

YOUTH ASSETS IN ADOLESCENT PREGNANCY

A QUANTITATIVE STUDY

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## **Abstract**

**Introduction:** Adolescent pregnancy continues to be a priority health issue in the United States. Although risk factors for poor maternal and infant health outcomes are well-documented, less is known about youth assets that may contribute to a healthier pregnancy and beginning for new mothers and their newborns. The purpose of this research was to identify perceived youth assets of pregnant adolescents.

**Methods:** Pregnant adolescents (N=28) were recruited from the waiting rooms of two non-profit urban neighborhood health clinics in the Midwest. Each participant completed the Youth Assets Survey (YAS) in which they rated their attitudes, beliefs, and behaviors pertaining to a set of protective factors against risky behaviors.

**Results:** Participants had the highest mean ratings on Educational Aspirations for the Future and Cultural Respect. The assets with the lowest mean ratings were Use of Time in Group Sports and Religion. One significant finding was that the teens who reported a satisfactory relationship with their mother had higher mean asset scores. The third highest mean asset was Responsible Choices focusing on ability to appropriately identify and choose a behavior based on consequences.

**Conclusions:** Although we hypothesized that pregnant adolescents in this study would report relatively low assets, the majority of self-reported assets were moderate to high. Although other factors may contribute to the experience of becoming pregnant, assets possessed by pregnant adolescents undoubtedly affect the course of the pregnancy and beyond. Pregnancy is not necessarily perceived as a barrier or impediment but rather may strengthen resolve to achieve future goals.

**Key Words:** youth assets, pregnancy, pregnant adolescents, anticipatory guidance

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## CHAPTER I: INTRODUCTION

Adolescent pregnancy continues to be a priority health issue in the United States.

Pregnancy rates in adolescents steadily dropped from 1990 to 2005. This trend was reversed in 2006 for fifteen- to nineteen-year-olds and has increased yet again in 2007 for all racial groups except Hispanic adolescents (Hamilton, Martin, & Ventura, 2009). The reported birth rate for adolescents (15-19-year-olds of all races) in 2007 was 42.5 births per 1000. While the birth rate for non-Hispanic and black teens as well as Asian Pacific Islanders rose by 1 to 2 percent in 2007, the birth rate for American Indian or Alaska Native (AIAN) teenagers increased by 7 percent. The rate for Hispanic teenagers reflected a decrease of 2 percent from 2006-2007 (Hamilton, Martin, & Ventura, 2009).

Teenage pregnancy imposes serious risks on both the adolescent and her newborn. One concern is that adolescents enter into pregnancy with poor health habits and/or assets, and are unable to make the transition needed for the promotion of a healthy pregnancy (Grady & Bloom, 2004). There are many published studies that identify risk factors that lead to poor outcomes in pregnancy. Some of these factors are widely known and accepted, such as smoking or drinking alcohol. According to Bushman, Foster, & Vickers (2001), pregnant adolescents are placing an increased metabolic demand on their still developing bodies to support the needs of the fetus. Age alone may place the pregnant adolescent at significant risk. When an adolescent under the age of 16 has the same weight gain as an adult woman, the birth weight for the infant born to the adolescent may be lower (Bushman, et al., 2001).

In contrast to known risk factors, there are few positive assets identified for the promotion of a healthy adolescent pregnancy. "Youth assets" is an expanding topic of interest to researchers looking to improve the lives of youths. These assets are conceptualized in part as

relationships between adolescent and parent, ability of the youth to make decisions that contribute to good health, and ability to identify a positive vision for the future. Until now, no research has specifically targeted the youth assets of pregnant adolescents.

### **Background on Adolescent Pregnancy**

Adolescence is a period of transition from childhood to adulthood and spans from approximately age thirteen to nineteen. This period is a time of biological and psychological transition and specifically one of growth and maturity. Physically the adolescent is going through many changes that are difficult enough without the added needs of maintaining a healthy pregnancy. “Nutritional status is considered to be one of the most important environmental factors affecting the health of the teenage mother and her infant” (Stang, Story, & Feldman, 2005, p.4). Psychologically, adolescents generally have a sense of indestructibility and are self-centered. They believe that rules do not apply to them and they are, in a sense, invincible (Heath, 1995, p.135). Additionally, adolescents are under higher stress during and after pregnancy, which places them at risk for maternal adjustment and emotional distress.

Adolescent behaviors place the maternal development at risk and lead to a poor outcome in relation to the newborn (Grady & Bloom, 2004). Adverse outcomes related to adolescent pregnancies include premature birth, low birth weight, and increased infant morbidity and mortality (Koniak-Griffin & Turner-Pluta, 2001; Tilghman & Lovette, 2008). Holub, et al, (2007) describe difficult maternal adjustment in the adolescent characterized by more negative feelings about motherhood, decreased competency and care of the infant. Identifying assets that support maternal adjustment are needed in order to ensure a positive outcome of pregnancy (Holub, et al., 2007).

### **Statement of the Problem**

In tandem with research on the prevention of identified risk factors, more efforts are needed to look at the youth assets and characteristics that contribute to positive behaviors in pregnant adolescents and promote healthy outcomes for the teen parent and their newborns.

### **Study Purpose**

There have been several studies using the Youth Assets Survey (YAS) to investigate potential associations between assets and youth risk behaviors such as sexual activity, alcohol and drug use, and aggressive behaviors (Oman, Vesely, & Aspy, 2005; Oman, et al., 2004). There is no research that specifically examines what assets are prominent or diminished in pregnant adolescents or that specifically examines relationships between youth assets and maternal health.

Studies using the YAS have found inverse relationships between youth assets and risk-taking behaviors. This research will use the YAS to identify the youth assets of pregnant adolescents. The purpose of our research is to assess the levels of perceived youth assets in the pregnant adolescent.

### **Research Hypotheses**

- Pregnant adolescents will have low to moderate youth assets.
- Pregnant adolescents who are attending school will have higher mean scores on good health practices.
- Pregnant adolescents who are attending school will have higher mean scores on general aspirations for the future.

- Pregnant adolescents who have completed higher levels of education will have greater assets (number of constructs).
- Pregnant adolescents who report a satisfactory relationship with their mother will have moderate to high youth assets.

### **Summary**

The goal of this research is to contribute to the body of scientific evidence on youth assets by surveying the pregnant adolescent population. There is extensive research on the risks related to adolescent pregnancy, as well as at risk behaviors associated with adolescents. There is a gap in research examining positive youth assets perceived by the *pregnant* adolescent.

Our research is important to nursing because nurses, along with other healthcare professionals and educators who specialize in the care of adolescents, and particularly in pregnant adolescents, may use our findings to help identify young women who need more support throughout their pregnancies. This research may also assist in the anticipatory guidance utilized by the health care provider to promote protective factors known to contribute to a healthy pregnancy.

## CHAPTER II: CONCEPTUAL FRAMEWORK

Much of the study of youth has revolved around behavior associated with risks. In the late 1980s a framework emerged that centered on the assets youth possessed which served to protect them from involvement in at-risk behaviors, such as alcohol consumption, cigarette use, and early sexual debut (Jessor, 1991). This current research project was to survey female adolescents who had already participated in at-risk behavior(s) resulting in pregnancy. This behavior not only placed them at risk for a pregnancy, it also placed them at risk for other negative consequences of adolescent sex such as violence, sexually transmitted diseases, and a higher risk of morbidity and mortality associated with the stress on adolescent growth and development as it coincides with pregnancy, from conception to delivery of a neonate (Koniak-Griffin & Turner-Pluta, 2001). We wished to establish via self-report, how this vulnerable group in the population perceived many components of their lives, such as their family strengths, community involvement, and general educational aspirations for the future. Therefore, the challenge was to locate a tool that was valid and reliable to use in surveying this population for positive youth assets which they possess, even while practicing at-risk behaviors.

Positive youth development is the conceptual framework used for this study. There is no comprehensive list in the literature that identifies a composite of youth assets or factors that serve to protect youth and this has created a challenge for those researchers working in the field of positive youth assets (Kegler, et al. 2005). There was no consistent and reliable method by which to measure these assets. Youth assets as related to youth development can be associated with resiliency, identity, and bonding as well as emotional and social competency (Kegler, et al., 2005).

In 1995, the Centers for Disease Control and Prevention (CDC) funded 13 community-based projects as part of a national teen pregnancy prevention initiative. One project was conducted in Oklahoma City and was called the HEART of OKC (Health, Empowered And Responsible Teens of Oklahoma City) project (Kegler, et al., 2005). That research team set out to develop a survey that was intended to measure the assets of youth (Oman, et al., 2002). The project focused on five neighborhoods with diverse ethnic populations. These areas were experiencing high birth rates. The neighborhoods also had community-based organizations. In addition to windshield tours and key informants, secondary data were collected such as crime statistics, school dropout rates, and economic data. Focus groups were then initiated. There were 23 focus groups with a total of 186 adolescents participating. A “teen asset menu” was designed that listed several assets under topic areas such as “service to others” and “youth as resources.”

Two pilot studies were then conducted during 1996 and 1998. The participants consisted of one parent and one adolescent from the same household who were interviewed in person by two interviewers; the interviewers recorded responses on computers and tape recorded the sessions. The goal was to identify items on the survey that were difficult to understand, as well as determine whether the wording was appropriate and whether items were confusing. This approach was intended to identify positive assets that protected youth from at-risk behavior, contributed to increasing academic achievement and promoted other outcomes, such as competency.

Nine asset concepts were identified from this process. They were labeled Family Communication, Peer Role Models, Future Aspirations, Responsible Choices, Community Involvement, Non-Parental Role Models, Constructive Use of Time, Good Health Practices (exercise/nutrition), and Cultural Respect (Oman, et al., 2002). Research has been conducted on



these assets and how they relate to multiple youth risk behaviors, either in the presence or absence in the life of the youth (Kegler, et al, 2005). “Given the nascent stage of adolescent developmental asset research, however, the measures presented here remain a significant contribution to the field of adolescent health, at a minimum providing an important informational tool for others undertaking similar research” (Oman, et al, 2002). Oman, et al. (2004, p.1425) stated, “Emerging research and empirical evidence suggest that specific protective assets may indeed insulate adolescents from engaging in certain risk behaviors.” The assets were later termed constructs and eight additional categories were added during testing of the psychometric properties. The 17 constructs were included in the revised survey.

The CDC then funded a more involved five-year longitudinal study designed to expand the list of youth assets. Monies were granted to the Oklahoma University College of Public Health to “analyze, publish and disseminate information from the Youth Asset Survey, a 5-year study of 1,100 families in Oklahoma City, spearheaded by Dr. Oman” (Inasmuch Foundation, 2008). The longitudinal project was completed and Wave 5 of the data was obtained in 2008 with a valid completion rate of all 5 waves at 89%. The data continues to be analyzed and dissemination of findings is expected within the next year.

Dr. Roy Oman created a paper-pencil survey, the Youth Asset Survey (YAS), for researchers who, while not wishing to conduct longitudinal studies related to all aspects of a teen life, wished to establish the asset of youth related to an area of interest (R. Oman, personal communication, January 9, 2010). Our research project, Youth Assets in Adolescent Pregnancy, utilized the YAS to collect information about assets of pregnant adolescents. To the best of our knowledge, this will be the first use of the Youth Asset Survey to research assets possessed by pregnant adolescents.

### CHAPTER III: REVIEW OF RELATED LITERATURE

#### *Prevalence of Adolescent Pregnancy*

Adolescent pregnancy has been a concern for many decades. There has recently been a decline in the percentage of adolescent pregnancies. However, due to an increased population in that age group, the actual numbers of pregnancies among adolescents remains minimally changed. According to Montgomery (2003), approximately 13% of the births in the United States are to adolescents and 78% of those births are outside of marriage. Hamilton, Martin, and Ventura (2009) introduced preliminary data for 2007 in the National Vital Statistics Reports published by the National Center for Health Statistics (NCHS). Information was obtained from the vital records that were registered in 2007 and accounted for greater than 95% of those certificates filed. They report that the birth rates for adolescents age 15-17 and 18-19 each rose an estimated 1% in 2007 (preliminary data). The birth rate for females age 15-17 was 22.2/1000. In 2007, 140,640 infants were born to this age group which reflects a 5% increase from 2005. The birth rate for females aged 18-19 during the same time was 73.9/ 1000 adolescents. From 1991 to 2005 there was a 14-year span of declining birth rates in the 18-19 year olds, but the 2007 preliminary numbers indicated a 6% higher rate than in 2005. Birth rates for females age 10-14 were unchanged at 0.6/1000 births (Hamilton, et al., 2009).

Sieger and Renk (2007) conducted a study of 166 pregnant and parenting adolescents to note any relationship that might exist between the ethnicity of these women and any behavior problems or self-esteem issues they might have and whether they had social support. The subjects were primarily African American and Hispanic American. This study provided data in the form of ethnic identity as it related to internalizing and externalizing behavior problems. It also examined social support to determine if it was a protective factor for both the adolescent as well as the infant.

In addition to demographic data, other measurements were conducted through the use of the Multigroup Ethnic Identity Measure, the Youth Self-Report, Rosenberg Self-Esteem Scale.

Multidimensional Scale of Perceived Social Support, Infant/Toddler Symptom Checklist, and the Parenting Stress Index-Short form. “All the pregnant and parenting adolescents examined in this study were identified because they were participating in various services available in their communities” (Seiger & Renk, 2007, p. 578).

After several analyses of the data, the findings were consistent with other studies that have documented the importance of social support in reducing some of the effects of the difficulties encountered by this group of individuals. “Thus, social support was found to serve as a protective factor for pregnant and parenting adolescents’ self-esteem when they were experiencing behavior problems” (Sieger & Renk, 2007, p. 578). It is unknown if these findings were a result of the group chosen for this study, as they were receiving services from the community, or if this was due to the cultural perspective that pregnancy means status and independence. As a result of these findings, it will be important to explore further the ethnic identity of pregnant and parenting adolescents within the context of social support and the outcomes they are able to achieve. “These results suggested that interventions targeting social support may be helpful for improving the functioning of pregnant and parenting adolescents and their infants” (Sieger & Renk, 2007, p. 580).

#### *Adolescent Girls’ Perception of Teenage Childbearing Consequences*

In a study by Unger, Molina, and Teran (2000), 584 female students were surveyed to determine their perception of the consequences related to bearing a child while a teenager. This study sought to determine why an adolescent might choose to become pregnant in order to initiate programs that might be effective in encouraging delay of pregnancy until adulthood. The background of this study focused on the concept that an individual will participate in an activity-

-in this case unprotected sexual intercourse--in direct correlation to the outcomes of that behavior that are perceived to be positive (Unger, et al., 2000).

The Perceived Consequences of Teenage Childbearing (PCTC) was developed and tested through this study (Unger, et al., 2000). Focus groups were used with the goal of determining which questions would provoke a response that might result in a better understanding of which thought process resulted in the conclusion that an adolescent pregnancy was desired. Items on the PCTC were statements such as, "It would be the first time I had something that was truly mine," and "I'd still be able to finish my high school education," which were two of the highest mean scores (Cronbach alpha = .80). A demographic component gathered data regarding age, ethnicity, grades, expected level of educational attainment, communication with parents, as well as attitudes toward contraception and childbearing and sexual behavior (Unger, et al., 2000).

The results of the PCTC revealed high scores among Latinas, followed closely by African-Americans, as well as non-U.S. natives. The higher the score the more likely the teenage girl would be to engage in sexual intercourse without adequate protection against pregnancy. The Latina culture may emphasize a role among its women that values motherhood and/or the concept of large families which rewards those young women who conceive and bear at a younger age. The results of this study suggest that programs directed at instruction in obtaining contraceptives will not be effective to reach the teenager who is motivated to become pregnant. Further research should be done to determine how best to encourage delayed pregnancy among groups that perceive positive consequences of bearing a child as a teenager (Unger, et al., 2000).

#### *Mother-Mother Figure Relationships with Teen Daughters/Teen Mothers*

When a teenager becomes pregnant family dynamics are affected. The teen must decide when to inform her mother regarding the impending birth. There is also a transition in the roles

of both the teenager and her mother. The adolescent becomes a mother and her mother becomes a grandmother. Paskiewicz (2001) used an exploratory descriptive design to study this relationship when she studied 15 African American teen mothers. It was a convenience sample and inclusion criteria were age (19 years or younger), first pregnancy, prenatal care through teen obstetric clinic, delivery of a healthy full-term baby, and African American. These teenage mothers were simultaneously part of a large, longitudinal study of adolescent mothers. This study was conducted when the infant was approximately 12 months old in order to allow both the teenage mother and her mother to have experienced their new roles for an adequate length of time. There were 12 open-ended questions during one in-depth interview conducted separately for confidentiality purposes (Paskiewicz, 2001).

Themes emerged that were both symbolic and interactive. Communication and role change were revealed as symbolic concepts. “Overall, mothers and daughters who felt positive about their relationship also shared positive feelings about assuming their roles as mother[s] and grandmothers” (Paskiewicz, 2001, results section, para 9). Conflict and social isolation centered around areas of interaction and were woven through all participants’ experiences which indicate that the effects of everyday concerns regarding child care issues, school attendance, and the ability to participate in outside activities all impact the relationship. Another finding of this study was the social isolation that the grandmother experienced as a result of increased time spent caring for the child, limiting previous interaction she may have had in the community.

### *Teenage Mothers at Age 30*

There is difficulty studying teenagers in a longitudinal study due to the very nature of the stage and tasks of life associated with their age group. “Describing teen mothers only in terms of how they differ from women who defer parenting makes it impossible to understand how

variations in personal meanings, family and cultural traditions, or material circumstances shape family formation and the way that teen mother[s] understand their own lives,” writes SmithBattle (2005, p. 834). She completed a longitudinal, interpretive study that began with 16 families interviewed from 1988-1989 when the infant was 8-10 months old. Three more interviews were conducted in years 1993, 1997, and with a final interview in 2001 at which time 27 family members were interviewed. SmithBattle (2005) followed them for almost 14 years in order to identify the events in their lives related to education, marriage, and subsequent childbearing. Criteria for inclusion were age (younger than 19), single, Black or White, and raising a healthy first-born child. The families were of different structures, incomes, and levels of education associated with the grandparents (SmithBattle, 2005).

Identification of mothering as a central theme prevailed throughout all the years of interviews. Additional themes of adult love and work emerged associated with the youth developmental goals of those ages 15-30. The central identity associated with mothering was one of purpose and direction, yet not categorized as providing meaning and contentment for some. Others indicated that the role of mother was sufficient to provide meaning for a life. Some verbalized concern that the pregnancy and subsequent birth of the child might have altered the adolescent in a positive way even to the point of saving her from potentially fatal destructive behaviors. The voices of the women emerged as either strong or muted and directly correlated to their relationships with their parents prior to pregnancy. Those in oppressive or abusive environments carried those themes into their adult life. This qualitative study showed the strong effect that family connectedness and their relationship with their mothers had on these pregnant adolescents.

*Health-promoting and Risk Behaviors*

Youth assets as they relate to risk behaviors or those behaviors that promote health remain difficult to measure. Murphey, Lamonda, Carney, and Duncan (2004) added six questions regarding assets that might promote health-related behavior to an existing measurement method entitled the “Youth Risk Behavior Survey (YRBS)” that the Center for Disease Control (CDC) developed to measure the health risk behaviors of youths across the nation who are in school. Each state may add questions to the survey. The ability to catch a brief measure of the assets that contribute positively was the desired goal and each asset was defined by a single item. The study by Murphey, et al, focused on several assets, some of which were part of the YRBS core questions. There were 30,916 Vermont students in grades 8-12 that completed this survey. Demographically, 91.9% were White and 85% of the mothers had completed a minimum of 12<sup>th</sup> grade (Murphey, et al).

The single item constructs were grades in school (achievement academically requires engagement in the process), the young person’s relationship and communication with his/her parent(s) regarding school, increasing autonomy in decision-making regarding school, participation in constructive, supervised activity when not at school (not to include sports), community connectedness through volunteering, and a sense of value within one’s own community. There was found to be a direct inverted correlation between self-reported possession of the assets and the risk of participating in behaviors that would compromise their health. Risk-behaviors were cigarette smoking, alcohol use, binge drinking, marijuana use, physical fighting, sexual intercourse, and planned suicide. The addition of even one asset reduced the likelihood that behavior not considered healthy would occur.

#### *Adolescent Alcohol and Drug Use*

Most of the published research on youth development has focused on a limited number of youth assets or related concepts, and few studies have examined multiple positive influences and how these might prevent alcohol and drug use among youth (Oman, et al, 2004).

Epidemiological findings on adolescent and young adult alcohol use reveal several disturbing trends. National data indicate not only that there are high rates of alcohol use among these age groups, but also that many adolescents and young adults engage in drinking practices associated with major contributors to youth mortality and with disruptions in significant contexts that are important for health development (Windle, 2003, p. 85).

Oman, et al, conducted a study of 1350 randomly selected households, each of which had at least one parent and one adolescent. The average age of the adolescent was 15.4 years and the sample consisted of 52% females. Demographics included race/ethnicity, gender, parental income, family structure, and level of parental education.

One difference in this study was that “nonuse of drugs or alcohol” was considered a positive finding, thereby giving the “reduction in risk behavior” the designation of a youth asset. The attempt was then made to identify those assets as protective in nature. The use of the Youth Assets Survey allowed further research into the correlation of nine youth assets with abstinence from alcohol and drugs during adolescence. Although the questionnaire involving alcohol and drug use assessed only for the past 30 days, the findings were significant. Since the survey was self-report, it must be approached from the basis of honesty.

The conclusion of this study was consistent with previous studies indicating that even one of the youth assets was enough to offer protection in the form of a decreased likelihood of using alcohol or drugs.



*Good Health Practices*

Physical growth and maturation occur at a rapid rate during adolescence. These years, however, are not when nutrition is given a place of significance. Teenagers eat fast food at astounding rates and family dinner times have become a relic. At a time when the adolescent is engaging in unprotected sexual intercourse, the possibility of conception is ongoing. The first trimester of a pregnancy is a time of rapid organ development and the nutritional intake, adolescent weight, and daily living habits have a significant outcome in the neonate. Many components of diet are of concern when concentrating on the adolescent. Iron, mineral, and protein needs increase during pregnancy. Stang, Story, and Feldman (2005) suggest that in developed countries the adolescent has developed many poor habits related to eating such as skipping breakfast, using methods to control weight gain that are unhealthy, and substituting snacks for nutritious meals. Fast food has the increased calorie count without the nutrition dense component of well thought out choices that consider the growth and development of the adolescent and unborn. While Stang, et al suggest that screening for nutrition occur with all pregnant adolescents, the knowledge that embryo development occurs prior to the adolescent realizing that conception has occurred, suggests that this screening may be more beneficial to all female adolescents (Stang, 2005).

Adolescent pregnancy is thought to have many implications for infant birth weight. Roth, Hendrickson, Schilling, and Stowell (1998) describe the importance of education on healthy lifestyle choices, postponing pregnancy, and reducing unwanted pregnancy. Infants who are born at normal weight are 40 times less likely to die within the first month than those infants born at low birth weight (2500 grams). The higher risk of low birth weight is due to several factors in adolescent mothers. First of all, the delay in prenatal care can impact overall health

during pregnancy and infant birth weight. Also, Roth, et al. (1998) describe that the mother and fetus may be competing for nutrients, possibly leading to decreased birth weight. Risk factors such as peer pressure can affect the health of the neonate as there may be hesitance on the part of adolescent mothers to gain weight due to social acceptance among peers and fear of becoming overweight. “Fearing peer disapproval or ostracism, pregnant teen-agers may continue to consume substances known to have deleterious effects on fetal development” (Roth, et al, 1998, p. 272).

The Journal of Perinatal Education publishes a column entitled “Ask an Expert.” In spring 2008 a reader wrote in asking for advice on how to adapt childbirth classes for teaching adolescents. Joan Tilghman and Avi Lovette, both board certified Nurse Practitioners, wrote the response. The vulnerability of the pregnant adolescent with regards to their level of education and their access to available resources plays a significant role in their behaviors during the pregnancy. Teens typically respond to the pressure of peers and often imitate role models. Their knowledge base regarding physical development and their stage of psychosocial growth impact their decisions. Educators and those in the community who interact with this vulnerable population must use every opportunity to promote wise choices and provide information regarding community resources, if not for the health and well-being of the unborn, then for the teenage female herself.

Kaiser and Hays (2005) used a descriptive design to assess and document the involvement of first-time pregnant adolescents in three specific at-risk behaviors: substance use (smoking, alcohol consumption, and illicit drug use), sexual risk taking, and prenatal class attendance. The Center for Disease Control’s Youth Risk Behavior Surveillance System was used after modification of the health behavior questions occurred. The study was designed to

determine if the adolescents reduced any of these behaviors during their pregnancy. This was a convenience sample of 145 pregnant adolescents using more than 45 sites in the Midwest. The females were between 15 and 18, first pregnancy, unmarried, 20-40 weeks pregnant, who intended to retain parental rights and spoke English. This sample had a mean age of 16.63 years and was ethnically diverse. Seventy-five of the teens smoked, 65 used alcohol, 52 used street drugs, and the majority were sexually active. Upon discovery of pregnancy, 25% quit smoking, only one participant continued using alcohol, 9 continued street drugs, and no changes were anticipated regarding sexual risk taking. These findings may indicate that these behaviors are underreported in recent data reflecting the national trends (Kaiser, 2005).

#### *Pregnant and Parenting Teens' Aspirations and Expectations*

Klaw (2008) conducted a study to explore the phenomenology of pregnant and parenting teens' aspirations and expectations using "possible selves" as the construct. Thirty participants were included in the study. All the students attended an alternative school for pregnant and parenting adolescents in a large Midwestern city. The participants ranged in age from 14- to 19-years-old with a mean age of 16.4. The participants consisted of 90% African American and 10% Mexican American ethnicity. The participants completed a brief "Obstacle Survey," drew a lifeline of the future, and discussed their dream job and the influence of role models on their future. Some of the participants completed collages of their expectations for the future. Their concerns regarding child care, transportation and health services were discussed as well. This was done by using open ended questions during focus group sessions (Klaw, 2008).

For analysis of the information, interpretations were summarized from the thematic findings (Klaw, 2008). Themes from the lifelines were analyzed for differences between the aspirations that the participants reported versus the obstacles they expressed. The results

indicated that prevailing themes among the teens were envisioning themselves married, financially successful, in professional careers, with family support. All represented themselves as what is widely considered middle class. Researchers interpreted this data as representing “hopes for the future” although participant expression from their collages described these as actual life trajectories, despite the lack of resemblance to current life circumstances. These teens looked to significant adults in their lives for inspiration and guidance and used them as images of an ideal self for “who I might become.” Despite their aspirations, the teens were aware of their potential barriers and this became their “feared self.” In focus group discussions the teens revealed their “ideal selves” and their “feared selves” and the researchers found the statements to be contradictory. The results of this study provide insight as to the high expectations and aspirations of pregnant and parenting youth. Overall, although they knew there were possible barriers, that knowledge did not impede their aspirations for the future (Klaw, 2008).

### Conclusion

Adolescence and all of its developmental challenges can create a “perfect storm” when pregnancy occurs. The factors that help to improve conditions for a healthy, uneventful pregnancy need to be explored. The review of literature has shown that the adolescent population is not a compliant age group and is seen as egocentric. Adolescents see their future as very positive but often easily abandon their dreams. To the best of the researchers’ knowledge the YAS has never been used to solely examine pregnant adolescents. In the absence of this, our research seeks to determine the self reported assets of pregnant adolescents.

## CHAPTER IV: METHODOLOGY

### Sample

In quantitative research, the researchers seek to select samples that allow them to achieve statistical conclusion validity and to be able to generalize their results to the population (Polit & Beck, 2008). The target population for this study was pregnant adolescents ages 11 to 19. Participation in this study was strictly voluntary. This study was done using a convenience sample at two clinics in an urban community in the Midwest. Thirty potential participants that met the criteria for inclusion were recruited. Of the potential thirty participants, twenty nine adolescents completed the survey. One of the twenty-nine surveys collected was disqualified when it was determined that the participant had previously completed the questionnaire. The thirtieth potential participant had also previously completed the survey and attempted to complete the survey a second time by giving the researcher a different name. Twenty-eight participants completed the surveys that were used for analysis.

### **Inclusion/Exclusion Criteria:**

To meet eligibility criteria for this study, the female must have been less than 20 years of age at the time of the study. The participants must have previously established prenatal care at the designated clinics. There were no exclusion criteria for gravida, race, ethnicity, or socioeconomic status. Because of cost and practical constraints, the study focused on two clinics located in urban areas for recruitment of the target population. Further validity was enhanced through the match between the eligibility criteria and the target population.

### **Sampling plan:**

The method chosen to draw the sample was a non-probability convenience sample. It was classified as non-probability since selection of participants was by non-random methods.

Since there is no way to estimate the probability that each element will be included in a non-probability sample, this means that every potential participant may not have a chance for inclusion (Polit & Beck, 2008). The sample design involved the key factors of budget and time constraints and location of clinics.

**Strata:**

Further stratification of the elements by race and age category within the accessible population enabled tabulation of the results for generalization to specific populations. The sample goal for the study was 30 participants. The use of this size sample will build diversified representativeness into the design. (Polit & Beck, 2008).

**Sampling bias:**

Control for sampling bias was through selection of participants from two different sites. Although both of the sites were in urban areas, the use of multiple sites enabled the study to maintain representation of the population for the purpose of generalizability.

**Design**

A comparative descriptive design was used to examine the relationship of youth assets in pregnant adolescents. The purpose of the comparative study was to observe and describe the levels of assets and make comparisons based on various demographic items (Brown, 2009). The design included the Youth Assets Survey, created by Dr. Roy Oman, to determine the presence of youth assets. This tool was originally designed and validated for use in programs aimed at preventing at-risk behaviors in teens in Oklahoma City, Oklahoma. This current study sought to measure the presence of youth assets in pregnant adolescents.

### **Internal Validity**

“Internal validity concerns the validity of inferences that given the existence of an empirical relationship it is the independent variable rather than other factors that caused the outcome” (Polit & Beck, 2008, p.287).

#### **History**

The comparative descriptive design of this study limited the threat to the validity of the research. The threat of the setting or a societal event is present and may affect the dependent variable, however this study did not involve interventions and did not use a control group.

#### **Selection Bias/Maturation**

“Selection bias is one of the most problematic and frequently encountered threats to the internal validity of studies not using an experimental design” (Polit & Beck, 2008, p. 295).

There was a selection bias based on the population that is served by these clinics which are located in urban areas. Although no specific ethnic or socioeconomic backgrounds were excluded from the study, the patient populations of these clinics were mostly African American, low socioeconomic status females. This was the highest threat to internal validity.

Maturation is the process of change in people over time, both physically and emotionally, that can affect the outcome of a study (Polit & Beck, 2008). Since the tool was used and measured only once during the study it would be difficult to determine the effect that maturation played. There was no intervention nor interaction with the participants after the data was obtained. Emotional maturation may be occurring due to the circumstances and the responsibilities that coincide with adolescent pregnancy, however this study was a one-time encounter and therefore reduces the risk of maturation as a threat to the validity of the research.

#### **Testing**

Another threat to the validity of a study is testing. This threat occurs when the effects of a pretest alter the performance on a post test either through memory or introduction of a subject (Polit & Beck, 2008). Since there was no pre or post test administered in this study, internal validity is strengthened; however it is recognized that introduction of the survey may affect the dependent variables. Overall, testing was a low threat to bias in the internal validity.

### **Instrumentation**

Instrumentation threatens the validity of the design when there are changes either in the tool or the method by which it is administered (Polit & Beck, 2008). The Youth Asset Survey is a single administration tool that is conducted through self report. The original youth assets survey was received via email with permission from Dr. Roy Oman to copy for use with this research. The tool was used without making any changes from Dr. Oman's original survey. Each participant was given the survey to complete individually and the demographic information was completed by the researchers. The methodology limits bias due to this threat.

### **Mortality**

Mortality represents the reduction of participants in the study from beginning of data collection to end of data collection (Polit & Beck, 2008). This study population is high risk for non-compliance, poor follow-up and is, furthermore, a transient group. However, this study was a onetime encounter and a low risk for attrition.

### **External Validity**

External validity is the generalizability of the study findings to populations outside of the study participants. There were two clinics in urban areas from which the study participants were selected. These clinics are located in Flint, Michigan. The patients at the two clinics came from mostly low socioeconomic status families and were predominantly of African American descent.



Participants included pregnant adolescents less than twenty years old who had established prenatal care at the clinics.

One of the strengths to the external validity is the use of multiple sites. This aspect will strengthen confidence in the ability to replicate similar findings. Weaknesses to the external validity of the study are identified as the low socioeconomic income, sample size ( $n=28$ ), and African American descent. Both clinics have similar populations which may limit generalizability of the findings to various ethnic backgrounds or higher socioeconomic income groups. In order to strengthen the study, the researcher would need to include clinics that serve other ethnic backgrounds and middle or upper class income families. However, across the country there are numerous clinics that serve similar populations and the findings from this study may be transferable to those patients.

### **Instruments**

With the permission of Dr. Roy Oman, the tool used for this study is the Youth Assets Survey (YAS). The tool was part of a national teen pregnancy prevention initiative. The psychometric properties of YAS were first tested in 2002 (Oman, Vesely, McLeroy, Harris-Wyatt, Aspy, Rodine, & Marshall, 2002) and were found to have acceptable reliability. It was subsequently refined and expanded to encompass seventeen constructs (Oman, personal communication February 6, 2009). Oman reported the reliability and validity statistics as follows:

Cronbach's alphas from the complete sample ranged from 0.55 to 0.92. A majority (27 of 34) of the alphas were .65 or above. All items loaded on one construct at .40 or above. The final results yielded 17 constructs assessed via 61 items. Spearman correlations and intraclass correlations ranged from .60 to .82 and .58 to .87, respectively.

The tool was initially the result of three studies, two pilot studies and a main study, during which the tool was refined and expanded. This is a pencil and paper survey created to replace the verbal interview used for the initiative. The adolescents self-reported their perceptions by completing the closed-ended questionnaire. This structured tool has a fixed set of multiple choice questions. Participants were given an opportunity to circle a number that corresponds with the answer that best describes their thoughts on a question. Since the information obtained was not linked to the participant after data collection there is less chance of obtrusiveness to distort their answers. Objectivity remained intact as the answers to the questions could not be manipulated by the bias, if any, of the researchers.

### **Procedure**

The elements of informed consent were used for this procedure. Consent was obtained from both of the urban healthcare clinics in Flint, Michigan. A member of the study team asked potential participants if they wanted to hear more about the research study. Explanation was provided that participation was completely voluntary. Those that were not interested were thanked for their time. For those with an interest, that study team member orally read the recruitment flyer/letter and the informed consent information to the potential participant and provided details of the study so as to ensure informed consent. The recruitment flyer and informed consent were written at a seventh grade reading level as required by the Institutional Review Board at the University of Michigan-Flint. Explanation was provided to the participant that they would receive a survey to complete and that demographic information would be obtained. The potential participants were informed that this was confidential and that only the team members would have access to their survey and demographic information. They were also informed that any data collected, studied, and published would not have their personal

information attached to it in any way. They were told about the benefits of this study and that upon completion of the survey they would receive a \$10 gift card to Wal-Mart.

The participant was asked to describe the research to the study team member to ensure their understanding of the study. They were given an opportunity to ask questions about the research study. Oral explanation was provided to the participants. Study team members were prepared to evaluate the subject's level of understanding and were available to reinforce areas where understanding appeared to be weak. Once the participant agreed to take the survey, she received and signed the informed consent as well as completed the survey, and demographic information was collected by the study team member. Each participant was given a copy of the Informed Consent, Health Insurance Portability and Accountability Act (HIPAA) policy for the clinic as well as a copy of the behavioral counseling resources available. The researchers were available for questions before, during and after the consent and questionnaire.

### **Data Analysis**

Data was input using Statistical Package for the Social Sciences (SPSS) version 16.0. The statistical consultant for the university oversaw data input and analysis. Demographic data to represent the sample included age, highest grade completed in school, presently attending school (yes or no), weeks pregnant, marital status, race/ethnicity, and with whom they reside.

Descriptive statistics were used to describe the demographic data that was collected.

The data obtained from the YAS was analyzed statistically and therefore quantified. An item response theory was used in the questionnaire since the researchers determined the characteristics of the items independent from who completed them. A Latent trait Likert scale was used for analysis. A number of constructs varied by the amount of items per construct, but all constructs were coded on a one-to-four Likert. A five point summary was run on each of the

seventeen constructs. The information obtained from this analysis was used to evaluate hypothesis one which stated that pregnant adolescents would have low to moderate youth assets.

For hypotheses two through five an independent samples T-test was used to evaluate the hypotheses. An independent samples T-test was used because in each of the hypotheses there were two groups being compared that met the assumptions, which are: the dependent variable is normally distributed, the two groups have approximately equal variance on the dependent variable, and the two groups are independent of one another.

Hypothesis two evaluated whether pregnant adolescents who were attending school would have higher mean scores on good health practices than those who were not attending school. The researchers split the group into those who were attending school and those who were not. An independent samples T-test was used to compare the two groups with scores on construct number eight, Good Health Practices, which incorporated questions twenty-five to twenty-eight of the YAS.

Hypothesis three compared the general aspirations for the future for those pregnant teens attending school and not attending school. The researchers again split the data into those attending school and those who were not. The independent samples T-test compared the means of the two groups in their scores of the General Aspirations for the Future construct (questions number eleven through thirteen).

In hypothesis four the researchers sought to determine if pregnant adolescents who had completed higher levels of education would have greater assets (number of constructs). To analyze this hypothesis the researchers split the participants into those who were in grades eight through ten and those who were in grades eleven through some college. The researchers then evaluated the means of the two groups for the total assets with an independent samples T-test.

The last hypothesis stated that pregnant adolescents who report a satisfactory relationship with their mother would have moderate to high youth assets. The researchers chose 2.5 as the cut-off number for satisfactory versus unsatisfactory relationship with mother. The means of the Relationship with Mother construct was used to split the data into two groups. An independent samples T-test was again used to compare the total mean assets of the two groups.

## CHAPTER V: RESULTS

Thirty surveys were offered for completion. One survey had to be disallowed as this participant had previously completed the questionnaire. The thirtieth potential participant began the interview with a study team member and it was found that she was also a duplicate, so no survey was offered. A sample size of 28 was used due to the difficult nature of data acquisition for this particular population as well as the repetitious nature of their visits. The age range spanned from 15 to 19 with the mean age of 17.39.

While fourteen participants (50%) reported living with their mothers, only one participant (3.6%) reported living with only her father. The remaining thirteen participants reported living in a variety of other situations such as with grandparents (3.6%), brothers/sisters (3.6%), aunt/uncle (7.1%), etc. (See Table 1). Frequencies and means of demographic variables are reported below (Table 1).

*Table 1: Descriptive Statistics of Demographic Variables*

	Frequency (%)	Mean	Standard Deviation
Age	---	17.39	1.40
Highest Grade Completed		---	---
8	1 (3.6%)		
9	9 (32.1%)		
10	8 (28.6%)		
11	3 (10.7%)		
12	5 (17.9%)		
13 (Some college)	2 (7.1%)		
Currently in School		---	---
Yes	21 (75%)		
No	7 (25%)		
Number of Weeks Pregnant		23.98	7.93
Marital Status		---	---
Single	27 (96.4%)		
Married	1 (3.6%)		
Race/Ethnicity		---	---
Black	22 (78.6%)		
White	3 (10.7%)		
Black, Hispanic, & Native American	1 (3.6%)		
Black & White	2 (7.1%)		
Who do you live with?		---	---

Mom	14 (50%)		
Dad	1 (3.6%)		
Grandparents	1 (3.6%)		
Brothers/Sisters	1 (3.6%)		
Aunt/Uncle	2 (7.1%)		
Other	5 (17.9%)		
Mom, Dad, & Brothers/Sisters	1 (3.6%)		
Boyfriend & Boyfriend's Family	1 (3.6%)		
Mom & Dad	1 (3.6%)		
Mom & Brothers/Sisters	1 (3.6%)		

*Table 2: Descriptive Statistics of the 17 Constructs*

	N	Min	Max	Mean	Standard Deviation
Educational Aspirations for the Future	28	3.00	4.00	3.79	0.35
Cultural Respect	28	3.00	4.00	3.63	0.32
Responsible Choices	28	2.67	4.00	3.56	0.43
General Aspirations for the Future	28	2.33	4.00	3.54	0.47
Religiosity	28	2.75	4.00	3.50	0.44
Parental Monitoring	28	1.25	4.00	3.29	0.84
Relationship with Mother	28	1.38	4.00	3.25	0.86
General Self Confidence	28	2.00	4.00	3.20	0.53
Family Communication	28	1.50	4.00	3.18	0.73
Non Parental Adult Role Models	28	1.67	4.00	3.15	0.54
School Connectedness	28	1.50	4.00	3.04	0.61
Good Health Practices Exercise Nutrition	28	1.00	4.00	3.02	0.75
Peer Role Models	28	1.75	4.00	2.80	0.56
Relationship with Father	28	1.00	4.00	2.58	1.14
Community Involvement	28	1.00	3.75	2.37	0.85
Use of Time Groups Sports	28	1.00	3.75	2.08	0.87
Use of Time Religion	28	1.00	4.00	1.86	0.86

### Research Hypotheses

**Hypothesis 1: Pregnant adolescents will have low to moderate youth assets.**

There were 17 constructs included in the survey that encompassed a total of 61 questions.

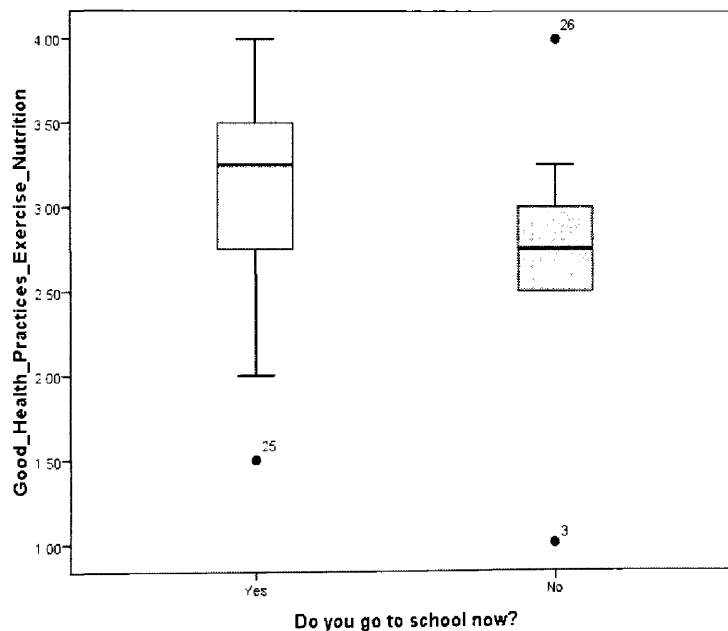
As shown in Table 2 the constructs with the highest mean scores were Educational Aspirations

for the Future ( $\underline{M}$ =3.79) and Cultural Respect ( $\underline{M}$ =3.63). General Aspirations for the Future, ( $\underline{M}$ =3.54) Responsible Choices ( $\underline{M}$ =3.56) and Religiosity ( $\underline{M}$ =3.50) all scored at 3.5 or above. The lowest scoring constructs were Use of Time Groups/Sports ( $\underline{M}$ =2.08) and Use of Time Religion ( $\underline{M}$ =1.86).

**Hypothesis 2: Pregnant adolescents who are attending school will have higher mean scores on good health practices than pregnant adolescents who are not attending school.**

The Good Health Practices construct includes both exercise and nutrition; however these are both generalized statements. The t-test was insignificant,  $t(26)=1.40$ ,  $p=0.172$ . The participants ( $n=21$ ) attending school ( $\underline{M}$ =3.13,  $\underline{SD}$ = 0.68) did not have better health practices than the participants ( $n=7$ ) not attending school ( $\underline{M}$ =2.679,  $\underline{SD}$ =0.91). (See Figure 1)

Figure 1: Hypothesis 2



**Hypothesis 3: Pregnant adolescents who are attending school will have higher mean scores on general aspirations for the future than pregnant adolescents who are not attending school.**

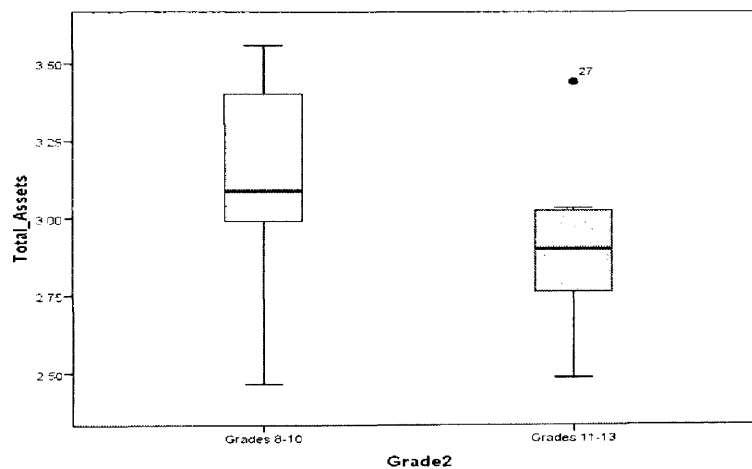


To evaluate this hypothesis the General Aspirations for the Future construct was measured between those attending versus not attending school. The t-test was insignificant,  $t(26)=0.08$ ,  $p=0.94$ . The participants ( $n=21$ ) attending school ( $M=3.54$ ,  $SD=0.45$ ) did not have higher general aspirations for the future than the participants ( $n=7$ ) not attending school ( $M=3.52$ ,  $SD=0.54$ ).

**Hypothesis 4: Pregnant adolescents who have completed higher levels of education will have greater assets (number of constructs) than pregnant adolescents who have not completed higher levels of education.**

This hypothesis compared those participants in grades eight through ten ( $n=18$ ) versus those in grades eleven through thirteen or some college ( $n=10$ ). The t-test was insignificant,  $t(26)=1.93$ ,  $p=0.06$ . The participants in grades eight through ten ( $M=3.13$ ,  $SD=0.32$ ) did not have greater assets than the participants in grades eleven through thirteen ( $M=2.90$ ,  $SD=0.26$ ).

Figure 2: Hypothesis 4



**Hypothesis 5: Pregnant adolescents who report a satisfactory relationship with their mother will have moderate to high youth assets than those who report a less than satisfactory relationship with their mother.**

To evaluate this hypothesis a value of  $\geq 2.5$  was used to signify a satisfactory relationship with the adolescent's mother while  $< 2.5$  identified those adolescents with an unsatisfactory relationship with their mothers. As shown in Table 3, those adolescents who reported a satisfactory relationship with their mother ( $n=21$ ) had significantly higher mean total assets as compared to those who reported an unsatisfactory relationship.

*Table 3a: Hypothesis 5*

Relationship with Mother		N	Mean	Standard Deviation
Total Assets	Unsatisfactory ( $< 2.5$ )	7	2.84	0.35
	Satisfactory ( $\geq 2.5$ )	21	3.12	0.28

*Table 3b: Hypothesis 5*

Independent Samples Test	
Levine's Test for Equality of Variances	Sig = 0.30
T-test for Equality of Means Equal variances assumed	$t = -2.12$ $p = 0.04$

## CHAPTER VI: DISCUSSION/SUMMARY

This study extends the literature by documenting the self-reported assets of twenty-eight pregnant adolescents. Assets found in the youth have been reported to serve as a protection against at-risk behavior. Developmental assets of youth are “critical for young people to become healthy, caring, and capable adults who lead productive lives” (Oman, et al. 2002). As a result of previous research, the researchers in this study attempted to determine the positive assets present in pregnant adolescents. Previous research determined positive correlation of nine youth assets with abstinence from alcohol and drugs during adolescence. Seiger and Renk (2007) suggest that social support (asset) is a protective factor for pregnant and parenting adolescents' self-esteem. Despite the finding that more than half of teens report failing a grade, a study by Stevenson, Maton, and Teti (1998) reveals a positive picture of attitudes toward school, school grades, and school enrollment during pregnancy.

It was anticipated that these pregnant adolescents who were from urban, low socioeconomic backgrounds would report lower assets. The mean per construct for these pregnant adolescents ranged from a low of 1.85 (Use of Time-Religion) to a high of 3.75 (Educational Aspirations for the Future) with the majority greater than or equal to 2.5, all above normal. The potential range was 1 to 4. School attendance did not provide a significant difference in good health practices. The construct for good health practices was four questions related to exercise and healthy eating.

- You take good care of your body by eating well.
- You take good care of your body by exercising.
- It is important to you to maintain a healthy body weight.
- It is important to you to be physically active every day.

These results were incongruent with previous research. Stang, et al. (2005) reported that teens enter into pregnancy with a poor nutritional status. However, nutritional status and lifestyle practices have an important impact on the health of the teen and their baby.

These pregnant adolescents indicated that they have high aspirations for the future regardless of their educational status. SmithBattle (2006) suggests that pregnancy may strengthen resolve to improve their status in life. “Although many begin mothering with educational and social disadvantages, the demands and responsibilities of caring for a child inspire many teens to recommit to education to improve their life chances and long-term success” (SmithBattle). Additional studies support that the majority of pregnant teens do not view their pregnancy as a barrier to future goals (Smith, 2004).

While not statistically significant, our findings show that the lower grade participants (grades 8-10) had greater assets than those in grades 10-13. Our results indicate that, although we expected these teens to have increased assets as they grew older and had a higher level of education, the opposite was true.

Our findings from hypothesis five indicated that there is a level of importance in the relationship with the mother and the pregnant adolescents (refer to hypothesis five). Participants that related a better relationship with their mother had a higher average on overall total assets. Previous studies confirm relationship with mother strengthens with pregnancy and improves as pregnancy progresses (Richardson, 2005; Paskiewicz, 2001). In her dissertation, Richardson (2005) states, “the notion that the mother needs to continue parenting her daughter while she is pregnant is important.”

This small study adds new knowledge to the body of literature on youth assets in the urban-dwelling pregnant adolescent population.

### **Limitations**

The findings were based on self-reported perceptions and there was a limited sample size. The original sample size was projected to include thirty pregnant adolescents. Although adolescents that qualified for this study were scheduled for prenatal appointments, this group has a high cancellation/no-show rate and no surveys were completed on several days. Another barrier the study team faced was reliability of participants to self-disclose previous participation in the study. There were two participants that attempted to repeat the survey. One survey was disqualified when it was discovered that the participant had completed two surveys. The other participant started the survey before it was brought to the attention of the researcher that she had previously completed the survey and after verification the survey was discontinued. At a certain point it was determined that the eligible participants on any given day were simply follow-up appointments for previous study participants. Since this was a convenience sample, ages 11-14 were not represented. There is a limited ability to generalize these results as they may only be valid among the population sampled. It is unknown whether manipulation of the data by the participants occurred. The survey was lengthy (61 questions and a demographic questionnaire) and the participants may have lost interest. Some participants had concerns regarding time constraints due to transportation, bus schedules, and others had small children with them that became fussy during the interview. This research was done at a prenatal visit to the obstetrician's office and was not prescheduled.

### **Implications for Future Research**

There is a need for further research regarding youth assets in adolescent pregnancy. In order to better represent the population, future research should concentrate on a larger sample size in a variety of settings (urban and rural). Replication studies could lend support to the

credibility of the findings from our study. With a larger sample size, the psychometric properties (reliability and validity) of the Youth Assets Survey could be analyzed in the population of pregnant adolescents.

In the clinical setting, the Youth Asset Survey could be used as a screener to identify pregnant adolescents with low assets who might need more intensive interactions with a health care professional. In order to provide anticipatory guidance the health care professional gathers information, establishes a therapeutic alliance, and provides education and guidance (Foye, 2010). With anticipatory guidance, nurses working with pregnant adolescents could encourage activities to decrease at risk behaviors, improve nutritional status, and promote self confidence for their role as a mother.

The asset survey could also be used to perform a longitudinal study that would follow pregnant adolescents through prenatal visits and delivery of their infant. The researcher could examine relationships between levels of prenatal care, youth assets, and birth outcomes such as birth weight and gestational age. Research could help to determine which assets are the most important for this population to possess. This data could be used to help pregnant adolescents to achieve more positive pregnancy and birth outcomes. Future research could examine what interventions by health care providers could support or increase assets in the pregnant adolescent. Nurses could develop educational programs aimed at strengthening compliance with prenatal visits to promote the health of the pregnant adolescent and her fetus. Group educational projects could be established to promote healthy nutrition and self-care activities.

The ultimate goal of this program of research is to produce new ways of thinking about the needs of pregnant adolescents in order to help pave the way for optimal physical, emotional, and interpersonal functioning essential for the dual roles of the developing child and mother.

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## APPENDICES

### Appendix A



Flint Institutional Review Board • 530 French Hall, 303 E. Kearsley St, Flint, MI 48502 • phone (810) 762-3383 • fax (313) 593-0526 • research@umflint.edu

**To:** Ms. Marilyn Filter

**From:**

Marianne McGrath

**Cc:**

Towana Ernst  
Marsha Lesley  
Jennifer Connell  
Carla Bennett  
Marilyn Filter

**Subject:** Initial Study Approval for [HUM00021649]

**SUBMISSION INFORMATION:**

Study Title: Developmental Assets in Adolescent Pregnancy

Full Study Title (if applicable):

Study eResearch ID: [HUM00021649](#)

Date of this Notification from IRB: 3/12/2009

Initial IRB Approval Date: 3/12/2009

**Current IRB Approval Period: 3/12/2009 - 3/11/2010**

**Expiration Date:** Approval for this expires at **11:59 p.m. on 3/11/2010**

**UM Federalwide Assurance (FWA): FWA00004969 expiring on 4/18/2011**

**OHRP IRB Registration Number(s): IRB00000248**

**NOTICE OF IRB APPROVAL AND CONDITIONS:**

The IRB Flint has reviewed and approved the study referenced above. The IRB determined that the proposed research conforms with applicable guidelines, State and federal regulations, and the University of Michigan's Federalwide Assurance (FWA) with the Department of Health and Human Services (HHS). You must conduct this study in accordance with the description and information provided in the approved application and associated documents.

**APPROVAL PERIOD AND EXPIRATION:**

The approval period for this study is listed above. Please note the expiration date. If the approval lapses, you may not conduct work on this study until appropriate approval has been re-established, except as necessary to eliminate apparent immediate hazards to research subjects. Should the latter occur, you must notify the IRB Office as soon as possible.

**IMPORTANT REMINDERS AND ADDITIONAL INFORMATION FOR INVESTIGATORS**

**APPROVED STUDY DOCUMENTS:**

You must use any date-stamped versions of recruitment materials and informed consent documents available in the eResearch workspace (referenced above). Date-stamped materials are available in the "Currently Approved Documents" section on the "Documents" tab.

**RENEWAL/TERMINATION:**

At least two months prior to the expiration date, you should submit a continuing review application either to renew or terminate the study. Failure to allow sufficient time for IRB review may result in a lapse of approval that may also affect any funding associated with the study.

**AMENDMENTS:**

All proposed changes to the study (e.g., personnel, procedures, or documents), must be approved in advance by the IRB through the amendment process, except as necessary to eliminate apparent immediate hazards to research subjects. Should the latter occur, you must notify the IRB Office as soon as possible.

**AEs/ORIOs:**

You must inform the IRB of all unanticipated events, adverse events (AEs), and other reportable information and occurrences (ORIOs). These include but are not limited to events and/or information that may have physical, psychological, social, legal, or economic impact on the research subjects or others.

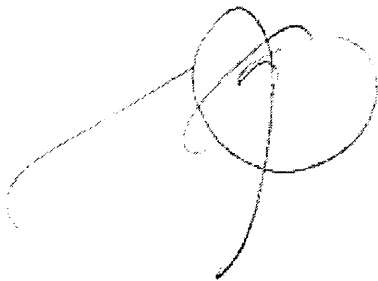
Investigators and research staff are responsible for reporting information concerning the approved research to the IRB in a timely fashion, understanding and adhering to the reporting guidance ([http://www.med.umich.edu/irbmed/ae\\_orio/index.htm](http://www.med.umich.edu/irbmed/ae_orio/index.htm)), and not implementing any changes to the research without IRB approval of the change via an amendment submission. When changes are necessary to eliminate apparent immediate hazards to the subject, implement the change and report via an ORIO and/or amendment submission within 7 days after the action is taken. This includes all information with the potential to impact the risk or benefit assessments of the research.

**SUBMITTING VIA eRESEARCH:**

You can access the online forms for continuing review, amendments, and AEs/ORIOs in the eResearch workspace for this approved study (referenced above).

**MORE INFORMATION:**

You can find additional information about UM's Human Research Protection Program (HRPP) in the Operations Manual and other documents available at: [www.research.umich.edu/hrppp](http://www.research.umich.edu/hrppp).



**Marianne McGrath**  
Chair, IRB Flint

Appendix B

**Teenage Development  
Research Study  
University of Michigan – Flint**

March 15, 2009

We are trying to learn more about the lives of teenagers and we are inviting you to be in our research study.

The study team is asking you to fill out a survey. There will be 61 questions and it will take about 30 minutes to fill out. The questions do not ask about your pregnancy, only about your life as a teenager.

Your individual answers will not be shared with anyone. Your name will not be on any papers related to this study. Any information you give us will be reported as a group and no individual teen will be identified.

You will be asked to sign a consent form in order to be in the study. This form will give us permission for you to be in the study. Being in this study is voluntary – you do not have to be in it. You may stop being in this study at any time, even after you start. Your choice to be in our study or not will not affect any of your medical care at the clinic.

Do you have questions so far?

You will be able to sit in a private area in the clinic to fill out the study. One of the study team members will go over the consent form with you. If you have any questions, you may ask them at any time. We will ask you to sign the consent form before you fill out a survey. When you are done filling out your survey you will be given a \$10 gift card to Wal-Mart.

Again, if you have any questions about the study, maybe even after you get home today, tomorrow or anytime, you may call Marilyn Filter at 810-762-3420. She teaches at the University of Michigan – Flint in the nursing department.

Thank you for your time today!

Marilyn Filter MS, CNM  
Clinical Assistant Professor  
University of Michigan – Flint  
810-762-3420

## Appendix C

**Teenage Development  
Informed Consent for a  
Research Study  
University of Michigan – Flint**

We are trying to learn more about the lives of pregnant teenagers and we are inviting you to be in our research study.

**Names of the Researchers**

Marilyn Filter MS, RN, CNM (teacher)

Marsha Lesley PhD, MS (teacher)

Carla Bennett RN (student)

Jennifer Connell RN, BSN (student)

Towana Ernst RN, BSN (student)

If you have any questions about this study you may call or email:

Marilyn Filter, MS, CNM (teacher)

Clinical Assistant Professor, University of Michigan-Flint

msfilter@umflint.edu

(810)762-3420

**Description of the research:**

In the past, outcomes with births have been measured by looking at the “risks” related to pregnant teens. This research will be important because it will help us to define which “skills” teenagers have gained that lead to healthy births. Healthcare workers can then focus on encouraging “skills” that pregnant teens have rather than focus on their “risks.”

**What do you have to do?**

If you agree to be in this research project, you will fill out a survey with 61 questions. These questions do not ask you about your pregnancy. They ask you about your life as a teen.

**How long will it take?**

It will take you about 30 minutes to fill out the survey. You can ask questions before you sign this form and before you begin filling out the survey. You will sit in a separate area of the clinic to fill out the survey.

**Is there any risk if you fill out a survey?**

The study team does not think you will be harmed in any way if you answer their questions. If you are upset by any question, you do not have to answer that one. You can skip a question. If any questions upset you so much that you want to talk to a social worker or a counselor about your feelings, we will give you a sheet of paper with names of places you can go for help.

Being in our study is voluntary - you do not have to be in it. Even after you start the survey, you may stop at any time. Your choice to be in our study or not, will not affect any of your medical care at the clinic. If you choose to not fill out the survey your prenatal care will not change.

**Measures to be taken to minimize risks and discomforts:**

Your individual answers will not be shared with anyone. Your name will not be on any papers related to this study. Any information you give us, will be recorded as a group and no individual teen will be identified.

The surveys will be kept in a locked filing cabinet at the University of Michigan-Flint. Only the study team members will be able to see your answers, no one else. After we take the information off the surveys and add it to our computer files, we will shred the paper copy.

**Expected benefits to subjects and to others:**

Even though you might not get a direct benefit from being in our study, other teens may benefit from the answers you give us. If you want, you can get a copy of the final report on this study from our teacher, Marilyn Filter. If you would like a copy of the report, just call her.

**Costs to subjects resulting from participation in the study:**

It will not cost you anything to be in our study. All costs to do this study will be paid by the study team.

**Payments to subjects for participation in the study:**

When you finish answering the questions on the survey, we will give you a \$10.00 gift card for Wal-Mart.

**Confidentiality of records and data:**

Your records and information will be kept private. The only people who will be able to see this information will be those directly involved in the study. You will not be identified in any reports on this study. All records will be kept private and will only be accessed by the study team members and the Institutional Review Board, at the University of Michigan-Flint. All surveys will be kept in a locked cabinet in a locked office and will be shredded after the end of the study. All HIPAA rules and regulations of the Hamilton Community Health Network will be followed. You will be given a copy of the HIPAA policy. If you have any questions about privacy for this study please contact Marilyn Filter.

**Institutional Review Board Contact Information:**

If you have any questions about your rights as a research participant, please contact the Institutional Review Board, Sally Conley, 530 French Hall, 303 E. Kearsley Street, Flint, MI 48502-1950, (810)762-3383, or email [sjconley@umflint.edu](mailto:sjconley@umflint.edu).

**After signing this consent one copy of this document will be kept with the research records and one copy will be given to the participant to keep.**

*I have read and been informed of the purpose and proposed benefits as well as potential risks of this study. Marilyn Filter, Marsha Lesley, Carla Bennett, Jennifer Connell, or Towana Ernst has offered to answer any questions that I may have in regards to this study. I hereby consent to willing participate in the proposed study.*

\_\_\_\_\_  
Participant's Printed Name

\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Date



## Appendix D

ID# \_\_\_\_\_

Youth Asset Survey (YAS)

**Directions:** *This is not a test with right and wrong answers. It is simply a survey of attitudes, beliefs, and behaviors of teenagers like you. Please circle the answer you most agree with. We want you to feel completely safe to answer each of the questions and know that no one will be able to identify the survey that you filled out. Would you please answer the way you really feel? Please do not put your name on the survey. Thank you for contributing to this project.*

**These questions are about how often you talk to your parents or other adults in your home. Please circle the number that best describes how often you talk to your parent(s) or guardian(s).**

1. How often do you talk to your mother, father (or an adult in the household) about your problems?

1	2	3	4
Almost never	Some of the time	Usually	Almost always

2. How often does your mother, father (or an adult in the household) tell you that he or she wants good things for you?

1	2	3	4
Almost never	Some of the time	Usually	Almost always

3. How often do you talk to your parents about what is right and wrong?

1	2	3	4
Almost never	Some of the time	Usually	Almost always

4. How often do you feel comfortable talking to your parent(s) about personal matters?

1	2	3	4
Almost never	Some of the time	Usually	Almost always

**These questions are about your closest friends. Please circle the number that best describes how often each occurs.**

5. Do most of your friends follow the rules their parents make for them?

1	2	3	4
Almost never	Some of the time	Usually	Almost always

6. Do most of your friends stay out of trouble?

1	2	3	4
Almost never	Some of the time	Usually	Almost always

7. Do most of your friends choose healthy behaviors or activities?

1	2	3	4
Almost never	Some of the time	Usually	Almost always

8. Are most of your friends responsible?

1	2	3	4
Almost never	Some of the time	Usually	Almost always

**These questions are about your future. Please circle the number that best describes your feelings.**

9. How important is it to your family that you continue your education after high school?

1	2	3	4
Not important at all	Somewhat important	Very important	Extremely important

10. As you look to your future, how important is it to you to stay in school?

1	2	3	4
Not important at all	Somewhat important	Very important	Extremely important

11. What are the chances that when you are an adult you will be successful in whatever you choose to do?

1	2	3	4
Very low	Low	High	Very High

12. What are the chances that when you are an adult you will be doing the kind of work that you like?

1	2	3	4
Very low	Low	High	Very High

13. What are the chances that when you are an adult you will be respected by other people?

1	2	3	4
Very low	Low	High	Very High

**These statements describe a person who may or may not be like you. Please circle the number that tells how well the statement describes you.**

14. You can say no to activities that you think are wrong.

1	2	3	4
Not at all like you	A little like you	Mostly like you	Very much like you

15. You can identify the positive and negative consequences of a behavior, and choose appropriately.

1	2	3	4
Not at all like you	A little like you	Mostly like you	Very much like you

16. You try to make sure that everyone in a group is treated fairly.

1	2	3	4
---	---	---	---

Not at all like you      A little like you      Mostly like you      Very much like you

17. You volunteer on a regular basis to help others in your community.

1                                  2                                  3                                  4  
Not at all like you      A little like you      Mostly like you      Very much like you

18. You work to make your community a better place.

1                                  2                                  3                                  4  
Not at all like you      A little like you      Mostly like you      Very much like you

19. You know where to volunteer in your community.

1                                  2                                  3                                  4  
Not at all like you      A little like you      Mostly like you      Very much like you

20. You participate in volunteer or community service groups.

1                                  2                                  3                                  4  
Not at all like you      A little like you      Mostly like you      Very much like you

**These questions are about people from other racial/ethnic backgrounds. Please circle the number that best describes your feelings.**

21. You respect the beliefs of people even if they are of a different race.

1                                  2                                  3                                  4  
Strongly Disagree      Disagree      Agree      Strongly Agree

22. You have friends from other racial/ethnic groups.

1                                  2                                  3                                  4  
Strongly Disagree      Disagree      Agree      Strongly Agree

23. You trust people from other racial/ethnic cultures.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

24. You treat others fairly no matter what their race.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

**These statements describe a person who may or may not be like you. Please circle the number that tells how well the statement describes you.**

25. You take good care of your body by eating well.

1	2	3	4
Not at all like you	A little like you	Mostly like you	Very much like you

26. You take good care of your body by exercising.

1	2	3	4
Not at all like you	A little like you	Mostly like you	Very much like you

27. It is important to you to maintain a healthy body weight.

1	2	3	4
Not at all like you	A little like you	Mostly like you	Very much like you

28. It is important to you to be physically active every day.

1	2	3	4
Not at all like you	A little like you	Mostly like you	Very much like you

**These questions are about things you may do in your spare time. Please circle the number that best describes how much you do each of them.**

29. You participate in an organized school activity outside of class.

1	2	3	4
Almost never	Some of the time	Usually	Almost always

30. About how many times each week did you participate in organized activities after school hours? (These can be related to your school, youth groups, sports, lessons, or other activities.)

1	2	3	4
None	One time	Two times	Three or more times

31. You participate in a school sports team or group such as swim team, cheerleading, or soccer.

1	2	3	4
Almost never	Some of the time	Usually	Almost always

32. You participate in out-of-school sports teams or groups.

1	2	3	4
Almost never	Some of the time	Usually	Almost always

33. On average, how often did you attend religious services during the past 12 months?

1	2	3	4
Never	One or two times a year	About once a month	Once a week

**These questions are about religion and/or your spiritual belief system. Please circle the number that best describes each of them.**

34. Last MONTH I participated in religious or spiritual activities with at least one other person.

1	2	3	4	5
Zero times	1-5 times	6-10 times	11-15 times	more than 15 times

35. How important is it to you to be able to rely on religious teachings when you have a problem?

1	2	3	4
Not important at all	Fairly unimportant	Fairly important	Very important

36. How important is it to you to believe in God (or a higher power or creator)?

1	2	3	4
Not important at all	Fairly unimportant	Fairly important	Very important

37. How important is it to you to rely on your religious (or spiritual) beliefs as a guide for day-to-day living?

1	2	3	4
Not important at all	Fairly unimportant	Fairly important	Very important

38. How important is it to you to be able to turn to prayer when you are facing a personal problem?

1	2	3	4
Not important at all	Fairly unimportant	Fairly important	Very important

**These questions are about adults other than your parents. Please circle the number that best describes how much you agree or disagree with each one.**

39. Most of the adults you know are good role models for you.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

40. You know adults who encourage you often.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

41. There is an adult at your school who is concerned about your well-being.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

**These questions are about the school you are now attending, or last attend if you are not in school at this time. Please circle the number that best describes your feelings.**

42. You feel close to people at your school.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

43. You are happy to be at your school.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

44. The teachers at your school treat students fairly.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

45. You feel safe at your school.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree



**These questions are about your relationship with your mother. Please circle the number that best describes your feelings.**

46. How close do you feel to your mother?

1	2	3	4	5
Not at all	Very little	Somewhat	Quite a bit	Very much

47. Most of the time, your mother is warm and loving toward you.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

48. You are satisfied with the way your mother and you communicate with each other.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

49. Overall, you are satisfied with your relationship with your mother.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

**These questions are about your relationship with your father. Please circle the number that best describes your feelings.**

50. How close do you feel to your father?

1	2	3	4	5
Not at all	Very little	Somewhat	Quite a bit	Very much

51. Most of the time, your father is warm and loving toward you.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

52. You are satisfied with the way your father and you communicate with each other.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

53. Overall, you are satisfied with your relationship with your father.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

**These questions are about how you feel when you are doing things. Please circle the number that best describes you.**

54. I can solve most problems if I invest the necessary effort.

1	2	3	4
Not at all true	Hardly true	Moderately true	Exactly true

55. If I am in trouble, I can usually think of a solution.

1	2	3	4
Not at all true	Hardly true	Moderately true	Exactly true

56. I can usually handle whatever comes my way.

1	2	3	4
Not at all true	Hardly true	Moderately true	Exactly true

**This statement describes a person who may or may not be like you. Please circle the number that tells how well the statement describes you.**

57. When you are confronted with a problem, you can usually find several solutions.

1	2	3	4
Not at all like you	A little like you	Mostly like you	Very much like you

**These questions are about you and your parents [or guardians]. Please circle the number that best describes you and your parents.**

58. My parent(s) know where I am after school.

1	2	3	4
Almost never	Some of the time	Usually	Almost always

59. I tell my parent(s) who I am going to be with before I go out.

1	2	3	4
Almost never	Some of the time	Usually	Almost always

60. When I go out at night my parent(s) know where I am.

1	2	3	4
Almost never	Some of the time	Usually	Almost always

61. I talk with my parent(s) about the plans I have with my friends.

1	2	3	4
Almost never	Some of the time	Usually	Almost always

## Appendix E

**YAS Scoring**

Note: The asset is coded as missing if fewer items than the number specified for each asset (below) have been answered.

**Family Communication-** Items 1, 2, 3, 4

Sum the scores for the items and divide by 4. (Example: (Q1=some of the time(2);

Q2=usually(3); Q3=usually(3); Q4=some of the time(2) then  $[(2+3+3+2)/4]=2.5$ )

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Peer Role Models-** Items 5, 6, 7, 8

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Educational Aspirations for the Future-** Items 9, 10

Sum the scores and divide by 2.

If only one item is missing, the score of the other item is used as the asset score.

**General Aspirations for the Future-** Items 11, 12, 13

Sum the scores and divide by 3.

If there is some missing data but at least 2 of the 3 questions were answered, sum the scores and divide by the number of questions answered. .

**Responsible Choices-** Items 14, 15, 16

Sum the scores and divide by 3.

If there is some missing data but at least 2 of the 3 questions were answered, sum the scores and divide by the number of questions answered.

**Community Involvement** - Items 17, 18, 19, 20

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Cultural Respect-** Items 21, 22, 23, 24

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Good health practices (exercise/nutrition)-** Items 25, 26, 27, 28

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Use of Time (groups/sports) -** Items 29, 30, 31, 32

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Use of Time (religion) -** Items 33, 34

Recode question 34 by changing 5 to 4. 'Last MONTH I participated in religious or spiritual activities with at least one other person.' 1=zero times (recode=1); 2=1-5 times (recode= 2); 3=6-10 times (recode= 3); 4=11-15 times (recode= 4); 5=more than 15 times (recode=4).

Sum the recoded scores and divide by 2.

If only one item is missing, the score of the other item is used as the asset score.

**Religiosity-** Items 35, 36, 37, 38

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Non-Parental Adult Role Models-** Items 39, 40, 41

Sum the scores and divide by 3.

If there is some missing data but at least 2 of the 3 questions were answered, sum the scores and divide by the number of questions answered.

**School Connectedness-** Items 42, 43, 44, 45

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Relationship with Mother-** Items 46, 47, 48, 49

Recode question 46 to change 5 point scale to 4 point scale. 'How close do you feel to your mother?' 1= Not at all (recode=1); 2=Very little (recode=2); 3=Somewhat (recode=2.5);

4=Quite a bit (recode=3); 5=Very much (recode=4).

Sum the recoded scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Relationship with Father-** Items 50, 51, 52, 53

Recode question 50 to change 5 point scale to 4 point scale. 'How close do you feel to your father?' 1= Not at all (recode=1); 2=Very little (recode=2); 3=Somewhat (recode=2.5); 4=Quite a bit (recode=3); 5=Very much (recode=4).

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**General Self-Confidence-** Items 54, 55, 56, 57

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

**Parental Monitoring-** Items 58, 59, 60, 61

Sum the scores and divide by 4.

If there is some missing data but at least 2 of the 4 questions were answered, sum the scores and divide by the number of questions answered.

Appendix F

**Demographic Information**

Subject ID # \_\_\_\_\_

Age \_\_\_\_\_

Highest grade completed in school \_\_\_\_\_

Do you go to school now? (Circle one)      Yes      No

How many weeks pregnant are you \_\_\_\_\_

Single      Married      (Circle one)

Race/Ethnicity      (Circle all that apply)

Black                      White                      Hispanic                      Asian                      Other

Who do you live with? (Circle all that apply)

Mom                      Dad                      Grandparents  
Brother/Sisters

Boyfriend                      Boyfriend's family                      Aunt/Uncle                      Cousins

Other \_\_\_\_\_

Appendix G

**Available Counseling Services**

John Turner, Behavioral Specialist  
Available on Tuesday and Thursday  
Hamilton Clinic-Main  
4001 N. Saginaw Street  
Flint, Michigan 48505  
Ph: 810-789-9141

Robert Barbier, Behavioral Health Clinician  
Available on Tuesday and Thursday  
Primarily at North Pointe but can be available at Main.  
Hamilton Clinic-North Pointe  
5710 Clio Road  
Flint, Michigan 48504  
Ph: 810-787-4445



## Appendix H

The person named below has completed the indicated online modules in the University of Michigan's Responsible Conduct of Research training program, known as PEERRS (Program for Education and Evaluation in Responsible Research and Scholarship).

PEERRS is a web-based foundational instruction and certification program for the members of the University of Michigan community engaged in or associated with research. Modules are offered on Foundations of Responsible Research Conduct; Research Administration; Conflict of Interest; Human Subjects Research; Animal Research; and Publications and Authorship. Each module consists of 20-30 web pages containing the core material, short case studies with questions, and pop-ups with additional information to provide greater depth and elaboration.

Certifications are obtained by passing a test associated with each module. The certifications are valid through the dates shown.

**Certifications for: Bennett,Carla (carlbenn)**

<b>Module</b>	<b>Certified Through</b>
Human Subjects - Biomedical & Health Sciences	05/14/2011
Human Subjects - Social & Behavioral Sciences	05/14/2011

**Certifications for: Connell,Jennifer (jharmon)**

<b>Module</b>	<b>Certified Through</b>
Animal Subjects	05/10/2011
Conflict of Interest	05/10/2011
Foundations of Good Research Practice	05/10/2011
Human Subjects - Biomedical & Health Sciences	05/10/2011
Research Administration	05/10/2011

**Certifications for: Ernst,Towana (ternst)**

<b>Module</b>	<b>Certified Through</b>
Animal Subjects	05/13/2011
Authorship, Publication and Peer Review	05/13/2011
Conflict of Interest	05/13/2011
Foundations of Good Research Practice	05/13/2011
Human Subjects - Biomedical & Health Sciences	05/13/2011
Human Subjects - Social & Behavioral Sciences	05/13/2011
Research Administration	05/13/2011

**Certifications for: Filter,Marilyn (msfilter)**

<b>Module</b>	<b>Certified Through</b>
Conflict of Interest	03/28/2010
Foundations of Good Research Practice	03/28/2010
Human Subjects - Biomedical & Health Sciences	12/05/2010
Research Administration	03/28/2010

**Certifications for: Lesley,Marsha (mlesley)**

<b>Module</b>	<b>Certified Through</b>
Animal Subjects	01/01/2010
Authorship, Publication and Peer Review	01/01/2010
Conflict of Interest	12/31/2009
Foundations of Good Research Practice	09/07/2011
Human Subjects - Biomedical & Health Sciences	08/25/2011
Human Subjects - Social & Behavioral Sciences	10/06/2012
Research Administration	12/30/2009



Appendix I

February 6, 2009

Marilyn Filter, MS, CNM  
Clinical Assistant Professor  
University of Michigan-Flint  
Department of Nursing  
303 E. Kearsley St.  
Flint, MI 48502-1950

Dear Professor Filter:

This letter will serve as permission from Hamilton Community Health Network for the University of Michigan-Flint Graduate Nursing Program students to conduct their study titled "Developmental Assets of the Pregnant Adolescent" at Hamilton's (MAIN or North Point clinic sites).

The Hamilton Community Health Network is in support of the Graduate Nursing Program at University of Michigan-Flint and looks forward to future joint efforts in research and clinical placements that have potential to improve the health of the Flint community.

Sincerely,

A handwritten signature in cursive script that reads "Clarence R. Pierce".

Clarence R. Pierce  
Chief Executive Officer

A handwritten signature in cursive script that reads "Michael Giacalone, Jr.".

Michael Giacalone, Jr., M.D.  
Chief Medical Officer

