AFTER-SCHOOL EXPERIENCES: VARIATIONS IN PERCEPTIONS OF SUPPORT

By

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AFTER-SCHOOL EXPERIENCES: VARIATIONS IN PERCEPTIONS OF SUPPORT

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Under the supervision of Profession Deborah Lowe Vandell

At the University of Wisconsin – Madison

This dissertation considers students' experiences at school-based after-school programs in terms of the developmental supports that the programs provide. In particular, supportive relationships with adults, supportive relationships with peers, opportunities of autonomy and leadership, and interest in activities are the developmental supports that are measured.

After-school program experiences were assessed for 191 eighth grade students attending eight school-based after-school programs. Students described their experiences using two measurement strategies. First using Experience Sampling Methodology, students recorded in small logbooks their location, whether or not they were attending an after-school program, their activity, companions, and feelings, five times each day during the after-school hours and on weekends, during 1 week periods in the fall and spring. Second, students described their experiences at programs more globally using the Developmental Supports Rating Scale (DSRS). The DSRS was adapted from the Public/Private Ventures Youth Survey (Gambone and Arbreton, 1997) by this investigator explicitly for this study.

A confirmatory factor analysis was conducted to analyze the structure underlying the items in the DSRS. A four-factor model was fitted using LISREL, reflecting the four developmental supports the DSRS was posited to assess. The Chi-Square for the model was

significant and two of the fit indices reached the .90 and above range that many researchers deem indicative of adequate fit.

The first aim of the dissertation was to investigate the potential differences in students' perceptions of developmental supports at the eight after-school programs. Significant differences were found suggesting that programs offering fewer types of activities were rated as being less supportive than those programs offering more activities.

Next, stability in perceptions of support over time was examined. Because of the fluidity in program participation, three groups were considered: participants who were in the same program and same activity at Time 1 and Time 2, those who were in the same program but different activities at Time 1 and Time2, and finally, those who were in different programs at Time 1 and Time 2. The findings suggest that perceptions of support remain stable over time for those students who continue to participate in the same program and changing activities within a program may not impact the supportive environment of that program.

Differences in perceptions of support by activity type were also examined. Activities were placed into 4 categories: academic, arts, sports, and service. Significant differences were found between sports and academic activities with students rating sports activities as more supportive. Students in sports and service activities reported more supportive relationships with peers than did students in academic activities. Students in sports and arts activities reported more interest in their activities than did students in academic activities. The ANOVA model was then compared to an alternative model in which child gender, child ethnicity, prior adjustment, and family structure were included as covariates (ANCOVA). The overall pattern of

significance was unaffected by the expanded model suggestion that the findings are robust and appear largely unaffected by selection factors.

The final aim of the dissertation was to examine relations between the Experience Sample data and the Developmental Supports Rating Scale. Correlations between ESM and DSRS data suggest that when students reported being more motivated at the after-school program and they reported their affect as positive, their global ratings of supports were also high. Overall, the significant correlations between daily experiences and global ratings of support suggest that the more choice, enjoyment, interest and motivation students have about an activity, the more supportive they rate the activity in terms of relationships, autonomy, leadership and interest.

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Chapter One

Statement of Purpose

Since the early 1990's, there has been a shift in the approach researchers, practitioners and policy-makers have taken when addressing youth issues. The field is moving from a focus on intervention and crisis to one that views adolescent development in terms of assets and supports (Larson, 2000; Scales & Leffert, 1999; Quinn, 1999; Catalano, et al., 1998). Programs and activities developed for youth reflect this shift, with a general focus on promoting normal development and building competencies (Quinn, 1999; Halpern, 1999). Within this general framework, programs may be specifically aimed at providing a safe environment for students during the after-school hours (Halpern, 1999). They may be enrichment programs aimed at reinforcing basic academic skills such as reading and math (Catalano, et al., 1998; Fashola, 1998), computer skills (Mayer, et al, 1999), and peer tutoring (Hahn, Leavitt, & Aaron, 1994). After-school programs also may be designed to foster positive relations between students and peers, students and adults, and the school and the community (Walker, et al, 2000; Pierce & Shields, 1998).

Programs that are available to youth in the after-school hours also vary in location, sponsorship, attendance requirements and participation opportunities (Fashola, 1998; Gambone & Arbreton, 1997). Programs may be located in schools, community centers, or other community buildings. Various organizations sponsor after-school programs for youth, such as cities, school districts, YMCA's, Boys and Girls Clubs of America. Programs are also funded through national, state and local initiatives. Programs range from school-based programs that require students to attend to drop-in programs at YMCA's or Boys and Girls Clubs. In addition, these after-school programs vary in the participants they service; some serve a limited age range such

as the Quantum Opportunities Program which serves youth in grades 9 – 12 or the Be A Star program which serves children ages 5 – 12 (Hahn, Leavitt, & Aaron, 1994; Pierce & Shields, 1998). Other programs, such as Boys and Girls Clubs, serve all school-age children and adolescents in the area (National Research Council and Institute of Medicine, 2000). Across this varied array of after-school activities in which middle school youth participate, lies a potential context in which positive youth development can occur (Kahne, et al, 2001; Larson, 2000; Quinn, 1999).

This dissertation considers students' experiences at school-based after-school and youth programs in terms of the developmental supports that the programs provide. In particular, supportive relationships with adults, supportive relationships with peers, opportunities for autonomy and leadership, and interest in activities are the developmental assets or supports that are measured. Using two approaches to measure students' experiences, I examined (a) if global perceptions of support vary by program and are stable over time, (b) if global perceptions of support vary by activity type, (c) if global perceptions of support vary by child and family characteristics including gender, ethnicity, prior adjustment and family structure, (d) if global ratings of support are associated with sustained attendance, and finally (e) if global perceptions of support are related to minute-to-minute ratings of experiences.

After-school program experiences are assessed for 191 eighth grade students in three communities. The students attended eight school-based after-school programs. Students described their after-school experiences using two measurement strategies. First, during 1 week periods in the fall and spring, students recorded in small logbooks, their location, whether or not they were attending an after-school program, their activity, companions, and feelings, five times each day during the after-school hours and on weekends, using Experience Sampling

Methodology. Second, students described their experiences at programs more globally using the Developmental Supports Rating Scale (DSRS). The DSRS was adapted from the Public/Private Ventures Youth Survey (Gambone and Arbreton, 1997) by this investigator explicitly for this study.

The DSRS assesses students' experiences in programs on four broad areas of support posited to foster positive youth development: supportive relationships with adults, supportive relationships with peers, engagement in activities, and opportunities for autonomy and leadership (Eccles & Gootman, 2002; Larson, 2000; Scales & Leffert, 1999; Catalano, et al, 1998; Gambone & Arbreton, 1997; Rosenthal & Vandell, 1996). Understanding the extent to which after-school programs are successful in providing students with these development supports and experiences has value as a marker of program quality.

The first aim of the current study was to examine students' perceptions of support in eight school-based after-school programs. The current study also considered involvement in after-school programs longitudinally by investigating consistency and change in perceptions of after-school programs from fall to spring of an academic year.

The second aim of the current study was to examine whether students' ratings of developmental supports differ by activity type. Previous research has noted that different types of activities are differentially associated with student outcomes. For example, students who participated in sports have been reported to have positive educational trajectories. Participation in school-related activities has been associated with less truancy, less drug use, and lower dropout rates relative to non-participants. Participation in prosocial activities was associated with high achievement and college plans (Bryant, Gao, & Zimmerman, 2002; Larson, 2000; Eccles and Barber, 1999; Mahoney & Cairns, 1997). One possible explanation for these

differential relations between activities and adolescent outcomes is that different types of after-school activities provide students with experiences that vary in support, autonomy and engagement. The current study investigated whether students' perceptions of support vary by type of activity. Activities were classified into four types: academic, arts, sports, and service. It was expected that differences in perceptions of support would be found such that academic activities will receive the lowest ratings of support.

Previous research has found patterns of program participation and program effects to vary by particular child characteristics. Studies have found girls participate in more types of activities than boys; boys participate in sports more often than girls; African-American boys participate in sports activities more than European-American boys (Bryant, Gao, & Zimmerman, 2002; Larson, 2000; Cooper, Valentine, Nye and Lindsay, 1999; Eccles & Barber, 1999; Pierce, Hamm, & Vandell, 1999; Mahoney & Cairns, 1997). The third aim of this dissertation extends this line of inquiry by examining these characteristics as selection factors and examining how students' perceptions of the supports they receive while attending after-school programs vary by gender, ethnicity, prior adjustment and family structure. Students' perceptions of support may help to explain why previous research has found differences in participation rates and in program effectiveness.

As noted in the Carnegie Report "A Matter of Time," (Carnegie Corporation, 1992) and The Committee on Community-Level Programs for Youth Report "Community Programs to Promote Youth Development" (Eccles and Gootman, 2002), programs that service young adolescents are fluid. Middle school students are believed to "vote with their feet" and move in and out of programs more frequently than younger students for whom after-school programs act as child care (Eccles & Gootman, 2002; Quinn, 1999). One possible reason students drop out of

programs is that their developmental needs are not being met. The fourth aim of the current study examines associations between perceptions of support and sustained program attendance. It was expected that those students who rate programs more positively would be more likely to remain in the same programs throughout the school year.

The fifth and final aim of the current study was to examine relations among experiences in programs reported via Experience Sampling methods, and ratings on specific scales of the Developmental Supports Rating Scale. Linking the Experience Sampling data with ratings on the Developmental Supports Rating Scale will allow associations between minute-by-minute ratings of experiences and more global perceptions of support to be examined. It was expected that students' reports of experiences via ESM would be correlated with ratings of support on the Developmental Supports Rating Scale such that more positive daily experiences are associated with higher ratings of support.

Chapter Two

Background

Theoretical Framework

Developmental changes experienced during adolescence, whether they are positive or negative, can be seen as a result of the dynamic interaction between the individual and his/her social contexts (Richman & Bowen, 1997). Eccles and colleagues (1993) suggest that development is influenced by the "fit" between the individual and the social environment. They propose a stage-environment fit perspective, which posits that the environment should fit or meet the current developmental needs of the individual, while also stimulating further development. An appropriate fit between individual and social context can result in optimal development, while an inappropriate fit can fail to promote positive development. The concept of stage-environment fit reflects the changing interactions between person and environment over time (Eccles, et al, 1993). Goodness-of-fit is achieved when the demands of the environment are appropriate to the current emotional, cognitive, social and psychological needs of the child (Richman & Bowen, 1997).

There are two main components of the stage-environment fit perspective. First is the developmental component. The developmental process is a "joint function of the context and the individual" (Larson, 2000, p. 179) and the individual's preparedness to engage in the environment must be identified. This suggests that the developmental stage of the individual needs to "fit" with the social environment. Adolescent development is characterized by capacity for abstract cognitive pursuit, peer orientation, increased desire for autonomy and self-focus and self-determination (Eccles et al, 1993).

The second component of the stage-environment fit perspective is the environment. This includes the context in which the individual is situated, as well as the additional environments that influence that context (Richman & Bowen, 1997). In the current study, after-school activities are the context of interest, and acting on them are a variety of additional contexts such as the school, community, neighborhood, city, and the political climate.

Eccles and colleagues (1993) employed the stage-environment fit perspective to examine school and family contexts and their impact on adolescent development. Their work suggests that the unique nature of early adolescence in contemporary America is explained in part by the interaction of developmental changes and changes in the social environment (Eccles, et al, 1993). Negative changes or outcomes may be due less to the individual and more to a mismatch between individual and social environment. Eccles and colleagues (1993) suggest that at a time when young adolescents need increased opportunities for decision making, autonomy, and participation in the classroom, middle school environments offer young adolescents fewer chances for these and are less likely to foster opportunities to develop close relationships with teachers (Eccles, et al, 1993). Thus, the stage-environment fit perspective suggests that difficulty is not inherent in being an adolescent, but rather, environments that are unsuitable to the developmental needs of adolescents lead to difficulty. The current study extends the stage-environment fit perspective to include after-school environments.

Scholars have suggested that after-school activities have more freedom than schools to provide a social environment that fits with the developmental needs of early adolescents (Eccles, 1999; Halpern, 2000). Kahne and colleagues (2001) collected questionnaire data from 125 African-American 6^{th} – 10^{th} grade students comparing experiences in three after-school programs with experiences during the regular school day. Those attending one of the three after-

school programs completed the questionnaire while at the program; other students completed the questionnaire in the regular classroom. All students also rated their regular school day experiences using the same questionnaire. The questionnaire used items adapted from the Public/Private Ventures Youth Survey (Gambone and Arbreton, 1997). Three scales were identified: Affective Context (items include: I wish I could spend more time here, I feel comfortable hanging out, I feel like I belong, Adults criticize me for no good reason), Supports for Youth Development (items include: I learn important things, Adults pay attention to what is going on I in my life, I learn how to solve problems in society), and Opportunities for Youth as Resources (items include: I have been in charge of a group, I counseled or tutored others, I helped solve a conflict or argument) (Kahne, et al., 2001). Comparisons were made between ratings on the survey reflecting after-school program experiences and experiences during the regular school day. Study findings suggest that students experience more opportunities for support and more positive affective contexts when at an after-school program than when at school (Kahne, et al., 2001). It is not clear in this study, however, what types of activities students participated in while at the programs. The purpose of the current study was to examine how perceptions of support vary across after-school programs and specific activity types (academic, arts, sports, and service) within those programs.

The stage-environment fit framework suggests that environments that are developmentally appropriate and meet the developmental needs of the participants will support current and future development. In order to examine after-school activities within a stage-environment fit framework, the developmental needs of young adolescents must be exactly defined. The following section summarizes the research in the area of defining developmental needs and supports of adolescents.

Developmental Assets and Supports for Adolescents

Researchers at the Search Institute in Minneapolis, Minnesota generated a list of 40 developmental assets that they argue contribute to healthy youth development (Scales & Leffert, 1999; Benson, 1997). Their developmental assets model grew out of a synthesis of the empirical research of child and adolescent development. The objective of defining these assets was to identify the developmental factors associated with prevention of risky behaviors, enhancement of thriving outcomes, and resiliency (Benson, Leffert, Scales & Blyth; 1998). The 40 assets are "the building blocks that all youth need to be healthy, caring, principled, and productive" (Scales & Leffert, 1999; p. 5). In Table 1, I summarize proposed sets of assets or supports that have been hypothesized by researchers to promote positive adolescent development.

The 40 assets are grouped into eight categories, four external to the child and four internal to the child. The external categories include *support, empowerment, boundaries and expectations,* and *constructive use of time.* The *support* asset refers to the support provided youth by the adults in their lives. This includes the love and acceptance they receive. *Empowerment* refers to the community's acceptance and belief about its youth. *Boundaries and expectations* are placed on youth by both families and communities and provide consistent expectations for behaviors and attitudes. Families and communities also provide youth with the asset of *constructive use of time.* Communities, schools and families provide constructive environments in which youth spend their time, such as after-school, community and youth programs (Scales & Leffert, 1999). The internal categories are *commitment to learning, positive values, social competencies* and *positive identity*; and they refer to the "internal compasses" of

Table 1. Developmental Assets

Scales & Leffert (1999) Benson, et al. (1998) Benson (1997)	**External Assets**	**Internal Assets**
	Support	*Commitment to Learning*
	Family support	Achievement motivation
	Positive family communication	School engagement
	Other adult relationships	Homework
	Caring neighborhood	Bonding to school
	Caring school climate	Reading for pleasure
	Parent involvement in schooling	*Positive Values*
	Empowerment	Caring
	Community values youth	Equality and social justice
	Youth as resources	Integrity
	Service to others	Honesty
	Safety	Responsibility
	Boundaries and Expectations	Restraint
	Family boundaries	*Social Competencies*
	School boundaries	Planning and decision making
	Neighborhood boundaries	Interpersonal competence
	Adult role models	Cultural competence
	Positive peer influence	Resistance skills
	High expectations	Peaceful conflict resolution
	Constructive Use of Time	*Personal Power*
	Creative activities	Personal power
	Youth programs	Self-esteem
	Religious community	Sense of purpose
	Time at home	Positive view of personal future

youth. Intrinsic motivation to learn, being connected to school and community, maintaining values and a positive sense of one's self are encompassed in these internal assets (Scales & Leffert, 1999).

The 40 developmental assets were measured using the *Profiles of Student Life: Attitudes and Behaviors*, a self-report measure designed for students in 6^{th} – 12^{th} grade. In a report based on 99,462 respondents in grades 6 - 12 in 213 communities across the United States (Benson, Scales, Leffert, & Roehlkepartain, 1999), the authors describe the state of developmental assets among youth. In their sample, 59% of youth reported participating in a youth program and 19% reported participating in creative activities such as music or performing arts (Benson, Scales, Leffert, & Roehlkepartain, 1999). This report examines students' access to 40 developmental assets but did not measure the *quality* of their experiences. In the current study, I build on the developmental assets model by examining the *quality* of students' experiences within after-school programs and activities.

Within the developmental assets model, after-school or youth programs are considered an asset to youth. Specifically, high quality programs are viewed as supporting the *constructive use of time* asset for those youth spending three or more hours per week participating (Scales & Leffert, 1999). The current study also is based on the premise that attending a youth program is an asset for adolescents. However, the current research conceptualizes the after-school programs and activities as contexts in which youth may have access to various developmental assets and supports. This dissertation extends this research by determining the kinds of assets provided by after-school programs, and directly measuring students' experiences at programs during different types of activities.

Eccles and Gootman (2002) and the Committee on Community-Level Programs for Youth, described five areas of personal and social assets thought to facilitate positive youth development and well-being (See Table 2): *physical, intellectual, psychological and emotional,* and *social development. Physical* development includes good health habits and risk management skills. *Intellectual* development includes being successful at school, having good decision-making skills, developing good critical thinking and reasoning skills, and developing essential life and vocational skills. Knowledge of culture and the ability to function in multiple cultural contexts are also part of the intellectual development asset. Inherent in the *psychological and emotional* development asset are good mental health, a positive self-image, good coping skills, good conflict resolution skills, "planfulness", a positive social identity, a strong moral character, and a commitment to good use of time. The *social* development asset involves connectedness and attachment to family, peers and community.

Eccles and colleagues (2002) suggest that specific contexts, which provide positive experiences and opportunities for developing positive relations, will enable youth to acquire these assets. After-school programs and activities may be a context that provides the kinds of experiences needed to develop the personal and social assets defined here.

These two conceptualizations of the assets, which were developed by the Search Institute and Eccles et al, represent complementary perspectives. The Search Institute's Assets approach covers external and internal aspects of the lives of youth, while Eccles and Gootman focus on a personal perspective. The two taken together give a picture of the kinds of environments, relationships and personal characteristics that work in concert to support the positive developmental trajectories of young adolescents.

Table 2. Developmental Supports

Eccles & Gootman (2002)	**Personal and Social Assets**
	Physical development
	Good health habits
	Good health risk management skills
	Intellectual development
	Knowledge of life skills
	Knowledge of vocations skills
	School success
	Critical thinking skills
	In-depth knowledge of more than one cultural
	Good decision-making skills
	Psychological and emotional development
	Good mental health
	Good emotional self-regulation
	Good coping skills
	Good conflict resolution skills
	Person efficacy
	"Planfulness" - planning for the future
	Personal autonomy
	Coherent personal and social identity
	Prosocial and culturally sensitive values
	Spirituality
	Moral character
	Commitment to good use of time
	Social development
	Connectedness
	Sense of social place
	Attachment to prosocial institutions
	Ability to navigate in multiple cultural contexts
	Commitment to civic engagement

Other research groups have also considered specific elements of after-school programs and activities that are posited to act as supports or assets for youth (See Table 3). McLaughlin, Irby and Langman (1994) conducted field research using ethnographic interviews and observations to determine how neighborhood organizations in three urban areas were successfully meeting the needs of their youth participants. This research involved 120 organizations serving over 30,000 young adolescents. Based on five years of interviews by and with youth and program leaders, a set of program characteristics emerged as fundamental to the successful impact of these programs on the lives of the neighborhood youth. Programs need to be safe, with clear and consistent rules. Youth need to be listened to and take part in decision-making. Programs need to facilitate the development of positive relationships with both peers and adults. Program curricula need to offer a generous number and type of activities and the activities involve real work and real responsibility. There also needs to be a future focus to the program (McLaughlin, Irby, & Langman, 1994).

Drawing on theories and research on adolescents, as well as advice from youth service providers, Gambone and Arbreton (1997) proposed a similar set of program elements that they posit predict positive youth development: *a sense of safety, challenging and interesting activities, a sense of belonging, social support from adults, input and decision-making, leadership,* and *volunteer and community service. A sense of safety* includes safety within the building as well as safe passage to and from the program. *Challenging and interesting activities* incorporate a wide range of activities that provide unique experiences, and allow youth to have input into the selection of activities. *Belonging* includes designating spaces as "youth owned", reinforcing membership, giving youth the opportunity to contribute and attempting to hire staff

Table 3. Proposed Features of Positive Developmental Settings

McLaughlin, Irby and Langman (1994)	**Gambone & Arbreton** (1997)	**Eccles & Gootman** (2002)
Safe place to be	Safety	Physical and psychological safety
Youth must be listened to and take part in decision-making	Input and decision-making	Positive social norms
Activities need to involve real work and real responsibility	Challenging and interesting activities	Opportunities for skill building
Generous number and type of activities	Community service	Appropriate structure
Clear and consistent rules	Leadership	Support for efficacy and mattering
Opportunities to develop positive relationships with peers and adults	Social support from adults	Integration of family, school, and community efforts
Future focus to the program	Belonging	Supportive relationships
		Opportunities to belong

that represent the youth participants in terms of ethnicity and gender. *Social support from adults* includes opportunities for youth and staff to meet informally, maintaining a stable staff and reasonable staff-youth ratio. *Input and decision-making* ensures that youth have input in policy and program structure decisions, and input into activity selection and choices. *Leadership* opportunities include leadership training, service on councils and governing positions, group leaders and representatives as well as chances to explore job opportunities. *Volunteer and community service* opportunities include chances to be involved in both formal service clubs and service projects (Gambone & Arbreton, 1997). Their premise is that "if young people are given the developmental tools needed to master the tasks of adolescence, fewer teens will make the serious mistakes and unhealthy choices whose consequences, in the end, require public intervention." (Gambone & Arbreton, 1997; p. 2).

Eccles and Gootman also proposed specific after-school program features that may facilitate positive development. Those features include: *physical and psychological safety, appropriate structure, supportive relationships, opportunities to belong, positive social norms, support for efficacy and mattering, opportunities for skill building*, and *integration of family, school and community*. *Physical and psychological safety* include safe facilities as well as practices that encourage safe peer group interactions. *Appropriate structure* refers to limit setting and providing youth with clear, consistent rules and boundaries. *Supportive relationships* are characterized by closeness, good communication, support and guidance. *Opportunities to belong* include meaningful inclusion, engagement, and support of cultural and social identity. *Positive social norms* are rules of behaviors and expectations that include values and morals. *Support for efficacy and mattering* are practices that support autonomy, independence, and responsibility in youth participants. *Opportunities for skill building* include exposure to

intentional learning experiences and preparations for employment. *Integration of family, school, and community efforts* implies cooperation and a connectedness with family, school, and community (Eccles & Gootman, 2002). They propose that these features work together, and therefore programs with more features are likely to afford greater support for students' positive development (Eccles & Gootman, 2002).

There are notable limitations to these studies. First, they provide little empirical evidence to substantiate the influence of assets, supports and features on positive youth development. Second, while these elements are posited to work together in support of development, little evidence is provided about the mechanisms that impact positive youth development. The current study expands on the above research to determine specific program supports that can promote positive development. A better understanding of how youth perceive these supports has implication for targeting and tailoring after-school programs and services to more effectively meet the differing needs of the youth they serve. These supports are: 1) supportive relationships with adults, 2) supportive relationships with peers, 3) engagement in activities, and 4) opportunities for autonomy and leadership.

Measuring Developmental Supports within After-School Programs and Activities

In this section I examine how the four developmental supports (supportive relationships with adults, supportive relationships with peers, opportunities for autonomy and leadership, and interest in activities) have been measured in previous research on after-school programs and activities. This review suggests that while investigators posit that programs provide students with experiences in each of the four developmental areas, few studies measure the supports explicitly. It is also the case that for some studies that do measure supports directly; a single method approach is used to measure students' experiences.

Supportive Relationships with Adults

Mentoring is one way that adults support young adolescents. In a random assignment experiment, Grossman and Tierney (1998) examined the effects of mentoring on 1,138 youth aged 10 to 16 years who participated in the Big Brothers /Big Sisters programs at eight sites. When youth arrived at the program for the intake procedures, they were randomly assigned to the treatment group and matched with a mentor immediately or placed on a waiting list (control group). The analysis group consists of 959 youth (487 treatment, 472 control). Most youth were ethnic minorities and more than 40% reported receiving public assistance/food stamps. No significant differences on background characteristics were found between treatment and control groups (Grossman & Tierney, 1998).

Treatment and control students completed baseline and follow-up questionnaires; the findings reported are inferred from the outcome data obtained. Findings suggest that adult mentors acted as positive role models, encouraged youth to become involved in prosocial activities, and helped youth to learn to cope with peer pressures. Mentored youth were less likely to engage in risky behaviors such as drug and alcohol use and aggressive behaviors. Treatment students were less likely to start using illegal drugs and alcohol during the study period and during the 18-month follow-up. Treatment youth also were less likely to resort to violence (hitting) than control group youth (Grossman & Tierney, 1998).

Mentors served as examples of the importance of education and a positive attitude about school. Treatment youth reported slightly better grades, with girls reporting the largest difference. Students involved with mentors were more confident about their academic ability and less likely to skip school (Herrara, Sipe, & McClanahan, 2000; Fashola, 1998; Grossman & Tierney, 1998).

Grossman and Tierney did not, however, measure students' experiences with their adult mentors. So while their findings suggest that mentoring has a positive effect on youth outcomes, the specific aspects of the mentoring relationship that may have been most effective were not measured. In the current study, students rate their overall perceptions of their relationships with adults in the after-school programs on the DSRS.

Mentoring is a clear example of the opportunity to develop a supportive relationship with an adult, yet many after-school environments do not provide youth with one-on-one mentoring. Can supportive relationships be built in a group setting? McLaughlin, Irby and Langman's (1994) ethnographic data suggest that the "wizards" or adult program staff at the neighborhood centers they observed were crucial to the success of the youth participants and the program in general.

In a longitudinal study of after-school care for school-aged children, Vandell and Pierce (2001) measured levels of supportive adult relationships among students and program staff as well as general experiences of students from 1st through 5th grade. In that research, trained observers evaluated the program along seven dimensions: positive regard, negative regard, positive behavior management, negative behavior management, flexible programming, availability of age-appropriate activities, and chaotic environment. These ratings were averaged across multiple observations to create an average quality score. In addition to these qualitative ratings, observers used the School-Age Care Environment Rating Scale (SACERS) to evaluate six program features including interactions between staff and students (Vandell & Pierce, 2001). In addition, students were asked to rate their program experiences via the After-school Environment Scale (ASES). The ASES has three scales, which measure the students' perceptions of the psychosocial climate of the after-school program: peer affiliation, emotional

support, and autonomy/privacy (Rosenthal & Vandell, 1996). Nineteen items on this instrument compose the "emotional support" subscale.

Findings from this research suggest that positive relations with program staff were associated with fewer behavior problems and improved peer relations in first, third and fifth grades (Vandell & Pierce, 2001; Pierce, Hamm, & Vandell, 1999). High levels of emotional support from staff were associated with less loneliness and depression when children were in 3rd and 4th grades (Vandell & Pierce, 2001). This research is important for several reasons. It examined student experiences longitudinally and information was collected from several sources, including children, parents, and observers. The current study builds on this research by extending consideration to middle school students, focusing on four specific developmental supports and including a broad range of after-school programs and activities. The current study asks youth directly about the kind of supports they experience from the adults involved in their after-school programs and activities.

Kahn and colleagues (2001), in their study comparing school and after-school experiences, surveyed students about their relationships with adults in both school and after-school settings. Items on the Affective Context and Supports for Youth Development subscales related to the quality of adult relationships. As noted earlier, students reported having more supports for development during the after-school program than during the school day. Comparisons were also made between school-based and community-based after-school programs. Students in school-based programs reported having more supports for development during the school day than did students attending community-based programs. There were however, no differences in perceived support between the two after-school settings (Kahne, et al, 2001). These results suggest that during the after-school hours, school-based programs may

allow students to form positive relationships with adults within the school system that extend to the regular school day.

In The After-School Corporation (TASC) Evaluation, White and colleagues (2001) also collected student survey data to examine students' experiences while attending after-school programs. The study involved 42 schools serving elementary and middle school students. Participating schools were located in 28 of the 32 New York City school districts. The 1,897 student participants who completed surveys were predominantly Hispanic or African-American, and 88% qualified for free or reduced lunch (White, Reisner, Welsh & Russell, 2001; Reisner, White, Birmingham & Welsh, 2001).

The scales embedded in the TASC survey include: program connection/community, TASC opportunities, staff interactions, trust of staff, academic benefits (of the after-school program), and academic self-esteem (general). These scales were pulled from various existing measures including the After-School Environment Rating Scale (Rosenthal & Vandell, 1996), and the Public/Private Ventures Youth Survey (Gambone & Arbreton, 1997). Results from year one and two of the evaluation suggest that high school students have more positive relations with program staff than do middle school students. Surprisingly, students who reported negative interactions with program staff reported higher program attendance than other students (White, Reisner, Welsh & Russell, 2001).

This study is limited in that the TASC surveys are anonymous and therefore the two time points cannot be connected for individual students, and student surveys can only be linked to project-level aggregate data. This limits the usefulness of this instrument in that reported experiences could not be directly linked to academic achievement and school attendance outcomes, or to parent surveys.

Gambone and Arbreton (1997) developed the Public/Private Ventures Youth Survey to evaluate the effectiveness of youth programs in terms of the developmental supports and experiences offered to participants. Volunteer Youth Service Organizations (VYSO) were specifically targeted due to their inherent mission of supporting youth development. The programs evaluated in this study included: Boys and Girls Clubs (in Boston, Chicago, Denver, New York, San Francisco), Girls Incorporated (an organization serving only girls, located in Dallas, Newark DE, Rapid City, Sioux City, Omaha), and YMCA (Flushing, San Antonio, Newark NJ, Kansas City, Fort Wayne). These sites were chosen because they represent exemplar sites within each organization (Gambone & Arbreton, 1997).

The survey adapted items from existing scales to measure developmental supports and opportunities, from several sources. The seven areas addressed on the survey are: leadership, social support from adults, challenging and interesting activities, belonging, input and decision-making, safety, and community service. Program staff recruited students (ages 10-18) who had participated in the program during the past year, to complete the survey. Data were weighted to correct for biases created by these data collection methods (Gambone & Arbreton, 1997).

The study was not designed to examine outcomes in relation to VYSO participation; therefore no outcome measures were collected. The survey data were analyzed to examine how participants perceived the developmental supports and opportunities available at each program site. Two-thirds of the students surveyed indicated having at least one adult at the program with whom they had a supportive relationship.

While these three studies (Kahne, et al., 2001; TASC, 2001; Gambone & Arbreton, 1997) are different in their design and purpose, they used similar methods to understand students' after-school program experiences. One strength of all three is the direct measurement of student

experiences. These studies are limited, however, in that they cannot connect the general "satisfaction with program" measures to students' specific experiences while involved in after-school programs or activities. In the design of the current study, specific experiences as measured by the Experience Sampling methodology are linked to students' more general perceptions of the supports they receive, yielding a more comprehensive picture of their after-school program experiences.

Supportive Relationships with Peers

A careful examination of the program evaluations and developmental research on after-school programs and activities suggests that fostering positive and supportive relationships with peers is often a program goal, but in many cases it is not directly measured (Cooper, Valentine, Nye & Lindsay, 1999; Pierce & Shields, 1998; Roth, Brooks-Gunn, Murray, & Foster, 1998; Hahn, Leavitt & Aaron, 1994). For example, the *Quantum Opportunities* program (Hahn, Leavitt & Aaron, 1994) and the *Be A Star* program (Pierce & Shields, 1998) are two after-school programs whose curriculum specifically addresses peer relationships. The *Quantum Opportunities* program is designed to begin in 9th grade and follow students through high school. The after-school program includes a peer-tutoring component. Although students completed questionnaires measuring outcome variables, no measures of student experiences were collected in the program evaluation (Hahn, Leavitt & Aaron, 1994). Findings from the program evaluation, however, indicate that student participants had positive outcomes related to high school completion and subsequent college attendance. These findings suggest that peer tutoring may function as a developmental support, thereby facilitating positive developmental outcomes.

The *Be A Star* after-school program serves children between the ages of 5 and 12 years. The program utilizes a curriculum that encourages positive peer interactions through group

discussions, games, and activities (Pierce & Shields, 1998). The "Revised Individual Protection Factor Index" was used as a standardized outcome measure for the 9-10 and 11-12 age groups (Treatment N = 386; Comparison N = 397). Significant differences were found for: prosocial behavior, emotional awareness, cooperation, confidence, school bonding, and self-efficacy, attitudes towards drugs and alcohol, and African-American cultures. In each case, differences were in the expected direction (Pierce & Shields, 1998). While these results indicate positive program effectiveness, the relative efficacy of supportive relationships with peers was not directly measured.

Cooper, Valentine, Nye & Lindsay (1999) examined middle and high school students participation in structured after-school groups involving peers. Students who participated in this type of after-school program had higher academic achievement, higher achievement test scores, and higher teacher reported grades than did students participating in other kinds of after-school programs (Cooper, Valentine, Nye & Lindsay, 1999). However, no measures of student experiences or ratings of peer support were collected.

Vandell and Pierce (2001) have evaluated peer relations via observations, child and mother report. In their research on school-aged after-school care, positive peer relations were related to general measures of child well-being (Vandell & Pierce, 2001). Students reported feeling less lonely when they attended programs that provided more peer support, more emotional support and more opportunities for autonomy and privacy. These relationships were stronger for girls than for boys (Vandell & Pierce, 2001).

The TASC evaluation adapted items from the ASES (Rosenthal & Vandell, 1996) Peer Affiliation Scale for use with elementary students (Reisner, White, Birmingham & Welsh, 2001). For students in grades 4 – 5, 87% reported experiencing positive interactions with peers at the

after-school programs. For students who attended a combined elementary and middle school program, 89% reported positive interactions with peers (Reisner, White, Birmingham & Welsh, 2001).

Opportunities for Leadership and Autonomy

Middle school is a time when young adolescents are acquiring the skills and sense of identity that will carry them into adulthood (Halpern, 2000: Larson, 2000; Eccles, 1999). Out-of-school environments that provide youth opportunities for decision-making and autonomy are posited to be associated with positive developmental outcomes (Gambone & Arbreton, 1997).

Gambone and Arbreton (1997) found that 71% of students reported having the opportunity to participate in at least one leadership activity in the past year. The VYSOs participating in the study all had national leadership training programs that involve youth participants in service, advocacy, and the political process (Gambone & Arbreton, 1997). Of the youth participants surveyed, 60% reported having some opportunities for input and decision-making within the context of the after-school program. Most often, decision-making involved choosing activities and activity partners. In over half the programs, youth had opportunities to develop rules for the program (Gambone & Arbreton, 1997). These data were primarily descriptive and were not linked to student outcomes, but were used to describe the experiences students had while attending the VYSOs.

The current study uses an adaptation of the Gambone and Arbreton instrument and extends their research by examining whether daily experiences at an after-school program or activity predict overall ratings of support and by examining how perceptions of support might vary by activity type as well as by child and family characteristics.

Engagement in Activities

Rosenthal and Vandell (1996) examined the relations among children's experiences in after-school programs and various program features for 180 3-5th grade students. The students reported their experiences via the After-School Environment Scale (ASES). Results suggest that programs that offer more and varied activities are reported by students to be more emotionally supportive (Rosenthal & Vandell, 1996). In a sample of low-income elementary students, enrichment activities have also been associated with better peer relations and work habits, as well as better emotional adjustment (Posner & Vandell, 1994).

The TASC evaluation asked elementary and middle school students about their opportunities to participate in new, interesting, and challenging activities while at their after-school program (Reisner, White, Birmingham & Welsh, 2001). Middle school students reported fewer opportunities for new experiences than did elementary or high school students. Students who reported having more opportunities with new and interesting activities also reported attending their after-school program more often. High scores on this subscale were associated with feelings of academic success (Reisner, White, Birmingham & Welsh, 2001).

Gambone and Arbreton (1997) also surveyed students attending VYSOs about their opportunities to engage in challenging and interesting activities. For students attending VYSOs, 60% reported that they had opportunities to participate in challenging and interesting activities at least some of the time. The types of activities included sports, computer, arts, community service, health, and leadership training (Gambone & Arbreton, 1997).

Scales, and colleagues (2000) approached participation in an after-school program or youth activity a little differently. They conceptualize the program as an asset rather than as context that might provide assets. They investigated the effects of gender, grade, ethnicity and assets on 7 thriving indicators: school success, leadership, valuing diversity, physical health,

helping others, delay of gratification, and overcoming adversity. Their sample included 6,000 (1,000 in each of six ethnic groups) 6^{th} – 12^{th} grade students, from across the country. All students completed the Search Institute Profiles of Student Life: Attitudes and Behaviors (PSL-AB) during the 1996-1997 school year. The "Time in youth program" asset is defined as spending three or more hours per week participating in a program. The PSL-AB items that contributed to this asset are:

> During an average week, how many hours do you spend:
> - Playing on or helping with sports teams at school or in the community
> - In clubs or organizations (other than sports) at school (for example, school newspaper, student government, school plays, language clubs, hobby clubs, drama club, debate)
> - In clubs or organizations (other than sports) outside of school (such as 4-H, Scouts, Boys and Girls Clubs, YWCA, YMCA) (Benson, Scales, Leffert, & Roehlkepartain, 1999).

They found that time spent in youth programs contributed to thriving behaviors, both the composite thriving index as well as to individual thriving behaviors. Time spent in a youth program predicted school success for all ethnic groups except African-American. This asset predicted leadership, helping others, physical health and overcoming adversity for all ethnic groups (Scales, Benson, Leffert, & Blyth, 2000). Although these data seem to support the proposition that time spent at a youth program is an asset, the data do not illuminate the mechanisms that account for the relationship between program attendance and thriving. While this conceptualization of after-school programs as an asset rather than as providing support differs from the previously summarized research, it still has relevance for this study. The findings indicating that time in programs contributes to thriving suggest that developmental benefits are derived from program involvement. This supports the premise of the current

research that assessing student experiences at an after-school program is crucial to understanding program effectiveness.

Although some after-school program evaluations have measured students' experiences in relation to developmental supports, in many cases, student-report instruments are frequently measures of overall program satisfaction and do not assess specific student experiences. This study builds on past research by measuring students' perceptions of the developmental supports they receive in their after-school programs, specifically examining supportive relationships with adults and with peers, opportunities for autonomy and leadership, and interest in activities. It extends previous research by including a large range of after-school program and activity types and student experiences, and by examining these longitudinally.

The current study also links two methods by which students report on their experiences. Experience Sampling Method (ESM) is used to track students' subjective daily experiences at a program over the course of one week. The ESM makes it possible to know what a student is doing at a given time and to assess how a student responds emotionally to each experience. It is therefore possible to learn how important a particular activity is and how much the student enjoys the activity. The current study examines relations between minute-by-minute ratings of specific activities to the overall, global perceptions of support obtained on the Developmental Supports Rating Scale in order to create a more comprehensive record of students' experiences in after-school programs and activities.

Activity Variations in After-School Program Experiences

Previous research on after-school experiences has reported variations in student outcomes for different types of activities. Gender and ethnic differences in participation rates have also been reported. In this section I review the research related to types of activities, gender and

ethnicity in after-school experiences and propose that variations may be related to students' perceptions of developmental supports.

Previous research on after-school care has reported variations in student outcomes for different types of activities. The current study extends research in this area by asking if students' perceptions of developmental supports (as measured by the DSRS) vary for different after-school activities.

Cooper, Valentine, Nye and Lindsay (1999) surveyed 424 6^{th} – 12 grade students and their parents about participation in extracurricular activities. Specifically, participants were questioned about their involvement in homework, T.V. viewing, school-based activities, other out-of-school groups and paid employment. Data were gathered from both parent and student in order to obtain a more precise estimation of time use and to construct a composite measure of activity. Student demographic characteristics were obtained and included gender, ethnicity, and, free/reduced lunch eligibility. Analyses were conducted to determine the relationship between time spent in an extracurricular activity and academic achievement (as measured by grades, achievement test scores, and grades after controlling for achievement test scores). The relationships between activity and outcome were found to vary by type of activity. Students spending time in structured group activities had higher achievement test scores. Time spent on homework and in school-based activities was positively related to grades. Students who spent time working were found to have somewhat lower achievement test scores, but higher grades (Cooper, Valentine, Nye and Lindsay, 1999).

Bryant, Gao and Zimmerman (2002) also examined associations between involvement in extracurricular activities and academic outcomes among high school students. They examined associations between activity type and problem behaviors. Three types of activities were

considered: school-based activities, church or religious activities, and non-school or church related activities. These three types were then clustered into prosocial activities (church youth group, choir, school service groups, community service organizations, and volunteer work), school-related activities (school clubs, school music and band, school government), and sports. Their sample consisted of 850 9th grade students who were followed for four years. Regression analyses and t-tests were used to examine effects of participation on outcomes. Self-reports, collected when students were in 12th grade, included substance use, depression and self-acceptance, truancy, school bonding, and academic achievement (G.P.A.). Demographic controls included gender, ethnicity, and parental education.

Participation in sports was negatively associated with cigarette use and depression while being positively associated with G.P.A. and plans for attending college. Students involved in prosocial activities were less likely to use alcohol, cigarettes and marijuana and more likely to make plans for college. Students participating in school-related activities were less likely to use cigarettes and marijuana and to be truant than non-participants. (Bryant, Gao and Zimmerman, 2002). The processes by which participation in these various activities may impact achievement and behavior were not identified and measured.

Eccles and Barber (1999) investigated the possible benefits and risks associated with participation in extracurricular activities. Specific activities were clustered into five categories: prosocial activities, performance activities, school involvement, team sports and academic clubs. They surveyed 1,259 students who were participants in a larger, longitudinal study. Outcome data was collected when most students were in 12th grade and included measures of risky behaviors, G.P.A., and standardized test scores. Activity involvement data was collected when students were in 10th grade. Findings suggest that students involved in prosocial activities

(attending church, volunteer, community service) evidenced better academic achievement, a greater likelihood of attending college and less involvement in problem and risky behaviors. Involvement in team sports increased the likelihood of engaging in risky behaviors, namely drinking. Those students involved in performing arts activities were more likely to like school and have a higher G.P.A. in 12th grade than non-participants (Eccles & Barber, 1999).

Eccles and Barber (1999) suggested that peer associations and activity-based identity might explain the outcome differences they reported. Those students who participated in prosocial activities also identified themselves and their peer group as academic-oriented and relatively unlikely to engage in risky behaviors. Sports participants identified themselves and their peer group as likely to drink alcohol. Eccles and Barber (1999) argue that these identity and peer associations may help to explain variations in outcomes. It also may be the case that different processes within each type of activity mediate the relationship between participation and outcomes. The current study seeks to measure process by obtaining students' perceptions of support while participating in an after-school program.

Child Characteristics and After-School Experiences

Gender

Previous research on after-school experiences has reported gender differences in participation in different types of after-school programs and activities. The current study extends research in this area by asking if child gender impacts perceptions of support.

Cooper and colleagues (1999) examined relationships among participation, outcomes and child characteristics. These relationships were found to vary by gender. The association between time spent on homework and grades was stronger for boys than for girls. Bryant and colleagues (2002) also reported gender differences. Female students participated in more

school-related activities than did male students. Not surprisingly, male students were more likely to be involved in sports than were female students (Bryant, Gao and Zimmerman, 2002). The National Survey of 8th Graders found that girls and boys were equally likely to participate in after-school programs or activities, but they joined different types of programs (U.S. Dept. of Education, 1990).

Eccles and Barber (1999) also found variations in participation rates for boys and girls. Overall, females participated in more activities and a greater diversity of activities than male students. Males however, participated on more different sports teams than did females. More female students participated in prosocial, performing arts activities, school-involvement activities and academic clubs than did males (Eccles & Barber, 1999).

Participation rates at Volunteer Youth Service Organizations (VYSO) (Gambone & Arbreton, 1997) were also found to vary by gender. Attendance records were kept at each VYSO sight for four consecutive weeks during the 1995-1996 school year. Each site serves low-income, urban youth, drawing at least 100-300 students age10-18 years from the immediate neighborhood. Findings from these attendance records suggest that more boys attend these programs than girls (except of course, for Girls Inc.). The differences in attendance rates between boys and girls ranged from boys representing 52% to 80 % of participants at an individual program site. The largest differences occurred at Boys and Girls Clubs. Contrary to other findings, no real differences in sports participation were found between boys and girls. Girls were more likely than boys to participate in arts and crafts activities and in leadership/community service activities (Gambone & Arbreton, 1997).

Mahoney and Cairns (1997) examined involvement in extracurricular activities for a group of 392 students. Activity participation was collected via school yearbooks. Yearbook

information from grades 7 through 12 was gathered for participating students. The types of activities were clustered into nine general categories: sports, academics, arts, government, service, press (school newspaper, yearbook), school assistants, vocational activities and royalty activities (homecoming, prom). Boys were more likely than girls to not be involved in any activities, or in only one activity (Mahoney & Cairns, 1997).

Findings from these studies suggest that boys and girls participate in different types of activities and that outcomes related to participation vary by gender. Relatively few studies have examined the extent to which perceptions of program experiences reflect differences in child characteristics. Kahn and colleagues (2001) examined gender differences in reports of affective context, supports for youth development, and engagement of youth as resources for school and after-school experiences. Their findings suggest that girls rated affective context during the school higher than did boys. Ratings for supports for youth development and engagement of youth as resources were also higher for girls but differences were not detected between school day and after-school program. These findings point to a connection between gender and reports of experiences suggesting that girls rate experiences as more positive and supportive than boys.

The current study examines gender differences in perceptions of the developmental supports provided by after-school programs and activities. The previous research suggests that, with the exception of sports, girls are more likely than boys to participate in after-school activities and rate activities more positively. It is hypothesized that girls will report higher levels of support than boys.

Ethnicity

Previous research has also reported ethnic differences in participation in various after-school activities. The current study asks if perceptions of supports vary by child ethnicity.

Bryant and colleagues (2002) reported that participation rates varied by ethnicity, such that African-American students had higher rates of involvement in prosocial activities than did white students (Bryant, Gao and Zimmerman, 2002). In the National Survey of 8th Graders, white students reported participating in after-school programs more often than did students of color (U.S. Dept. of Education, 1990).

Participation rates at VYSOs were also found to vary by ethnicity. Ethnic differences occurred at individual sites, for example, the Boston Boys and Girls Club was 98% white, while the Denver Boys and Girls Club was 78 % Hispanic. Four of the five YMCA sites served predominantly African-American youth. Ethnic differences for specific types of activities were not presented (Gambone & Arbreton, 1997).

Mahoney and Cairns (1997) also examined ethnic variation. Overall, African-American students participated in more activities than did white students. The types of activities African-American and White students participated in also differed. African-American boys were more likely to be involved in sports than were white male students, and white students were more likely to participate in student government activities (Mahoney & Cairns, 1997).

Understanding how different types of activities support students differently may help in interpreting the findings of studies such as the ones described above. This study expands this research by considering whether perceptions of developmental supports might also vary by child ethnicity.

Program Participation Over Time

The previous research examining after-school program participation and effectiveness, demonstrates that most research studies and evaluations measure student experiences at a single point in time (Bryant, Gao, & Zimmerman, 2001; Cooper, Valentine, Nye, & Lindsay, 1999;

Eccles & Barber, 1999; Mahoney & Cairns, 1997). Outcome data are measured at a later time point and then related to previously measured program experiences. While this design provides information on program effectiveness, it does not increase our understanding of how specific experiences and perceptions of the program relate to continued program participation. The current study measures students' perceptions of support at two time points to examine if perceptions of support predict continued participation. This type of longitudinal inquiry is particularly important when examining middle school students' after-school experiences because prior to middle school, the predominant focus of after-school programs was providing childcare for working parents (Halpern, 1999; Quinn, 1999). But as children move into middle school, their interests and abilities change and they may no longer agree to participate in the kinds of childcare after-school programs they attended while in elementary school. After-school programs for middle school students are voluntary and students willingly participate only in those programs and activities that are responsive to their needs (Eccles & Gootman, 2002; Quinn, 1999). Few studies have examined factors that may contribute to continued participation in after-school programs, or changes in program experiences that may be related to outcomes. Examining experiences and perceptions of support longitudinally can offer important information regarding program participation and help in the interpretation of longitudinal outcome data.

Summary

This dissertation examines after-school programs as contexts in which positive youth development is supported. Students' perceptions of support and experiences while at after-school programs are measured using two methods: global ratings of support and experience sampling. The Developmental Supports Rating Scale was adapted by this investigator to assess

students' global perceptions of the after-school program environment across four broad areas of support: supportive relationships with adults, supportive relationships with peers, opportunities for autonomy and leadership, and interest in activities. Experience Sampling Methodology was used to assess students' reports of daily experiences.

Using these two measurement approaches, this dissertation examined (a) if global ratings of support vary by after-school program and are stable over time, (b) if global perceptions of support vary by activity type, (c) if global perceptions of support vary by child gender, ethnicity, prior adjustment or family structure, (d) if global ratings of support are associated with sustained attendance, and finally, (e) if global perceptions of support are related to reports of daily experiences.

Chapter Three

Specific Aims and Hypotheses

This dissertation has 5 specific aims. First, I examine whether global ratings of support measured via the Developmental Supports Rating Scale vary by school-based after-school program. Second, I examine whether there is variation by activity type. Third, I examine whether global ratings of support vary by child gender, ethnicity, prior adjustment and family structure. Fourth, I examine if global ratings of support are related to sustained attendance at programs. Finally, I examine the relations between daily experiences and global ratings of support. This chapter presents hypotheses related to each aim.

Aim 1

The current study posits that the differential effects of after-school program participation on children's development found in previous research may be the result of differences in the type and quality of developmental supports associated with different programs and activities. Prior research suggests that programs that offer a variety of enriching experiences contribute to positive outcomes for youth (Fashola & Cooper, 1999; Rosenthal & Vandell, 1996). The first aim of the current study examines variation in perceptions of support by school-based program. It is hypothesized that programs that offer a variety of enriching experiences (more activity types) will be perceived by students as more supportive overall.

Aim 2

Previous research also suggests that different types of extracurricular activities have differential effects on developmental outcomes (Bryant, Gao, & Zimmerman, 2002; Larson, 2000; Cooper, Valentine, Nye and Lindsay, 1999; Eccles & Barber, 1999; Mahoney & Cairns, 1997). Participation in sports activities has been associated with lower rates of depression, higher

G.P.A., and increased use of alcohol (Bryant, Gao, & Zimmerman, 2002; Eccles & Barber, 1999). Participation in clubs has been associated with higher achievement, participations in arts activities has been associated with liking school and higher grades, and service activities have been associated with better peer relations and fewer risky behaviors (Cooper, Valentine, Nye and Lindsay, 1999; Eccles & Barber, 1999; Pierce & Sheilds, 1998). One explanation may be that different types of activities offer different levels of developmental supports. I examine variations in perceptions of support by activity type. The four different activities examined in the current study are: academic, arts, sports, and service.

It is hypothesized that students attending arts and clubs activities will rate those activities as being higher in Interest in Activities, as having more Opportunities for Autonomy and Leaderships and as providing more supportive peer relationships with than academic activities. It is hypothesized that students participating in service activities will rate Supportive Relationships with Peers as higher than will students in academic activities. It is hypothesized that students participating in sports activities will rate Supportive Relationships with Adults and Supportive Relationships with Peers as higher than will students participating in academic activities.

Aim 3

Prior research suggests that boys and girls participate in different types of activities; in general boys do more sports and girls do more school-based, prosocial, arts and service activities (Bryant, Gao, & Zimmerman, 2002; Eccles & Barber, 1999; U.S. Dept. of Education, 1990). It is also suggested that outcomes vary by gender (Cooper, Valentine, Nye and Lindsay, 1999; Eccles & Barber, 1999; Mahoney & Cairns, 1997). Few studies however, have examined

differences in experiences while at programs. In one study that investigated differences in program experiences, girls reported more positive experiences than boys (Kahn, et al., 2001).

Previous research has also examined ethnic differences in activity participation. Findings suggest that African –American students participate in more prosocial activities (Bryant, Gao, & Zimmerman, 2002), participate in more activities overall and African-American boys participate in more sports (Mahoney & Cairns, 1997). Although participation rates and developmental outcomes associated with after-school programs have been examined in terms of variations in both gender and ethnicity (Bryant, Gao, & Zimmerman, 2002; Larson, 2000; Cooper, Valentine, Nye and Lindsay, 1999; Eccles & Barber, 1999; Pierce, Hamm, & Vandell, 1999; Mahoney & Cairns, 1997), relatively few studies have examined the extent to which students' perceptions of the developmental supports provided by after-school activities might reflect differences in child and family characteristics. The child and family characteristics examined here are: child gender, ethnicity, prior adjustment, and family structure.

The current study examines the extent to which child characteristics such as gender, ethnicity, prior adjustment and family structure are related to students' perceptions of their after-school program experiences as measured by the Developmental Supports Rating Scale.

It is hypothesized that child and family factors will significantly associated with perceptions of support as measured by the Developmental Supports Rating Scale. It is hypothesized that girls will rate program experiences as more supportive than boys.

Aim 4

There appears to be a fluid nature to programs that service middle school students and as Quinn (1999) observed, students can "vote with their feet" (Eccles & Gootman, 2002; Quinn, 1999). Therefore, at the individual level, we hypothesize that students who report low levels of

support at Time 1 are less likely to attend the after-school program at Time 2. Conversely, it may be that students who report overall high ratings of support in the fall are more likely to continue participating in the program in the spring. To test these hypotheses, I examine how perceptions of support as measured by the Developmental Supports Rating Scale in the fall predict intensity and duration of participation.

It is hypothesized that students who perceive programs more positively at Time 1 will be more likely to continue to participate in the program at Time 2.

It is hypothesized that students who perceive programs more positively at Time 1 will participate more often and for longer durations.

Aim 5

Two methods of measuring student experiences were used in this study. Students reported on daily experiences using the Experience Sample Method, answering questions about the specific activity they were engaged in when signaled. Students also rated their experiences more globally on the Developmental Supports Rating Scale. Both measures of experiences were collected in the Fall and in the Spring. It is expected that associations will be found between Experience Sampling data and ratings on the Developmental Supports Rating Scale.

It is hypothesized that students who report more positive experiences (high positive affect, high motivation, high concerted effort) when signaled at the program are will also report overall higher levels of support on the DSRS.

Chapter Four

Methods

Sample

This study is composed of a subsample of youth who were participants in a larger study of After-School Experiences (Vandell, 2001). Data were collected in three Midwestern U.S. communities. The communities are ethnically diverse, and differ in level of urbanization, workforce composition, and economic stability. Students attended eight middle schools: three schools each in two communities, two schools at one community. Students, their parents, and their teachers were participants in the larger study; the current study will only utilize data collected from students and parents. The total sample consists of 191 eighth grade students. The current study utilizes after-school experience data collected from 157 students in the fall of 8th grade (Time 1) and 135 students in the spring of 8th grade (Time 2).

As shown in Table 4, 172 of the 191 students in the original sample completed the Developmental Supports Rating Scale at either Time 1 (fall) or time 2 (spring). Demographic data for the original sample (N=191) can be found in Appendix A. Comparisons between the final sample and those students who did not participate at Time 1 and comparisons between the final sample and those students who did not participate at Time 2 indicate no significant differences between the groups on any of the demographic characteristics. As shown in Table 4, 27.3 % of the sample resided in site 1, 37.6 % resided in site 2, and 34.9 % resided in site 3. The sample was approximately 50% male. In terms of ethnicity,61.3 % of the sample was non-white. Approximately one-third of the students resided in single-parent families. In terms of yearly household income, 28.5 % earned less than $20,000, 27 % earned between $20,000 and $39,999, 21.9 % earned between $40,000 and $59,999, and 22.6 % earned $60,000 or more. In terms of

Table 4. Demographic Characteristics of Participants

	Students completing DSRS at Time 1 or Time 2 N=172		Students completing DSRS at Time 1 N=157		Students completing DSRS at Time 2 N=135	
Site						
Site 1	27.3 %		27.4 %		20.0 %	
Site 2	37.8 %		36.9 %		44.4 %	
Site 3	34.9 %		35.7 %		35.6 %	
Gender						
Male	49.7 %		49.7 %		50.9 %	
Ethnicity						
Nonwhite	61.3 %		61.0 %		58.1 %	
Family Structure						
One-parent	33.3 %		33.1 %		34.5 %	
Income						
Less than $20,000	28.5 %		29.0 %		30.0 %	
$20,000 - $39,999	27.0 %		27.4 %		25.5 %	
$40,000 - $59,999	21.9 %		21.0 %		22.7 %	
$60,000 or more	22.6 %		22.6 %		21.8 %	
Parent Education	Mother	Father	Mother	Father	Mother	Father
High School degree or Less	43.3 %	51.2 %	43.4 %	50.0 %	40.5 %	51.6 %
Some College	33.3 %	22.1 %	34.6 %	22.0 %	33.6 %	22.2 %
College Graduate	23.3 %	26.7 %	22.1 %	28.0 %	25.9 %	26.3 %

education, 43.3 % of mothers and 51.2 % of fathers held a High School degree or less, 23.3 % of mothers and 26.7 % of fathers held a college degree or higher.

Procedures

Data were collected in the fall (October) and spring (April) of the 2001-2002 school year. During recruitment, field staff described the study to groups of students and distributed consent forms. Students and parents returned consent forms to a drop-off box in the school office, where field staff collected them. Once consent forms were collected, small groups (6 – 10 students) were trained to participate in the Experience Sampling study. Students participated for one week in the fall (Time 1) and for one week in the spring (Time 2).

Developmental Supports Rating Scale

The Developmental Supports Rating Scale was adapted by the current investigator to measure students' perceptions of the developmental supports offered by their after-school activities and programs. Items were adapted from Gambone & Arbreton (1997), from Rosenthal & Vandell (1996) as well as items generated for this questionnaire specifically for this dissertation (See Table 5; Appendix B). Students completed the Developmental Supports Rating Scale at Time 1 and again at Time 2. Students completed the DSRS at the end of the week in which they participated in the Experience Sampling study. On the DSRS, students were asked to rate an adult-sponsored after-school activity they were currently participating in. If students were involved in more than one activity, they were asked to rate the one they participated in most often.

Experience Sampling Method

Csikszentmihalyi, Larson and colleagues (1983, 1987, 1991) have been instrumental in the development of a the Experience Sampling Method (ESM), which allows researchers to collect systematic data about what a person does, thinks and feels during the course of their daily

Table 5. Individual Item Sources for the Developmental Supports Rating Scale

1. The adults here pay attention to what's going on in my life. (Gambone & Arbreton, 1997)	10. I like doing activities with the other kids here. (Dadisman, 2001)
2. I get to do things here that I don't get to do anywhere else. (Gambone & Arbreton, 1997)	11. I could go to an adult here if I needed advice about a personal item. (Gambone & Arbreton, 1997)
3. I get to know other kids really well here. (Rosenthal & Vandell, 1996)	12. I help set the rules here. (Gambone & Arbreton, 1997)
4. I get to help plan activities or events here. (Gambone & Arbreton, 1997)	13. Staff let me decide what activities I'm going to do here. (Gambone & Arbreton, 1997)
5. The staff here notice when I participate in activities. (Gambone & Arbreton, 1997)	14. I feel like my ideas count here. (Gambone & Arbreton, 1997)
6. I have a lot of friends here. (Rosenthal & Vandell, 1996)	15. The activities here really get me interested. (Gambone & Arbreton, 1997)
7. The staff here help me do something if it is too hard for me to do by myself. (Gambone & Arbreton, 1997)	16. When I do a good job at something, the staff here let me know. (Gambone & Arbreton, 1997)
8. I get a chance to do lots of new things here. (Gambone & Arbreton, 1997)	17. Staff let me decide how to spend my free time. (Gambone & Arbreton, 1997)
9. I can really trust the other kids here. (Rosenthal & Vandell, 1996)	18. How long have you been involved in this program or activity? (Dadisman, 2001)
	19. How often do you attend or participate in this program or activity? (Dadisman, 2001)

life. This record of daily experiences is not usually captured by other data collection methods, and reduces the error found in instruments that rely on the reconstruction of experiences after the fact (Larson & Csikszentmihalyi, 1983). In previous research, Experience Sampling has been used with 5th to 12th graders to measure a variety of constructs including affective states, family relationships and life situations (Larson, et al, 1996).

As part of the larger project, ESM was used to measure 8th grade students' experiences during the after-school hours, evenings, and on weekends. Students wore a watch for seven consecutive days in the fall and seven consecutive days in the spring. Watches were programmed by field staff to randomly beep five times each weekday between the time school ended until 8:30 p.m. and five times each weekend between 10:00 a.m. and 8:30 p.m. Only those signals that occurred while students were attending an after-school program were included in these analyses.

Training. Students participated in a 45-minute training session to learn how to complete logbook entries. They were instructed to be specific when describing their location and activities. For location, students were asked to write down where they were when the watch signaled them. They were to include where in a particular building they were. For example, students were instructed to write "at home in my room", "at school in the gym" or "at my friend's house in her basement." Students were also asked to be specific when describing their activity. For example, when using a computer students were asked to write what they were doing ("surfing the net", "playing games on the computer" or "writing a science paper on the computer"). The training session concluded with students completing two practice pages from the logbook. Field staff then checked these pages to ensure that students understood the training instructions. Field staff then met with students each day for the daily follow-up. At these daily

follow-up meetings, field staff checked the logbook from the previous day, distributed the logbook for the current day and answered any questions students might have. Students were paid $1.00 per completed logbook entry at the daily follow-up meeting. On Fridays, students were given the Friday logbook and a Saturday/Sunday logbook. Field staff telephoned students on Sunday evening, reminding them to bring their logbooks to the daily follow-up meeting on Monday. Training sessions and daily follow-up meetings were scheduled to accommodate the school's needs. Some students attended training sessions and daily follow-up meetings during the after-school hours and other groups met before school or during the lunch break.

Completing the logbook. Each time the student was signaled, he/she completed a two-page record in a daily logbook (See Appendix C). The student recorded location, activity, activity partner(s), others present, levels of engagement in the activity and affective state. Students also indicated whether or not they were at an after-school program and if so wrote down the name of the program.

Coding and data entry. Trained coders using a detailed coding scheme coded participants' responses regarding their location and activities. Inter-coder reliability was .95 for location, .90 for being in an after school program (y/n), and .89 for the activity reported. All data were double entered into a database by trained data entry specialists. The data entry program signaled if the second entry did not match the first entry; therefore, the reliability between the first and second data entry was very near 1.0, or 100%.

Measures

Measures of Engagement and Affect

As part of the larger study, individual items from the Experience Sampling logbook were combined to create composite measures of engagement and affect. A factor analysis using Promax

rotation was performed on the 8 logbook items relating to the nature of the activity being performed. The items included: a) how much choice did you have about this activity, b) how important was this activity to you, c) was it interesting, d) was it challenging, e) did you enjoy what you were doing, f) how hard were you concentrating, g) were you using your skills, and h) did you wish you were doing something else (reversed coded). The items were rated on a four-point scale (1 = not at all, 2 = somewhat, 3 = pretty much, and 4 = very much).

Two factors were associated with eigenvalues over 1: (1) Concerted Effort, or the experience of heightened concentration when using a high degree of skills in a challenging activity (mean of items d, f, g), and (2) Intrinsic Motivation, or the perception of enjoyment, interest, and intrinsic desire during activities involving high degrees of choice (mean of items a, c, e, h). Reported alphas for each subscale are as follows: Concerted Effort, $\alpha = .88$; Motivation, $\alpha = .74$. In addition, there was one stand-alone item that did not load highly onto a factor, Importance (i.e., "How important was this activity to you?").

In the current study, composite measures of engagement (concerted effort, motivation, and importance) were created using only those beeps that occurred while students were participating in an after-school program (897 beeps at Time 1; 699 beeps at Time 2). See Table 6 for means and standard deviations of each composite measure of engagement for those participants in the current study at Time 1 and Time 2. Student reports of Concerted Effort, Motivation and Importance appear to be stable across the two time points. Mean ratings of Concerted Effort are slightly lower than those of Motivation and Importance.

A second factor analysis was performed on the 11 items relating to the participant's emotions when signaled. These items included: lonely, happy, angry, stressed, excited, bored, scared, sad,

Table 6. Means and Standard Deviations of Composite Measures of Engagement

	Program Experiences at Time 1 M (SD) N = 157	Program Experiences at Time 2 M (SD) N = 135
Engagement		
Concerted Effort	2.64 (.81)	2.62 (.81)
Motivation	3.06 (.61)	3.07 (.58)
Importance	3.08 (.69)	3.09 (.70)

Note. Concerted Effort = Challenge, Concentration, Skills. Motivation = Choice, Interest, Enjoyment, Wish. Importance = Importance.

relaxed, proud, and worried. These items were rated on a four-point scale (1 = not at all, 2 = a little, 3 = somewhat, and 4 = very much). Three factors were associated with eigenvalues over 1: (1) Positive Affect, or a positive emotional disposition (mean of items happy, excited, relaxed, proud), (2) Negative Affect, or a negative emotional disposition (mean of items angry, stressed, scared, sad, worried), and (3) Idleness, or feelings of being both lonely and bored (mean of items lonely and bored). Reported alphas for each subscale are as follows: Positive Affect, $\alpha = .75$; Negative Affect, $\alpha = .76$, Idleness, $\alpha = .43$.

In the current study, composite measures of affect (positive affect, negative affect, idleness) were created using only those beeps that occurred while students were participating in an after-school program (897 beeps at Time 1; 699 beeps at Time 2). See Table 7 for means of the composite measures of affect with the current sample at Time 1 and Time 2. As with the composite measures of engagement, student reports of affect appear to be stable from Time 1 to Time 2. Ratings of negative affect and idleness are lower than ratings of positive affect and both time points.

Developmental Supports Rating Scale

The Developmental Supports Rating Scale consists of 17 items that are rated using a 5-point scale (1= never, 2 = almost never, 3= sometimes, 4 = most of the time, 5 = all the time). The questionnaire was designed to assess the availability of four areas of support during various after-school activities. The four areas are: supportive relationships with adults, supportive relationships with peers, opportunities for autonomy and leadership, and interest in activities. In addition, students were asked how long they had participated in the program (1 = less than 1 month, 2 = 1 to 2 months, 3 = 3 to 6 months, 4 = 7 months to 1 years, 5 = more than 1 year) and how often they participated (1 = once a month, 2 = 2 to 3 times a month, 3 = once a week, 4 = 2 to 4 times a week, 5 = 5 or more times a week).

Table 7. Means and Standard Deviations of Composite Measures of Affect

Affect	Program Experiences at Time 1 M (SD) N = 157	Program Experiences at Time 2 M (SD) N = 135
Positive Affect	2.53 (.71)	2.52 (.68)
Negative Affect	1.29 (.38)	1.29 (.39)
Idleness	1.32 (.41)	1.31 (.40)

Note. Positive Affect = Happy, Excited, Relaxed, Proud. Negative Affect = Angry, Stressed, Sad, Worried. Idleness = Bored, Lonely.

Measures of Activity Type

Students recorded in logbooks the activity in which they were participating when signaled. Students also recorded on the Developmental Supports Rating Scale the name of the program and activity they rated. These activities were then categorized into four broad groups: academic, arts, sports, and service (Table 8). When a student recorded only a program name on the Developmental Supports Rating Scale, logbook entries were examined to determine what type of activity the student participated in while at the program. Activities such as homework club, tutoring, foreign language clubs and computer clubs were categorized as academic. Arts activities included performance (music, dance, singing) and fine (painting, computer animation) arts. Both coached and recreational sports were included in the sports category. Service activities included things like Scouts and Student Council. Community-based religious activities are shown in the Service category, however, these were not included in the analyses using the activities nested in the eight school-based programs.

Child and Family Factors

Information about child gender, ethnicity, prior adjustment and family structure was collected. Parents completed surveys in the fall. They reported on family demographic information including family structure, income, maternal and paternal education, and child's ethnicity. In addition, parents answered questions about their child's behavior. Parents rated child's overall adjustment to school and psychological well-being. The 6 items included: a) my child gets along with others, b) my child likes school, c) my child works hard at school, d) my child is self-confident, e) my child is creative, and f) my child is happy. Each item was rated on

Table 8. Reported Activities Combined to Create Activity Categories

Academic	**Arts**	**Sports**	**Service**
Homework Club	Choir	Recreational:	4-H
Odyssey of the	Jazz Band	Basketball	Boy Scouts
Mind	Chorus	Football	
Spanish Club	Modeling	Soccer	Student Council
French Mentoring	Sax lessons		Civic Air Patrol
	Destination		
	Imagination		
Tutoring	Band		
	Needle Craft		
New Genesis	Drama	Coached:	**Community-**
(tutoring)		Volleyball	**Based**:
Study Hall	Animae club	Wrestling	Church Youth
Pre-Employment	(computer	Tennis	Group
Club	Animation)	Boxing	Bible Study
Computer Club	Comic Book Club	Basketball	Hope for Teens
	Model-making	Track	Youth in Action
	Art Enrichment	Softball (Girls)	Confirmation Class
	Painting		

a 5-point scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agrees, and 5 = strongly disagree). High scores indicate a rating of better adjustment and greater well-being. The six items were combined to create the child adjustment variable (M = 4.16, Sd = .76, alpha = .85).

Chapter Five

Results

Overview

A goal of this dissertation was to consider students' perceptions of the supports that they received at after-school programs during various activities. Data analyses proceeded through several stages and six substantive issues were examined. Preliminary analyses examined the psychometric properties of the Developmental Supports Rating Scale. The second set of analyses examined variations in the DSRS in different programs and examined ratings of support over time. The third set examined variations in the DSRS in different activities nested within programs. The fourth set of analyses examined relations between child and family characteristics and ratings on the DSRS. The fifth analyses examined associations between perceptions of support and program attendance. Finally, associations between daily reports of experiences and global ratings of support were examined.

Psychometric Properties of the Developmental Supports Rating Scale

Because the Developmental Supports Rating Scale is a new measure, properties of the scale and subscales were assessed. Means and standard deviations were calculated for each item individually (Table 9). Confirmatory factor analysis was then conducted to analyze the structure underlying the items in the Developmental Supports Rating Scale. A four-factor model was fitted using LISREL, reflecting the four developmental supports the DSRS was posited that reflected: Supportive Relationships with Adults, Supportive Relationships with Peers, Opportunities for Autonomy and Leadership, and Interest in Activities. The Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), Root Mean Square Error

Table 9. Descriptive Statistics for the Developmental Supports Rating Scale

Item	Mean (Sd)
1. The adults here pay attention to what's going on in my life.	3.67 (1.12)
2. I get to do things here that I don't get to do anywhere else.	3.09 (1.15)
3. I get to know other kids really well here.	3.84 (1.07)
4. I get to help plan activities or events here.	2.68 (1.28)
5. The staff here notice when I participate in activities.	3.69 (1.13)
6. I have a lot of friends here.	4.25 (.97)
7. The staff here help me do something if it is too hard for me to do by myself.	3.95 (1.15)
8. I get a chance to do lots of new things here.	3.76 (1.10)
9. I can really trust the other kids here.	3.20 (1.20)
10. I like doing activities with the other kids here.	3.77 (1.14)
11. I could go to an adult here if I needed advice about a personal item.	3.64 (1.29)
12. I help set the rules here.	2.21 (1.15)
13. Staff let me decide what activities I'm going to do here.	3.38 (1.30)
14. I feel like my ideas count here.	3.31 (1.20)
15. The activities here really get me interested.	3.53 (1.20)
16. When I do a good job at something, the staff here let me know.	3.76 (1.18)
17. Staff let me decide how to spend my free time here.	3.43 (1.26)
18. How long have you been involved in this program or activity?	3.44 (1.34)
19. How often do you attend or participate in this program or activity?	4.09 (.85)

Approximation (RMSEA), Comparative Fit Index (CFI), and the Non-normal Fit Index (NNFI) were used to quantify model fit.

The CFA confirmed the four hypothesized subscales. As posited, items #1, 5, 7,11, and 16 comprise the Supportive Relationships with Adults factor (Cronbach alpha = .81); items #3, 6,and 9 load on the Supportive Relationships with Peers factor (Cronbach alpha = .66); items #4,12,13,14, and 17 load on the Opportunities for Autonomy and Leadership factor (Cronbach alpha = .75); items #2,8,15 load on the Interest in Activities factor (Cronbach alpha = .75). The Cronbach alpha for the Total measure was .91. These alphas are one indication of the reliability of the instrument. Item number 10, "I like doing activities with other kids here", was omitted from the model as it did not load in the expected manner.

Chi-Square for the model was 171. 31 (df=97; p=.000). Goodness of Fit Indexes range in value from 0 – 1, with higher values indicating a better fitting model (Bryant & Yarnold, 1997). Two of the fit indices reached the .90 and above range that many researchers deem indicative of adequate fit: NNFI = .90; CFI = .92.

Table 10 lists the factor loadings of each item for the fitted model and Table 11 lists means, standard deviations and Cronbach alphas for each subscale. The Supportive Relationships with Adults and the Supportive Relationships with Peers subscales had the highest means (3.74 and 3.76) and the Opportunities for Autonomy and Leadership had the lowest mean (3.01).

Pearson correlations were calculated between the total DSRS score and the four subscales (Table 12). The significant correlations indicate that the scales are associated, but coefficients are not so high as to suggest that the subscales are measuring the same construct. Not surprisingly, the highest correlations are between the Total score and the subscales. Time 2

Table 10. Factor Loadings of Items on the Developmental Supports Rating Scale

	Factor Loading
Supportive Relationships with Adults	
• The adults here pay attention to what's going on in my life	.71
• The staff here notice when I participate in activities	.84
• The staff here help me do something if it is too hard for me to do by myself	.86
• I could go to an adult here if I needed advice about a personal item	.97
• When I do a good job at something, the staff here let me know	.75
Supportive Relationships with Peers	
• I get to know other kids really well here	.74
• I have a lot of friends here	.59
• I can really trust the other kids here	.74
Autonomy and Leadership	
• I get to help plan activities or events here	.57
• I help set the rules here	.55
• Staff let me decide what activities I'm going to do here	.71
• I feel like my ideas count here	.90
• Staff let me decide how to spend my free time here	.92
Interest in Activities	
• I get to do things here that I don't get to do anywhere else	.65
• I get a chance to do lots of new things here	.85
• The activities here really get me interested	.93

Note. Chi Square=171.31, df=97; p=0.00; Root Mean Square Error Approximation (RMSEA) = .070; Goodness of Fit Index (GFI) = .88; Adjusted Goodness of Fit Index (AGFI)=.83; Non-Normal Fit Index (NNFI)=.90; Comparative Fit Index (CFI)=.92.

Table 11. Psychometrics of Each Subscale on the Developmental Supports Rating Scale

Scale	Alpha	Mean	Standard Deviation
Supportive Relationships with Adults	.81	3.74	.88
Supportive Relationships with Peers	.66	3.76	.84
Autonomy and Leadership	.75	3.01	.87
Interest in Activities	.75	3.47	.94
Total	.91	3.47	.75

Table 12. Correlations between Total Score and Subscales of the DSRS Time 1

	Total	Supportive Relationships with Adults	Supportive Relationships with Peers	Autonomy & Leadership
Supportive Relationships with Adults	.917**			
Supportive Relationships with Peers	.766**	.652**		
Autonomy & Leadership	.850**	.666**	.501**	
Interest in Activities	.849**	.747**	.592**	.607**

correlations are reported in Table 13. As with Time 1, the significant correlations suggest that the scales are distinct and the strongest correlations are between the Total score and subscales. Correlations are similar between subscales across the two time points. For example, at Time 1 Interest in Activities and Autonomy & Leadership are correlated at .607 and .616 at Time 2. At both time points, Supportive Relationships with adults is more highly correlated with Interest in Activities ($r = .747$ and $r = .664$) than with the other two subscales.

Variations in Perceptions of Support by Program

The first study aim of the dissertation was to investigate potential differences in perceptions of developmental support at the eight after-school programs. The eight school–based programs were entered into an ANOVA as the independent variable and the Total score and subscales of the DSRS were entered as the dependent variables. Results for Time 1 are shown on Table 14, Time 2 results are on Table 15. Means, standard deviations, F-statistics and p-values are reported.

At Time 1, programs varied significantly on the Supportive Relationships with Peers subscale ($F= 2.50$; $p=.02$). Post Hoc comparisons found significant differences between Programs 1 and 8 ($p=.04$), 4 and 6 ($p=.05$), 4 and 7 ($p=.03$), 4 and 8 ($p=.02$), 2 and 6 ($p=.01$), 2 and 7 ($p=.004$), and Programs 2 and 8 ($p=.004$). These differences suggest that students in Programs 1, 2, and 4 reported higher perceptions of peer support than did students in Programs 8, 7, and 6. Omnibus tests approached significance for the Total Score ($F = 1.80$; $p=.07$) and Supportive Relationships with Adults ($F = 1.84$; $p=.07$). Post Hoc comparisons found significant differences between Programs 1 and 6 ($p=.02$), 1 and 8 ($p=.02$), 2 and 6 ($p=.01$), and Programs 2 and 8 ($p=.01$) on the Total score. Again, Programs 1 and 2 are reported as being more supportive

Table 13. Correlations between Total Score and Subscales of the DSRS Time 2

	Total	Supportive Relationships with Adults	Supportive Relationships with Peers	Autonomy & Leadership
Supportive Relationships with Adults	.853**			
Supportive Relationships with Peers	.733**	.521**		
Autonomy & Leadership	.859**	.624**	.477**	
Interest in Activities	.851**	.664**	.606**	.616**

Table 14. Variations in Perceptions of Support by Program at Time 1

	Program 1 N = 17	Program 2 N = 24	Program 3 N = 21	Program 4 N = 12	Program 5 N = 18	Program 6 N = 20	Program 7 N = 16	Program 8 N = 18	F *p*
DSRS									
Total DRSR	3.73	3.69	3.50	3.54	3.81	3.12	3.48	3.11	1.80
	(.55)	(.68)	(.75)	(.75)	(.70)	(.85)	(.91)	(.81)	.07
Supportive Relationships with Adults	4.05	3.97	3.70	3.97	3.49	3.44	3.85	3.31	1.84
	(.66)	(.81)	(1.0)	(.61)	(.87)	(.91)	(.98)	(.97)	.07
Supportive Relationships with Peers	3.92	4.14	3.83	4.06	3.80	3.48	3.38	3.35	2.50*
	(.61)	(.70)	(.79)	(.93)	(.81)	(1.0)	(.85)	(.89)	.02
Autonomy and Leadership	3.20	3.18	3.10	2.87	2.88	2.68	3.20	2.76	1.07
	(.80)	(.79)	(.85)	(1.2)	(.77)	(.84)	(1.1)	(.87)	.38
Interest in Activities	3.86	3.65	3.49	3.44	3.61	3.00	3.44	3.11	1.69
	(.82)	(.92)	(1.0)	(.90)	(.76)	(1.0)	(1.1)	(.91)	.11

Note. 11 students were enrolled in community-based programs across the 3 sites and therefore were not included in these analyses.

Table 15. Variations in Perceptions of Support by Program at Time 2

	Program 1 N = 7	Program 2 N = 10	Program 3 N = 19	Program 4 N = 14	Program 5 N =12	Program 6 N = 12	Program 7 N = 11	Program 8 N = 15	F *p*
DSRS									
Total DRSR	3.45	3.58	3.24	3.77	3.43	3.33	3.43	3.39	.804
	(.56)	(.60)	(.82)	(.54)	(.69)	(.72)	(.66)	(.74)	.56
Supportive Relationships with Adults	3.86	3.96	3.41	4.27	3.60	3.53	3.78	3.72	1.84
	(.53)	(.77)	(.87)	(.41)	(.60)	(.99)	(.72)	(.84)	.07
Supportive Relationships with Peers	3.76	3.67	3.56	4.00	3.86	3.53	3.67	3.78	.518
	(.72)	(.80)	(.96)	(.82)	(.87)	(.82)	(.80)	(.53)	.82
Autonomy and Leadership	2.83	3.06	2.77	3.14	2.88	3.08	3.02	2.68	.437
	(1.1)	(.79)	(.98)	(.67)	(1.0)	(.91)	(1.0)	(1.0)	.87
Interest in Activities	3.29	3.57	3.19	3.60	3.42	3.03	3.27	3.44	.539
	(.95)	(.65)	(1.1)	(.84)	(1.2)	(.71)	.68)	(1.1)	.80

Note. 28 students were enrolled in community-based programs across the 3 sites and therefore were not included in these analyses.

than programs 6 and 8. Post Hoc comparisons found significant differences between Programs 1 and 6 (p=.04) and Programs 2 and 6 (p=.05) on the Supportive Relationships with Adults subscale suggesting that students in Programs 1 and 2 reported more supportive relationships with adults than did students in Program 6.

Omnibus tests at Time 2 were not significant, however approached significance for the Supportive Relationships with Adults subscale ($F = 1.84$; $p = .07$). Post Hoc comparisons found significant differences between Programs 3 and 4 (p=.002), 4 and 5 (p=.03), and Programs 4 and 6 (p=.01). These differences indicate that students in Program 4 reported more supportive relationships with adults than did students in Programs 3, 5, or 6.

Changes in Perceptions of Support from Time 1 to Time 2

As shown in Table 16, there were no changes in quality of experiences from Time 1 to Time 2, on either the DSRS or the ESM report. For those students participating at both Time 1 and Time 2, means for the Total score are the same (3.47) at Time 1 and Time 2. Supportive Relationships with Adults has a mean of 3.72 at Time 1 and 3.75 at Time 2. Means on the other three subscales are slightly lower at Time 2. Duration and intensity of attendance also did not change from Time 1 to Time 2.

The numbers of students participating in each school-based program changed from Time 1 to Time 2 with lower participation at Time 2. Of the 17 students enrolled in Program 1 at Time 1, 6 continued at Time 2, 2 moved to a community-based program and 7 no longer participated in the current study. In Program 2, 7 of the Time 1 participants continued at Time 2, 2 moved to community-based programs and 15 no longer participated in the current study. Of the 21 students participating in Program 2 at Time 1, 18 continued, 2 moved to a community-based

Table 16. Means and Standard Deviations for Total Score and Subscales of the DSRS, Composite Measures of Engagement and Affect, Attendance, and Selection Factors

	Participants at Time 1 & Time 2 N = 114		Participants at Time 1 Only N = 43	Participants at Time 2 Only N = 15
DSRS	T1	T2		
Total Score	3.47 (.77)	3.47 (.70)	3.45 (.72)	3.44 (.85)
Supportive Relationships with Adults	3.72 (.92)	3.75 (.77)	3.79 (.77)	3.79 (.90)
Supportive Relationships with Peers	3.80 (.86)	3.75 (.76)	3.71 (.79)	3.80 (.88)
Opportunities Autonomy and Leadership	3.03 (.88)	3.01 (.93)	2.65 (.84)	2.84 (.99)
Interest in Activities	3.47 (.94)	3.38 (.96)	3.45 (.95)	3.40 (.98)
Engagement				
Concerted Effort	2.62 (.81)	2.58 (.77)	2.68 (.85)	2.59 (.91)
Motivation	3.07 (.58)	2.63 (.61)	3.04 (.70)	3.10 (.69)
Importance	3.09 (.70)	2.84 (.82)	3.02 (.68)	3.01 (1.01)
Affect				
Positive Affect	2.52 (.68)	2.36 (.77)	2.59 (.79)	2.12 (.55)
Negative Affect	1.29 (.39)	1.25 (.30)	1.32 (.36)	1.21 (.30)
Idleness	1.23 (.40)	1.34 (.42)	1.33 (.43)	1.31 (.27)
Attendance				
Duration	3.36 (1.35)	3.67 (1.47)	3.73 (1.26)	2.87 (1.41)
Intensity	4.46 (.80)	3.90 (.98)	3.83 (.99)	4.00 (.76)
Selection Factors				
% Male	50.9		46.3	50.0
% Non-White	51.0		53.3	50.0
% Single Parent Household	34.3		29.4	35.7
Child Adjustment	4.14 (.65)		4.18 (.58)	4.25 (.83)

Note. *Duration* denotes how long a student has attended the program (1 = less than 1 month; 2 = 1 – 2 months; 3 = 3-6 months; 4 = 7 months to 1 year; 5 = more than 1 year). *Intensity* denotes how often a student attends the program (1 = once a month; 2 = 2-3 times a month; 3 = once a week; 4 = 2 to 4 times a week; 5 = 5 or more times a week.

program and 1 left the study. Program 4 had 10 of the 12 Time 1 participants continue at Time 2. Programs 5 and 6 each had 12 of the Time 1 participants continue at Time 2. Programs 7 and 8 each had 11 of the Time 1 participants continue at Time 2. There were 14 new program participants at Time 2 distributed across Programs 1 – 5 and Program 8.

Overall ratings on the DSRS at Time 1 were used to predict program status at Time 2, with the expectation that low ratings of support would result in students leaving or changing after-school programs. A logistic regression was conducted with satisfaction at Time 1 as the independent variable and program status at Time 2 (0= not participating in a program, 1= participating in a program) as the dependent variable. The total score on the DSRS at Time 1 was not predictive of participation at Time 2.

Next, I examined stability in perceptions of support over time, at the program level. Because of the fluidity in program participation three groups were then considered: participants who were in the same program and same activity at Time 1 and Time 2 (N = 51), those who were at the same program but in different activities at Time 1 and Time 2 (N = 40) and finally, those who were in different programs at Time 1 and Time 2 (N = 31). Correlations for each group are reported in Table 17. For those students participating in the same program and same activity, all correlations were significant. The next group examined was those students who remained in the same program but not in the same activity within that program. All correlations were significant, except for Supportive Relationships with Peers ($r = .277$; $p=.088$). These findings suggest that perceptions of support remain stable over time for those students who continue to participate in the same program and changing activities within a program may not impact the supportive environment of that program.

Table 17. Stability in Perceptions of Support Over Time

	Paired Correlations	p-value
Same Program and Activity Time 1(T1) and Time 2 (T2) N=51		
Total T1 with Total T2	.654	.000
Supportive Relationships with Adults T1 with Supportive Relationships with Adults T2	.623	.000
Supportive Relationships with Peers T1 with Supportive Relationships with Peers T2	.512	.000
Opportunities for Autonomy & Leadership T1 with Opportunities for Autonomy & Leadership T2	.658	.000
Interest in Activities T1 with Interest in Activities T2	.512	.000
Same Program and Different Activity T1 and T2 N = 40		
Total T1 with Total T2	.534	.000
Supportive Relationships with Adults T1 with Supportive Relationships with Adults T2	.669	.000
Supportive Relationships with Peers T1 with Supportive Relationships with Peers T2	.277	.088
Opportunities for Autonomy & Leadership T1 with Opportunities for Autonomy & Leadership T2	.332	.039
Interest in Activities T1 with Interest in Activities T2	.324	.044
Different Program Time 1 and Time 2 N = 31		
Total T1 with Total T2	.431	.021
Supportive Relationships with Adults T1 with Supportive Relationships with Adults T2	.395	.028
Supportive Relationships with Peers T1 with Supportive Relationships with Peers T2	.270	.141
Opportunities for Autonomy & Leadership T1 with Opportunities for Autonomy & Leadership T2	.485	.006
Interest in Activities T1 with Interest in Activities T2	.184	.323

The final group examined was those students who changed programs from Time 1 to Time 2. Correlations were significant for the Total score (r = .431; p=.021), Supportive Relationships with Adults subscale (r = .395; p=.028), and the Opportunities for Autonomy and Leadership subscale (r = .485; p = .006).

These findings can be interpreted at tests of the reliability of the instrument. Ratings of the same environment at Time 1 and Time 2 are significantly correlated suggesting that the DSRS is a reliable instrument. The lack of significant correlations for the final group, which rated two different environments at two time points, also suggests that the instrument is reliably measuring perceptions of support.

Variations in Support by Activity Type

My next set of analyses examined program perception as a function of type of activity, which were classified into four general categories: academic, arts, sports, and service. These activities were nested within the eight school-based after-school programs. Tables 18 and 19 report the distribution of activity type within programs at Time 1 and Time 2. As shown on Table 18, at Time 1,the after-school programs differed in the types of activities they offered. Programs 6, 7, and 8 offered no service activities and were heavily focused on academic activities. Activity types were more evenly distributed across Program 1. Program 5 offered predominantly service activities. Time 2 activities are shown on Table 18. Interestingly, the pattern of distribution of activity type within program is different at Time 2. Program 5 was 64.7% service activities at Time 1 and 0 % at Time 2. Program 1 also no longer offered service activities at Time 2. Program 6, which was 100% academic at Time 1, offered all types of activity at Time 2. Sports activities increased across all programs at Time 2. About half the

Table 18. Distributions of Activity Type within Programs at Time 1

	Program 1 N = 17	Program 2 N =24	Program 3 N = 21	Program 4 N = 12	Program 5 N = 18	Program 6 N = 20	Program 7 N = 16	Program 8 N = 18
Academic	29.4	16.7	42.9	25.0	5.6	100	75.0	72.2
Arts	35.3	16.7	9.5	25.0	5.6	0	18.8	22.2
Sports	11.8	37.5	19.0	41.7	27.8	0	6.3	5.6
Service	23.5	29.2	28.6	8.3	61.1	0	0	0

Note. Numbers shown are percentages. Activities are the predominant activities reported at a particular program.

Table 19. Distributions of Activity Type within Programs at Time 2

	Program 1 N = 7	Program 2 N = 10	Program 3 N = 19	Program 4 N = 14	Program 5 N = 12	Program 6 N = 12	Program 7 N = 11	Program 8 N = 15
Academic	16.7	20.0	42.1	35.7	16.7	50.0	54.5	33.3
Arts	16.7	10.0	5.3	7.1	41.7	8.3	18.2	26.7
Sports	66.7	60.0	36.8	57.1	41.7	33.3	27.3	33.3
Service	0	10.0	15.8	0	0	8.3	0	6.7

Note. Numbers shown are percentages. Activities are the predominant activities reported at a particular program.

programs examined here were more heavily focused on academics in the fall, and moved toward more sports opportunities in the spring. These patterns of activity offerings within programs suggest that the opportunities for students change across the school year.

The programs that offer fewer kinds of activities are also those programs that were found to be less supportive in previous analyses. Students in Programs 2 and 4 reported significantly higher perceptions of supportive relationships with peers than did students in Programs 6,7, and 8. As shown in Table 18, Programs 2 and 4 provide opportunities for students to participate in all four activity types, while of activities Programs 6, 7, and 8 are more heavily focused on academics. The change is distribution of activity type within program from Time 1 to Time 2 also corresponds to changes in the variations of perceptions of support across programs from Time 1 to Time 2. There were fewer significant differences at Time 2, which may relate to increased opportunities within each program.

Next I examined whether perceptions of support vary as a function of activity type. These variations were to be examined irrespective of Program or Time. For activity type, the earliest reported activity was included and for those who did not participate in Time 1, Time 2 reports of activity type was used. The same strategy was used for the Developmental Supports Rating Scale. This created an N of 172 (157 participants whose Time 1 reports were used and 15 students whose Time 2 reports were use).

An ANOVA was performed with activity type as the independent variable, and the total score and subscales of the DSRS as the dependent variables (Table 20). Omnibus tests were significant for the Total score ($F = 3.06$; $p=.030$), the Supportive Relationships with Adults

Table 20. Variations in Perceptions of Support by Activity Type

	Academic N = 72	Arts N = 23	Sports N = 36	Service N = 41	F	*P* value
Total	3.28[b]	3.52	3.72[a]	3.54[a]	3.06	.030
Supportive Relationships with Adults	3.52[b]	3.79	4.08[a]	3.82	3.55	.016
Supportive Relationships with Peers	3.54[b]	3.81	4.06[a]	3.92[a]	3.81	.011
Opportunities for Autonomy and Leadership	2.92	3.02	3.02	3.08	.323	.807
Interest in Activities	3.21[b]	3.63[a]	3.89[a]	3.44	4.76	.003

Note. N=172. a > b

subscale (F = 3.55; p=.016), the Supportive Relationships with Peers subscale (F = 3.81; p=.011), and the Interest in Activities subscale (F = 4.76; p=.003). Post Hoc contrasts were conducted when the omnibus test was significant. Significant differences were found between academic and sports activities (p=.004) for the Total score, indicating that students in sports activities rated those as more supportive overall than did students in academic activities. Students in service and sports activities also reported more supportive relationships with peers than did students in academic activities (p=.02; p=.002, respectively). Students in sports and arts activities reported more interest in their activities than did those students in academic activities (p=.05; p=.000, respectively). There was a significant difference between sports and service activities (p=.03) on Interest in Activities such that students participating in sports reported higher interest than did students in service activities. No significant differences between activity types were found for Opportunities for Autonomy and Leadership (F = .323; p=.807).

In a second analysis, estimates from the ANOVA model were compared to an alternative model in which child and family factors were included as covariates (ANCOVA). These factors included gender, ethnicity, prior adjustment and family structure. Including the covariates in the model resulted in minimal changes in the magnitude of the estimates of activity type on perceptions of support. Moreover, the overall pattern of significance was unaffected by the expanded model suggesting that the findings are robust and appear largely unaffected by selection factors. Table 21 reports the adjusted means for the Total score and subscales of the DSRS by activity type. Similar to the basic ANOVA model, significant differences were found between activity types for Total score (F = 3.60; p=.015), Supportive Relationships with Adults

Table 21. Variations in Perceptions of Support by Activity Type with Means Adjusted for Covariates

	Academic N = 56	Arts N = 21	Sports N = 33	Service N = 34	F	*P* value
Total	3.23[b]	3.58	3.72[a]	3.52	3.60	.015
Supportive Relationships with Adults	3.40[b]	3.82	4.09[a]	3.79[a]	4.34	.006
Supportive Relationships with Peers	3.53[b]	3.88	4.05[a]	3.85[a]	3.51	.017
Opportunities for Autonomy and Leadership	2.91	3.06	3.02	3.08	.280	.840
Interest in Activities	3.11[b]	3.76[a]	3.88[a,c]	3.46[a,d]	6.25	.001

Note. N=144, N is lower due to missing parent report data. a > b; c > d. Covariates included were child gender, ethnicity, family structure and prior adjustment.

subscale (F = 4.34; p=.006), Supportive Relationships with Peers subscale (F = 3.51; p=.0 17), and Interest in Activities subscale (F = 6.25; p=.001). Students in sports activities reported overall higher perceptions of support than did students in academic activities (p=.002). Those students participating in sports and service activities reported more supportive relationships with adults than did students in academic activities (p=.001; p=.06, respectively). The same pattern is true with respect to support relationships with peers, wherein students in sports and service activities report more supportive peer relations than do students in academic activities (p=.003; p=.06, respectively). Students in arts, sports and service activities reported higher interest in activities than did students in academic activities (p=.005; p=.000; p=.06, respectively). There were also differences between sports and service activities, with students in sports reporting more interest in activities than students in service activities (p=.06).

Variations in Support by Child and Family Characteristics

The third aim of the study was to consider child and family characteristics in relation to students' perceptions of developmental supports. In order to determine whether gender, ethnicity, or family structure were associated with differences on the Developmental Supports Rating Scale, an analysis of variance (ANOVA) was performed using gender, ethnicity, and family structure (two-parent vs. single parent family) as between-subject independent variables, and the Total score and the subscales of the DSRS as the dependent variables. Mean differences between subscales as well as an overall DSRS score by gender, family structure, and ethnicity were examined and are reported in Table 22. No significant differences were found.

To determine if perceptions of support are predicted by child adjustment, a linear regression analysis was conducted with subscales as the dependent variable and child adjustment

Table 22. Variations in Perceptions of Support by Selection Factors: Gender, Family Structure, and Ethnicity

	Gender			Family Structure			Ethnicity			
	Male	Female	F	Two-Parent	Single-Parent	F	White	Black	Hispanic	F
Total	3.48	3.44	.125	3.47	3.40	.338	3.45	3.67	3.65	1.06
Supportive Relationships with Adults	3.74	3.73	.008	3.77	3.64	.676	3.77	3.55	3.98	1.75
Supportive Relationships with Peers	3.84	3.75	.498	3.82	3.67	1.12	3.70	3.71	4.04	1.93
Opportunities for Autonomy & Leadership	2.97	2.99	.030	2.93	3.07	.921	2.95	2.99	3.05	.205
Interest in Activities	3.53	3.38	.975	3.54	3.28	2.67	3.48	3.36	3.65	.608

as the independent variable. Results are reported in Table 23. Child adjustment was a significant predictor of Supportive Relationships with Adults (B = .272, p = .025), Supportive Relationships with Peers (B = .352, p = .001) and Total score (B = .257, p = .011). These results suggest that with lower rates of parent reported child adjustment problems are more likely to rate their after-school activities as being more supportive.

Concurrent and Longitudinal Associations Between Perceived Support and Program Attendance

Associations between Time 1 perceptions of support and program attendance were examined, controlling for child gender, ethnicity, prior adjustment and family structure (Table 24). Two measure of attendance were considered: intensity (once a month; 2 to 3 times a month; once a week; 2 to 4 times a week; 5 or more times a week) and duration (less than a month; 1 to 2 months; 3 to 6 months; 7 months to 1 year; more than 1 year). Concurrent correlations suggest that the Opportunities for Autonomy and Leadership subscale at Time 1 is related to sustained attendance (r = .203 at Time 1; r = .195 at Time 2). While no associations between perceptions of support and intensity of attendance were significantly concurrently, longitudinal analyses found Total score (r = .253), Supportive Relationships with Adults (r = .216), and Interest in Activities at Time 1 (r = .301) to be significantly associated with intensity of attendance at Time 2.

These results suggest that sustained attendance is more closely related to quality concurrently, while intensity of attendance is more closely related to quality longitudinally. The concurrent association between duration and Opportunities for Autonomy and Leadership suggest that the longer students attend a program, the more opportunities they have to make choices and take on leadership roles. Longitudinal associations between intensity and Interest in

Table 23. Child Adjustment predicting the Developmental Supports Rating Scale at Time 1

	Beta	p-value
Total	.257	.011
Supportive Relations with Adults	.272	.025
Supportive Relations with Peers	.352	.001
Autonomy and Leadership	.201	.088
Interest in Activities	.233	.068

Table 24. Correlations Between Perceptions of Support and Program Attendance Controlling for Child Gender, Child Ethnicity, Prior Adjustment, and Family Structure

	Intensity Time 1 N = 141	Duration Time 1 N = 141	Intensity Time 2 N = 129	Duration Time 2 N= 129
Time 1				
Total	.075	.130	.253*	-.008
Supportive Relationships with Adults	.069	.078	.216*	-.038
Supportive Relationships with Peers	.044	-.007	.148	-.027
Opportunity for Autonomy & Leadership	.014	.203*	.185	.112
Interest in Activities	.148	.109	.301**	-.124
Time 2				
Total			.125	.144
Supportive Relationships with Adults			.141	.083
Supportive Relationships with Peers			.161	.090
Opportunity for Autonomy & Leadership			-.007	.195*
Interest in Activities			.166	.059

Note. * $p < .05$; ** $p < .01$. Patterns of association were similar when controls were not included in the model. There was however, a significant association between Opportunities of Autonomy and Leadership at Time 1 and Duration at Time 2 (r = .204*).

Activities suggest that the more interested students are in the activities offered by a program, the more often they will attend. The associations between ratings of support and concurrent sustained attendance are indications of the validity of the DSRS. Previous research and theory posit that students will continue to participate in environments that are supportive and meet their developmental needs (Eccles, et al., 1993; Eccles & Gootman, 2002).

Association Between Global Ratings of Support and Daily Experience Sampling Reports

The final study aim of the dissertation was to examine relations between the Experience Sampling data and the Developmental Supports Rating Scale. The main objective of these analyses was to determine whether daily experiences in after-school programs were related to global ratings of support as reported via the DSRS. Means for the ESM composite variables of Concerted Effort, Motivation, Importance, and Positive affect when students reported being at the after-school program were used in the following analyses. Only those beeps that occurred while students were at an after-school program were included in calculating each composite variable (897 beeps at Time 1; 699 beeps at Time 2).

Pearson correlations were used in the analyses (See Table 25). Daily reports of motivation and positive affect were positively related to the Total score on the DSRS ($r = .31$, $p = .000$; $r = .29$, $p=.001$ respectively). These correlations suggest that when students reported being more motivated at the after-school program and they reported their affect as positive, their global ratings of supports were also high. Motivation and positive affect were also associated with Supportive Relations with Adults ($r = .26$, $p=.003$; $r = .30$, $p=.001$ respectively) and Interest in Activities ($r = .39$,$p=.000$; $r = .37$,$p=.000$ respectively). These relations suggest that activities in which students are happy and motivated were also activities in which students found adults to

Table 25. Correlations between Daily Program Experiences and Global Ratings of Support Time 1

	Global Ratings of Support				
Daily Experiences	Supportive Relationships with Adults	Supportive Relationships with Peers	Opportunities for Autonomy & Leadership	Interest in Activities	Total Score
Concerted Effort	.06	.10	-.06	.13	.05
Motivation	.26**	.34**	.16	.39***	.31***
Importance	.13	.15	.05	.19*	.14
Positive Affect	.30**	.17	.16	.37***	.29**

Note. Concerted Effort =Challenging, Concentrating, Skills. Motivation = Choice, Interest, Enjoyment, Wish. Importance = Importance. Positive Affect = Happy, Excited, Relaxed, Proud. Negative Affect = Angry, Stressed, Sad, Worried. Idleness = Bored, Lonely.

be supportive and activities to be interesting. Motivation was also associated with Supportive Relationships with Peers (r = .34, p=.000). Again these findings suggest that students are motivated to participate in activities in which their relationships are supportive. Importance was also associated with Interest in Activities (r = .19, p=.03), such that when students find activities important they rate higher interest in them. Negative affect and idle were not associated with any subscales of the DSRS.

The same analyses were conducted with Time 2 data. Correlations between the Total score, subscales of the DSRS, and composite ESM variables are presented in Table 26. Motivation was positively correlated with the Total score on the DSRS (r = .30, p=.001). Motivation also was positively correlated with Supportive Relationships with Peers (r = .21, p= .03), Opportunities for Autonomy and Leadership (r = .30, p = .001), and Interest in Activities (r = .34, p = .000). These significant correlations suggest that the more choice, enjoyment and interest students report having about an activity, the more supportive they rate that activity in terms of peer relationships, autonomy, leadership and interest.

Importance was positively associated with Interest in Activities (r = .27, p = .004), Supportive Relationships with Adults (r = .19, p = .05), and the Total score (r = .22, p = .02). When students reported that an activity was important to them, they also rated the activity higher in terms of adult relationships, interest, and being overall supportive.

Table 26. Correlations between Daily Program Experiences and Global Ratings of Support Time 2

	Global Ratings of Support				
Daily Experiences	Supportive Relationships with Adults	Supportive Relationships with Peers	Opportunities for Autonomy & Leadership	Interest in Activities	Total Score
Concerted Effort	.10	.02	.07	.29**	.14
Motivation	.10	.21*	.30**	.34**	.30**
Importance	.19*	.11	.16	.27**	.22*
Positive Affect	.06	.06	.17	.14	.14

Note. Concerted Effort =Challenging, Concentrating, Skills. Motivation = Choice, Interest, Enjoyment, Wish. Importance = Importance. Positive Affect = Happy, Excited, Relaxed, Proud. Negative Affect = Angry, Stressed, Sad, Worried. Idleness = Bored, Lonely.

Chapter Six

Discussion

Stage-environment fit theory suggests that environments that are developmentally appropriate, thereby meeting the developmental needs of participants, will support current and future development (Eccles, et al., 1993). This dissertation conceptualized after-school programs as contexts in which youth may have access to various developmental supports and in which positive development can occur. As part of this conceptualization I sought to examine developmental processes that occurred for middle school youth in eight different after-school programs located in three midwestern states.

Although after-school professionals and experts I the field have proposed the features of exemplary programs, systematic research in this area is limited and few studies have measured the processes and mechanisms by which participation in after-school programs may influence middle school students' development. One of the major goals and unique contributions of this dissertation was to assess and measure youth's perceptions of support and experiences in after-school programs. Two methods were used to measure student experiences. The two approaches used to measure and assess youth's experiences in the after-school context were: global ratings of support and minute-by-minute reports of youth's daily experiences. Examining support processes within the after-school context may enhance our understanding and interpretation of the results and findings from other studies that only examined after-school program participation in relation to outcomes.

The Developmental Supports Rating Scale

An important goal of the dissertation was to develop an instrument designed to measure students' perceptions of support. The Developmental Supports Rating Scale, which draws on elements from Public/Private Venture's Youth Survey (Gambone & Arbreton, 1997) and the After-School Environment Scale (Rosenthal & Vandell, 1996), was developed for this study to measure perceived support along four broad dimensions: supportive relationships with adults, supportive relationships with peers, opportunities for autonomy and leadership, and interest in activities. These dimensions reflect a careful review of the literature and utilize core features and characteristics of after-school programs that research suggests promotes positive youth development (Eccles and Gootman, 2002; Scales & Leffert, 1999; Gambone & Arbreton, 1997; McLaughlin, Irby, & Langman, 1994). A confirmatory factor analysis supported the hypothesized four-factor structure of the Developmental Supports Rating Scale. This instrument made it possible to assess whether youth's perceptions of developmental experiences in after-school programs vary by activity and other domains.

Few studies have examined middle school students' after-school experiences longitudinally. This dissertation extends the literature by examining perceptions of support in the fall and again in the spring of a school year. For those students who participated in the same program and activity in the fall and spring of a school year, perceptions of support did not change. Perceptions of support in fall and spring were different for those students who changed programs over the course of the school year.

This dissertation also extends the literature by examining stability of support over time for three participation patterns (same program/same activity; same program/different activity; different program). Students' ratings of support appeared to be reliable over time. For students

remaining in the same activity or in the same program, perceptions of support were stable across the school year. These findings suggest that the after-school programs in this study provided consistent developmental supports in the activities they offer. These findings can be interpreted at tests of the reliability of the instrument. Ratings of the same environment at Time 1 and Time 2 are significantly correlated suggesting that the DSRS is a reliable instrument. The lack of significant correlations for the students that rated two different environments at two time points, also suggests that the instrument is reliably measuring perceptions of support.

Concurrent and longitudinal associations between perceptions of support and attendance were also examined. Even after child gender, ethnicity, prior adjustment and family structure were statistically controlled, positive associations were found between subscales of the Developmental Supports Rating Scale and attendance. Notable findings included a positive correlation between Opportunities of Autonomy and Leadership in the fall and more sustained attendance. This relationship suggests that the longer students attend a program, the more opportunities they have for decision-making and leaderships roles within the program. This finding supports the supposition that opportunities for decision-making and autonomy are important features of quality programs for adolescents and should be associated with positive developmental outcomes. Longitudinal associations between intensity of attendance and Interest in Activities were also positive and significant. This is consistent with previous after-school evaluations, such as the TASC evaluation (Reisner, White, Birmingham, & Welsh, 2001) that found students who reported having more opportunities with new and interesting activities also reported attending their after-school programs more often.

Variations in Perceptions of Support by Program

A notable finding of the dissertation pertains to whether students in different school-based after-school programs reported differences in perceptions of support. Previous research has suggested that after-school programs that provide a variety of enriching opportunities for participants are likely to foster positive development (Fashola & Cooper, 1999; Rosenthal & Vandell, 1996). The findings here support the previous research and extend the literature by examining perceptions of support with middle school students. In examining variations in youth's perceptions of support by program, this study found that programs offering more types of activities were rated as more supportive than programs offering fewer types of activities. I found changes in the type and number of activities programs offered during the school year. The programs that offered predominantly academic activities in the fall broadened their offerings in the spring to include sports, arts, and service activities. It was also the case that fewer differences were found in perceptions of support at Time 2 than at Time 1. These results support the hypothesis that participants will rate those programs offering a variety of activities as more supportive. These findings are consistent with previous research and suggest to practioners that an important feature of high quality after-school programs is a diverse activity schedule. The increase in the diversity of activities offered provides more opportunities for activity participation suited to student interest.

Programs that offered predominantly academic activities received the lowest ratings of support, especially in regards to Supportive Relationships with Peers. This suggests that highly academic activities may not provide students with the kinds of experiences that build friendships and foster supportive relationships, program characteristics thought to important to middle

school students. These activities then may not develop the students' sense of belonging, which has been posited to be an important feature of high quality after-school programs (Eccles & Gootman, 2002; Gambone & Arbreton, 1997).

These findings also inform the Developmental Assets research. The results of the dissertation indicate that different types of programs and activities have differing levels of support. Therefore it may be important to consider programs individually, as contexts in which students have *access* to assets and supports, rather than considering programs universally as *an asset* as proposed by Scales and Leffert (1999).

Variations in Perceptions of Support by Activity Type

The specific types of activities students participate in also appear to be an important factor in overall program satisfaction. In the study, reported activities were coded into four activity types: academic, arts, sports, and service. The activity types used in this dissertation are similar to those used in previous research (Bryant, Gao & Zimmerman, 2002; Eccles & Barber, 1999; Jordan & Nettles, 1999). Significant differences were found between activity types across all subscales except Opportunities for Autonomy and Leadership. The pattern of differences was the same across subscales such that sports activities were rated as more supportive than academic activities. The findings indicating that sports activities are rated as most supportive (of the 4 activity types) in terms of relationships with adults and peers and interest in activities is consistent with studies that show positive outcomes associated with sports participation (Bryant, Gao and Zimmerman, 2002).

Service activities were also rated more supportive overall than were academic activities. These findings parallel the program level findings. Participants do not perceive academic

activities and programs that focus primarily on academics, as supportive as other types of activities. These findings are consistent with the stage-environment fit framework that suggests that middle school environments are not meeting the developmental needs of students. Academic activities are more likely to mirror the school day and are perceived by students as less supportive than enrichment activities such as sports and service. These findings are also consistent with those of Kahne and colleagues (2001), who found that students experience more opportunities for support and more positive affective contexts when in after-school programs than when at school.

With the remediation and academic support the focus of many after-school initiatives across the country, these findings have strong implications for future programming. The results here suggest that students will be more interested in their activities, experience more supportive relationships with adults and peers in after-school programs that offer a variety of activities through-out the afternoon and over the school year.

Associations Between Global Ratings of Support and Daily Experiences

A unique contribution of this dissertation was to examine the relationship between students' daily reports of experiences while attending an after-school program with their more global ratings of support. These two approaches relate reports of immediate experiences with more reflective reports of experiences. While these are not the same, the two reports were strongly associated which suggests connecting measures of specific experiences to more general perceptions of support yields a more comprehensive picture of students' after-school program experiences.

The relationship between immediate experiences and reflective perceptions of support were examined at Time 1 and at Time 2. Similar patterns emerged at each time point. Interest in activities, the subscale on the DSRS that included items such as "I get to do things here that I don't get to do anywhere else", was positively associated with positive affect at Time 1, concerted effort at Time 2, and motivation and importance at Times 1 and 2. Supportive relationships with peers was related to motivation and both Time 1 and Time 2. Motivation was also related to the total score at Times 1 and 2. Supportive relationships with adults was associated with importance, motivation and positive affect. Positive associations between Interest in Activities and daily experiences highlight the emphasis placed on students reporting on feelings and engagement related to the activity in which they were participating when signaled.

These positive associations suggest that students' minute-by-minute experiences of choice, interest, and engagement are related to their more global perceptions of support. These findings support previous research that posit positive features of developmental settings as including opportunities to belong and build positive relationships with peers, opportunities to engage in activities that are challenging, interesting and important (Eccles & Gootman, 2002; Larson, 2000; Gambone & Arbreton, 1997; McLaughlin, Irby, & Langman, 1994).

Associations Between Child and Family Factors and Perceptions of Support

Child and family characteristics were also considered in relation to the developmental supports measured by the Developmental Supports Rating Scale. Previous research suggested that child characteristics such as gender and ethnicity play a role in the impact program participation has on child outcomes. The hypothesis in this dissertation is the characteristics

influence the way in which students perceive supports. In contrast to previous findings, children's perceptions of support were not associated with individual child characteristics, except for prior adjustment. The only characteristic associated with the ratings of support was child adjustment, suggesting that students with more reported child behavior problems perceived programs as less supportive. When child and family factors were included in the analysis examining variations in perceptions of support by activity type the significance of the model did not change.

Study Limitations

There are study limitations that should be considered. First, it was not always the case that students were beeped while participating in their after-school activity. This was due in part to the random nature of the ESM beep schedule and to the fluid nature of 8th grade program attendance. This resulted in reduced numbers of subjects available for analyses, and less within program and activity data. A second limitation is the lack of random assignment to programs. Students were selected in situ, already enrolled and participating in after-school programs and activities. As with any non-experimental design, selection bias can pose a threat to internal validity. Alternative model specification which considered child and family characteristics as selection factors, controlled for the lack of random assignment to some degree.

Future Directions

There is a growing consensus among researchers regarding the kinds of assets adolescents need for healthy development (Eccles & Gootman, 2002; Scales & Leffert, 1999; Roth, Brooks-Gunn, Murray, & Foster, 1998). Increasingly, research on after-school programs and activities specify program features posited to support adolescent development (Eccles &

Gootman, 2002; Gambone & Arbreton, 1997). This dissertation is a first step in providing empirical evidence of the influence of supports on development by empirically testing the associations between perceptions of support and types of after-school activities. Additional research is needed however, to empirically test the effectiveness many of the program features described in this dissertation.

Future research should measure students' experiences in programs at multiple time points and also link these experiences with specific program features to more fully identify and understand student experiences and program attributes that contribute to continued program participation and positive development. Future research also should link students' perceptions of support with developmental outcomes. Perceptions of support could very likely account for differences in outcomes found in previous research on after-school activities. In addition, outcomes should measure a variety of developmental domains to reflect the different kinds of opportunities and supports that students experience while participating in after-school programs and activities

This dissertation contributes to research on after-school experiences by longitudinally examining student experiences in programs and activities as well as measuring students' perceptions of four broad areas of support: supportive relationships with adults, supportive relationships with peers, opportunities for autonomy and leadership, and engagement in activities.

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Appendix A

Demographic Data for Original Sample

Demographic Characteristics of the Original Sample

	Original Sample N=191	
Site		
Site 1	31.1 %	
Site 2	33.7 %	
Site 3	35.2 %	
Gender		
Male	51.8 %	
Female	48.2 %	
Ethnicity		
African-American	32.8%	
Hispanic	15.3 %	
White	38.7 %	
Family Structure		
One-parent	32.7 %	
Two-parent	64.3 %	
Income		
Less than $20,000	27.4 %	
$20,000 - $39,999	28.0 %	
$40,000 - $59,999	22.0 %	
$60,000 or more	22.6 %	
Parent Education	Mother	Father
High School degree or Less	43.4 %	51.2 %
Some College	26.0 %	14.5 %
College Graduate	30.6 %	34.3 %

Appendix B

Developmental Supports Rating Scale

Dadisman (2001)

Developmental Supports Rating Scale

Name:_____ School:_____ Date:_____

Program Name:_____

Please **circle one answer** for each question about your after-school program.

	Never	Almost Never	Some-times	Most of the time	All of the time
1. The adults here pay attention to what's going on in my life.	1	2	3	4	5
2. I get to do things here that I don't get to do anywhere else.	1	2	3	4	5
3. I get to know other kids really well here.	1	2	3	4	5
4. I get to help plan activities or events here.	1	2	3	4	5
5. The staff here notice when I participate in activities.	1	2	3	4	5
6. I have a lot of friends here.	1	2	3	4	5
7. The staff here help me do something if it is too hard for me to do by myself.	1	2	3	4	5
8. I get a chance to do lots of new things here.	1	2	3	4	5
9. I can really trust the other kids here.	1	2	3	4	5
10. I like doing activities with the other kids here.	1	2	3	4	5
11. I could go to an adult here if I needed advice about a personal item.	1	2	3	4	5
12. I help set the rules here.	1	2	3	4	5
13. Staff let me decide what activities I'm going to do here.	1	2	3	4	5
14. I feel like my ideas count here.	1	2	3	4	5
15. The activities here really get me interested.	1	2	3	4	5
16. When I do a good job at something, the staff here let me know.	1	2	3	4	5
17. Staff let me decide how to spend my free time here.	1	2	3	4	5

Please **circle one answer** for each question:

18. How long have you been involved in this program or activity?	less than 1 month	1 to 2 months	3 to 6 months	7 months to 1 year	more than 1 year
19. How often do you attend or participate in this program or activity?	5 or more times a week	2 to 4 times a week	once a week	2 to 3 times a month	once a month

Appendix C

Experience Sampling Logbook

Time signaled: _____ Time filled out: _____

1. Where were you?

2a. Were you at an **after-school program**? Yes No

2b. Name of the program:

3. What was the **main** thing you were doing?

4. What else were you doing?

5. Who was **doing** this activity with you? Circle **all** that apply.

No one	Other adults I know
Mom/stepmom	1 friend
Dad/stepdad	2 or more friends
Brother/sister Age _____	Other kids
Adult relative	Boyfriend/girlfriend
Child relative Age _____	Anyone else? Who?
Teacher(s)	_____
Program staff	_____

6. Who else was around but doing something else?

No one	Other adults I know
Mom/stepmom	1 friend
Dad/stepdad	2 or more friends
Brother/sister Age _____	Other kids
Adult relative	Boyfriend/girlfriend
Child relative Age _____	Adults I don't know
Teacher(s)	Anyone else? Who?
Program staff	_____

7. Circle an answer for **each** question about what you were doing.

	Not at all	Some what	Pretty much	Very much
a. How much choice did you have about this activity?	1	2	3	4
b. How important was this activity to you?	1	2	3	4
c. Was it interesting?	1	2	3	4
d. Was it challenging?	1	2	3	4
e. Did you enjoy what you were doing?	1	2	3	4
f. How hard were you concentrating?	1	2	3	4
g. Were you using your skills?	1	2	3	4
h. Did you wish you were doing something else?	1	2	3	4

8. How were you feeling when you were signaled? Circle an answer for **each** feeling.

	Not at all	A little	Some what	Very much
Lonely	1	2	3	4
Happy	1	2	3	4
Angry	1	2	3	4
Stressed	1	2	3	4
Excited	1	2	3	4
Bored	1	2	3	4
Scared	1	2	3	4
Sad	1	2	3	4
Relaxed	1	2	3	4
Proud	1	2	3	4
Worried	1	2	3	4