social fabric of rural areas (e.g., Elder & Conger, 2000; Gore et al. 2011; Hendry et al., 2002; Valentine, 1997) *before* attempting to bring programming to those areas. The second paper represents a novel contribution to the literature on rural adolescent development by articulating a

theoretically- and empirically-based model of promoting belonging among marginalized rural adolescents. The paper begins by highlighting how problems of belonging in adolescence pose threats to normal psychosocial development, and that these threats may be particularly salient in superficially homogenous (e.g., rural) areas. The extension and adpatation of intergroup contact (Allport, 1954) interventions to problems of belonging in rural areas is proposed as a method of addressing the social divisions that may hinder satisfactory psychosocial development among rural adolescents. Collectively, the papers in this dissertation represent an advancement in contextual sensitivity within the promotion and understanding of belonging among rural adolescents.

II. Study 1 – Interplay of School and Family Social Climate in the Prediction of Rural and Urban Young Persons' Achievement and Employment Outcomes

Abstract

School and family connectedness represent two well-established features of healthy adolescent development. Although prior research has connected both constructs to socioemotional health and educational achievement, fewer studies look beyond the high-school years to examine prospective effects of adolescent experiences of connectedness. In addition, little specific attention has been paid in the literature to the potential for differences in how school and family connectedness operate in rural areas. The present study uses data from Waves 1 and 4 of the National Longitudinal Study of Adolescent Health (Add Health) to compare the associations of school and family connection during adolescence with early adult educational and occupational attainments across urban, suburban, and rural samples. We also test for interactive effects of school and family connection. Results revealed that overall, school connectedness is consistently associated with educational and occupational outcomes in young adulthood in the rural group. This association is less consistent in the other groups, as are the associations between family connectedness and later outcomes. We discuss implications for the understanding of the role of school in rural adolescents' development for future research.

Interplay of School and Family Social Climate in the Prediction of Rural and Urban Young Persons' Achievement and Employment Outcomes

A strong connection to school is generally characterized by feelings of belonging, happiness, and camaraderie with teachers and peers. School connectedness is one of the most important contextual features in the prediction of adolescent emotional adjustment (Loukas & Pasch, 2013; Shochet, Homel, Cockshaw, & Montgomery, 2008) and academic achievement (Niehaus, Rudasill, & Rakes, 2012). Research has demonstrated that the positive influence of school connectedness persists even in contexts characterized by negativity (e.g., community violence; Borofsky, Kellerman, Baucom, Oliver, & Margolin, 2013), making it an important consideration for both researchers and practitioners. In addition to feeling a strong connection to school, a strong connection to family (i.e., parents) is also essential to positive development. For the purposes of this study, we operationalize family connectedness as a sense of emotional closeness and acceptance with parents. Similarly to studies of school connectedness, family connectedness is a robust predictor of academic adjustment during adolescence (Spera, 2005). This effect may be attributable to the sense of emotional security that a strong connection to family can provide to adolescents (Durkin, 1995).

Although school and family connectedness have been identified as important predictors of adolescent adjustment, extant literature focuses on urban and suburban populations, leaving a critical gap in our understanding of the effects of connection in rural contexts. Academic achievement may be particularly important in rural communities facing geographic isolation and relative shortages of economic opportunities for their young people (Hektner, 1995). Ensuring that adolescents from these communities are able to successfully navigate high school both academically and socially may prove an especially important stepping stone in their

development. Even for those who do not seek to leave the community, school is one of the primary social contexts of rural areas (Parker, 2001). Thus, it is still important for these students to feel connected to their schools.

The present study draws from empirical research on adolescent social development as well as *stage-environment fit* and s*elf-determination* theoretical perspectives (Eccles et al., 1993; Ryan & Deci, 2000) to formulate research questions and interpret results. We employed multilevel modeling techniques to analyze data from the National Longitudinal Study of Adolescent Health (Add Health). Participants were an average of 15 years old during the first wave of Add Health, and approximately 28 years of age on average at Wave 4. We aimed to identify the main and interactive effects of school and family connectedness on downstream indicators of economic adjustment such as young adult educational achievement, income, and job stability. The breadth of the Add Health data made it possible to examine these effects across geographical area (i.e., urban vs. rural). This study addresses a gap in the social psychological and human development literature, as rural populations have received far less attention than suburban and urban populations. The following sections present an overview of extant research on school and family climate, adolescent social and economic development, and the existing literature addressing these topics in rural populations before explicitly describing research questions and hypotheses pertaining to the present study.

Literature Review

Theoretical Background. The integration of the existing literature on family relations, school climate, and adolescent development is possible using the frameworks of *stage-environment fit* theory (Eccles et al., 1993) and *self-determination* theory (Ryan & Deci, 2000). Stage-environment fit theory is an expansion of Hunt's (1975) *person-environment fit* theory,

which holds that individuals' well-being across multiple domains is influenced by the degree to which the environment they inhabit meets their unique needs. Individuals who are in an environment with good fit tend to function better than those who are in environments that are not a good fit for that particular individual. Eccles and colleagues expanded upon this theory by considering individuals' needs in the context of their current developmental stage. For example, adolescence, being a unique developmental stage, introduces a unique set of needs that the environment may or may not meet. One of the most salient needs highlighted by Eccles and her colleagues is the desire for self-determination. *Self-determination theory* (SDT; developed independently of *stage-environment fit* theory) suggests that if persons experience competence, autonomy, and relatedness to others, they will develop intrinsic motivation to behave adaptively. Although stage-environment fit theory also speaks to adolescents' need for opportunities to experience competence, autonomy, and relatedness, SDT's conceptualization of relatedness slightly expands its definition. Relatedness contributes to the development of intrinsic motivation by providing a general sense of security and belonging. Indeed, satisfactory relationships with parents, peers, and teachers have demonstrable links to motivation in school settings (e.g., Wang & Eccles, 2012).

The principles of stage-environment fit theory and SDT are quite compatible in outlining the special needs of adolescents. The two theories suggest that as individuals mature into adolescents, they have developmentally unique needs that their environments may or may not meet. In general, adolescents experience a need for autonomy and relatedness. In terms of relatedness, adolescents benefit from strong relationships because they provide a sense of security and connectedness. If needs for autonomy and relatedness are not met, adolescents may not develop the intrinsic motivation required to succeed in settings where external pressures are

not as apparent. One such setting could be after the completion of secondary education. Although there are many potential pathways for satisfaction of one need to influence the others, the present study focuses on the impact of adolescents' perceptions of relatedness. The remainder of the literature review focuses on existing literature documenting the contributions of adolescents' perceptions of relatedness to their success in schooling and the labor market.

Family connectedness and adolescent development. Although the family's relative influence on an adolescent's behavior begins to wane during the middle school years (Allen, 2008; Harris, 1995; Larson & Richards, 1991), there remains a strong correlation between family connectedness (a sense of emotional closeness and acceptance with parents) and adolescent adjustment in a variety of domains. In general, family connectedness predicts developmentally important constructs such as emotional, behavioral, and academic adjustment. Specifically, adolescents who report stronger connections with their family tend to report fewer conduct problems and emotional difficulties as compared to their less-connected counterparts (Cookston & Finlay, 2006; Oldfield, Humphrey, & Hebron, 2015). Family connectedness also predicts how committed adolescents are to their schooling across multiple racial / ethnic groups (Machamer & Gruber, 1998). The more connected adolescents feel to their families, the more committed they tend to be to their schooling. This benefit appears to extend into the college years, even when students may have left their parents' homes (Cutrona, Cole, Colangelo, Assouline, & Russell, 1994).

The influence of parent-adolescent relationships on adolescents' academic success may operate through the socializing role that parents play for their adolescents – guiding them toward norms of behavior and away from risks. Furthermore, students may bring features of the parent-adolescent relationship to the student-teacher relationship. Thus, if a student has a good

relationship with parents, that student may also have a good relationship with teachers, promoting academic achievement (Murray, 2009).

Although the literature is clear on the link between parent-adolescent connection and academic performance, there is scant literature on the links between this relationship and other achievement-related outcomes. In particular, few if any studies test associations between parent-adolescent relationships and later labor market success. This is an important area to investigate, given that adjustment problems during adolescence are linked to later problems in adult development such as unemployment (Kokko & Pulkkinen, 2000). Furthermore, parents are highly influential in the activities in which their adolescents participate (Jacobs & Eccles, 2000). Whether it is incentivizing participation in extra-curricular activities or expressing interest in an adolescent's hobby, parents exert an influence that affects adolescents' vocational development. Therefore, it is reasonable to hypothesize that the nature of the parent-adolescent relationship influences adolescents' eventual economic success.

School connectedness and adolescent development. School connectedness generally includes feelings of support, belonging, and closeness to both adults and peers at school. Educational research has demonstrated that feelings of school connectedness are some of the most important predictors of academic achievement (Anderman & Anderman, 1999; Osterman, 2000). Students who are more connected to their school are more academically focused and ultimately more academically successful. Although the definition of connectedness usually includes feelings toward adults and peers at school, connection to peers at school may be particularly important in predicting academic success during adolescence (Juvonen, Espinoza, & Knifsend, 2012). This notion is supported in part by the clear connection between problems with peer relationships (e.g., bullying) and academic achievement. Adolescents who are bullied suffer

academically, but having strong connections to other peers can partially offset this effect (Wang, Ianotti, & Luk, 2011). Loukas and Pasch (2013) found that girls who experienced overt forms of victimization at school (hit, beat up, yelled at) tended to develop fewer conduct problems over time if they reported higher school connectedness. However, there is also evidence that students who feel more connection to their schools are less likely to be victimized in the first place (Wilson, 2004). In sum, students who feel more connected to their schools are less likely to be victimized and are better able to weather such negativity when it does occur.

As with the literature on family connectedness and adolescent / young adult achievement, the literature on school connectedness includes few studies that reach into adulthood. Most studies of adolescents' school connectedness make use of outcome variables that are situated at the end of high school; this is a notable gap in the literature. Adolescents' ability to find connection within a school and potentially associate themselves with one another is not unlike the ability to work well with others in an employment setting. Although no extant research addresses this specific question, there are documented links between high school connectedness and college attendance, such that adolescents who were more connected to their high schools are more likely to attend college (Babcock, 2008). In addition, adolescents who are more socially connected in general tend to out-earn their more socially isolated counterparts over the lifespan (Galeotti & Mueller, 2005).

Interactions between school and family connectedness. Prior studies have highlighted the independent or additive effects of family and school connectedness on adolescent adjustment (Duggins, Kuperminc, Henrich, Smalls-Glover, & Perilla, 2015; Law, Cuskelly, & Carroll, 2013; Shochet et al., 2008). However, it is also useful to consider the potential for connectedness in one domain to compensate for a lack of connectedness in other domains. This question has been

considered in the past, with the majority of studies treating school connectedness as a moderator of other contextual influences (e.g., family environment) on adolescents' adjustment. For example, in a large sample of suburban early adolescents, Loukas, Roalson, and Herrera (2010) found that higher levels of school connectedness tended to offset the negative relationship between negative family relations and conduct problems. Loukas and colleagues' (2010) findings echo prior results from another study of family and school connectedness in a large sample of suburban early adolescents (Barber & Olsen, 1997). Barber and Olsen found that when examining family and school connectedness, positive experiences in one domain become more relevant at lower levels of positivity in the other. For example, at low levels of family connectedness, school and other forms of connection bear stronger associations with conduct problems. Barber and Olsen assert that positive experiences within the family have the power to neutralize the ill effects of other contexts; when this positivity is absent, so too is the neutralization effect.

Although there is a body of evidence supporting the treatment of school connectedness as a moderator of negative family experience, less is known about the potential for family connectedness to protect against low school connectedness. We know from prior research that the family environment can predict school connectedness (Kelly, O'Flaherty, Toumbourou, Homel, Patton, White, & Williams, 2012; Shochet, Smyth, & Homel, 2007). Adolescents with stronger connections to their parents report more favorable opinions of the school environment, which in turn predicts greater school connectedness. However, it is still relatively unclear whether family connectedness can moderate low school connectedness in the same way school connectedness moderates poor family relations. In one notable study, Witherspoon and colleagues (2009) divided a group of 437 ethnically diverse adolescents (age 11-12; sixth grade)

from an urban area into profiles based on levels of connection to family, school, and neighborhood. Although they identified a cluster with lower school connectedness and higher family connectedness, the scores were moderate in both directions. The group was labeled as "average" and discussion did not address whether family connectedness could offset lower school connectedness. However, the authors did emphasize that the contexts of connection did not reliably co-vary – school and family were not predictably similar in level. It therefore remains relevant to address whether or not family connectedness can promote positive youth development given a lack of connection to the school.

Rural Adolescents, Families, and Schools. The present study includes a substantial sample of students from rural areas. These adolescents face unique social and economic challenges, given their rural setting. Extant research involving rural populations has focused on rural populations' relative levels of academic achievement and economic opportunity compared to suburban and urban populations (e.g., Fan & Chen, 1999; Reeves & Bylund, 2005). However, there is a gap in the literature comparing how school and family connectedness operate in rural and non-rural areas. Such a comparison is prudent, as rural areas have different social structures than non-rural areas (Elder & Conger, 2000), and these differences may influence academic outcomes (Gore, Wilburn, Treadway, & Plaut, 2011). Social networks in rural areas are frequently described as more closely-knit than networks in urban or suburban areas (Cassidy & McGrath, 2015; Elder & Conger, 2000; Shamah & MacTavish, 2015). Although the feeling of inclusion in a close-knit community may be very pleasant, the feeling of exclusion or disconnection in those communities may be particularly problematic. Geographic isolation and the relative lack of diversity in some rural areas may hinder the ability of those who do not identify with their setting to connect with their schools. Adolescents who feel disconnected from

their schools may not want to become involved in extra-curricular activities or other school-based social activities. This in turn could have problematic developmental consequences given that low-curricular involvement is linked to negative outcomes for rural youth in particular (Sharp, Tucker, Baril, Van Gundy, & Rebellon, 2015).

Beyond connection to school, characteristics of the families from which rural adolescents hail may also contribute to their adjustment. Collectivist attitudes, which emphasize the maintenance of social ties, and relatively higher importance of family connectedness in rural settings (Elder & Conger, 2000) suggest that the role of connection to family may be different for rural adolescents as compared to urban and suburban adolescents. The present study aims to shed light on these potential differences.

The Present Study. This study takes advantage of data from the National Longitudinal Study of Adolescent Health (Add Health; McNeely, Nonnemaker, & Blum, 2002) in addressing our hypotheses. The theory and literature we have reviewed inform several specific expectations. Maintaining interpersonal relationships, a necessary skill for both academic and labor market success, is developed in the context of supportive relationships within the family and at school. Thus, we expected (Hypothesis 1) that both school and family connectedness would predict young adulthood indicators of educational attainment and labor market performance such as employment status. Because schools in rural areas serve as social hubs (Parker, 2001; Walsh, 2012), we expected that the link between school connectedness and young adult outcomes would be greater in rural settings than in non-rural settings (Hypothesis 2); in essence, we expected that setting would moderate links between school connectedness and outcomes. Given evidence that deficits in socialization experiences with parents can be compensated for through positive experiences with peers (and vice versa; Barber & Olsen, 1997; Loukas et al., 2010), we also

expected an interaction between school connectedness and family connectedness (Hypothesis 3), such that the association between lower school connectedness and poorer educational and occupational outcomes would be attenuated at higher levels of family connectedness. In addition, given the relative lack of diversity and social opportunities in rural settings, we expected that the interaction between school connectedness and family connectedness would differ across rural and non-rural settings (Hypothesis 4). Specifically, we expected that the vulnerabilities associated with lack of school or family connectedness would be greater in rural settings than non-rural settings, such that rural adolescents with either low school connectedness or low family connectedness would report poorer educational and occupational outcomes compared to their non-rural counterparts with either low school connectedness or low family connectedness. We expected that rural adolescents with low school and family connectedness would report the poorest educational and occupational outcomes.

Method

Data

Data for the present study are drawn from waves 1 and 4 of the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a national, longitudinal sample of individuals beginning in adolescence (grades 7-12). This dataset is particularly useful to the present study given its large sample of individuals from rural schools, allowing for comparison of urban and rural data. Wave 4 contains data spanning into young adulthood (approximately 24-32 years of age; M = 28.9 years, SD = 1.8). Less than one percent of the sample is at either extreme of the age range, and 92% of the sample is age 27 or older. The initial sample for Add Health was drawn from a stratified, random sample of 80 pairs of high schools and their feeder middle schools throughout the United States. The sampling methods ensured that the data would

be nationally representative of the country with respect to ethnic breakdown, size, location, and urbanicity (i.e., rural, suburban, urban). To be eligible for random selection, the schools had to include an 11th grade and at least 30 enrolled students.

The initial sample includes approximately 90,000 students who completed an in-school questionnaire in the 1994-1995 academic year (Wave 1). Special oversamples of certain ethnic groups were collected after the initial sample, including Black students from well-educated families, Chinese, Cubans, and Puerto Ricans. Furthermore, 12,105 students participated in additional in-home interviews. Pertinent data from these sources include information on educational achievement, family dynamics, perceptions of school characteristics, and peer relationships. The sample from Wave 1 has a modal age of 15, is close to 50% female, 60% non-Hispanic White, 18% Black, 16% Hispanic (of any race), 7% Asian, 5% Native American, and 10% other races. The majority of adolescents reported that their parents received at least a high school education. The Add Health dataset also contains responses from school administrators, providing data at the aggregate level for the student body as well as information about the school itself. This data allows for multi-level analysis that takes into account school-level characteristics.

Wave 4 data includes 15,701 respondents from the original sample. The data pertinent to the present study include information regarding participants' ultimate educational attainment and labor market outcomes (income, supervisory roles, number of times ever fired). Because the questions in the present study are longitudinal in nature, the analytic sample for the present study includes only those individuals who provided data at both Waves 1 and 4, were not missing data on weight variables, and who were not missing data on Wave 4 outcomes. The final sample size for analysis was 13,642 individuals in 132 schools.

Measures

Demographic controls. Participants provided data on their biological sex and racial identification. Sex was coded as 0 = male, 1 = female. Participants' race was captured via a series of dummy variables (a value of 1 indicating identification with that racial group) representing African-American, Native American, Asian, Hispanic, and an "Other" variable for other responses. Participants' parents reported their own educational attainment, which was coded on a scale from 1 to 5, with 1 indicating less than a high school education, and 5 indicating a bachelor's degree or higher.

School connectedness. The scale of school connectedness used in this study has been previously validated across multiple ethnic and racial groups (Furlong, O'Brennan, & You, 2011; α range: .82 - .86). Five items comprise the scale, each assessing the adolescent's self-reported agreement (range of values from 1 = *strongly disagree* to 5 = *strongly agree*) to the following five statements: 1 – "I feel close to people at this school." 2 – "I am happy to be at this school." 3 – "I feel like I am a part of this school." 4 – "The teachers at this school treat students fairly." 5 – "I feel safe in my school." Scores across each item were averaged to produce the mean school connectedness score. Reliability for the scale in the present study was .76.

Family connectedness. Feelings of connection to the family of origin are assessed using 6 self-report items rated on a Likert-type scale (e.g., "How much do you feel people in your family understand you?"; 1 = *not at all* to 5 = *very much*). The items tap the adolescents' perceptions of connection to both parents, their sense that the family as a whole understands them, and their desire to leave home (reverse coded). Scores were averaged across all items to generate a mean score for each individual. Cronbach's alpha for the scale in the present study was .72.

Achievement variables. Participants' educational and employment data were collected during Wave 4 of the Add Health study. Participants were approximately 24-32 years of age during this time (*M* = 28 years). Participants reported on their highest educational attainment, with possible response values ranging from 1 (*8th grade or less*) to 11 (*completed a doctoral degree*). At Wave 4, approximately 30% of participants had completed a bachelor's degree or higher. The education variable was recoded on a 6 point scale, with the highest score reflecting the completion a bachelor's degree or higher and the lowest score representing less than a high school education. Labor market performance was captured by participants' reports of current income and how many times they had been fired during their careers. A log transformation was performed to account for the positive skew in self-reported income. In addition, participants provided data on whether they had held supervisory roles (0 = no supervisory roles in current job, 1 = supervise other employees, 2 = supervise employees who supervise others).

School-level variables. School-level variables were treated as controls and were reported by the school administrator during Wave 1 of the study. This study drew upon the administrator's report of school size and whether the school was public or private. Consistent with prior research (Feldman & Matjasko, 2007, Wilkinson & Pearson, 2015), the urbanicity of the school was constructed by the Add Health researchers drawing upon data from the National Center for Education Statistics (NCES). Possible labels include rural, suburban, and urban. The NCES defines the following categories for urbanicity for pre-2000 census data (CITE):

1. A central city of a Consolidated Metropolitan Statistical Area (CMSA) or Metropolitan Statistical Area (MSA) with population of 250,000 or more.
2. Central city of a CMSA or MSA but not designated as a large central city.
3. Place within the CMSA or MSA of a large central city.

4. Place within the CMSA or MSA of a mid-size central city.
5. Place not within a CMSA or MSA but with population of 25,000 or more and defined as urban by the United States Census.
6. Place not within a CMSA or MSA with a population of at least 2,500 but less than 25,000.
7. Place not within a CMSA or MSA and designated as rural by the United States Census (i.e., not in an incorporated city, not in a census-designated place with 2,500 or more people, not in an "urbanized area").
8. Place within a CMSA or MSA designated as rural (NCES, 2015).

In the Add Health dataset, the following values were constructed from the above classifications. Values 1,2 = urban; 3,4,5,6 = suburban; 7,8 = rural.

We note some important considerations to the definition of rural in the Add Health dataset. The U.S. Census designations of rural has been criticized as insufficiently precise compared to the way urban areas are specified (Isserman, 2005). A complex set of criteria, resulting in an area of at least 2,500 people and a population density of at least 500 people per square mile, indicate the use of the term "urban." Rural areas are officially defined as areas that are not urban. Although the Census-based designation of rural generally fits popular conceptions of "rural," the threshold of 2,500 individuals defines some areas as urban that would align with general conceptions of what defines rural (Isserman, 2005). Importantly, some have criticized the use of geography to define any society, given recent trends of migration, globalization, and connections provided via electronic media to the rest of the world (e.g., Urry, 2012). Overall, the use of the Add Health urbanicity variable presents challenges. However, its definition does align well with the present emphasis on low population densities and the shortage of relationship-

building opportunities that arises in communities with low overall population (Bahns, Pickett, & Crandall, 2011).

Analytic Plan

Mplus (Muthén & Muthén, 2010) statistical software was used to analyze the data. To test our hypotheses, we fit a series of multi-group models to the data. Multi-level modeling techniques were used to account for the nested nature of students within schools in the Add Health design. Sampling weights were included in each analysis to adjust parameter estimates for the specific oversampling techniques built into the Add Health design (Chen & Chantala, 2014). In our study, Wave 4 (young adult) achievement variables served as dependent variables in separate two-level models. Each outcome was predicted in the absence of other outcomes. Level one variables included the adolescent's perceptions of school and family connectedness, grade point average, as well as family-of-origin socioeconomic covariates (European-American dummy variable, income, education of parents). The level two variables are interpreted as controls, including school type and school size. The multi-level model predicting young adult educational and labor market outcomes can be mathematically defined as follows:

$$ACHIEVE_{ij} = (\gamma_{00} + \gamma_{01}SC_j + \gamma_{10}IC_{ij}) + (e_{ij} + \varepsilon_{0j} + \varepsilon_{1j}IC_{ij})$$

In this model, *ACHIEVE* represents the relevant educational or labor market variable being modeled for individual *i* in school *j*. The first set of parentheses includes variables that are explicitly modeled. γ_{00} represents the mean of that achievement variable in the sample. γ_{01} and γ_{10} respectively represent the regression coefficients for the main effects of school-level (e.g., urbanicity, size) and individual-level (perceptions of connectedness) variables and covariates on later achievement. The second set of parentheses includes variables representing the unmeasured variance (error terms) in the regression equation.

Results

Main Analyses

Pearson's correlations, means, and standard deviations for all variables are shown in Tables 1-3. The tables are organized by region. The average students felt moderately connected to their schools, reported close to a B average in GPA, and reported strong connection to their families. At Wave 4, average income was $34,090 (SD = 37,018) for those who grew up in urban areas, $35,976 (SD = 42,477) for those who grew up in suburban areas, and $31,750 (SD = 37,248) for those who grew up in rural areas. The modal educational completion was some college (34% of sample). Two-thirds of the sample had never been fired, but 20% had been fired once, with the remainder of the sample reporting being fired twice or more. About two-thirds of the sample did not have supervisory duties, whereas approximately 25% supervised other employees, and 10% reported supervising employees who supervise other employees.

Across all regions, the distributions of study variables were acceptably normal, with mean values generally in the middle of the range of possible values. Skewness of all variables was within a tolerable range, except for income. The observed range of responses for items rated on Likert scales included all possible values for all variables. One notable exception was family connectedness, in which we observed fairly high average values (within 1.5 SD of the scale maximum).

Tables 4-7 present a summary of the regression of each outcome of interest on school and family connectedness. In this and subsequent models, the outcome was regressed upon individual reports of school and family connectedness. Control variables included gender, race, participants' grade point average, and parents' highest level of education as reported at Wave 1. We also controlled for the level two covariate of school size and type (public/private).

The model predicting highest educational attainment by Wave 4 revealed that for rural participants only, perceptions of school connectedness were associated with long-term educational attainment (B = .11, p = .037). Rural students who perceived more connection to their schools tended to attain higher levels of education. For suburban (B = .06, p = .053) and urban (B = .04, p = .27) populations, this association was not significant. Differences in the magnitude of regression coefficients were tested using the method specified by Paternoster, Brame, Mazerolle, and Piquero (1998). In this model, the magnitude of differential effects was not significant across geographic areas. Family connectedness did not significantly predict educational attainment in the rural (B = .05, p = .34), suburban (B = .04, p = .09), or urban (B = .05, p = .28) sample. Of the control variables, gender, GPA, and parental education were consistently related to educational attainment. Females, those with higher GPAs, and those with more educated parents tended to achieve higher levels of education by Wave 4 of data collection.

The next model predicted participants' log transformed self-reported income at Wave 4 of data collection. Across all groups, perceptions of school connectedness were associated with income levels at Wave 4. Specifically, students who felt more connected to their schools during adolescence tended to report earning more yearly income at Wave 4 than those who felt less connected to their schools (B_{rural} = .07, p < .001; $B_{suburban}$ = .07, p < .001, B_{urban} = .07, p < .001). The magnitudes of these effects were not significantly different across geographic areas. Family connectedness predicted income in the rural sample only (B = .09, p = .03). The magnitude of differential effects across geographic areas was not significant in any comparison. Of the control variables, gender, GPA, and parental education were consistently related to Wave 4 income. Males, those with higher GPAs, and those with more educated parents tended to report higher levels of income by Wave 4 of data collection.

The third model predicted participants' self-reported number of times being fired from a job by Wave 4 of data collection. For suburban and rural participants only, perceptions of school connectedness were associated with number of times fired at Wave 4. Specifically, suburban (B = .04, p = .01) and rural (B = .08, p < .001) students who felt more connected to their schools during adolescence tended to report fewer incidences of being fired by Wave 4 than those who felt less connected to their schools. School connectedness was unrelated to times fired in the urban sample (B = .02, p = .28). The magnitude of effects differed significantly between rural and urban (B = .10, SE = .028, p < .001) and between suburban and rural groups (B = .06, SE = .028, p = .03). In addition, for urban participants only, perceptions of greater family connectedness predicted fewer times being fired (B = -.07, p < .001). The magnitude of the urban coefficient differed significantly from the suburban coefficient (B = .06, SE = .028, p = .03). Family connectedness was not a significant predictor in the suburban or rural group. Of the control variables, gender, race, and GPA were consistently related to number of times fired. Males, those with lower GPAs, African-American, and Native American individuals tended to report a higher frequency of getting fired by Wave 4 of data collection.

The final model predicted the supervisory responsibility of participants in their jobs at Wave 4. For rural participants only, adolescents who reported higher levels of school connectedness tended to have greater supervisory responsibilities at work in early adulthood (B_{rural} = .04, p = .028; $B_{suburban}$ = .02, p = .35, B_{urban} = .02, p = .23). The magnitude of differential effects was not significant in any comparison. Family connectedness was associated with supervisory roles in the rural group only (B_{rural} = .04, p = .045). Of the control variables, gender, race, and GPA were related to the degree of supervisory responsibility. Males reported greater supervisory roles across all three geographic areas. Participants who identified as

African-American tended to report fewer supervisory roles in urban and suburban settings. Participants with higher GPAs in adolescence tended to report greater supervisory roles at Wave 4 in urban areas.

To test Hypotheses 2 and 3, an interaction term representing the multiplicative effect of school and family connectedness was added to each of the models above. The interaction term was not significant in 10 out of 12 predictions. It was not significant in predicting highest education, ($B_{suburban}$ = .01, p = .90, B_{urban} = .06, p = .68), income (B_{rural} = .04, p = .25; $B_{suburban}$ = .03, p = .47, B_{urban} = -.02, p = .69), times fired ($B_{suburban}$ = .02, p = .09, B_{urban} = .02, p = .37), or supervisory roles (B_{rural} = .000, p = .99; $B_{suburban}$ = -.003, p = .88, B_{urban} = .01, p = .68). However, two significant interactions emerged. In predicting times fired, there was a significant interaction in the rural group only (B_{rural} = .05, p = .002). Simple slopes analyses revealed that at higher levels of family connectedness, the slope of school connectedness predicting times fired was non-significant (B = -.12, p = .26), whereas at lower levels of family connectedness, the slope was significant (B = -.18, p < .05). In predicting highest education, school and family connection interacted significantly in only the urban group (B_{urban} = -.13, p < .001). Simple slopes analyses revealed that at higher levels of family connectedness, the slope of school connectedness predicting times fired was flatter (B = .43, p < .05), whereas at lower levels of family connectedness, the slope was steeper (B = .59 , p < .001). However, with only two out of 12 tested interactions reaching significance, there is little support for our interactional hypotheses. This suggests that on average, the effects of school connectedness operate independently of the effects of family connectedness, and vice versa. Thus, the main effects models for school and family connectedness were deemed the final models.

Discussion

Adolescents have a developmentally salient need for experiences of autonomy and relatedness to others (Eccles et al., 1993; Ryan & Deci, 2000). The degree to which adolescents' particular environments meet these needs may have long-term developmental implications. The present study is one of the first studies to compare the effects of school and family connectedness across urban, suburban, and rural settings in the United States. We take advantage of several strengths of the Add Health study, including a long-term longitudinal design spanning early adolescence through early adulthood and a large, nationally representative sample with substantial urban, suburban, and rural subsamples. These design features strengthen the novelty of the present study. Many prior studies have been either cross-sectional or have not been able to compare results across differing urbanicities.

Consistent with the first hypothesis, school connectedness during adolescence consistently predicted young adult indicators of educational and occupational adjustment. For rural adolescents, feelings of school connectedness were associated with all four young adulthood indicators of educational and occupational adjustment. Greater school connectedness was associated with greater educational attainment, earnings, and supervisory roles, and fewer times being fired among rural youth. Family connection predicted fewer fired among urban youth, and greater income and supervisory roles among rural youth. These associations are based on relatively conservative analyses that predicted educational and occupational outcomes across approximately 13 years and controlled for gender, race, GPA, and parents' education. The pattern of associations across outcome models was somewhat less consistent among suburban adolescents and much less consistent among urban adolescents, for whom school connectedness only predicted Wave 4 income. However, an important caveat is that when comparing the magnitude of differential effects across the models, the majority of coefficients of school and

family connection were not significantly different from one another. Nonetheless, the consistent pattern of results across the four outcome models in the present investigation points toward the longitudinal importance of school connectedness in rural areas. Although family connection did relate to two outcomes for rural youth, it may be more appropriate to think of it as an antecedent rather than a covariate of school connectedness. Additional hypotheses were not supported, as school and family connectedness interaction terms were mostly nonsignificant.

Rural Youth and Social Connectedness

School connectedness and educational attainment. School connectedness is a reliable predictor of adolescent emotional adjustment (Loukas & Pasch, 2013; Shochet et al., 2008) and academic achievement (Anderman & Anderman, 1999; Osterman, 2000; Niehaus et al., 2012), even in contexts characterized by negativity (e.g., Borofsky et al., 2013). School connectedness also protects against the ill effects of peer relationship difficulties on academic outcomes (Loukas & Pasch, 2013; Wang et al., 2011). Perceptions of connectedness to school likely support needs for autonomy, competence and relatedness, and thereby foster the intrinsic motivation necessary for optimal academic performance in adolescence (Ryan & Deci, 2000). School connectedness may also indicate connection to teachers or counselors who provide practical assistance in career and / or college preparation. Notably, results of the present study suggest that school connectedness also consistently predicts educational and occupational outcomes in early adulthood among rural individuals.

Stage-environment fit and self-determination theories are useful in interpreting the overall pattern of findings for rural youth. At this developmental period, it is especially important for young people to develop new social connections beyond the nuclear family (Eccles et al., 1993; Juvonen et al., 2012). Urban and suburban youth benefit from communities with higher

concentrations of organizations dedicated to youth development beyond the school, such as mentoring, after school programs, and volunteer opportunities (McCracken & Barcinas, 1991). Even though rural areas may offer some of these same opportunities, rural adolescents are likely to encounter their parents or adult relatives as the leaders of extra-curricular activities outside of school (e.g., community or religious programs; Chan & Elder, 2001; Elder & Conger, 2000). Thus, for rural youth to build non-family connections, school may be the only available venue to pursue this salient developmental task.

The consistent link between school connectedness and educational attainment among rural youth is noteworthy in the context of a historical trend toward out-migration of educated individuals from rural areas (Carr & Kefalas, 2009; Domina, 2006). Prior research has found that rural youth experience conflicting desires with respect to leaving their communities of origin. This is understandable, given the relative lack of economic opportunities in rural areas as compared to urban areas (Lichter & Johnson, 2007). Rural youth recognize the importance of leaving for educational and economic opportunity. However, rural youth also tend to place a high importance on maintaining social ties in their communities of origin, and may lower their educational and occupational aspirations in order to maintain these ties (Hektner, 1995; Howley, 2006). Results of the present study appear to contradict these findings. Rather than predicting lower achievement, connection to school (a measure of social ties) was associated with higher educational attainment and greater occupational success in young adulthood for rural youth. It is possible that the benefits associated with having social ties in the form of school connectedness operate independently of any adjustments to career and future aspirations.

Although Hektner (1995) and Howley (2006) assert that having strong social ties in rural areas may result in fewer individuals seeking higher education, school connectedness may also

be part of a developmental sequence that promotes later achievement. Qualitative findings from Shamah and MacTavish (2015) shed light on how this sequence may evolve. Shamah and MacTavish found that when rural adolescents felt more socially connected with their immediate surroundings, they tended to report feeling a greater sense of future orientation and purpose. Quantitative research – albeit on non-rural populations – also supports the notion that social connectedness promotes future orientation (Crespo, Jose, Kielpikowski, & Pryor, 2013; Pinquart, Juang, & Silbereisen, 2003). In turn, future aspirations predict adulthood educational and occupational attainments, even when aspirations are measured during adolescence (Ashby & Schoon, 2010; 2012). In the academic domain specifically, studies suggest that youths who are able to consider academic success as a possibility are more likely to pursue higher education (Hubbard, 1999; Oyserman, Bybee, & Terry, 2006). In sum, school connectedness may promote adolescents' future orientation, which in turn motivates the actions required to realize their academic and occupational aspirations.

Results of the present study also align with Harris' (1995) group socialization theory, which emphasizes the importance of peer group experiences at school for outcomes in adulthood. Starting in adolescence and continuing into adulthood, the social world becomes peer-focused. School connectedness may more consistently predict young adulthood success than does family connectedness because school more accurately reflects the social world of most students' futures – one that is peer-focused. Although it is possible that positive peer experiences at school prepare adolescents for educational and occupational success in early adulthood, another possibility is that adolescents who perceive themselves as very connected to their schools have a long history of social competence that drives both their perception of school connectedness and ultimate educational and occupational success. In essence, genetic predispositions or developmental

processes beginning in childhood may substantially account for adolescent reports of social functioning, including school connectedness and achievement outcomes (Laird, Jordan, Dodge, Pettit, & Bates, 2001). However, prior research has shown that although school connectedness and social competence are related, they are not identical, and thus school connectedness may independently predict educational and occupational outcomes. A related possibility is that school connectedness mediates the effects of social competence on later adjustment (Ross, Shochet, & Bellair, 2010). The role of social competence was not addressed due to the lack of childhood indicators of social competence in the present study, but considering the role of social competence along with school connectedness is an important direction for future research.

Social determinants of long-term economic outcomes. The study of social or relational predictors of long term economic attainments is lacking among rural youth. However, in terms of occupation-related outcomes, our findings align well with research findings that social connection from pre-adolescence through adolescence predicts earnings and occupational prestige in adulthood (Galeotti & Mueller, 2005; Zettergren, Bergman, & Wångby, 2006). Our study showed that there was a significant link between school connectedness and young adults' self-reported income. Prior research has also shown that higher levels of school connectedness predict fewer emotional difficulties and more prosocial behavior during adolescence (Diaz, 2005; Oldfield et al., 2015). The present finding that greater school connectedness is associated with a greater degree of supervisory responsibility suggests that the behavioral benefits of greater school connectedness during adolescence may persist through adulthood into individual's occupational lives. Part of this benefit may arise from the opportunity to develop perspective-taking and empathy that is primarily a feature of peer relationships given their more egalitarian dynamic (Laible, Carlo, & Roesch, 2004). In addition, socio-emotional adjustment problems

during adolescence have been linked to long-term occupational difficulties such as unemployment (Kokko & Pulkkinen, 2000). Our finding that school connectedness is inversely related to the number of times fired by young adulthood among rural youth supports these findings.

Overall, results align well with research that has not been specifically tied to rural populations. However, the mechanisms underlying the links between school connectedness and occupational outcomes might differ between rural and non-rural areas. For example, given its social importance in rural areas, school connectedness may indicate that adolescents are well integrated into their community. Rural adolescents who report that they share values with the community-at-large tend to report outcomes more conducive to achievement (Elder & Conger, 2000). Therefore, if school connectedness facilitates or indicates integration into the wider community, the connections and information about future employment opportunities that result from being well-connected (i.e., "strength of weak ties;" Granovetter, 1973) would predict more occupational success later in life. Future research would have to include a measure of residential mobility to confirm this explanation; it is most valid for those adolescents who report high school connectedness and remain in or return to their communities of origin to begin a career.

The potential mediating role of identity. Individuals' identity development may be a mediator of the effects of school connectedness on later educational and occupational outcomes. Stage environment fit theory would suggest that given the importance of identity development in adolescence (Erikson, 1968), the optimal environment supports the identity exploration process. Identity development is a social process (Berzonsky, 1990; Stets & Burke, 2000); therefore, it is likely influenced by social experiences and perceptions, such as school connectedness. To the extent that adolescents feel safe and connected within salient social contexts such as their

schools, they may be more willing to explore their identity. As a result, adolescents may participate in activities that are pertinent to the identities they see for themselves in the future (Beal & Crockett, 2010). In addition, a more well-connected adolescent likely has more significant others with whom to discuss aspects of the future such as educational and occupational plans. The potential for these social interactions to promote educational and occupational outcomes is likely highest in an environment to which individuals perceive a strong connection.

Non-Rural Youth and School Connectedness

Results from suburban youth displayed a similar pattern, though less consistent, to rural youth. The pattern suggests that some suburban schools may be just as prominent in their communities as are rural schools. This may be especially true if the suburban community is at the fringes of a metropolitan area. These suburban fringe schools may be officially categorized as suburban. However, they may be just as socially prominent as rural schools because of their communities' relative distance from urban centers. Thus, suburban students' reports of school connectedness would reflect social integration, just as it may in rural areas. In our study, school connectedness predicted income, number of times being fired, and supervisory roles. School connectedness likely operates in ways similar to those previously outlined (e.g., via links with behavioral and emotional adjustment; Kokko & Pulkkinen, 2000; Laible et al., 2004).

Although school connectedness predicted economic outcomes in the suburban population, it was not associated with educational attainment. It is likely that other predictors are more important in suburban areas in the prediction of educational attainment. Suburban areas often contain families that have higher income and more educated parents than rural families (Roscigno, Tomaskovic-Devey, & Crowley, 2006). Coming from a lower SES background is

likely to inhibit educational aspirations and expectations (Hubbard, 1999; Stewart, Stewart, & Simons, 2007). Therefore, in rural and lower-SES areas, school connectedness may be especially important as a means of overcoming other disadvantages. In contrast, suburban adolescents already enjoy strong advantages provided by their families of origin; these advantages overshadow the role of school connectedness in suburban and higher SES areas.

The less consistent links between school and family connectedness in adolescence and young adult achievements in urban samples may reflect the general difference in the availability of spaces that are important to the social lives of teenagers. In rural areas, the school is a central location for many community and social events (Parker, 2001). In contrast, urban students, rather than spending extra time with peers at school, have access to other public spaces such as shopping malls, parks, and other recreational facilities. These spaces serve as the prime locations for time spent developing one's peer social network (Malone, 2002; O'Keeffe & Kerr, 2015; Vanderstede, 2011). Thus, feeling connected in the school setting may capture less of the social life of a non-rural adolescent than it does for a rural adolescent. In addition, non-rural areas are likely to have more initiatives available for youth to find support in their educational and occupational pursuits (e.g., Ward, Strambler, & Linke, 2013). Thus, the main effects of connection to school would be diminished in these areas. Instead, other factors such as social connections outside of school as well as educational expectations, enrollment in specialized magnet high schools, and criminal record may be more predictive of young adulthood achievements in non-rural areas (Ou & Reynolds, 2008).

Family Connectedness

Contrary to expectations, family connectedness was not a consistent predictor of young adult outcomes in any context, beyond the effect of school connectedness. There were three

significant links uncovered between family connectedness and Wave 4 outcomes. Urban youth who felt more connected to their families reported fewer times being fired in young adulthood, and rural youth who felt more connected to their families had higher income and more supervisory roles by Wave 4. It is difficult to draw definitive conclusions from this pattern of results.

The lack of a discernible pattern may be attributable to the general decline in adolescents' time spent with the family as a whole (Allen, 2008; Larson & Richards, 1991). Findings align with some, but not all prior research. Our findings align with other studies showing that non-family relationship variables more strongly predict socioemotional and educational adjustment in young adulthood than measures of parent-adolescent relationship (Phinney, Dennis, & Chuateco, 2005; Laible, 2007; Laible, Carlo, & Raffaelli, 2000; Phinney & Haas, 2003). For example, Dennis and colleagues found that a lack of peer support, but not family, support, was linked to several indices of adjustment among college students. This may be due to the role of the peer group in the formation of adolescents' educational expectations (Kiuru, Aunola, Vuori, & Nurmi, 2007). Furthermore, parent-child relationships tend to be at their lowest quality in the lifespan during adolescence (Furman & Buhrmester, 1992). The tendency for these relationships to be strained during adolescence may limit their predictive power in the long-term. Our findings do not align with other studies showing that parents and peers have significant and independent contributions to adolescent and young adult adjustment (e.g., Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Gonzales, Cauce, Friedman, & Mason, 1996; Vitoroulis, Schneider, Vasquez, del Pilar Soteras de Toro, & Gonzales, 2012; Wood, Read, Mitchell, & Brand, 2004). It is noteworthy that at the bivariate level, family connection is correlated with three out of the four outcomes. It is possible that the measure of family connectedness used in the

present study simply failed to capture the most salient or full range of dimensions of family connectedness or acceptance. A measure that taps into the sense of belonging in the family as a whole (i.e., treating the family unit as a singular context) rather than emotional connections with individual family members may be more useful in future studies. Future research with better measurement of family connectedness is necessary before strong conclusions can be drawn. Similarly, more depth in measurement of school connectedness is also an important direction for future research.

School and Family Connectedness Interaction

School connectedness and family connectedness were moderately correlated (across all areas, r = .32), which suggests that families and schools are related but distinct sources of connectedness in adolescence. Despite the possibility of different levels of school and family connectedness implied by the moderate correlation, we found limited support for an interactive effect of school and family connectedness. The overall lack of significant interactions suggests that each form of connection is meaningful regardless of the level of connection experienced in the other domain. Prior research has suggested interactive effects of school and family connectedness (e.g., Barber & Olsen, 1997; Loukas et al., 2010), such that school connectedness compensates for a lack of family connectedness, and vice versa. However, the present pattern of findings suggests that students may benefit from the experience of school connectedness regardless of their family background. This is heartening for practitioners, as it suggests that in many situations, the effects of interventions that target school connectedness are not likely contingent on levels of family connectedness.

Participant and Family Background

The main analyses of the present study controlled for gender, race, GPA, and parental education. Race was not a consistent predictor of outcomes, though it did predict supervisory responsibilities for all groups; White individuals tended to have more supervisory responsibilities than non-White individuals. Although not the focus of the study, it is important to note that gender was one of the most powerful predictors of educational and occupational achievement in young adulthood. Females tended to be better educated, yet reported lower income and supervisory responsibility. Furthermore, the bivariate association between income and sex appears to be stronger in rural areas than in non-rural areas. This assumption would require further testing. However, some prior research on economic activity in rural areas has suggested a stronger gender gap in rural areas as compared to urban areas (e.g., Bird & Sapp, 2004). Participants' own GPA was also a notably consistent predictor of outcomes at Wave 4. Race and parental education did appear to have some influence on Wave 4 outcomes, though not quite as consistently. Taken together, analyses suggest that the influence of demographic factors on achievement is strong.

Limitations

We acknowledge several limitations within the present study. First, although this study includes separate time points for predictor and outcome variables, controlling for earlier levels of the outcomes was not possible, and thus the design is ultimately correlational in nature. In addition, the relations between school connectedness and long-term outcomes are modest. Thus, we cannot substantiate causal interpretations of the results. We cannot know definitively whether the effect of school connectedness operates differently across urbanicities, because an experiment involving controlled manipulation of school connectedness across urban, suburban, and rural samples would have to be conducted is not possible. There has also been an implicit

assumption in our study of a linear educational trajectory. It is likely that, especially given recent periods of economic recession in the United States, some individuals proceed along an educational path that is not entirely linear. For example, studies have shown that during recent economic recessions, educational attainment tends to be higher, perhaps because the cost of staying in or returning to school outweighs the cost of unemployment (Bedard & Herman, 2008; Kahn, 2010).

Second, although the outcome measures were relatively objective (e.g., highest education, income), all of the measures were self-reported and comprised of few items. Additional informants as well as more intensive measurements of social and family connectedness would allow stronger tests of hypotheses. For example, assessing the reasons why individuals feel rejected at school or at home is important to understand. Moreover, it is important to understand what individuals tend to label as the barriers to integration with their communities. It would also be helpful to assess what makes it difficult to connect with others in marginalized adolescents' homes / schools / communities.

Third, significance testing within each individual model revealed few significantly different magnitudes of effects for school and family connectedness across regions. Thus, we cannot conclusively suggest that prediction of any individual outcome differs across urban, suburban, and rural areas. Finally, our results represent the aggregated estimates of effects across many different rural communities. Thus, results may not reflect the specifics of every rural community in the United States. Some rural communities are experiencing significant demographic shifts, resulting in a more diverse racial / ethnic breakdown (Lichter & Brown, 2011). Our results may not be generalizable to these areas of the country.

Conclusions and Future Directions

Despite the study's limitations, the overall pattern of results is meaningful. Although we must be cautious given the modest magnitude of individual findings, the overall pattern of results points toward the importance of school connectedness for rural youth. Our study is unique in its simultaneous inclusion of both rural and non-rural samples – a significant contribution to the school connectedness literature. In addition, our modeling techniques were conservative, including several control variables that may have partially accounted for the links between our measures of social connection and achievement. Taken together, our findings suggest that practitioners who seek to intervene with rural adolescents should be cognizant of the importance of the school connectedness within these communities as they develop interventions. Improvements to the rural youths' perceptions of connectedness to their schools may have long term benefits in terms of educational and occupational achievements. Future longitudinal research on rural students with several time points of data assessing the effects of increases in school connectedness is warranted. It may also be important to conduct qualitative research investigating the factors of rural life to which adults attribute their accomplishments. This knowledge may be useful in hypothesizing mediators of the influence of school connectedness in rural areas.

For example, future research could involve the attention to the intersection of place and gender. It is well established that gender is a prominent factor in career development processes, with women experiencing unique barriers to career advancement (Morrison, White, & Van Velsor, 1987; Ryan, Haslam, & Postmes, 2007). Our bivariate results showed that the gender – income correlation coefficient in rural areas was almost twice as large than in urban areas. Essentially, gender was correlated more strongly in rural than in urban areas at the bivariate level of analysis. Prior research has established that the gender gap exists across both urban and rural

areas (Bird & Sapp, 2004). However, the mechanisms underlying this gap may differ depending on the cultural context. In the present study, we have called attention to cultural differences; specifically, we highlighted the individualist-collectivist contrast across urban and rural areas (Elder & Conger, 2000, Gore et al., 2011). Similar distinctions have been made comparing Western females and males (Kasulis, 2000; Seem & Clark, 2006). Therefore, the combined influence of gender norms and regional-cultural norms may expose rural females to socialization processes that intensely foreground deference to group norms and identity. Future studies including both urban and rural populations could directly compare the values held by men and women in these areas, specifically as related to occupational development. One relevant question may be whether collectivism moderates the relationship between gender and economic achievement among rural and urban women. Multi-level analyses that account for between-community variation in collectivist attitudes would add nuance to results of future studies.

As a whole, our results highlight that the identification of positive youth development processes in non-rural areas may require additional testing that directly compares rural and non-rural areas and the inclusion of more intensive assessments of the constructs we have used in the present study. Our results, though provisional, highlight distinct patterns among rural and non-rural individuals in the association of school connectedness and educational and occupational development. Currently, we have only speculated about possible explanations for the links between adolescents' school connectedness and young adult outcomes. Patterns uncovered in the present study provide promising avenues for future study.

Table 1

Unweighted Correlations, Means, and Standard Deviations for Variables: Urban Sample

URBAN	1	2	3	4	5	6	7	8	9	10
1. Sex	1									
2. Hispanic	-.03	1								
3. AA	.05	-.30***	1							
4. Native	.02	.04	-.01	1						
5. Asian	-.03	-.14***	-.11***	-.02	1					
6. Other	-02	.56***	-.20***	-.05	-.09***	1				
7. GPA	.14***	.17***	.12***	.04	.13***	-.06***	1			
8. Parent Ed	.03	-.37***	.10***	-.02	.06***	-.22***	.24***	1		
9. Family Conn.	-.10***	.01	-.04	-.03	-.02	-.01	.15***	.01	1	
10. School Conn.	.01	-.01	-.05	-.01	.03	.01	.22***	.04	.31***	1
11. W4 Education	.13***	-.17***	.01	-.05	.14***	-.10***	.46***	.38***	.08***	.14***
12. W4 Income	-.14***	.02	-.07***	-.02	.06***	-.01	.11***	.08***	.03	.06***
13. W4 Times Fired	-.11***	-.01	.09***	.07***	-.03	-.01	-.14***	-.04	-.06***	-.05***
14. W4 Supervisor	-.11***	-.01	-.04	-.01	.02	-.01	.04	.02	-.01	.03
Mean	.51	.25	.18	.04	.03	.14	2.8	2.6	4.3	2.7
Standard Deviation	.54	.47	.42	.21	.18	.38	.84	1.3	.66	.81

Note: *** $p < .001$; Parent Ed = Parent's highest level of education; W4 Education = Participant's highest educational attainment by Wave 4; Due to the large sample size, only correlations significant at $p < .001$ are starred. The sex variable is coded 0=male, 1=female.

Table 1, continued

Unweighted Correlations, Means, and Standard Deviations for Variables: Urban Sample

URBAN	11	12	13	14
11. W4 Education	1			
12. W4 Income	.19***	1		
13. W4 Times Fired	-.20***	-.09***	1	
14. W4 Supervisor	.01	.14***	-.05	1
Mean	3.8	34090	.46	.49
Standard Deviation	1.6	37018	.93	.75

Table 2

Unweighted Correlations, Means, and Standard Deviations for Variables: Suburban Sample

SUBURBAN	1	2	3	4	5	6	7	8	9	10
1. Sex	1									
2. Hispanic	-.01	1								
3. AA	.04	-.17***	1							
4. Native	.01	.06***	.04	1						
5. Asian	-.02	-.06***	-.16***	-.03	1					
6. Other	-.01	.63***	-.12***	-.01	-.07***	1				
7. GPA	.14***	-.12***	-.11***	-.04	.06***	-.09***	1			
8. Parent Ed	-.04	-.23***	.01	-.02	.09***	-.17***	.23***	1		
9. Family Conn.	-.11***	-.01	-.02	-.01	-.02	-.01	.14***	.02	1	
10. School Conn.	.03	-.02	-.05***	-.03	.01	-.04	.23***	.06***	.31***	1
11. W4 Education	.13***	-.09***	-.04***	-.03	.06***	-.07***	.48***	.38***	.07***	.13***
12. W4 Income	-.12***	.01	-.05***	-.02	.06***	-.01	.11***	.08***	.03	.05***
13. W4 Times Fired	-.15***	-.03	.10***	.02	-.05***	-.01	-.17***	-.05***	-.03	-.07***
14. W4 Supervisor	-.08***	-.02	-.05***	.01	.03	-.01	.05***	.03	.04	.05***
Mean	.50	.06	.13	.02	.04	.04	2.9	2.8	4.3	2.7
Standard Deviation	.47	.23	.31	.15	.18	.19	.73	1.1	.57	.70

Note: *** $p < .001$; Parent Ed = Parent's highest level of education; W4 Education = Participant's highest educational attainment by Wave 4; Due to the large sample size, only correlations significant at $p < .001$ are starred. Sex variable is coded 0=male, 1=female. Races are coded 0=not identified, 1= identified.

Table 2, continued

Unweighted Correlations, Means, and Standard Deviations for Variables: Urban Sample

SUBURBAN	11	12	13	14
11. W4 Education	1			
12. W4 Income	.16***	1		
13. W4 Times Fired	-.20***	-.08***	1	
14. W4 Supervisor	.02	.12***	-.07***	1
Mean	3.9	35976	.47	.49
Standard Deviation	1.4	42477	.87	.64

Table 3

Unweighted Correlations, Means, and Standard Deviations for Variables: Rural Sample

RURAL	1	2	3	4	5	6	7	8	9	10
1. Sex	1									
2. Hispanic	.02	1								
3. AA	.05	-.05	1							
4. Native	-.01	.13***	-.06	1						
5. Asian	.01	.03	-.02	-.02	1					
6. Other	-.02	.47***	-.04	.04	-.01	1				
7. GPA	.14***	-.01	-.03	-.05	.06	.01	1			
8. Parent Ed	-.06	-.09***	-.09***	-.01	.02	-.05	.18***	1		
9. Family Conn.	-.10***	-.11***	.07	-.06	-.02	-.10***	.15***	.02	1	
10. School Conn.	-.05	-.06	-.01	-.07	.01	-.04	.25***	.02	.33***	1
11. W4 Education	.11***	.-03	-.03	-.09***	.06	-.04	.45***	.36***	.08***	.14***
12. W4 Income	-.21***	-.01	-.06	-.03	.01	-.01	.08***	.13***	.07***	.08***
13. W4 Times Fired	-.17***	.01	.04	.07***	-.03	.01	-.15***	-.05	-.07***	-.11***
14. W4 Supervisor	-.15***	.03	-.01	.02	.01	.03	.01	.03	.06	.03
Mean	.50	.02	.11	.04	.01	.01	2.8	2.5	4.3	2.8
Standard Deviation	.52	.16	.32	.20	.07	.11	.78	1.1	.63	.79

Note: *** $p < .001$; Parent Ed = Parent's highest level of education; W4 Education = Participant's highest educational attainment by Wave 4; Due to the large sample size, only correlations significant at $p < .001$ are starred. The sex variable is coded 0=male, 1=female. Races are coded 0=not identified, 1= identified.

Table 3, continued

Unweighted Correlations, Means, and Standard Deviations for Variables: Urban Sample

RURAL	11	12	13	14
11. W4 Education	1			
12. W4 Income	.13***	1		
13. W4 Times Fired	-.18***	-.06	1	
14. W4 Supervisor	.03	.15***	-.05	1
Mean	3.6	31750	.51	.48
Standard Deviation	1.5	37248	1.0	.69

Table 4

Regression Results: Predicting Highest Educational Attainment (HIED) by Wave 4

DV: HIED	Urban			Suburban			Rural		
	B	S.E.	β	B	S.E.	β	B	S.E.	β
Sex	.26***	.05	.09	.24***	.03	.08	.24**	.08	.08
Hispanic	-.20**	.07	-.06	-.05	.06	-.01	.28	.19	.03
Black	.05	.08	.01	.06	.07	.01	.22*	.10	.05
Native	-.13	.15	-.02	-.05	.09	.01	-.37***	.11	-.05
Asian	.20	.11	.02	-.02	.05	.00	.49	.29	.02
Other	.01	.07	.00	-.05	.08	-.01	-.54	.31	-.04
GPA	.71***	.05	.38	.73***	.03	.39	.77***	.05	.40
Parent Ed	.23***	.03	.19	.30***	.03	.24	.36***	.04	.26
School Conn.	.04	.04	.02	.06	.03	.03	.11*	.05	.06
Family Conn.	.05	.05	.02	.04	.03	.02	.05	.05	.02
School Size	.25*	.10	.13	.17**	.07	.08	.24**	.08	.15
School Type	.67**	.22	.02	.61***	.15	.09	.24**	.08	.03

Note: * $p < .05$; *** $p < .001$; Parent Ed = Parent's highest level of education; First block of predictors are level 1 (within); Second block of predictors are level 2 (between-person); Level-1 *N*= 13,642; Level-2 N = 132

Table 5

Regression Results: Predicting Logged Income at Wave 4

DV: INC	Urban			Suburban			Rural		
	B	S.E.	β	B	S.E.	β	B	S.E.	β
Sex	-.44***	.06	-.18	-.48***	.05	-.22	-.72***	.06	-.29
Hispanic	.03	.10	.01	.08	.05	.02	-.39	.48	-.05
Black	-.13*	.07	-.04	-.05	.07	-.01	.03	.12	.01
Native	.22**	.09	.04	-.03	.12	.00	-.44***	.11	-.07
Asian	-.04	.15	-.01	.03	.05	.01	-.59*	.30	-.03
Other	-.05	.09	-.01	-.18**	.05	-.03	-.35	.31	-.03
GPA	.16**	.05	.10	.22***	.03	.15	.22***	.04	.14
Parent Ed	.07**	.02	.07	.01	.02	.01	.11***	.02	.09
School Conn.	.07***	.02	.04	.07***	.02	.05	.07***	.02	.04
Family Conn.	.02	.07	.01	.02	.02	.01	.09*	.04	.04
School Size	.19**	.07	.13	.17***	.04	.09	.12	.07	.09
School Type	.37**	.15	.11	.31***	.08	.07	-.31**	.09	-.04

Note: * $p < .05$; *** $p < .001$; Parent Ed = Parent's highest level of education; First block of predictors are level 1 (within); Second block of predictors are level 2 (between-person); Level-1 *N*= 13,642; Level-2 N = 132

Table 6

Regression Results: Predicting Number of Times Fired by Wave 4

DV: FIRED	Urban			Suburban			Rural		
	B	S.E.	β	B	S.E.	β	B	S.E.	β
Sex	-.13***	.02	-.07	-.15***	.02	-.06	-.19***	.05	-.10
Hispanic	-.03	.03	-.01	-.08**	.03	-.02	-.14*	.07	-.02
Black	.11***	.02	.04	.14***	.02	.04	.13*	.06	.04
Native	.14*	.07	.03	.04	.05	.01	.13**	.04	.03
Asian	-.07	.05	-.01	-.02	.04	.00	-.02	.13	.00
Other	.03	.03	.01	.07**	.03	.01	.21	.12	.02
GPA	.07**	.02	.06	.11***	.01	.07	-.07***	.02	.06
Parent Ed	-.02	.01	-.02	-.02*	-.01	-.02	-.01	.01	-.01
School Conn.	.02	.02	.02	-.04*	.02	-.02	-.08***	.02	-.07
Family Conn.	-.07***	.02	-.04	-.01	.02	-.01	-.05	.03	-.03
School Size	-.02	.02	-.04	-.04	.02	-.05	-.03	.03	-.04
School Type	-.13**	.05	-.08	-.05	.03	-.02	-.02	-.04	-.00

Note: * $p < .05$; *** $p < .001$; Parent Ed = Parent's highest level of education; First block of predictors are level 1 (within); Second block of predictors are level 2 (between-person); Level-1 *N*= 13,642; Level-2 N = 132

Table 7

Regression Results: Predicting Degree of Supervisory Responsibility by Wave 4

DV: Supervisor	Urban			Suburban			Rural		
	B	S.E.	β	B	S.E.	β	B	S.E.	β
Sex	-.17***	.02	-.07	-.13***	.01	-.04	-.20***	.03	-.07
Hispanic	-.01	.05	.00	-.02	.03	.00	.08	.06	.01
Black	-.07*	.03	-.02	-.08**	.02	-.02	.09	.06	.02
Native	-.01	.08	.00	-.01	.06	.00	.17	.09	.02
Asian	-.06	.07	-.01	.02	.02	.00	-.04	.21	.00
Other	-.08	.05	-.02	.01	.04	.00	.06	.13	.00
GPA	.05*	.02	.03	.04**	.01	.02	-.01	.01	-.01
Parent Ed	-.02	.01	-.02	.00	.01	.00	.02	.01	.01
School Conn.	.02	.02	.01	.02	.02	.01	.04*	.02	.02
Family Conn.	.01	.02	.01	.03	.01	.01	.04*	.02	.02
School Size	-.02	.02	-.02	.04*	.02	.04	.05*	.02	.05
School Type	-.01	.05	-.01	.07	.06	.03	.00	.03	.00

Note: * $p < .05$; ** $p < .01$; *** $p < .001$; Parent Ed = Parent's highest level of education; First block of predictors are level 1 (within); Second block of predictors are level 2 (between-person); Level-1 *N*= 13,642; Level-2 N = 132

III. Paper 2: Marginalized Rural Youth: An Agenda for Intervention and Research

Abstract

Adolescents frequently define themselves by their membership in peer crowds. These crowds are stratified, with some crowds having higher status than others. The community context plays a role in granting status to certain crowds. For example, the collectivist ideology of many rural communities may constrict the acceptability of membership in non-mainstream crowds. Adolescents who do not identify with mainstream crowds may face significant difficulty in finding an optimal social niche. Lacking this fit may contribute to deficits in development (e.g., failure to sufficiently explore identity), and deserves attention by both researchers and practitioners. Based on its well-established merit in addressing issues of racial and interreligious prejudice, we highlight ICT as a promising model to address the exclusion of marginalized rural youth. Further, we contend that the use of ICT-based interventions may actually promote positive developmental assets among marginalized rural youth. This is an important shift in the literature, as ICT has typically been studied only in the context of deficit reduction (i.e., the reduction of prejudice). The result is a theoretically and empirically-informed conceptual model that can be used by researchers as a guide to understand the positive developmental processes for youth in rural areas and by practitioners as a guide to implement interventions that address problematic social divisions in rural schools.

Marginalized Rural Youth: An Agenda for Intervention and Research

Navigating the social hierarchies of school and community can be a daunting task for many adolescents. Adolescents' social contexts are often stratified, with some members occupying high status positions and others pushed to the margins. Marginalization can be a product of a variety of characteristics, including minority racial / ethnic status, unconventional interests (e.g., in clothing style, music, or art) or LGBT identification (Brown & Larson, 2009; Russell & Joyner, 2001). Peers tend to perceive marginalized youth as deviant and socially disconnected (LaFontana & Cillessen, 2002). Marginalized individuals often suffer psychologically and interpersonally from peer rejection, victimization, and mental health difficulties (Hatzichristou & Hopf, 1996; Parkhurst & Hopmeyer, 1998; Woodhouse, Dykas, & Cassidy, 2012; Zimmer-Gembeck, Trevaskis, Nesdale, & Downey, 2014).

The challenges associated with a stratified social structure may be amplified in rural settings where youth experience greater pressure to conform to or identify with a community-sanctioned lifestyle (Elder & Conger, 2000; Oswald & Culton, 2003). Research on urban and suburban populations suggests that the division associated with social stratification can be addressed by applying interventions based upon the tenets of intergroup contact theory (ICT; Allport, 1954; Pettigrew, 1998). The present paper extends prior research by directing scholarly attention to the application of ICT in rural areas.

We address three primary aims in this integrative review. First, through a review of relevant literature on peer crowds and rural social climate, we identify marginalized rural youth as a population facing unique challenges to normal psychosocial development. Specifically, we highlight how the stratification of peer crowds and subsequent barriers to free social interaction threatens normal psychosocial development for those at the margins, particularly in rural areas

with fewer social niches available. Second, we discuss the nuances of satisfying the initial conditions of ICT, addressing both challenges to and opportunities for its successful application in a rural community. Finally, we integrate and extend prior work by contending that previously identified outcomes of contact interventions may promote healthy psychosocial development among marginalized rural youth. This represents a shift from deficit reduction (i.e., reducing prejudice) toward the cultivation of developmental assets (Benson, 2003) that promote healthy psychosocial development. The result is a theoretically and empirically-informed conceptual model that can be used by researchers as a guide to understand the processes that lead to experiences of inclusivity for youth in rural areas and by practitioners as a guide to implement interventions to address problematic social divisions in rural areas.

Stratification within Adolescents' Educational Contexts

Given the developmental significance of school engagement and performance, as well as the amount of time that most adolescents spend at school, examining the ways in which the school environment is stratified has been an important focus of prior research. Multiple frameworks are applicable to the study of social hierarchies at school. Although not the main focus of this review, it is important to acknowledge prior work identifying ethnicity as a prominent factor in adolescent experiences of social divisions at school.

Social stratification by ethnicity is a common occurrence in diverse schools (Greene, Way, & Pahl, 2006). Transitioning to a high school in which one is part of an ethnic minority is associated with lower levels of school belonging (Benner & Graham, 2007). Furthermore, variations in the ethnic distribution of the school influence adolescents' experiences, such that in schools with a clear majority group, minority members experience greater acculturation pressure than they would in a school that is ethnically diverse (Nishina, Bellmore, Witkow, & Nylund-

Gibson, 2010). These studies show that the unique ethnic breakdown of each school contributes to differing experiences of power and acculturation pressure. Furthermore, greater acculturation pressure increases risk for negative health outcomes, including symptoms of depression (Torres, 2010) and high blood pressure (Steffen, Smith, Larson, & Butler, 2006). These findings suggest that building a climate of multi-ethnic acceptance in schools is important.

Whether schools are racially diverse or homogenous, another common method of understanding social stratification is established in the literature on peer crowd affiliations. Peer crowds constitute groups of individuals who are clustered together based on reputation, but who may or may not actually spend time with one another (Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). When adolescents apply crowd labels such as nerds, jocks, cheerleaders, emo kids, and preppies to themselves or their peers, there is a common understanding of the images and value judgments these terms carry with them. It is evident from both lay and academic use of peer crowd terminology that the social world of adolescents is divided along crowd-based lines of identification. These divisions are stratified because the surrounding community may be more likely to sanction the existence and behavior of certain crowds over others.

Regardless of the crowd with which adolescents are affiliated, they are usually able to identify the label others would have for them (Brown & Klute, 2003), thus inheriting the costs or social capital associated with membership in that crowd. Even the perception of labeling as an outcast tends to be associated with poorer psychological outcomes, such as lower self-esteem than high-status counterparts (Brown & Lohr, 1987). Asserting one's own membership in a low status crowd is also linked to mental health difficulties even when peers would place that individual in a higher status crowd (Brown, von Bank, & Steinberg, 2008). In general, prior work

has shown that adolescents report that their social standing matters to them (LaFontana & Cillessen, 2010).

The hierarchical nature of crowds and crowd membership seems to contribute to adolescents' justification of peer exclusion. For example, Horn (2006) found that although an adolescent may self-identify with a low-status crowd such as "dirties" or "druggies," he or she may still indicate that a higher status individual should occupy a position of influence (e.g., student council) within the high school. However, accepting a social system does not necessarily indicate that an adolescent is thriving within it.

Studies have documented that crowd membership is associated with differences in risk behaviors and concurrent levels of internalizing symptoms (La Greca & Harrison, 2005; La Greca, Prinstein & Fetter, 2001). For example, La Greca and Harrison's (2005) cross-sectional study of high school aged youth found that membership in the "popular/jock" crowd was associated with fewer depressive symptoms. Membership in the "alternative" crowd conveyed no such benefit. Other cross-sectional research by La Greca, Prinstein, and Fetter (2001) found that the "nonconformist" crowd reported the highest level of health-risk behaviors (e.g., smoking, substance use, risky sexual behavior) compared to other peer crowds. Importantly, crowd affiliations have also been longitudinally linked to future functioning. For example, one study found that educational achievement by age 24 is highest among "brains" and lowest among "basket cases" and "criminals," as named by Barber, Eccles, and Stone (2001). Additional longitudinal work by Doornward, Branje, Meeus, and ter Bogt (2012) showed that association with the "nonconformist" crowd was linked to weaker declines in aggression and depressive symptoms from early to late adolescence, compared to affiliation with other crowds.

Costs of membership in the low-status crowds may not be limited to increases in risky behaviors, depressive symptoms, and academic underachievement. Some researchers argue that crowd membership restricts identity exploration. In a two-year observation- and interview-based study of high school students at a large school, Kinney (1999) found that once adolescents identify with a certain crowd, they have fewer opportunities to change that identification or explore alternatives. Furthermore, those adolescents who are either rejected or part of fringe groups have little opportunity for building healthy interpersonal connections (Cacioppo, Fowler, & Christakis, 2009). Social interaction is a vital component of identity development, as identity is developed not only through introspection, but also through daily interactions within adolescents' social contexts (Berzonsky, 1990). Significant relationships provide a context for conversations about identity, and these conversations may encourage further exploration or provoke attempts to affirm one's identity (Kerpelman & Lamke, 1997; Meeus, Oosterwegel, & Vollebergh, 2002). In essence, normal identity development demands healthy interpersonal contact – something that marginalized youth lack.

In sum, the multi-layered division and stratification of the school social world and the developmental consequences associated with membership in privileged or disenfranchised groups underscore the importance of optimizing group relations at school. Urban studies of group relations in high school tend to use ethnicity as the organizing factor. Studies from the literature on crowds suggest that even if a school is relatively ethnically homogenous, division still exists along other social lines. Youth who are part of marginalized groups suffer in any context, as outlined above. However, marginalized youth in rural settings may face unique challenges in the context of a social climate that is distinct from that of urban and suburban areas.

Rural Community Features that Amplify Problems of Marginalization

Although recent shifts indicate that the demographic makeup of rural regions of the United States is changing, the racial makeup of many of these regions remains largely White and non-Hispanic (United States Census Bureau, 2010). In regions where the rural population is non-White, the racial makeup remains homogenous. For example, many rural counties in the southeastern portions of the country are majority Black / African-American. Thus, racial homogeneity is a common element of social life in rural communities. Racial homogeneity is relevant when considering problems arising from social divisions, as it indicates that the divisions existing in these communities are driven by something other than race. Indeed, social-psychological work has established that when only one group of a particular category (e.g., gender, ethnicity) is present, that grouping becomes less important in defining identity (Turner, 1987).

Racial homogeneity can contribute to a sense of pseudocommunity – assuming that all members are part of a unified whole. The assumption that all members are part of a unified whole is likely related to the strong collectivist culture that characterizes many rural, as compared to urban, areas (Elder & Conger, 2000; Gore, Wilburn, Treadway, & Plaut, 2011). A collectivist culture tends to de-emphasize distinctions between self and other. Instead, a group identity is foregrounded (Kasulis, 2002). Within the social context of a high school, individuals who endorse a collectivist conception of identity may behave in ways that raise the homeostatic pressure to conform to a community's sanctioned lifestyle and be part of crowds that exemplify this conformity. Marginalized individuals in rural areas are aware of the pressure to conform, and often make attempts to emphasize their ties to the community rather than an identity (e.g., sexual minority status) that may exclude them from the social resources of their rural communities

(Holman & Oswald, 2011; Leedy & Connolly, 2008). Although marginalized rural youth may attempt to de-emphasize their differences from the greater community, they are often still visible as a result of the behavioral and emotional difficulties that come with low-status peer group membership in rural areas (Ludden, 2014). Despite efforts made to assimilate, rural youth are still able to identify individuals that do not align with traditional crowd labels (Hendry et al., 2002). Overall, it may be less acceptable to be part of a marginalized crowd and more difficult to transition between groups, particularly in a rural school embedded within a community with strong collectivist conceptions of identity (Kelly, Comello, & Edwards, 2004; Kinney, 1999).

Another unique and potentially influential characteristic of rural areas is the geographic isolation of many rural communities. Adolescence has long been marked as a period of exploration (Erikson, 1968). However, the pressure to conform to community-sanctioned identities, combined with geographic isolation, might preclude some adolescents from finding their optimal social fit (Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, et al., 1993). This is not to say that it is impossible for an adolescent to experience normal identity development in a rural context. Rather, it is possible that certain adolescents who do not feel socially compatible with their immediate communities have limited opportunities – at least during high school – to explore other social identities. Hendry, Kloep, and Wood (2002) provide support for the idea that rural youth recognize fewer available crowds than their urban counterparts. The researchers note a lack of "differentiated sub-cultures" in the discourse of rural youth that are apparent in more urban settings.

The lack of differentiated sub-cultures noted by Hendry and colleagues may also be related to the general context of social conservatism that characterizes many rural areas in the United States. For example, Walsh (2012) found that many residents of rural communities

viewed ideas and policies that originated in cities as antithetical to their community's values. People blamed problems occurring in rural areas on the encroachment of city policies into rural settings. This political tension between rural and non-rural areas may overlap with the social differences between rural and non-rural schools. With fewer acceptable social choices and a lower tolerance for deviance from what is considered the norm, non-mainstream rural adolescents will likely be pushed to marginalized positions within their social networks, stalling in their identity exploration.

Intervening in the effects of marginalization at the individual level, such as through one-on-one counseling, may be difficult in a social context with rigid boundaries between groups. Marginalized youth are in a position to be at odds with many in their social network, a potentially isolating experience. Social isolation, often associated with a self-reinforcing cycle of avoidant coping and negative self-perception, tends to interfere with normal development of social competence (Cacioppo et al., 2009; Rubin, Coplan, & Bowker, 2009; Rubin & Mills, 1988). In order to improve the social prospects of non-traditional youth in rural settings, the marginalization of some crowds in rural high schools (Ludden, 2014) must be addressed at the group level. Rather than remaining alone or in crowds of social "others" with documented disadvantages compared to more clearly defined crowds (Sussman, Pokhrel, Ashmore, & Brown, 2007), increasing the feasibility and actual occurrence of inter-group contact may serve as a protective factor against the risky behavior, mental health difficulties, identity stagnation, and underachievement associated with marginalization. Some rural schools are quite small (i.e., less than 100 students across multiple grades). Students within these schools may therefore have regular contact with a comparatively higher percentage of other students than those in larger schools. In other words, the social networks are denser in small schools (Fritch, 1999). However,

increased contact is not necessarily successful. Without appropriate conditions for contact to be successful, increased contact may only serve to exacerbate the existing social stratification that marginalizes certain youth.

To increase the feasibility and occurrence of intergroup contact, interventions based upon the tenets of intergroup contact theory (ICT) may be particularly appropriate in rural communities' schools. The racial homogeneity and the density of social networks in many rural areas may increase the homeostatic pressure faced by members of the community to conform to the community-sanctioned lifestyle (Crockett, Shanahan, & Jackson-Newsom, 2000), which may make intergroup contact even less common. Consequently, adolescents would have fewer chances for cross-group interaction, if the social structure is firmly established. The remainder of this article introduces ICT and specifies how the application of ICT interventions is particularly appropriate in a rural school setting, given the challenges to normal psychosocial development that may occur in such contexts.

Support for Intergroup Contact Theory

Intergroup contact theory (Allport, 1954; Pettigrew, 1998) is a social-psychological theory that was developed to understand and address issues of racial prejudice. Allport hypothesized that when different groups have the chance to interact with one another, the prejudice of each group's members against the other group will start to fade. In Allport's formulation of the theory, he specified that there were four crucial conditions that must be satisfied in order for intergroup contact to promote reductions in prejudice. First, situations of intergroup contact must provide (1) *equal status* to participants. Such a provision has the potential to counteract existing power hierarchies that may reinforce the prejudicial views of participants in either high or low status groups. Indeed, both high and low status group members

may hold prejudiced views of the outgroup (Mullen, Brown, & Smith, 1992). Thus, if nothing is done to ensure equal status, existing prejudices are likely to remain or be amplified (Moody, 2001). The next two crucial elements of successful intergroup contact are that participants work toward a (2) *common goal*, and that there must be (3) *intergroup cooperation* toward such goals. Given his focus on interracial contact, Allport provides an illustrative example of a multi-ethnic sports team. Two or more ethnic groups would share a common goal and work together toward achieving that goal (i.e., winning a game). Finally, the fourth component of effective intergroup contact as specified by Allport was that there must be (4) the *support of authorities* in the situation at hand. For example, school administrators have the potential to provide opportunities for intergroup contact within the context of in-school or extra-curricular activities (Moody, 2001). In effect, the support of authority figures introduces the notion that intergroup contact is normative and acceptable (Pettigrew, 1998).

Although the majority of research supports the notion that intergroup contact does reduce prejudice, scholars have called for the need to expand the initial hypothesis to include potential mediators of effects (Dovidio, Gaertner, & Kawakami, 2003; Pettigrew, 1998; 2008). Notable expansions to Allport's hypothesis include attention to the importance of affect, cognition, and friendship potential as mediating mechanisms through which contact has an effect on prejudice. With respect to affect, intergroup anxiety is an important predictor of the success of contact situations. Intergroup anxiety refers to the feelings of uncertainty, nervousness, or fear when interacting with outgroup members. Furthermore, individuals may have anxiety about how members of their ingroup may react if they develop positive relationships with members of an outgroup. These feelings of negativity may reside in members of both privileged and oppressed groups. Studies have shown that reductions in intergroup anxiety are a mediator through which

contact can reduce prejudice (e.g., Dhont, Roets, & Van Hiel, 2011; Turner, Hewstone, Voci, & Vonofakou, 2008).

Changes in cognition about the outgroup also play a mediating role in the effect of contact on prejudice. Typically, these changes involve a reorganization of how members of each group categorize themselves (Dovidio et al., 2003; Gaertner, Dovidio, & Bachman, 1996). Following intergroup contact, group members may continue to view themselves as part of distinct groups. However, what may be added is the cognitive inclusion of superordinate categories of classification. For example, using the analogy of a sports team, one might continue to recognize ethnic membership, yet also endorse the superordinate category of "team." These sorts of cognitive inclusions are shown to be mediators of the relationship between contact and prejudice.

A third mediator that has gained significant attention is friendship. Pettigrew (1998) proposed that generating affective ties to others via friendship is an extremely efficient way of satisfying Allport's conditions for effective contact. Pettigrew also argued that the mediating effect of developing friendships with outgroup members happens over time. Empirical studies (Eller & Abrams, 2004; Turner, Hewstone, & Voci, 2007) provide support for this notion, showing that friendship with outgroup members promotes closer affective ties with them, which in turn predicts reductions in anxiety and more positive general evaluation of outgroup members. In addition, the knowledge that one's acquaintances and friends have outgroup friends also predicts more favorable attitudes (Turner et al., 2008). In sum, individuals' friendships and their knowledge of their associates' friendships with outgroup members promote more favorable attitudes toward the outgroup.

Taken together, Allport's initial hypothesis and the research that has expanded upon it represent an integrated theoretical lens through which intergroup relations can be understood. Contact promotes improved relations, promotes reductions in negative affect, and develops friendships; these processes along with awareness of others' cross-group relationships all seem to serve as mediators of the relationship between contact and reduced prejudice. The ICT framework has been extended to include applications to relations between groups characterized by features other than ethnicity (e.g., religion; Paolini, Hewstone, Cairns, & Voci, 2004). Moreover, several extensive meta-analyses of both laboratory and field experiments of ICT interventions have documented significant reductions in participants' post-intervention levels of prejudice (Beelmann & Heinemann, 2014; Lemmer & Wagner, 2015; Pettigrew & Tropp, 2006). The earlier meta-analysis by Pettigrew and Tropp included many laboratory-based experiments testing the tenets of ICT. Lemmer and Wagner's more recent meta-analysis included many field studies. In addition, their meta-analysis included studies that conducted post-tests up to 12 months after interventions were complete. Results demonstrated that prejudice reductions tended to persist over time. In sum, ICT-based interventions are effective in a variety of settings beyond a controlled laboratory experiment.

Despite considerable evidence for the effectiveness of ICT-based interventions, the overwhelming focus of these studies remains on the reduction of ethnic, racial, or inter-religious prejudice. Very few published studies have addressed other potential sources of social divisions such as those based on adolescent peer cultures. A few studies cover interventions that have broader, diversity-oriented goals that are not specifically about race (e.g., Otis & Loeffler, 2006; Seaman, Beightol, Shirilla, & Crawford, 2009). However, even some of these studies still define success in terms of reductions in racial prejudice. Little to no attention has been paid to targets

such as crowd-based division or exclusion. Furthermore, none of the studies included in prior meta-analyses focuses on rural populations.

One purpose of this paper is to identify how the specific tenets of ICT may be applied to develop interventions that support marginalized rural adolescents' psychosocial development. Rural high schools with histories of strong group divisions are likely to retain rigid social boundaries that prevent cross group contact (Gilbert & Yerrick, 2001). Such rigid boundaries pose challenges to normal psychosocial development for marginalized youth. Thus, rural high schools may particularly benefit from ICT-based interventions.

The application of ICT-based interventions in rural areas comes with potential challenges and opportunities. The challenges and opportunities discussed below are based upon the preceding review of the unique social fabric of rural areas, and how an emphasis on group identity in these settings may interfere with normal identity exploration and development for marginalized youth. In addition, focusing on the promotion of positive developmental assets (i.e., Benson, 2003) rather than only on the reduction of negative experiences is an important shift in the ICT literature. Instead of viewing prejudice reduction and intergroup contact as the final targets of intervention, the present paper connects ICT interventions to positive psychosocial development, particularly for non-mainstream youth in rural schools.

Applying ICT to the Unique Developmental Needs of Marginalized Rural Youth

Prior research on the four conditions of successful intergroup contact (i.e., equal status, common goal, intergroup cooperation, support of authorities) and their mediators (i.e., intergroup anxiety, cognition about the outgroup, friendship formation) suggest several promising avenues for intervention with marginalized rural youth. The pathways are outlined in Figure 1. The following paragraphs outline these potential pathways through which the improvement of group

relations in rural settings may lead to healthier psychosocial development of marginalized youth. We begin with the challenges and opportunities to meet Allport's initial conditions of successful intergroup contact in rural areas. We follow this discussion with attention to the mechanisms of change identified by later ICT research, contending that their activation not only fosters bias reduction but also promotes healthy psychosocial development. An important note to the following discussion of applying ICT interventions in rural areas is that the interventions are ideally school-wide. The result is a set of regular or semi-regular events involving as many students as possible. Having the intervention characterized as a school-wide event or activity avoids bringing added attention to the marginalized youth themselves. In essence, the intervention's purpose is covert to participants, but is structured to provide meaningful and positive interactions between students.

Satisfying Allport's Initial Conditions in Rural Areas

Satisfying all of Allport's (1954) conditions for successful intergroup contact enhances the success of contact-based interventions. However, the unique social features of rural areas may alter the feasibility of satisfying these initial conditions. Given the non-rural focus of most of the literature on ICT interventions, we will discuss the opportunities for and challenges of creating the conditions for ICT in the context of rural social norms. We discuss the opportunities and challenges to applying ICT in the order we believe it would be most effective to address each condition.

Gaining the support of authorities is likely the most effective first step in bringing a contact intervention to a rural community. Adults in rural communities, perhaps more so than in other locales, are highly involved in orchestrating the social life in their communities (Elder & Conger, 2000). The support of authorities such as prominent adults is a necessary condition of

ICT intervention. The density of social networks in rural areas suggests that interventionists who find prominent adults have also likely found the adults who are strongly involved in the lives of the children in the community (Elder & Conger, 2000). The visibility of certain adults in the community presents an opportunity to gain the support of authorities. Furthermore, this support is especially important in rural areas. Given the emphasis on group identity and generally high intergenerational involvement rural areas, youth are likely to defer to trusted adults when making decisions (LeFebvre & Franke, 2013; Peng & Tjosvold, 2011). Parents may be one of the most basic examples of trusted adults. Rural parents' involvement has been characterized as a method of cultural reproduction. Parents orchestrate youth activities in order to maintain the values of the community at large (Elder & Conger, 2000). Taken together, existing knowledge on collectivist cultures and rural communities suggests that gaining the support of trusted adults from the school or larger community would be vital before attempting to bring groups into contact. When trusted adults buy into the prospect of bringing disparate social groups together, rural youth may be more likely to defer to the adults' judgement and engage in the cooperation and pursuit of common goals that is also vital to the success of ICT. Having trusted adults conduct the intervention provides youth with clear evidence that the adults endorse the conditions of the intervention context.

In pursuing the support of trusted adults, practitioners may also have to acknowledge the reputations that accompany youth in rural areas. Pre-existing reputations may present challenges to the experience of equal status that is necessary in an ICT intervention. Knowledge among peers and in the community about certain youths' reputations may firmly entrench them in a particular position in the rural social hierarchy. Consequently, it is possible that adults in the community may resist bringing low- and high-status youth together. This may also occur in non-

rural areas. However, the close-knit nature of rural communities has been identified both by youth and adults as a particularly salient barrier to social mobility in these areas (Elder & Conger, 2000; Kelly et al., 2004; Lee, Smerdon, Alfed-Liro, & Brown, 2000; Ludden, 2014). In essence, one's position in the social hierarchy is reinforced by years of involvement with the same peers and adults throughout one's schooling – something more likely to occur in rural communities with fewer people, fewer schools, and greater involvement of the general community at schools (Parker, 2001). Thus, in order to ensure that Allport's condition of equal status is met, the application of ICT in rural areas will need to include attention to the reputations that all participants (youth and adults) in the intervention bring with them. For example, identifying individuals' reputations as based on hearsay rather than actual experiences of each individual with a target individual may help to reduce the influence of prior on intergroup attitudes and behavior. This information must be presented to the adults when initially inviting their participation as leaders of the intervention. The information can be repeated to the participating youth within the intervention context.

Once practitioners gain the support of authorities in the establishment of an equal status intervention context, the collectivism and favorable attitudes of rural individuals toward the maintenance of social ties (Elder & Conger, 2000; Gore et al., 2011; Struthers & Bokemeier, 2000) are likely to facilitate the experience of cooperation and common goals. Prior cross-cultural research has shown that individuals from collectivist cultures are more likely to subjugate their own interests in order to support the interests of the group or an important individual within the group (LeFebvre & Franke, 2013; Peng & Tjosvold, 2011). For example, rural youth who identify with group ideals emphasizing the maintenance of social ties are likely to adjust their educational and occupational plans to be compatible with the maintenance of

social ties (Hektner, 1995). In the context of an ICT intervention in a rural setting, the collectivist socialization of participating individuals would be an asset in avoiding conflict in order to cooperate toward common goals. These individuals may have grown up in a rural climate that fosters cooperation and unity.

Mechanisms of Change

Beyond satisfying Allport's (1954) initial conditions of intergroup contact, prior research has suggested important mechanisms through which contact operates to reduce racial, ethnic, and interreligious prejudice (Pettigrew, 1998). In the next section, we discuss these mechanisms as they apply to marginalized rural youth. However, instead of utilizing prejudicial attitudes as an outcome, we identify examples of how the mechanisms of change may promote features of healthy psychosocial development. In the positive youth development framework, contact interventions are especially likely to cultivate assets (Benson, 2003) under the factors of positive identity, empowerment, and support. In this framework, positive identity may generally be equated to a sense of self-efficacy and self-esteem. Empowerment is defined in part through youths' experience that the community values them. Support involves the experience of caring relationships and contexts inside and outside the home. The following sections articulate how the activation of the mechanisms of change cultivates these and other developmental assets.

Intergroup anxiety and identity development. The first potential pathway from successful intergroup contact to healthier psychosocial development involves the mediating influence of intergroup anxiety reduction. We turn to identity development to provide concrete examples, as identity development is especially salient during adolescence (Erikson, 1968; Marcia, 1980). Scholars have theorized that individuals who have fearful views of others may be less likely to proceed through an adaptive identity exploration process. Instead, they may choose

to avoid identity exploration altogether (Pittman, Keiley, Kerpelman, & Vaughn, 2011). In Marcia's (1966, 1980) framework, there are four statuses that correspond to varying levels of exploration and commitment to identity. The *achieved* status represents someone who has experienced the crisis of identity formation and successfully navigated it, having a self-determined ideology and occupation. In contrast, an individual in the *identity-diffuse* status has not made any firm commitments, and is often uninterested in exploring and making these commitments. Between the two extreme statuses lie the *foreclosed* and *moratorium* statuses. A foreclosed individual has made a firm commitment to an occupation and an ideology without having engaged in a great deal of exploration. The individual in moratorium is in the midst of his crisis, but has not yet made any firm commitments to identity. Schwartz's (2001) review of the identity literature found that in general, having an achieved identity status is associated with psychosocial maturity, whereas diffusion is associated with maladjustment. Although not all individuals reach a fully achieved identity status, the general developmental trend is to report less diffusion and more commitment (Meeus, Iedema, Helsen, & Vollebergh, 1999).

Intergroup anxiety may hinder an individual's progress toward an achieved identity status because it can inhibit the social exploration that is necessary to identity development. With fewer social niches available to marginalized rural adolescents compared to urban adolescents (Hendry et al., 2002) and less mobility in the eyes of peers and community members (Elder & Conger, 2000; Kelly et al., 2004; Lee et al., 2000), rural adolescents may be more likely to foreclose on identities or group affiliations that do not provide an optimal social fit. Worse, marginalized rural youth may resort to delinquent behavior in an effort to jockey for social status (Ludden, 2014).

If any exploration is to occur in these relatively less diverse contexts, especially among marginalized adolescents, the intergroup anxiety that contributes to the lack of intergroup contact

must be addressed. Fortunately, ICT interventions offer opportunities to provide the necessary structure to scaffold interactions between formerly disparate groups. In terms of identity development, it may be most beneficial to experience anxiety reductions earlier in adolescence, when identity tends to be less solidified (Meeus et al., 1999). It is possible that malleability of identity earlier in adolescence may also bolster the overall success of contact interventions during this time. In addition, the support of authorities may be key in reducing intergroup anxiety within rural communities. Given the power of adults in rural communities to orchestrate social interactions among their children (Elder & Conger, 2000), their support will also be essential to reduce intergroup anxiety.

In sum, satisfying the conditions of successful intergroup contact can provide evidence to marginalized youth that contact with others beyond their position in the social hierarchy need not always be feared or avoided. Furthermore, non-marginalized youth may also benefit from these interactions. Barriers to cross-group interaction do not only apply to low-status youth; rural youth from a variety of groups report relatively little contact with other social groups (Kelly et al., 2004). More mainstream youth may engage in a more in-depth exploration of identity as a result of interaction with dissimilar others (Jones & Abes, 2004). An ICT intervention that is successful in satisfying Allport's conditions of contact may serve to scaffold the interactions between youth from formerly different levels in the peer hierarchy. The combination of pre-identified goals and an expectation of cooperation teaches participants how to effectively engage with a new group and could reduce the anxiety associated with intergroup contact.

Changes in cognition about the outgroup. The second pathway through which effective intergroup contact provides an opportunity to bolster positive psychosocial development involves the mediating influence of changes in cognition about the outgroup. One potential cognitive shift

involves youths' understanding of the norms of acceptable behavior and appropriate interpersonal contact in their community. If successful intergroup contact leads youth to reinterpret what they view as normative (as sanctioned by the community), they may be very likely to change their behavior toward others (e.g., initiating further contact with members of a former outgroup). This notion is supported by recent findings that changing individuals' understanding of group norms is a powerful predictor of individual behavior change (Miller & Prentice, 2016). For example, norms may exist that discourage community members from considering non-mainstream youth as genuinely part of the community, which would contribute to these youths' marginalization. Furthermore, marginalized youth, having experienced a degree of ostracism, may find it difficult to connect themselves to a superordinate category of community.

Helping marginalized rural youth cognitively connect to a superordinate category of classification involving the region itself is a valuable task capable of being addressed through ICT intervention. Rural areas have strong networks of cross-generational support that are important in the development of well-adjusted youth (Elder & Conger, 2000). If marginalized youth reject the superordinate category of "community" (which conceivably may result from maltreatment by others), they may also be denied access to the social capital contained within such communities. When adolescents believe that their values are in line with the community in which they reside, they tend to report feeling a greater sense of future orientation and purpose – strong indicators of healthy identity development (Benson, 2003; Shamah & MacTavish, 2015). However, when students feel socially adrift, even those with relatively strong academic performance seem to stagnate in their identity development.

ICT interventions, with their emphasis on cooperation, equal status, and friendship formation, are well-suited to help marginalized youth re-interpret their view of the community as a whole. Rather than viewing themselves only as outsiders, successful contact with more involved members of the community may help marginalized rural youth begin to view themselves as more integrated members of the community as a whole. The consistent finding that boundaries between groups are stronger in rural areas (Elder & Conger, Kelly et al., 2004, Lee et al., 2000) might actually enhance the success of contact interventions. Prior literature shows that youth who have no relationships with members of an outgroup before completing a task together may reconsider their view of the entire group of others rather than reconsidering their view of a single member of an outgroup (Desforges, Lord, Ramsey, Mason, Van Leeuwen, West, et al., 1991). Therefore, rural adolescents from areas with strong histories of division stand to gain the most from the cognitive changes associated with ICT intervention.

Fostering rural youths' friendships. The final potential pathway from intergroup contact to healthier psychosocial development involves the mediating influence of intergroup friendship. Prejudices rooted in power hierarchies have implications for friendship formation. Years of friendship research show that the most likely friendships are those that are similar in many characteristics – the concept of homophily (Dijkstra, Berger, & Lindenberg, 2011; Kandel, 1978; McPherson, Smith-Lovin, & Cook, 2001). Adolescents recognize and tend to abide by pre-existing status hierarchies that dictate norms of interaction among high school students (Horn, 2006). Thus, if individuals perceive others to be vastly different in status from themselves, they are unlikely to initiate contact that would be considered outside the norm of their position in the social hierarchy (Parker & Asher, 1993). In addition, if a particular peer culture is less accepting

of diversity and cross-group relations, those who seek to cross boundaries may face peer rejection and relational victimization (Kawabata & Crick, 2011).

The collectivist nature of rural communities can create strong behavioral expectations regarding acceptable social conduct, as well as acceptable social partners, and may initially be less tolerant of cross-group relations. This idea is reinforced by studies of marginalized individuals who attempt to reduce their display of any features of a marginalized identity (Holman & Oswald, 2011; Leedy & Connolly, 2008). These individuals would rather foreground parts of themselves that fit in with the community-sanctioned identities. One of the most prominent barriers to interaction in rural areas in particular is each individual's history of social status within the community (Elder & Conger, Kelly et al., 2004, Lee et al., 2000). A successful ICT intervention context would provide the basis for a new social history to begin to form for participants – eliminating a barrier to creating connections. This would be beneficial for low-status youth who previously may have been connected only to low-status others.

It is important that marginalized youth connect to individuals who are not socially isolated (Cacioppo et al. 2009) – especially in rural areas, where a lower population density limits the overall number of potential social partners. Because identity is considered to be a relational process (Berzonsky, 1990; Stets & Burke, 2000), a wider social network provides more opportunities for exploration. Adolescents may then have a greater chance to find their optimal social niche (Eccles et al., 1993). Moreover, given the strong influence of peer socialization on individual behavior (Harris, 1995), connecting with well-adjusted peers may also have a positive socializing effect on marginalized youth. Such social connections provide opportunities for marginalized youth to practice interacting with others who, rather than suffering from loneliness and isolation, have had a relatively normal developmental experience.

Conclusion

Overall, ICT represents a valuable framework to use in designing interventions to support the development of marginalized rural youth. These youth stand to gain a great deal from successful intergroup contact. Successful contact may provide youth with a more realistic opportunity for identity exploration, connection to non-marginalized peers, and access to the powerful social support network available in rural communities. Providing youth with these assets clearly aligns with principles of positive youth development defined by Benson (2003).

As specified in this review, marginalized rural youth face unique barriers to normal psychosocial development in part because of the social climate of the areas in which they reside. Although these barriers may not be necessarily due to racial tensions in rural areas, the barriers still involve social bias and prevent those at the margins from integrating well into their communities. As it is currently understood, ICT holds significant promise to address the challenges to normal development that marginalized youth in seemingly homogenous areas may face (Brown & Lohr, 1987; Brown et al., 2008; Horn, 2006). In this article, we have discussed the most relevant considerations for practitioners in applying the tenets of ICT to social divisions in racially homogenous rural areas. Through careful attention to the specific social structures of rural areas, practitioners can be better suited to serve this understudied and under-resourced population.

We have outlined strong theoretical reason for expecting ICT-based interventions to be effective with rural populations. Furthermore, we have proposed a more strengths-based view of the effect of ICT on youth development rather than focusing solely on prejudice. This represents a significant expansion of traditional ICT research, which has been focused on deficit reduction (prejudice). We have summarized the novel contributions of this paper in Figure 1. Future basic

research can empirically test our proposed link between intergroup contact and developmental assets for marginalized rural youth. In addition, future applied research should involve practitioners reaching out to rural communities to test the effectiveness of contact interventions in rural areas. Our discussion of the relevant particulars of rural culture serves as an aid to practicality of these interventions.

IV. General Discussion

The two papers in this dissertation make novel contributions to the literature on rural adolescents' experiences of belongingness. The experience of belongingness is associated with a variety of indices of well-being, including positive emotionality and behavioral, physical, and psychological health (Baumeister & Leary, 1995). For most adolescents, their primary sources of belongingness will derive either from relationships at school or within their families (Allen, 2008; Larson & Richards, 1991; Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). The goal of the two present papers was to begin to develop an understanding of belongingness within an understudied group of adolescents – those from rural areas. The first paper, guided by stage-environment fit (Eccles et al., 1993) and self-determination (Ryan & Deci, 2000) theories, took advantage of a large, nationally representative dataset to compare the role of school and family connectedness across urban, suburban, and rural areas in predicting young adult achievement-related outcomes. The second article synthesized literature across several areas of study to produce an agenda for research and practice targeting the social integration of marginalized rural youth.

The first paper contributes to the empirical base of knowledge regarding school connectedness among rural youth. As hypothesized, school connectedness emerged as a consistent predictor of young adult educational and occupational outcomes. The consistency of this association was most apparent in the rural subsample, wherein school connectedness at age 15 predicted age 28 reports of educational attainment, income, level of supervisory responsibility, and number of times ever fired. Given that adolescents have a developmentally

salient need for connection to peers (Eccles et al., 1993; Ryan & Deci, 2000), the study's findings align well with stage-environment fit and self-determination theories. School is likely the primary context in which rural adolescents can build supportive, non-family relationships (Oncescu & Giles, 2014; Parker, 2001). Therefore, the school is also the primary context that rural adolescents may be able to fulfill their developmental need for relatedness to peers. Overall, the results highlight the importance of school in meeting rural adolescents' needs for belongingness among peers.

Considering that schools are such important settings for rural adolescents' social development, it is important that intergroup boundaries are flexible enough that all youth in rural areas can participate in the social opportunities available through school. Many rural youth cite participation in social activities at school as turning points in a life course that may have been marred by prior negative experiences (Elder & Conger, 2000). However, for the youth who face rigid crowd-based boundaries in their schools, access to these activities may be limited. Therefore, in our second paper, we suggested specific points of entry to address marginalized rural youths' needs for belonging and proposed ICT interventions as a promising approach to improve the social climate of rural schools. We discussed the nuances of satisfying the necessary conditions and mediators in the implementation of ICT-based interventions in rural areas. We discuss these nuances so that they may be tested in the course of efforts by practitioners to provide all youth – not just the high status youth – access to social connection at schools (Allport, 1954, Pettigrew, 1998) in a rural context.

The second paper also extends the application of ICT to group divisions based on peer crowd membership – a division that has not yet been studied in the literature on ICT. Crowd membership may come with costs or benefits. For example, membership in socially active

crowds is associated with academic success in rural areas (Elder & Conger, 2000). Through a review and synthesis of existing literature, we emphasized that a common feature of rural areas is a culture that introduces strong norms of behavior and boundaries between different social groups. The second study also contends that marginalized rural youths' access to the positive aspects of community such as clubs, churches, and leadership roles is limited if youth are not part of mainstream social groups. ICT interventions hold promise to address these barriers to school and community involvement.

Across the two papers, the knowledge generated points toward several future directions for research on the social development of rural adolescents. Future studies should include longitudinal attention to the identity development of rural adolescents. We have provided initial evidence that school connectedness is longitudinally linked to rural adolescents' young adult indicators of economic prospects. We also assert that particularly in rural areas, the influence of school experiences on later outcomes may operate through identity development. Across adolescence and young adulthood, individuals are exploring their identity, and many eventually reach an achieved status (Kroger, Martinussen, & Marcia, 2010). Future scholarship should consider the importance of rural schools not only as a social institution, but also as a site of identity development given the relational nature of identity (Stets & Burke, 2000). In rural areas in particular, school may be one of the few places where adolescents encounter enough diversity to develop an identity that is sufficiently distinct, while also developing a collective identity from which they can draw support (Brewer, 1991). With these concepts in mind, studies that longitudinally model identity development as a potential mediator of the effects of school connectedness on later educational and occupational outcomes are indicated. In addition, studies

that test identity development (both individual and collective) as a mediator of the effects of an ICT intervention will also be informative.

More in-depth assessment of school connectedness would also advance future scholarship. The Add Health measure, though reliable, captures only a very broad assessment of school connectedness. Development of survey items that tap into the specific features of the school environment that lead to an endorsement of statements such as “I feel close to people at this school” are needed. This more in-depth measurement of school connection would also serve as an important indicator of success of the ICT programs that are discussed in the second study. Connection to school could increase as a result of participation in an ICT intervention. Because specific mechanisms have been identified in the study of ICT (Pettigrew, 1998), it would be helpful to link these mechanisms to specific facets of school connection rather than a single broad measure. For instance, changes in cognition about the outgroup may be linked to the example item above; changes in intergroup anxiety may be more likely to influence answers to the item “I feel safe in my school.” Expanding these individual items to include a more complex understanding of school connection would add nuance to program evaluation results.

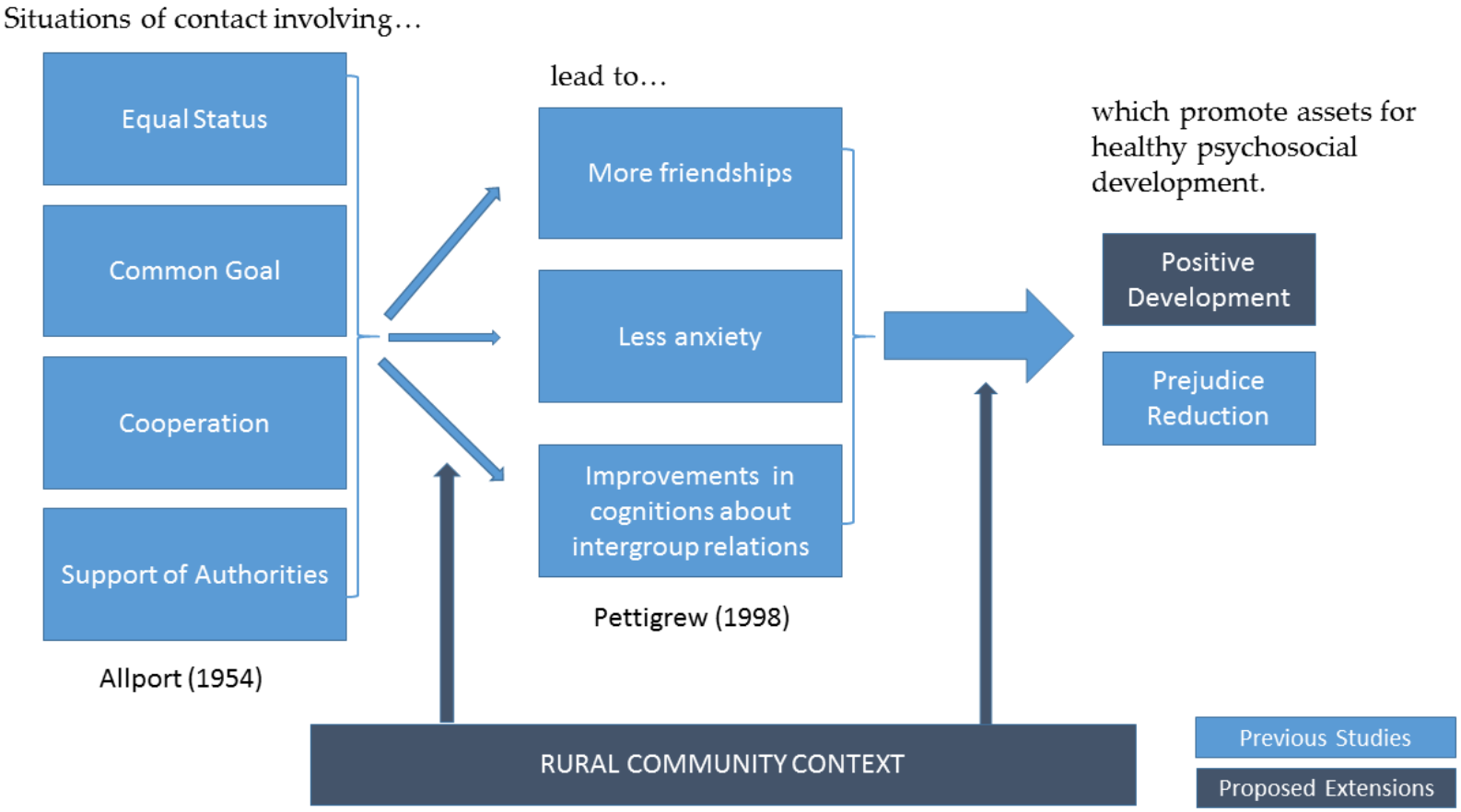
Furthermore, given that the role of school in the community is different in rural than in non-rural areas (Elder & Conger, 2000; Parker 2001), the measurement of school connectedness may also have to be adapted. An important issue for measurement development would be to clearly define how respondents are to think of the school environment. For example, respondents could be asked to focus on their interactions with others at the school during the regular school day. They could also focus on activities that take place at the school with both their schoolmates and potentially other adults and community members. Such a distinction would be relevant especially in rural areas wherein schools are a primary location for extra-curricular social

activities. Thinking of people from school may evoke memories that are not taking place during the normal school day; these interactions may not influence academic achievement in the same way as during-school interactions.

As a whole, the two papers in this dissertation have important strengths. The empirical study takes advantage of nationally representative, longitudinal data to answer questions about the associations between school connectedness and young adult educational and occupational outcomes across urban, suburban, and rural areas. The review paper synthesizes social-psychological, sociological, and intervention research to provide promising directions to promote marginalized rural youths' psychosocial development. Taken together, the studies highlight unique social features of rural areas that are relevant to developing positive youth development programming. These studies also highlight the need for continued scholarly attention to supportive contexts for adolescent development in rural areas, which have been understudied in the literature. This will require both basic and applied approaches, including randomized-controlled trials to establish whether interventions are effective in addressing divisions based on peer crowds in rural areas.

Figure 1.

Proposed Extensions to Intergroup Contact Intervention Model



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