

## I. Specific Aims

Participation in problem behaviors, such as substance use, crime and risky sexual activity, constitutes a significant threat to adolescent physical and mental health.<sup>1</sup> Although the factors that contribute to problem behavior tendencies are complex, research has demonstrated that adolescent risk behavior is influenced by the social contexts to which youth are exposed—including neighborhoods, schools, peers and family.<sup>1</sup> Theoretical advancements have drawn attention to potential structural features of contexts (e.g., neighborhood and school-level economic disadvantage) and an array of intervening social processes (e.g., social capital, norms and collective efficacy) that may shape youth outcomes. In addition, statistical advancements in the analysis of clustered data<sup>2</sup> along with large-scale data collection efforts have enabled researchers to establish the significance of these social contexts for adolescents' engagement in risk behaviors and for their physical and psychological well-being.<sup>3</sup> Despite the promise of contextually-oriented research, however, existing studies have been hampered by arbitrarily limited attention to, and inadequate measurement of, the key contexts to which adolescents are exposed. Thus, more comprehensive data on youth developmental contexts and significant advancements in the measurement of these contexts are necessary to inform the design of more effective policies and programs addressing adolescent health.

Consequently, we propose an unprecedented data collection effort emphasizing the impact of spatial and social exposures on risk behavior, victimization, and mental/physical health for a large sample of youth (N=5,200) in Franklin County, Ohio. This project offers three significant advances over prior contextual studies of youth development. First, we will collect data on a comprehensive array of developmentally relevant settings including family/household, residential, school, social network, and other formal and informal "activity space" contexts (e.g., churches, recreation centers, businesses, and "hang out" locations). This *multi-contextual* emphasis will enable us to examine the influence of a wide range of contextual exposures on significant aspects of youth well-being. Second, we will use Ecological Momentary Assessment (EMA) to collect real-time data on behavioral settings, including peer presence, adult supervision, the level of structure characterizing activities, and behavioral/health outcomes. These *space-time situated network* data will offer empirical linkages between the social network and spatial contexts of youth development enabling analyses of situational influences on setting outcomes. Third, we will collect survey, EMA, and Geographic Positioning System (GPS) data on the spatial and organizational settings of youth activities to identify overlapping activity locations among sampled youth (e.g., subjects who spend time at the same school, church, park, etc.). This information will be used to construct *actor-setting affiliation networks* among youth and activity locations, capturing heretofore unmeasured "community" structure. Characteristics of the communities in which adolescents are embedded may have important implications for well-being, above and beyond those contexts typically measured in prior research.

The project is designed to address a host of questions regarding the role of contexts in youth development. Consistent with the key innovations of the project, we focus the research narrative on three specific aims:

- 1) Examine the influence of key structural and social process characteristics of multiple social contexts on youth developmental outcomes (risk behavior, victimization, and mental/physical health), including residential neighborhoods, schools, activity spaces, non-family peer and adult social network ties and household/family characteristics. For instance, do characteristics of youth activity spaces—i.e., the actual spatial and social exposures youth experience in their daily routines—influence behavioral and health outcomes net of the effects of other contexts such as residential areas and schools?
- 2) Examine situational effects on key risk behaviors and mental states in real time using data gathered through Ecological Momentary Assessment. Specifically, estimate the relative importance and conjoint effects of setting characteristics (such as the presence and attributes of social network partners, the availability of adult supervision, and the level of structure characterizing activities) on setting outcomes. For instance, do peer network influences on youth risk behavior as captured in real-time assessments depend on aspects of the actual behavioral settings (supervision, structured activity) in which network ties are experienced?
- 3) Examine the extent to which youths' "communities" influence their health and developmental outcomes. Do structural and social process characteristics of youths' communities—i.e., the networks of actors and settings in which adolescents are embedded through routine exposure—independently influence developmental outcomes and health? To what extent are youths' communities contained within neighborhoods (i.e., conventionally measured residential contexts such as census tracts)? Do communities capture social contextual influence more effectively than conventionally operationalized neighborhoods? Do the effects of more proximate developmentally relevant contexts (such as peers and activity space characteristics) on youth outcomes depend on characteristics of the communities in which they are embedded? Do community characteristics account for race/ethnic disparities in youth outcomes?