AN INVESTIGATION OF MEDIATORS OF THE RELATIONSHIP BETWEEN SOCIAL SUPPORT AND POSITIVE HEALTH PRACTICES IN BLACK LATE ADOLESCENTS

by

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ABSTRACT OF THE DISSERTATION

An Investigation of Mediators of the Relationship between Social Support and Positive Health Practices in Black Late Adolescents

By Gale S. Gage

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The purpose of this study was to examine and test theory regarding positive health practices in Black late adolescents. Two models tested the mediation variables of resilience and self-efficacy to help explain the relationship between social support and positive health practices.

The final convenience sample of 179 college students, aged 18-23 years, was recruited from an urban community college located in New Jersey. Participants completed a demographic data form and four instruments measuring the study variables.

Using Pearson correlations, results indicated that positive health practices was positively related to social support ($r = .45$, $p < .001$), resilience ($r = .31$, $p < .001$), and self-efficacy ($r = .38$, $p < .001$). Social support was found to be positively related to resilience ($r = .28$, $p < .001$) and positively related to self-efficacy ($r = .40$, $p < .001$). Multiple regression analyses as specified by Baron and Kenny (1986) tested the two mediational models. Neither of the models was supported as hypothesized. Model 1 found that when resilience was controlled, the relationship between social support and positive health practices remained statistically significant ($t = 5.69$, $p = .001$) and the loss of 6% of explained variance in positive health practices by social support was due to mediation of resilience. The testing of Model 2 found that when self-efficacy was controlled for statistically, the relationship between social support and positive health

practices remained statistically significant ($t = 4.96$, $p = .001$) and the loss of 10% of explained variance in positive health practices by social support was due to mediation of self-efficacy. Findings indicate that resilience and self-efficacy are partial not complete mediators in the relationship between social support and positive health practices in Black late adolescents.

Based on study findings, it is concluded that social support, resilience, and self-efficacy are each positively related to positive health practices. Additionally, resilience and self-efficacy are each positively related to social support. However, neither mediator helped to explain the relationship in Black late adolescents. Other mediators need to be found that better explain the relationship between social support and positive health practices in this population.

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Lastly, much love to my husband, Charles Gage and children, Courtney, Chloe, and Charlotte. Your understanding of how much this doctorate meant to me made it far easier to complete than I could have ever imagined. I did it for us.

Dedication

This dissertation research is dedicated to my parents, Harry and Betty Stafford, who instilled in me the love of debate, politics, and education in the pursuit of becoming "whoever I wanted to be" and to the first doctor in the family, Dr. William Henry Stafford, for leaving his footprints for me to follow.

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Chapter I
Discussion of the Problem

Numerous studies have examined the relationship between social support and positive health practices in Nepalese adolescents (Mahat & Scoloveno, 2001), urban minority adolescents (Mahat, Scoloveno, & Whalen, 2002), early adolescents (Mahon, Yarcheski, Yarcheski, & Hanks, 2007), middle adolescents (Ayres, 2008), and late adolescent Asian American college students (Ayres & Mahat, 2012). While these studies have provided empirical support for the theories linking social support and positive health practice in adolescents (Ayres, 2008; Ayres & Mahat, 2012; Mahat & Scoloveno, 2001; Mahat et al., 2002; Mahon et al., 2007), no previous studies have tested the theory in Black late adolescents, as was done in the present study.

In attempt to build theory, a number of studies also have examined theoretical mediators of the relationship between social support and positive health practice in adolescents. Mahon, Yarcheski, and Yarcheski (2004) examined the mediator variables of loneliness and hopefulness in early adolescents, aged 12 to 14. In a sample of early adolescents, Mahon et al. (2007) examined the mediator variables of depression and optimism. Ayres (2008) examined the mediators of optimism and loneliness in a sample of middle adolescents. Hung (2011) tested the mediator effect of adjustment to college in a sample of Chinese/Taiwanese college students. Ayres and Mahat (2012) examined the mediators of optimism and acculturation in a sample of Asian American late adolescents. The mediators of interest in this study had not been examined previously in adolescent or adult samples. They are resilience and self-efficacy, and they were used to help explain the relationship between social support and positive health practices in Black late adolescents.

Theoretically, Langlie (1977) suggested that social support positively influences preventive health behaviors, such as seat belt use, exercise, good nutrition, medical and dental care, screening exams, and immunizations. Langlie explained that information and feedback received in socially supportive relationships positively affect health practices. Additional explanatory theories have elucidated the relationship between social support and positive health behaviors (Lewis & Rook, 1999; Pender & Stein, 2002; Umberson, 1987), while other theories link membership in a social group to participation in health promoting behaviors (S. Cohen, 1988). These theories served as propositions to examine the basic association between social support and positive health practices in Black late adolescents.

Theoretically, resilience is linked to social support (Fergus & Zimmerman, 2005; Fine & Schwebel, 1991; Garmezy, 1993; Tusaie & Dyer, 2004) and to positive health practices (Atkinson, Martin, & Rankin, 2009; Edward, 2005; Monteith & Ford-Gilboe, 2002; Stewart, Reid, & Mangham, 1997) and therefore served as a mediator to help explain the relationship between social support and positive health practices, as was done in this study. Likewise, self-efficacy is theoretically linked to social support (Bandura, 1986; Caprara, Scabini, & Regalia, 2006; Schunk & Meece, 2005) and to positive health practices (Bandura, 1997; Pender, Murdaugh, & Parsons, 2011; Schwarzer & Fuchs, 1996) and also served as a mediator to help explain the association between social support and positive health practices in this study.

Developmentally, there are three stages of adolescence: early, middle, and late (Elliott & Feldman, 1990). Each stage has its own developmental tasks and challenges; late adolescence is of concern in this study. Some of the tasks and challenges of late

adolescence are related to decision-making about education, employment, transitioning from home and family dependence to independence, intimate relationships, and the formation of personal and social identity (Zarrett & Eccles, 2006). Of relevance to this study, Elliott and Feldman (1990) suggested that late adolescence is a period when adolescents adopt specific behaviors that will be carried into adulthood. It might be reasoned that positive health practices learned throughout adolescence will be adopted during late adolescence as lifelong patterns.

In summary, this research examined the relationships between positive health practices as the dependent variable and (a) social support, (b) resilience, and (c) self-efficacy, as the independent variables. Two mediational models were tested to further explain the relationship between social support and positive health practices in Black late adolescents.

Statement of the Problem

In Black late adolescents

1. What is the relationship between social support and the dependent variables of (a) positive health practices, (b) resilience, and (c) self-efficacy?
2. What is the relationship between the dependent variable of positive health practices and the independent variables of resilience and self-efficacy?
3. What is the relationship between social support and positive health practices when mediated by either resilience or self-efficacy?

Sub-problems.

1. What is the relationship between social support and positive health practices?
2. What is the relationship between social support and resilience?

3. What is the relationship between resilience and positive health practices?
4. What is the relationship between social support and positive health practices when mediated by resilience and controlled statistically?
5. What is the relationship between social support and self-efficacy?
6. What is the relationship between self-efficacy and positive health practices?
7. What is the relationship between social support and positive health practices when mediated by self-efficacy and controlled statistically?

Definition of Terms

1. Social support is theoretically defined as encompassing the six types of relational provisions of attachment, social integration, opportunity for nurturance, reassurance of worth, sense of reliable alliance, and the obtainment of guidance associated with establishing and maintaining social relationships (Weiss, 1974). Social support was operationally defined as the subject's total score on the Personal Resource Questionnaire85-Part2 (Weinert, 1988).
2. Positive health practices are those health-related behaviors that consist of six domains: nutrition, exercise, relaxation, safety, avoidance of substance use, and health promotion and preventive practices (Brown, Muhlenkamp, Fox, & Osborn, 1983). Positive health practices was operationally defined as the subject's total score on the Personal Lifestyle Questionnaire (Brown et al., 1983).
3. Resilience is defined as the ability to bounce back or recover from stress (Smith et al., 2008). Resilience was operationally defined by the subject's mean score on the Brief Resilience Scale (Smith et al., 2008).

4. Perceived self-efficacy is defined as an individual's general belief or competence in the ability to cope with or respond to difficult situations (Schwarzer, 1992). Perceived self-efficacy was operationally defined as the subject's total score on the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995).

Delimitations

The sample was delimited to Black late adolescents, aged 18 to 23 (Elliott & Feldman, 1990), who were currently enrolled and attending classes at a community college. To minimize measurement error, only students who were mentally and physically able to complete the study instruments and who comprehend the English language, as communicated to the researcher, were included as participants in this study.

Significance

Regardless of how they are viewed conceptually, health behaviors are important to study in all populations and subgroups within American society (U.S. Department of Health & Human Services [HHS], 2012). For decades, the literature abounds with studies of health behaviors in many populations. However, there is a paucity of studies on positive health practices in the Black population, and this is especially true for Black adolescents. In an attempt to address this gap in the literature, this study examined positive health practices in Black late adolescents, and examined theoretically relevant variables that help to explain this phenomenon in this population.

Based on theory (S. Cohen, 1988; Langlie, 1977; Lewis & Rook, 1999; Pender & Stein, 2002; Umberson, 1987), positive relationships have been found empirically between social support and positive health practices in Nepalese adolescents (Mahat & Scoloveno, 2001), urban minority adolescents (Mahat et al., 2002), early adolescents

(Mahon et al., 2007), middle adolescents (Ayres, 2008), and late adolescent Asian American college students (Ayres & Mahat, 2012). This study extended the testing of this theory in Black late adolescents. The findings contribute to the body of knowledge regarding the association between social support and positive health practices for this population.

To continue to build theory, this study examined two mediators of the relationships between social support and positive health practices, neither of which had been examined in previous research. They are resilience and self-efficacy. Therefore, filling this gap in the literature supplies important knowledge for nurses who work with Black late adolescents in a variety of healthcare settings regarding the theoretical relationships between (a) social support and resilience, (b) resilience and positive health practices, (c) social support and general self-efficacy, and (d) general self-efficacy and positive health practices.

In summary, this study examined the relationship between social support and positive health practices in a population not studied previously. To add to theory, two mediators were examined, resilience and self-efficacy, to test the extent each one helps to explain the association between social support and positive health practices. All of the findings contribute to new nursing knowledge for Black late adolescents and can begin to create a much-needed knowledge base about positive health practices for this population.

Chapter II

Review of the Literature

The review of the literature presents descriptive theories of health behavior and explanatory theories linking the dependent variable of health behavior (positive health practices) to the independent variable of social support. Theories linking social support to resilience and resilience to positive health practices behavior are presented. Further, theories linking social support to self-efficacy and self-efficacy to positive health practices are presented. Empirical support for all theoretical propositions is presented. The literature presented results in two mediational models, one of which examines resilience as a mediator of the relationship between social support and positive health practices, and the other of which examines self-efficacy as a mediator of the same relationship. Finally, the theoretical rationale and hypotheses conclude this chapter.

Descriptive Theories of Health Behavior

According to Kasl and Cobb (1966), health behaviors are activities carried out by healthy individuals to prevent or detect disease. Performance of the behavior is established within the belief that there will be a benefit to one's health and wellness. Such activities include: a) seeking information about health-related matters; b) going to a doctor for check-ups, prophylactic interventions, or immunizations; c) engaging in exercise; d) practicing good nutrition; e) wearing seat belts, practicing safe sex, periodic self-examinations; and, f) moderate use of alcohol. Health activities or behaviors are distinguished from illness and sick role behaviors in that illness behavior emanates from symptoms of sickness and diminished function whereas continued performance of usual social responsibilities within a healthy context denote health behavior.

Harris and Guten (1979) derived a conceptualization of positive health practices from their broadly defined category of Health-Protective Behavior (HPB). This type of behavior is viewed as any activity performed by a person, in order to protect, promote, or maintain health, regardless of perceived or actual health status. Harris and Guten (1979) assumed that all individuals engage in intentional behaviors to protect their health whether with approved medical guidance or not. Harris and Guten (1979) provided a sample of commonly performed activities identified as self-defined health-protective behaviors. Based on survey data, these behaviors in order of importance included: general nutrition, sleep and relaxation, exercise, health contacts, personal hygiene, and psychological well-being. Additional health protective activities cited included weight maintenance, limiting tobacco and alcohol use, and monitoring environment, medication, and intake of substances other than food, medicine, or alcohol.

Abel (1991) generated a description of health behaviors which emerged from surveys assessing healthy lifestyles in both German and American samples. A common set of behaviors derived from the study included emphasis on physical appearance, recovery and relaxation, concerns about health, nutrition habits, and walking behaviors. Moreover, Abel (1991) suggested that not smoking, limited alcohol consumption, regular check-ups, and physical exercise be recognized as measures of a healthy lifestyle.

Cockerham (1997) suggested that a healthy lifestyle, a form of health behavior, consists of choices and practices that are embraced by individuals and performed outside the health care delivery system. These activities encompass decisions about nutrition, exercise, smoking, stress management, alcohol and drug use, physical appearance, and accident risk.

Health behavior, as determined by Eakin (1997), denotes cognitions and activities of the individual which improve, maintain, and restore health. Implied in this view is that behavior is both emic (consciously directed or recognized behavior related to one's health) and etic (health related to observed behavior seen from an external source regardless of awareness from the individual engaged in said behavior). Eakin (1997) proposed that health behavior incorporates the following three dimensions: a) conceptions of health and perception of the body of risk; b) prevention, promotion, and adverse behavior; and c) the experience and response to illness, injury, and disability. Subsumed in those dimensions are the activities of smoking, drug-taking, sickness absenteeism, alcohol use, condom use, exercise, and self-protective practices.

Gochman (1997) conceptualized health behavior as "those personal attributes such as beliefs, expectations, motives, values, perceptions, and other cognitive elements; personality characteristics, including affective and emotional states and traits; and overt behavior patterns, actions and habits that relate to health maintenance, to health restoration and to health improvement" (p. 3). Health behavior denotes taking a specific action of doing or not doing what may improve one's health whether the individual is consciously aware or voluntarily performs the health action (Gochman, 1997). Considered as part of the conceptualization are preventive and protective behaviors, such as immunizations, healthy eating, wearing seat belts and bicycle helmets, engaging in safe sex activities, obeying traffic laws, and adherence to health and safety regulations in the workplace.

In summary, early theorists identified behaviors such as exercise, balanced nutrition, avoidance of smoking, alcohol and drug use, safe sex, and limiting accident risk

as those consistent with promoting, protecting, maintaining and restoring health (Harris & Guten, 1979; Kasl & Cobb, 1966). Later theorists have associated these same behaviors with adoption of a healthy lifestyle that serves to increase one's status of health and wellness (Abel, 1991; Cockerham, 1997; Eakin, 1997; Gochman, 1997).

Descriptive Theories of Health Behavior: Nursing

Using Harris and Guten as a framework, Brown, Muhlenkamp, Fox, and Osborn (1983) viewed positive health practices as those health-related behaviors that consist of six domains of nutrition, exercise, relaxation, safety, avoidance of substance use, and preventive health practices. These behaviors are performed to protect, promote, or maintain health. The conceptualization of positive health practices by Brown et al. underlies this study.

According to a model proposed by Kulbok (1985), individuals seeking to improve or conserve health actively invest personal resources in a lifestyle that promotes engagement in preventive health behavior. Preventive health behaviors are voluntary actions performed by the individual regardless of perceived or actual health status and involve diet, exercise, sleep, alcohol and caffeine avoidance, dental hygiene, use of seat belts, and routine professional preventative health services.

Pender, Murdaugh, and Parsons (2011) asserted that, through the adoption of healthy behaviors, individuals can achieve their full health potential. Their model description places emphasis on individual strengths, resiliencies, resources, potentials, and capabilities of a healthy condition rather than on the effect of existing pathology on health behavior. A health-promoting lifestyle consists of the behavioral components of health responsibility, physical activity, nutrition, interpersonal relations, spiritual growth,

and stress management living. Health-promoting behavior integrated within a healthy lifestyle ultimately lead to the attainment of positive health outcomes, enhanced functional ability, and a better quality of life.

In summary, nursing literature has suggested that engagement in positive health behaviors are an essential part of a lifestyle that promotes, protects and maintains health. Nursing theorists agree that health behavior is best described as a multi-dimensional concept that incorporates physical activity, nutrition, rest and relaxation, stress management, safety precautions, avoidance of harmful substances and use of preventive health services (Brown et al., 1983; Kulbok, 1985; Pender et al., 2010), as well as interpersonal relations and spiritual growth (Pender et al., 2010).

Descriptive Studies of Adolescent Health Behavior

Groft, Hagen, Miller, Cooper, and Brown (2005) described the health behaviors of 288 students, with a mean age of 15.5 years, both male and female, from a small rural high school in Canada. Groft et al. found that more than 70% of the sample would eat better, 61% would increase their level of physical activity, and 51% would eliminate stress in order to improve or maintain their health. Overall, the female students reported a greater desire than male students to participate in a vast majority of the health promotion behaviors surveyed, except wanting to gain weight, deal with bullying and violence, or improve a home situation deemed more important by the male students.

Peterson, Jian, Peng, Tai, and Bian (2008) examined the oral and general health behaviors of 2662 Chinese urban adolescents from groups aged 11, 13, and 15 years. Using data from self-administered questionnaires, Peterson et al. found that students with highly educated parents were more likely to engage in oral and general health practices,

eat healthy, and perform vigorous physical activity. A higher consumption of alcohol and playing computer games were found in students with highly educated parents with higher family income. In contrast, students from families with lower education had a higher consumption of sugary food/drinks and were more likely to watch television.

Peltzer (2009) examined the relationship between positive health practices and peer support from school and home, in 12,740 students, aged 13-15, from the African countries of Kenya, Uganda, Namibia, and Zimbabwe. He found that about 70% of those students had a positive score for items related to non-tobacco, limitation of alcohol, non-drug use, hand hygiene before eating, and were abstinent or used condoms. About 50% engaged in hand hygiene with soap, no bullying or passive smoking, condom use and physical activity.

Curtis, Waters, and Brindis (2010) studied the health behaviors of 663 adolescents, aged 12 to 17, living in rural areas of California. About 63% of the samples were Caucasians, while approximately 20% were Latinos, and the rest (about 17%) represented other ethnicities. The researchers reported that most (about 90%) adolescents perceived themselves as healthy, with most (about 69%) having reported a healthy weight; about 28 % were overweight or obese. Further, these adolescents, on average, ate 1 to 2 servings of both fruits and vegetables daily, drank one soda per day, and consumed fast food less than once per day. The sample, on average, engaged in 60 minutes of physical activity on 4 days per week. Depression was experienced 1 to 2 days a week by over 1 in 4 adolescents, peaking in the 14 to 15 year old group. About 1 in 5 adolescents (20.5 %) reported receiving treatment for an injury in the past year. Less than 1 in 10 of the sample were current cigarette smokers, while 41.6% reported consuming more than a

few sips of alcohol. About 1 in 7 (15.8%) of the sample were sexually active, using condoms as their contraceptive method of choice.

In summary, empirical studies show that adolescents from different countries engage in health-promoting behaviors, such as eating nutritious foods, exercising, and reducing stress in order to maintain or improve health (Curtis et al., 2010; Groft et al., 2005; Peltzer, 2009). Researchers also found that adolescents whose parents were highly educated were more likely to engage in general health-promoting activities of diet, exercise and oral hygiene in contrast to those adolescents with parents who were less educated and had a lower income level (Peterson et al., 2008).

Descriptive Theories of Social Support

Weiss (1974) identified six types of relational provisions associated with establishing and maintaining necessary social relationships. Attachment, social integration, opportunity for nurturance, reassurance of worth, sense of reliable alliance, and the obtainment of guidance are provisions required by the individual, which relate to different relationship experiences or function. According to Weiss, these provisions are distinct or special to each relationship, vary in importance to each individual, and are the likely reason that individuals find it necessary to engage in relationships throughout their lifetime. This conceptualization of social support underlies this study.

Cobb (1976) defined social support as information that leads the individual to believe he is cared for in such a way as to be protected from harmful states of illness. This protection may cause a reduction in a need for medical assistance and facilitate recovery.

Kahn and Antonucci (1980) defined social support as the interpersonal transactions of a relationship that include the key elements of affect, affirmation, and aid. Affective transactions involve liking, admiration, respect and love, whereas transactions of affirmation are agreements of acknowledgement appropriate of an act or statement of another person. Giving money, time, entitlements, and information are representative of aid or assistance. A convoy is used to describe a network of family, friends, and others that expands the concept of social support. The term convoy describes the set of persons in a relationship who are relied upon to give or receive support at any time throughout their lifespan.

House (1981) cited several dimensions, or attributes of social support, namely emotional, instrumental, informational, and appraisal support. Emotional support comprises love, trust, caring and having empathy toward others. Instrumental support involves financial dealings, such as tangible aid, goods and services or housing assistance. Specifically, emotional and instrumental support are support significant others provide in the time of need. Giving advice and information on social, health, or employment matters during a time of stress are deemed informational support. Appraisal support involves information that is used for the purpose of evaluation of self.

Cohen and Syme (1985) described social support as resources provided by others, especially from those relied upon and who care. In particular, functional support is the capacity of relationships to fulfill particular functions, such as providing affection, a sense of belonging, or material aid.

Barrera (1986) conceptualized social support as three distinct categories of social embededness, perceived social support, and enacted support. Social embededness

describes the relationship of the individual to significant others within a socially connected environment. Perceived social support is the cognitive awareness of support in connection to others. Enacted support assesses the actions or helpful behavior taken by others in the provision of support.

Heaney and Israel (2008) suggested that social support can be provided by many different types of individuals belonging to either an informal network of family, friends, and coworkers or through a formal network of professionals, such as those working in healthcare or in human services. Heaney and Israel suggested that deliberately intended interactions offered by a provider which yield positive not negative effects is social support.

In summary, there are varying definitions of social support. Most theorists view social support as means to giving, perceiving, or receiving help from those individuals in a relationship with each other (Barrera, 1986; Cohen & Syme, 1985; Weiss, 1974). Social support can be provided by an identified network of persons who allow for love, trust, guidance, financial assistance, and self-improvement in seeking well-being and health throughout one's life (Cobb, 1976; Heaney & Israel, 2008; House, 1981; Kahn & Antonucci, 1980).

Explanatory Theories of Social Support and Positive Health Practices

Langlie (1977) postulated that social support influences the adoption of preventive health behaviors represented by the practices of seat belt use, exercise, medical and dental care, good nutrition, immunizations, and miscellaneous screening exams such as hearing and vision tests. Langlie explained that belonging to a group with

similar social characteristics positively and consistently influenced engagement in preventive health behavior standards for adults.

Umberson (1987) explained that social relationships may help regulate or control human behavior. Social support, whether emotional, informational, or in the form of practical help, facilitates health-promoting behaviors, such as proper sleep, diet, exercise, appropriate alcohol, cigarette and drug usage. In addition, adherence to a medical regimen and seeking suitable medical care are additional health-promoting behaviors influenced by one's social relationships.

S. Cohen (1988) suggested that social support is a promoter of health and antecedent to positive health practices. Social support can influence health behaviors, such as diet, exercise, smoking, and alcohol intake. S. Cohen explained that social support may increase or decrease health behaviors depending on social norms and the information provided by people in the individual's social network.

Lewis and Rook (1999) explained that there is likely engagement in healthy behaviors when there is direct support or social control from social network members. The promotion of health behaviors such as diet, exercise, use of seat belts, adequate sleep, relaxation, and avoidance of smoking and alcohol are influenced by the relationship with one's family, friends, and spouse. For Lewis and Rook, social control refers to interaction among network members that invoke influence and regulation and contribute to better health practices.

Pender and Stein (2002) suggested that decisions adolescents make regarding participation in behaviors such as physical activity, smoking, using drugs, being sexually active, and healthy eating can be traced to involvement with one's social milieu. They

recognized that adolescents are most influenced by those individuals that they have chosen to affiliate with as their best friends. As a result, adolescents are likely to develop healthy lifestyles if they interact with friends who engage in healthy behavior. Conversely, if their peers engage in unhealthy behaviors then the adolescent is more likely to include such behavior into their lifestyle resulting in poorer health and social outcomes. Pender and Stein (2002) proposed that social support is central in ultimately influencing adolescent behavior and emotion that enables healthy lifestyle choices.

In summary, explanatory theories suggest that social support influences engagement in positive health behavior (Langlie, 1977; Lewis & Rook, 1999; Pender & Stein, 2002; Umberson, 1987). Other theories link identification as a member of a social group to participation in health promoting behaviors (S. Cohen, 1988).

Empirical Studies of Social Support and Positive Health Practices in Adolescents

A number of studies have examined the relationship between social support and positive health practices in adolescents, using the same instruments that will be used in the present study. They are the Personal Resource Questionnaire85-Part 2 (PRQ85-Part 2), to measure social support, and the Personal Lifestyle Questionnaire (PLQ) to measure positive health practices.

Mahat and Scoloveno (2001) examined the relationship between social support and positive health practices in a sample of 101 urban Napalese girls, aged 15-17. The adolescents responded to the PRQ85-Part 2 and the PLQ. Results indicated a statistically significant positive and low to moderate correlation between perceived social support and positive health practices ($r = .32$, $p < .01$) in this sample.

Mahat, Scoloveno, and Whalen (2002) examined the relationship between social support and positive health practices in a small sample of 65 urban minority adolescents, aged 15 to 17. The adolescents completed the PRQ85-Part 2 and the PLQ. Social support was found to be positively correlated with positive health practices ($r = .37$, $p < .01$).

Mahon, Yarcheski, Yarcheski, and Hanks (2007) studied the relationship between social support and positive health practices in a sample of 128 adolescents, aged 12-14. The respondents completed the PRQ85-Part 2 and the PLQ. A moderately strong positive correlation was found between social support and positive health practices ($r = .61$, $p < .001$).

Ayres (2008) examined the relationship between social support and positive health practices in a sample of 204 middle adolescents, aged 15-17. They responded to the PRQ85-Part 2 and the PLQ. The results revealed a positive correlation between social support and self-reported positive health practices ($r = .44$, $p < .01$).

Ayres and Mahat (2012) examined the relationship between social support and positive health practices, in a sample of 163 Asian American college students, aged 18 to 21. Participants responded to the PRQ85-Part 2 and the PLQ. The researchers found positive correlation between social support and positive health practices ($r = .44$, $p < .01$).

In summary, empirical studies show that, in early to middle adolescents to late adolescent college students, social support is positively associated with positive health practices (Ayres, 2008; Ayres & Mahat, 2012; Mahat & Scoloveno, 2001; Mahat et al., 2002; Mahon et al., 2007). The findings consistently demonstrated a low to moderate to moderately strong positive correlation between the two variables and lend support to the

theory linking social support to positive health practices. The relationship between social support and positive health practices was examined in a sample of Black late adolescents in this study, which had not been done previously.

Empirical Studies of Social Support and Health-Promoting Lifestyle in Adolescents

A number of other studies that examined the relationship between social support and health practices used different instruments to measure social support and health practices. All of the studies used the Health-Promoting Lifestyle Profile II (HPLP-II) to measure health-promoting lifestyle and the Multidimensional Scale of Perceived Social Support (MSPSS) to measure perceived support from friends and family.

Jackson, Tucker, and Herman (2007) examined the relationship between social support and health-promoting lifestyle in a sample of 162 college students, aged 18 to 23 years and older, with a mean age of 20 years. The participants completed the MSPSS and the HPLP-II. The results showed a positive relationship between health-promoting lifestyle and perceived family and friend support ($r = .35$, $p < .01$).

In a sample of 500 Iranian adolescent female students, aged 14-18 years, Mohamadian et al. (2001) examined the relationship between social support and health-promoting lifestyle. The students completed the MSPSS and the HPLP-II. Correlational analysis demonstrated that social support had a positive relationship to health-promoting lifestyle ($r = .30$, $p < .01$).

Peker and Bermek (2011) examined the relationship between social support and health-promoting lifestyle in a sample of 111 dental students in Turkey, aged 18 to 22 with a mean of 19.43 years. Participants responded to the MSPSS and the HPLP-II.

Results indicated a positive correlation between perceived social support and health-promoting lifestyle ($r = .62$, $p < .001$) in this sample.

In summary, a number of studies examined the relationship between social support and health-promoting lifestyle in middle and late adolescents. Research findings consistently reveal a statistically significant positive relationship between the two variables (Jackson et al., 2007; Mohamadian et al., 2011; Peker & Bermek, 2011). These findings provide empirical support of the theorized relationship between social support and health-promoting lifestyle, another conceptualization of health practices. The limitation of these studies is that the HPLP-II contains items measuring social support, raising the issue of redundancy in measurement of the two variables of social support and health-promoting lifestyle.

Descriptive Theories of Resilience

Theorists have described resilience from a variety of perspectives. They are (a) trait or personality characteristic, (b) a developmental phenomenon, or (c) from a process perspective. Each viewpoint is addressed.

From a developmental viewpoint, Garmezy (1985) defined resilience as the regaining of function following adversity when power and capabilities are lost; the individual recovers to a former level of adaptation and competence. As such, Garmezy distinguishes resilience from invulnerable, as the latter suggests the lack of flexibility and promises invincibility to stress and adversity.

Also from a developmental perspective, Rutter (1993) defined resilience as protection an individual develops against susceptibility to illness that helps to negate the effects of adversity. Rutter (1993) further described resilience as a fluid non-static

process that transforms one's response to psychosocial adversity and risk through the experience of successful coping or adaptation.

From a trait perspective, Wagnild and Young (1993) identified five personality characteristics inherent in the conceptual foundation of resilience that moderate the negative effects of stress and promote positive adaptation. They are: (a) perseverance, having the ability to carry on despite setbacks; (b) equanimity, a balanced approach to moderating the effects of stress; (c) meaningfulness, the realization that life is worth living; (d) self-reliance, the ability to draw on inner strengths and capabilities from past successes; and (e) existential aloneness, the uniqueness everyone has and the associated experiences of such.

Also from a trait perspective, Block and Kremen (1996) defined resilience as a generalized, ongoing characteristic of the individual that allows for return to a level of control after a stressor is no longer present in order to maintain a state of equilibrium. Resilience is designated within the more conceptual personality construct of ego-resiliency. According to Block and Kremen (1996), ego-resilience is described as an ability to adapt sufficiently to internal and external stressors and return to previous level of ego-control.

Using a process perspective, Tusaie and Dyer (2004) defined resilience as a dynamic, non-static process that results in adaptation and improvement in the face of significant adversity. For Tusaie and Dyer, resilience is a continuum of adaptation, transition, and success that consists of coping abilities and varying personality characteristics that allow the individual to bounce back after a stressful life event. Resilience is understood to fluctuate across time, developmental stage, and social context.

Ungar (2004) described resilience as both an outcome and process negotiated between an individual and the environment which afford resources necessary for a positive appraisal of health while experiencing adverse conditions and occurring circumstances. Ungar (2004) viewed resilience as the successful negotiation between one's self and available health resources. Success is dependent on the socially implied definition of health used by individuals to assess their overall health status.

Smith et al. (2008) conceptualized resilience as the ability to bounce back or recover from stress. For Smith et al., resilience is a resistance to illness, stress adaptation, thriving, and higher than normal functioning, in spite of exposure to stress. They viewed resilience as a unitary construct that is important to study in its own right. This conceptualization of resilience underlies this study.

In summary, descriptive theories suggest that resilience is conceptually derived from a developmental (Garmezy, 1985; Rutter, 1993), process (Tusai & Dyer, 2004; Ungar, 2004) or trait perspective (Block & Kremen, 1996; Wagnild & Young, 1993). Other theorists view resilience as a unitary construct that has importance as a research variable (Smith et al., 2008). However, most theorists agree that resilience is the ability to bounce back, adapt to risk, stress, and or adverse situations that restore or regain prior functioning (Block & Kremen, 1996; Garmezy, 1985; Rutter, 1993; Smith et al., 2008; Tusai & Dyer, 2004; Ungar, 2004; Wagnild & Young, 1993).

Theories of Adolescent Resilience

Luthar and Zigler (1991) identified adolescent resilience as an individual's ability to maintain and survive with positive adaptation and healthy functioning against exposure to life stressors. Luthar and Zigler (1991) suggested that resilience is not an all-

embracing construct. Instead, resilience is best defined within the specific domain of a successful coping outcome resulting from increased vulnerability to a significant threat or severe adversity.

Fergus and Zimmerman (2005) synthesized a definition of adolescent resilience from the extant literature on the topic. Fergus and Zimmerman (2005) suggested that resilience is a "process of overcoming the negative effects of risk exposure, coping successfully with traumatic experiences, and avoiding the negative trajectories associated with risks" (p. 399). They also stated that the process of resilience in adolescence varies according to geographical location (rural versus urban), socioeconomic status, gender, and promotes factors which inoculate the adolescent against repeated exposure to risk and prevent negative outcomes.

Ahern (2006) defined adolescent resilience as a process of adaptation to risk which incorporates an individual's personal characteristics, family, and community support. As proposed by Ahern, a model of adolescent resilience describes a continuum of behaviors with contrasting poles that have internal and external risk factors on one end and protection factors of positive individual attributes and sociocultural connections on the opposite end. Adolescent resilience is a dynamic and ever-changing process based on risks and protective factors inherent in this population.

In summary, resilience is the successful coping and positive adaptation to life stressors or adverse events for the adolescent (Ahern, 2006; Fergus & Zimmerman, 2005; Luthar & Zigler, 1991). The descriptive viewpoints of adolescent resilience focused on a developmental perspective (Luthar & Zigler, 1991) and a process orientation (Ahern, 2006; Fergus & Zimmerman, 2005). Adolescent resilience is multi-dimensional, varies

according to environmental and social context, and serves to protect the adolescent from further risk (Ahern, 2006; Fergus & Zimmerman, 2005; Luthar & Zigler, 1991).

Explanatory Theories of Social Support and Resilience

Fine and Schwebel (1991) explained that families who have good communication, give positive support, are cohesive, and strong in character and role modeling, help to promote resilience in children exposed to risk. Moreover, relationships with extended family members, peers, teachers, coaches, and clergy-- as well as external events such as school and extracurricular activities-- may work together or separately as environmental circumstances to promote resilience in this population. Children with resilience are able to adapt to their uniquely experienced situations of dysfunction and find ways and reasons to succeed despite those encountered stressors.

Garmezy (1993) explained that a supportive family and community encourage and facilitate resilience among individuals in adapting to stressful situations. Regardless of risk, protective factors, such as a safe and nurturing family environment, and an encouraging and reinforcing external support system, are essential to fostering resilience. Individuals are able to take advantage of opportunities for growth because of favorable conditions presented by the existence of a warm supportive family and supportive community members such as the church, teachers, neighbors, and parents of friends. Tusaie and Dyer (2004) also suggested that environmental factors, such as a sense of connectedness or social support as perceived by individuals, influence resilience.

Fergus and Zimmerman (2005) suggested that resilience is the process of overcoming risk associated with undesirable outcomes. This process aids the adolescent in overcoming adverse effects of risk and avoiding negative outcomes. Fergus and

Zimmerman explained that parental resource factors are critical in formulating adolescent resilience. The parental factors identified include social support, monitoring, and communication skills.

In summary, a number of theorists (Fergus & Zimmerman, 2005; Fine & Schwebel, 1991; Garmezy, 1993; Tusaie & Dyer, 2004) have proposed a relationship between social support and resilience. Important to the explanation of the relationship is the support that is generated from family and significant persons in the community. In addition, the theorists stressed that social support encompassing good communication, role modeling, and cohesiveness influences the development of resilience in children and adolescents.

Empirical Studies of Social Support and Resilience

Markstrom, Marshall, and Tryon (2000) examined the relationship between social support and ego strength, a representative variable for resilience, in a sample of 113, 10^{th} grade high school students, aged 14 to 17. The sample consisted of 53 African American and 60 White students from five counties in the rural, low-income, Appalachian region of West Virginia. The participants responded to the Perceived Social Support Scale and the Psychosocial Inventory of Ego Strengths. The results indicated a moderate positive correlation between social support from family and resilience ($r = .41$, $p < .01$) and between social support from friends and resilience ($r = .41$, $p < .01$).

Smith et al. (2008) examined the relationship between social support and resilience, using the MOS Social Support Survey (MOS-SSS), the Interpersonal Support Evaluation List (ISEL), and the Brief Resilience Scale (BRS) in four independent samples. The samples consisted of: (1) 128 undergraduate students mean age 20.4 years;

(2) 64 undergraduate students, mean age 20.4 years; (3) 112 cardiac rehabilitation patients, and (4) 50 chronic pain sufferers and healthy controls. A positive relationship between social support and resilience was found in all samples. The ISEL survey was used with the Brief Resilience Scale in both Sample 1 ($r = .28$, $p < .01$) and Sample 2 ($r = .27$, $p < .05$). The MOS-SSS was used with the BRS in both Sample 3 ($r = .30$, $p < .01$) and Sample 4 ($r = .40$, $p < .01$).

Trask-Tate, Cunningham, and Lang-DeGrange (2010) studied the relationship between social support and ego-resiliency in a sample of 136 African American girls, aged 14 to18. They responded to the Social Support Scale and the Ego-Resiliency Scale. The results showed that father support and resilience ($r = .22$, $p < .05$) and grandparent support and resilience ($r = .24$, $p < .01$) were positively correlated. However, the relationship between mother support and ego-resiliency was not appreciably correlated ($r = .11$, *ns*), but the researchers did not provide an explanation for this unexpected finding.

Mitchell and Ronzio (2011) examined the relationship between social support and emotional resilience, in a sample of 209 African American women, aged 21to 45, who were either high school or college educated. The participants completed a 15-item version of the Personal Resources Questionnaire and the Connor-Davidson Resilience Scale. A moderate positive correlation was found between social support and emotional resilience ($r = .44$, $p < .001$).

Kim and Lee (2011) examined the relationship between social support and resilience among adult children of alcoholics. The sample consisted of 459 college students from a university in Korea. The students completed the MSPSS and the

Resilience Scale. The results revealed a moderate positive correlation between social support and resilience ($r = .43$, $p < .001$) in this sample.

In summary, empirical studies have demonstrated a positive association between social support and resilience in middle to late adolescents (Trask-Tate et al., 2010), young African-American mothers (Mitchell & Ronzio, 2011), White and Black students (Markstrom et al, 2000), a Korean sample (Kim & Lee, 2011), and four clinical and non-clinical samples (Smith et al., 2008). The magnitude of the correlations across studies indicated a low to moderate relationship between the two variables lending empirical support for the theory linking social support to resilience. The relationship was examined in this study in Black late adolescents.

Explanatory Theory of Resilience and Positive Health Practices

Stewart, Reid, and Mangham (1997) suggested that resilience may be related to health behaviors in adolescents, such as avoidance of smoking and alcohol use. The authors proposed that positive health behaviors can be fostered by resilience promulgated through various health-promoting interventions applied with children and adolescents.

Monteith and Ford-Gilboe (2002) presented a conceptual model in which resilience, viewed as a health potential, contributes to a health-promoting lifestyle. The theorists considered resilience as the capacity to change, grow, and adapt to ongoing life stress and adversity. According to Monteith and Ford-Gilboe, resilience is an individual strength that facilitates health work and promotes engagement in a healthy lifestyle.

Edward (2005) generated a theoretical proposition from qualitative data suggesting that resilient individuals look after themselves by exercising, eating balanced

meals, getting adequate sleep, engaging in social interactions, hobbies, and relaxation. All of these behaviors reflect a healthy lifestyle.

Atkinson, Martin, and Rankin (2009) suggested that resilience is the way individuals respond to challenges that affect their health behavior. They argued that resilience has implications for health behaviors, health, and mental health.

In summary, explanatory theories suggest that resilience is related to participation in health behaviors (Atkinson et al., 2009), and a healthy lifestyle (Edward, 2005; Monteith & Ford-Gilboe, 2002; Stewart et al., 1997). According to the aforementioned theorists, resilience is strength and a positive attribute related to engagement in a healthy lifestyle.

Empirical Studies of Resilience and Health-Promoting Lifestyle

Solem (2001) examined the relationship between resilience and self-care practices, in a sample of 100 high school students, aged 13 to 18, with the majority in their middle to late teens. The respondents completed the Solem Adolescent Resilience Abilities Scale and the Denyes Self-Care Practice instrument. Statistically significant positive associations were found between specific resilience abilities and self-care practices, with correlations ranging from $r = .25$, $p < .05$ to $r = .48$, $p < .05$.

Monteith and Ford-Gilboe (2002) examined the relationship between resilience and health-promoting lifestyle in a sample of 67 mothers, aged 27 to 44, of families with preschool children. The participants completed the Resilience Scale (RS) and the Health-Promoting Lifestyle Profile II (HPLP-II). The results yielded a moderate positive correlation between mother's resilience and health- promoting lifestyle ($r = .42$, $p < .001$).

Black and Ford-Gilboe (2004) examined the relationship between resilience and health- promoting lifestyle in a small sample of 41 adolescent mothers who were heads of household. Participants responded to the RS and the HPLP II. The researchers found that resilience had a moderate positive correlation with health-promoting lifestyle ($r = .42$, $p < .001$) in adolescent mothers.

Wagnild (2003) studied the relationship between resilience and health-promoting behaviors in a sample of 344 older adults who responded to the RS and the HPLP II. Resilience was found to have a positive moderate correlation with health-promoting lifestyle ($r = .53$, $p < .001$).

In summary, researchers have reported positive correlations between resilience and health-promoting lifestyle in samples of young mothers (Black & Ford-Gilboe, 2004; Monteith & Ford-Gilboe, 2002), and older adults (Wagnild, 2003). Solem (2001) found in middle adolescents that resilience had a positive correlation with self-care practices viewed as health-promoting behavior. The magnitude of the correlations across studies suggests a moderate relationship between the two variables, providing empirical support for the theoretical relationships linking resilience and health-promoting lifestyles. The relationship between resilience and positive health practices was examined in this study, which had not been done previously in Black adolescents.

Descriptive Theories of Self-Efficacy

Schwarzer (1992) viewed self-efficacy as an appraisal of self-confidence of individuals' capability to control their environment by adapting behaviors to life stress. Self-efficacy is the belief about taking action to produce a certain outcome. Self-efficacy is specific to the sense of competence one possesses in mastering a domain of

functioning. Self-efficacy, or the lack thereof, can either enhance or impede the motivation to perform. Schwarzer viewed self-efficacy as both a general and situation-specific construct. However, general self-efficacy has broader application to any situation or challenge in adapting behavior for change (Schwarzer, 1992). The conceptualization of general self-efficacy underlies this study.

Bandura (2001) defined self-efficacy as the belief individuals have about the ability to control their actions and behaviors to produce desired results and outcomes. Self-efficacy is the motivation to behave in such a way as to influence the type of action deemed necessary to affect change. Moreover, self-efficacy is the belief that one has the perseverance, competence, and endurance to produce beneficial effects by the action that is undertaken. The likelihood that individuals will act depends on the belief that they hold about their ability to perform as expected and produce the sought out behavior. In Bandura's theory, self-efficacy is the belief individuals have in their ability to successfully manage a particular situation. Self-efficacy is considered to be activity-specific in that individuals may make judgments about a specific situation and their ability to function in different domains or specific situation. Thus, Bandura viewed self-efficacy as a situation-specific rather than general construct.

Resnick (2004) viewed self-efficacy as necessary to achieve certain types of performances within an individual’s capability to organize and perform those activities. Self-efficacy is what individuals think, believe, and feel that can determine reactions and behavior. Self-efficacy is said to be a dynamic, comprehensive construct that involves judgment which changes overtime as new information and experiences occur and individuals adapt behavior to fit the occurrences.

In summary, theorists (Bandura, 2001; Resnick, 2004; Schwarzer, 1992) have described self-efficacy as the belief in one's ability to think, behave, and feel in such a way as to produce a desired effect or outcome. Self-efficacy is a determinant in how individuals will react to new information and experiences. It is a dynamic and comprehensive judgment or motivation that can adapt behavior to stressors as specified or in general to control environmental demands (Bandura, 2001; Resnick, 2004; Schwarzer, 1992).

Explanatory Theories of Social Support and Self-Efficacy

Bandura (1986) suggested that self-efficacy is influenced by several factors, one of which is the support received from others. Bandura proposed that there are four sources of self-efficacy, one of which is verbal persuasion. He explained that verbal instructions and advice, provided by others, help convince individuals that they can succeed in performing difficult tasks and supply them with the confidence to accomplish the task. Support from others aides in overcoming obstacles when individuals pursue their behavioral goals. In short, Bandura linked supportive relationships to positive self-efficacy beliefs.

Schunk and Meece (2005) proposed that adolescents will develop positive self-efficacy beliefs when socialized in a framework of positive academic and social models and when they are taught to overcome challenges by supportive others and family members. They explained that social contexts have a powerful influence on adolescents' self-efficacy.

Caprara, Scabini, and Regalia (2006) proposed that family relationships grounded in mutual respect, emotional support, sharing of knowledge, and social connectedness

contribute to adolescents' self-efficacy beliefs. According to these theorists, adolescents with strong self-efficacy beliefs are more likely to take advantage of life's opportunities and express their talents, and ultimately achieve their goals.

In summary, social support is crucial to the development and enhancement of self-efficacy. Several theorists recognize that self-efficacy develops within a supportive environment which involves positive academic and social models (Schunk & Meece, 2005), observation of others convincing communication (Bandura, 1986), and mutual respect, emotional support, and social connectedness in adolescents (Caprara et al., 2006).

Empirical Studies of Social Support and Self-Efficacy in Adolescents

Jackson et al. (2007) examined the relationship between social support from family and friends and health self-efficacy in 162 college students, aged 18 to 23 years and older, with a mean age of 20 years. The participants completed the MSPSS and the Self-Rated Abilities for Health Practices Scale, which measured self-efficacy of general health practices. The results showed a positive relationship between perceived family/friend support and health self-efficacy ($r = .34$, $p < .01$).

Frank, Plunkett, and Otten (2010) examined the relationship between perceived parenting and general self-efficacy in 158 Iranian American adolescents, aged 13 to 20. The Parental Behavior Measure was used to assess perceptions of parental support and general self-efficacy was measured using the subscale of the Sherer and Maddux Self-Efficacy Scale. The findings revealed that parental support had a positive but weak correlation with general self-efficacy ($r = .22$, $p < .01$).

Cicognani (2011) examined the relationship between social support, a psychosocial coping resource, and self-efficacy in a sample of 342 adolescents, aged 14 to 19 years, attending high school. The participants responded to the MSPSS and the General Self-Efficacy Scale (GSES). Results indicated a weak but statistically significant positive correlation between friend support and general self-efficacy ($r = .18$, $p < .001$).

Hung (2011) studied the relationship between social support and generalized self-efficacy among a sample of 103 college students, with a mean age of 24. The participants completed the MSPSS and the GSES. The findings revealed a positive association between perceived social support and perceived general self-efficacy ($r = .36$, $p < .01$).

Tangeman and Hall (2011) examined how family relationships and perceived social support are related to general self-efficacy in a sample of 100 incarcerated African American and Hispanic males, aged 13 to 18. The Perceived Social Support Scale and the Children's Perceived Self Efficacy were used to elicit the results. A statistically significant positive but weak correlation was found between family relationship index and general self-efficacy ($r = .18$, $p < .05$) and perceived social support from peers and general self-efficacy ($r = .32$, $p < .01$).

In summary, empirical studies demonstrated that, in adolescents and college students, social support is weakly or moderately related to self-efficacy in various populations. Social support was positively correlated to general self-efficacy in a variety of adolescent samples (Cicognani, 2011; Frank et al., 2010; Hung, 2011; Tangeman & Hall, 2011) and health self-efficacy in college students (Jackson et al., 2007). These findings serve to provide empirical support for the relationship between social support and self-efficacy. The relationship was examined in this study in Black late adolescents.

Theories of Self-Efficacy and Health-Promoting Behaviors

Synthesizing early social-cognitive theories and research of self-efficacy, Schwarzer and Fuchs (1996) proposed that self-efficacy beliefs play an important role in the adoption and execution of health behaviors. They explained that self-efficacy beliefs influence the intention to change risk behavior, the amount of effort one will invest to achieve their goal, and provide the persistence necessary to maintain healthy behaviors.

Bandura (1997) suggested that efficacy of a personal nature instills to some extent control over the engagement in health behaviors that benefit individuals in age groups and socioeconomic levels. He further proposed that perceived self-efficacy has a vital role in habits managed by the individual that affect health behavior directly. Thus, based on Bandura's theory, it might be reasoned that there is a positive relationship between self-efficacy and positive health practices.

As proposed in the revised Health Promotion Model (Pender et al., 2011), perceived self-efficacy is identified as a cognitive-perceptual factor that has both an indirect and direct influence on health-promoting behavior. As explained by Pender et al., self-efficacy motivates the health-promoting behaviors of individuals directly and indirectly through their commitment to a plan of action.

In summary, several theorists have proposed a relationship exists between self-efficacy and health-promoting behavior. Self-efficacy beliefs influence the adoption, control, and execution of health behaviors that benefit individuals throughout all age groups and socioeconomic levels (Bandura, 1997; Schwarzer & Fuchs, 1996). Self-efficacy can also affect health behavior both directly and indirectly through motivation to commit to a plan of action (Bandura, 1997; Pender et al., 2011).

Empirical Studies of Self-Efficacy and Health-Promoting Behaviors

Hendricks and Hendricks (2005) examined the relationship between self-efficacy and health-promoting lifestyle in 168 student-athletes, aged 18 to 26, most (92%) of whom were African American. The participants responded to the Sherer and Maddux General Self-Efficacy subscale and the HPLP-II. In this sample, the researchers reported a statistically significant beta ($B = .15$, $p < .001$) between self-efficacy and health-promoting lifestyle.

Jackson et al. (2007) examined the relationship between self-efficacy and health-promoting behaviors, such as exercise, eating healthy, and getting sufficient rest, as part of a health-promoting lifestyle in 162 college students, with a mean age of 20 years. The Self-Rated Abilities for Health Practices Scale, which measures health self-efficacy, and the HPLP-II were completed by the sample participants. A moderately strong positive association was found between the two variables studied *(*$r = .61$*,* $p < .01$).

Hung (2011) studied the relationship between self-efficacy and health-promoting lifestyle in a sample of international college students, with a mean age of 24 years. The GSES and the HPLP- II were completed by the study participants. The findings yielded a moderately positive relationship between perceived general self-efficacy and health-promoting lifestyle as hypothesized by the researcher ($r = .38$*,* $p < .01$).

Peker and Bermek (2011) examined the relationship between self-efficacy and health-promoting lifestyle in 111 dental students in Turkey, aged 18 to 22. The participants responded to the GSES and the HPLP-II. Results indicated a strong positive correlation between general self-efficacy and health-promoting lifestyle ($r = .79$*,* $p < .001$) in this sample.

In summary, empirical studies show that general self-efficacy is positively correlated with health-promoting lifestyle in student-athletes (Hendricks & Hendricks, 2005), and international students (Hung, 2011; Peker & Bermek, 2011), and that health self-efficacy is related to health-promoting lifestyle in college students (Jackson et al., 2007). Most of the results yielded moderate to strong correlations giving support to the theoretical links between these two variables.

Theoretical Rationale

The outcome variable, positive health practices, was originally conceptualized as protective health behaviors by Harris and Guten (1979). This type of behavior is performed by a person to protect, promote, or maintain health, irrespective of the individual's actual or perceived health status. Health-protective behaviors consist of: general nutrition, sleep and relaxation, exercise, personal hygiene, and psychological well-being. Other activities deemed health protective are: weight maintenance, limiting alcohol and smoking, and intake of substances other than food, medicine, and alcohol (Harris & Guten, 1979). Moreover, stress management, immunizations, wearing seat belts and bicycle helmets, condom use, and obeying traffic laws are part of the description of protective and preventive health behaviors (Cockerham, 1997; Eakin, 1997; Gochman, 1997). Nursing theorists conceptualized the engagement in healthy behaviors such as physical activity, nutrition, relaxation, stress management, safety precautions, and avoiding the use of harmful substances as integrated within a health-promoting lifestyle (Kulbok, 1985; Pender et al., 2011). Using this framework, Brown et al. (1983) coined the term positive health practices, consisting of nutrition, exercise,

relaxation, safety, avoidance of substance use, and preventive health practices. In the present study, positive health practices was investigated in Black late adolescents.

Weiss (1974) defined social support as the relational provisions of attachment, social integration, opportunity for nurturance, reassurance of worth, sense of reliable alliance, and the obtainment of guidance. Many theorists have proposed a relationship between social support and health behavior. As explained by Langlie (1977), belonging to a group which possesses similar social characteristics, positively and consistently influences the adoption of preventive health behaviors. Similarly according to Umberson (1987), social support in the form of practical help, emotional, or informational aid, facilitates health-promoting behaviors such as sleep, diet, exercise, and appropriate alcohol, cigarette, and drug use. S. Cohen (1988) postulated that social support is antecedent to positive health practices and as such is dependent on the social norms and information provided by those within an individual's social network. Lewis and Rook (1999) explained that engagement in health behaviors such as diet, exercise, use seat belts, adequate sleep, relaxation, and the avoidance smoking and alcohol are likely when there is direct support from network of friends and family. Pender and Stein (2002) further explained that adolescents make decisions about participation in health behaviors based on their social environment and are more likely to develop healthy lifestyles if those they affiliate with engage in healthy behavior. Research findings have supported the positive relationship between social support and positive health practices in adolescents (Ayres, 2008; Ayres & Mahat, 2012; Mahat & Scoloveno, 2001; Mahat et al., 2002; Mahon et al., 2007) and health-promoting lifestyle in adolescents (Jackson et al.,

2007; Mohamadian et al., 2011; Peker & Bermek, 2011). Based on theory and previous research, social support was expected to be positively related to positive health practices.

Throughout the theoretical literature, variables have been identified as possible mediators of the relationship between social support and positive health practices. Two such variables are resilience and self-efficacy. Resilience is viewed as either a trait, developmental, or process phenomenon. From a developmental perspective, Garmezy (1985) defined resilience as the ability to regain function and recover to a former level of adaptation and competence following adversity. Block and Kremen (1996) defined resilience as an extension of ego-resiliency trait that enables an individual to adapt to both internal and external stressors and return to a state of equilibrium. Resilience is further described as a non-static process that can modify the response to significant adversity and risk through successful coping or adaptation (Rutter, 1993; Tusaie & Dyer, 2004). In this study, resilience is viewed as the ability to bounce back or recover from adversity (Smith et al., 2008).

Several theorists have proposed that social support is antecedent to resilience. Fine and Schwebel (1991) explained that families, peers, and supportive community members such as teachers, coaches, and clergy help to promote resilience in children exposed to risk by providing good communication, positive support, cohesiveness, and being strong in character and by role modeling. Garmezy (1993) explained that a supportive family and community encourage and facilitate resilience to stressful situations. Protective factors, such as a warm supportive family and supportive community members such as teachers, neighbors, church members, and other parents are essential to fostering resilience. Tusaie and Dyer (2004) also suggested that

environmental factors, such as a sense of connectedness or social support as perceived by individuals, influence resilience. Lastly, Fergus and Zimmerman (2005) explained that parental factors of social support, monitoring, and communication are critical in the formulation of adolescent resilience. Research findings have supported the positive relationship between social support and resilience in adolescents (Markstrom et al., 2000; Trask-Tate et al., 2010).

Positive health practices have been proposed to be an outcome of resilience. Stewart et al. (1997) suggested that positive health behaviors in adolescents can be fostered by resilience. Other theorists conceptualized resilience as the capacity to change, grow, and adapt to ongoing life stress and adversity that facilitate health work (Monteith & Ford-Gilboe, 2002) and contribute to individuals engaging in exercising, eating balanced meals, getting adequate sleep, social interactions, hobbies, and relaxation behaviors reflective of a healthy lifestyle (Edward, 2005; Monteith & Ford-Gilboe, 2002). Atkinson et al. (2009) suggested that resilience is the way individuals respond to challenges that affect their health behavior, health, and mental health. Research findings have provided support for the positive relationship between resilience and positive health practices in various adolescents (Black & Ford-Gilboe, 2004; Monteith & Ford-Gilboe, 2002; Solem, 2001) and in older adults (Wagnild, 2003). Based on theory and previous research, social support was expected to be positively related to resilience, and resilience was expected to be positively related to positive health practices. It was also expected that resilience would mediate the relationship between social support and positive health practices (see Figure 1).

Several theorists have postulated that social support is antecedent to self-efficacy. Self-efficacy, as conceptualized by Schwarzer (1992), is an appraisal of an individual's self-confidence to control their environment by adapting behaviors to life stress. Similarly, Bandura (2001) defined self-efficacy as the belief individuals have about their ability to control their actions and behaviors for the production of a desirous outcome. Relative to explanatory theory, Bandura (2001) proposed that of the four sources of self-efficacy, verbal persuasion is the support provided by others that helps convince individuals that they can succeed in performing difficult tasks and gives them confidence to accomplish the task and pursue their behavioral goals. In short, Bandura linked supportive relationships to positive self-efficacy beliefs. Schunk and Meece (2005) suggested that supportive others and family members help adolescents develop positive self-efficacy beliefs when socialized within positive academic and social models. They further explained that social contexts have a powerful influence on adolescents' self-efficacy. Finally, Caprara et al. (2006) proposed that family relationships grounded in mutual respect, emotional support, sharing of knowledge, and social connectedness contribute to adolescents' self-efficacy beliefs, strongly linking social support to self-efficacy. Research findings have supported the positive relationship between social support and self-efficacy in adolescents (Cicognani, 2011; Frank et al., 2010; Hung, 2011; Tangeman & Hall, 2011).

Several theorists suggested that self-efficacy beliefs play an important role in the adoption, control, and execution of health behaviors that benefit individuals throughout all age groups and socioeconomic levels (Bandura, 1997; Schwarzer & Fuchs, 1996). Relative to explanatory theory, self-efficacy beliefs influence the intention to change risk

behavior, the amount of effort one will invest to achieve their goal, and the persistence to maintain healthy behaviors (Schwarzer & Fuchs, 1996). Perceived self-efficacy has a vital role in habits managed by the individual that affect health behavior directly and indirectly in pursuit of a plan of action (Bandura, 1997; Pender et al., 2011). Research findings have supported the positive relationship between self-efficacy and positive health practices in adolescents (Hendricks & Hendricks, 2005; Hung, 2011; Jackson et al., 2007; Peker & Bermek, 2011). Based on theory and previous research, social support was expected to be positively related to self-efficacy, and self-efficacy was expected to be positively related to positive health practices. It was also expected that self-efficacy would mediate the relationship between social support and positive health practices (see Figure 2).

Hypotheses

In this study of Black late adolescents, it was predicted that:

1. There is a positive relationship between social support and positive health practices.
2. There is a positive relationship between social support and resilience.
3. There is a positive relationship between resilience and positive health practices.
4. When resilience is controlled for statistically, the relationship between social support and positive health practices will diminish and will not be statistically significant.
5. There is a positive relationship between social support and self-efficacy.

6. There is a positive relationship between self-efficacy and positive health practices
7. When self-efficacy is controlled for statistically, the relationship between social support and positive health practices will diminish and will not be statistically significant.

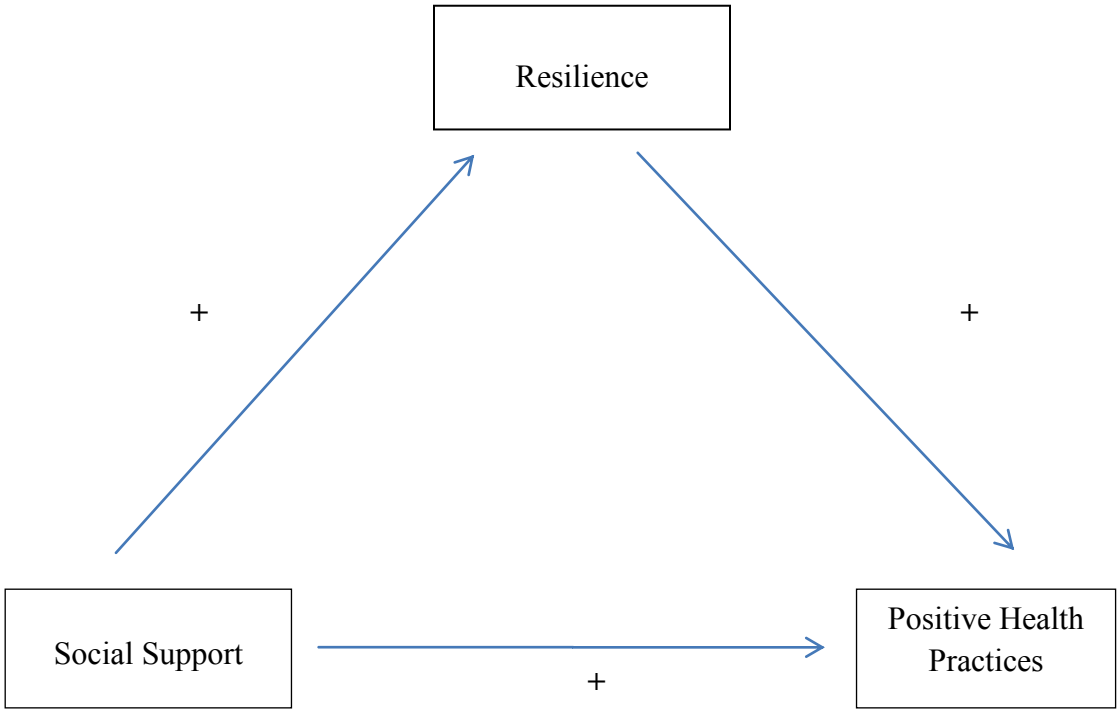

Figure 1. Mediational model of the relationship between social support and positive health practices with resilience as the mediating variable.

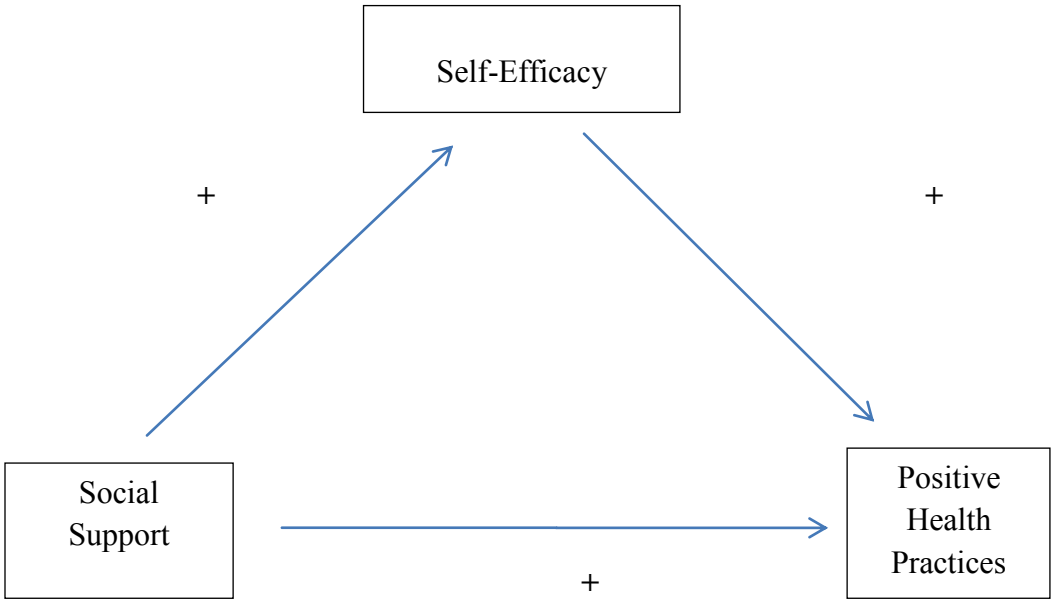

Figure 2. Mediational model of the relationship between social support and positive health practices with self-efficacy as the mediating variable.

Chapter III

Methods

This chapter presents the description of methods of the correlational research design used in the present study, which examined the relationship between the dependent variable of positive health practices and the independent variable of social support. This study also tested two models proposing mediational relationships between social support and positive health practices with the variables of resilience and self-efficacy, established through theory and empirical literature. The discussion presented includes the (a) research setting, (b) sample, (c) instrumentation, (d) and methods of data collection.

Research Setting

The study was conducted in a community college located in a northern New Jersey city. This community college services primarily Black students who live in the regional area. About 62% of the students enrolled in the school are receiving both federal and state financial aid. The data were collected in various classroom settings within the college, after following the Institutional Review Board guidelines of Rutgers University, and with the permission of the college authorities which had been previously obtained. The collection of data occurred over a six week period during the days and hours the college was holding classes.

Sample

A non-probability convenience sample was used to collect data in this study. According to power analysis for multiple regression analysis and using a small to medium effect size of $f^2 = .07$, an alpha of .05, and a power of .80 (J. Cohen, 1988), a sample size of 165 late adolescents was needed to test the two mediational models in this

study. Of the 504 students approached, 199 agreed to participate in the study with 20 students excluded because they did not meet the inclusion criteria. The final sample size consisted of 179 self-identified Black college students, aged 18 to 23 (M = 20.21, SD 1.59), who agreed to participate in the study and gave written informed consent. Of the participants in the final sample, 64 were male, 115 were female. The different ethnicities of respondents were self-identified into groups representing African-Americans (54.7%), Black Caribbeans (28%), Black Africans (11.2 %), and Black Biracial (6.1 %) students. The majority of participants were in either the first (42.1%) or second year of college (40.4%), with 12.4 % reported being in college for three years and 5.1% reported having spent four years in college. There were 6 academic divisions of study reported by the respondents with the largest number of students coming from Social Sciences (36%), Biology and Chemistry (16.2%), Allied Health (12.4%), Humanities (10.7%), Engineering, Technology and Computer Science (7.9%), and Business (7.9%). An additional 8.9% of the respondents had not declared a major or were undecided. Most of the participants worked either part-time (34.6%) or full-time (31.3%) outside of school, with 23.5% reported being currently unemployed and 10.6% reported never being employed.

The majority of respondents (82.7%) reported not identifying with having a condition that limits or restricts their engagement in physical activity, while 17.3% reported having a condition that limits or restricts their engagement in physical activity. Of the 31 students who reported a condition, 23 reported having asthma, 1 reported a heart murmur, 1 was pregnant, 1 had severe acne, 1 reported diabetes, and 1 student

reported having arthritis. The demographic data of the sample characteristics are summarized in Table 1.

Table 1

Frequency of Selected Demographic Variables

Characteristic	n	Percentage
Gender		
Male	64	35.8
Female	115	64.2
Ethnicity		
African-American	98	54.7
African Black	20	11.2
Caribbean Black	50	28.0
Biracial Black	11	6.1
College Year		
Year 1	75	42.1
Year 2	72	40.4
Year 3	22	12.4
Year 4	9	5.1
Division/Major		
Social Sciences	64	36
Biology & Chemistry	29	16.2
Allied Health	22	12.4
Humanities	20	10.7

(continued)

Characteristic	n	Percentage
Business	14	7.9
Engineering	14	7.9
Undecided	16	8.9
Employment		
Full-time	56	31.3
Part-time	62	34.6
Unemployed	42	23.5
Never Employed	19	10.6
Medical Condition		
Yes	31	17.3
No	148	82.7
Medical Condition Type		
None	148	84.1
Asthma	23	13.1
Heart Murmur	1	.56
Pregnancy with Diabetes	1	.56
Arthritis	1	.56
Diabetes	1	.56
Severe Acne	1	.56
MD[a]	3	

Note. MD[a] = Missing Data

Instruments

The Personal Resource Questionnaire85-Part 2.

The Personal Resource Questionnaire85-Part 2 (PRQ85- Part 2; see Appendix A) was originally constructed as part of the Personal Resource Questionnaire (PRQ) developed by Brandt and Weinert (1981). Part two of the measure is based on five of six of Weiss's (1974) theoretical relational provisions of social support, namely attachment/intimacy, nurturance, worth, social integration, and assistance. The PRQ85-Part 2 is a self-report measure consisting of 25-items with a 7-point Likert scale, scored from 1 (*strongly disagree*) to 7 (*strongly agree*). Reverse scoring is required for negatively worded items 4, 7, 10, 16, and 24. The total score obtained can range from 25 to 175, with higher scores indicative of higher levels of social support as perceived by the respondent.

Validity of the PRQ-Part 2 was established through the use of several psychometric procedures. Brandt and Weinert (1981) determined content validity of the original PRQ-Part 2 by developing five items that corresponded specifically to each of five of six relational provisions proposed by Weiss (1974). The resulting 25 items from the PRQ-Part 2 were categorized by fifteen individuals with graduate level knowledge in health or social science. Three experts in the research of social support validated the relevance of content represented by the PRQ-Part 2. Lastly, adult members in the community provided feedback on the tool's relevance to supportive relationships. As a result of each procedure, statements were revised and one item from each category was negatively worded to decrease response bias.

Predictive validity was established for the PRQ-Part 2 with a sample of 149 spouses of patients diagnosed with multiple sclerosis (Brandt & Weinert, 1981). The criterion scores from a measure of family functioning and the subscales of dyadic consensus and satisfaction from the Marital Adjustment Scale demonstrated positive correlations with the PRQ-Part 2 (r = .30 to .44, p < .001).

Construct validity was assessed using The Self-Help Ideology (SHI) measure which demonstrated correlations with three of the five hypothesized subscales from the PRQ-Part 2 (Brandt & Weinert, 1981). The findings revealed statistically significant positive correlations between the SHI and intimacy (r = .25, p <. 001), assistance (r = .23, p < .01), and social integration (r = .14, p < .05), in a sample of spouses of 149 patients with multiple sclerosis. Additional support for construct validity was provided by correlating the PRQ-Part 2 with the mental health variables of anxiety, depression, neuroticism, and extroversion proposed by Weinert and Brandt (1987). Perceived social support was found to be moderately and negatively associated with anxiety (r = -.37, p <.001), depression (r = -.42, p < .001), and with neuroticism (r = -.28, p < .01); perceived social support was positively associated with extroversion (r = .32, p < .001). Internal consistency reliability of the PRQ-Part 2 (Brandt & Weinert, 1981), using a sample of 149 adults, revealed a coefficient alpha of = .89 for the overall scale and average coefficient alphas ranging from .61 to .77 for the hypothesized subscales. The PRQ-Part 2 was slightly modified and resulted in the PRQ82 (Weinert, 1987). Continued testing and refinement led to revisions that included minor rewording of items contained within the nurturance subscale. Because of concern regarding the age references associated with the nurturance subscale of the PRQ82-Part 2, any statement

mentioning children was removed (Weinert, 1987). The revised instrument is now considered the PRQ85-Part 2 and is utilized in the measurement of perceived social support in this study.

Weinert (1987) assessed the convergent validity of the PRQ85-Part 2 with five other measures of social support in a sample of 100 adult men and women, aged 25 to 65. The findings revealed statistically significant positive correlations between the PRQ85-Part 2 and Interpersonal Support Evaluation ($r = .52$, $p < .01$), the Cost and Reciprocity Index ($r = .52$, $p < .01$), the Social Support Scales ($r = .49$, $p < .001$), the Inventory of Socially Supportive Behaviors ($r = .40$, $p < .01$), and the Norbeck Social Support Questionnaire ($r = .25$, $p < .01$).

Weinert (1987) provided evidence for construct validity for the PRQ85-Part 2 using factor analysis combining the samples and data taken from three studies. A total of 248 mostly Caucasian adult men and women, from middle-class backgrounds, made up the final sample. Principle component analysis with oblique rotation determined that a three-factor structure was most acceptable and explained 43.4% of the total variance. Factor 1 was labeled Intimacy/Assistance, Factor II as Reciprocity, and Factor III as Integration/Affirmation. The findings revealed an association between Factor I with Factor II as $r = .19$; Factor I and Factor III, $r = .36$, and Factor II and Factor III, $r = .17$. Construct validity for the PRQ85-Part 2 was also determined by factor analysis conducted by Yarcheski, Mahon, and Yarcheski (1992) in a sample of 325 adolescents, aged 12 to 21. After a principal components analysis with oblique rotation was performed, a four-factored solution was accepted, explaining 48.9% of the variance. Based on loadings of the 25 items, Factor I was labeled as Intimacy/Integration/

Assistance; Factor II was described as Sense of Alliance; Factor III was labeled Worth; and Factor IV was described as Nurturance. Yarcheski et al. (1992) further demonstrated construct validity of the PRQ85-Part 2, using theoretically relevant variables in relation to perceived social support. A negative correlation was found between perceived social support and symptom patterns (r = -.25, p < .01) and a positive correlation was found between perceived social support and perceived health status (r = .25, p = .01).

Relative to reliability, Weinert (1987) reported a coefficient alpha for the PRQ85-Part2 of .87 in a combined sample of 248 men and women. Mahon, Yarcheski, Yarcheski, and Hanks (2007) reported a coefficient alpha of .90 in a sample of 12 to 14 year old adolescents. Ayres (2008) reported a coefficient alpha of .91 in a convenience sample of 204 middle adolescents, aged 15 to 17. Ayres, Atkins, and Li (2010) reported a coefficient alpha of .93 in a sample of Filipino women, aged 18 to 21. Ayres and Mahat (2012) reported finding a coefficient alpha of .93 in 163 Asian American college students, aged 18 to 21.

The Personal Lifestyle Questionnaire.

The Personal Lifestyle Questionnaire (PLQ; see Appendix B) is a self-report instrument used to measure the positive health practices of individuals (Brown, Muhlenkamp, Fox, & Osborn, 1983). The 24-item scale consists of statements reflective of activities individuals engage in to protect their health. The activities, categorized into six dimensions, are (a) nutrition, (b) exercise, (c) relaxation, (d) safety, (e) avoidance of substance use, and (f) health promotion. The engagement in these positive health behaviors are measured on a 4-point Likert scale where 4 is (*almost always*), 3 (*occasionally*), 2 (*infrequently*), and 1 (*never*). Reverse scoring is necessary for

negatively worded items 7, 13, 14, 16, and 20 as indicated by statements such as “Smoke more than one pack of cigarettes daily” and “Drive after drinking two or more alcoholic beverages” (Brown et al., 1983, p. 159). Total activity scores can range from 24 to 96, with higher scores representative of engagement in more positive health practices.

Brown et al. (1983) established content validity of the PLQ by selecting items based on a review of literature undertaken by Harris and Guten (1979) in the examination of health-protective behaviors. From that review, Brown et al. (1983) isolated the most prevalent self-health-care activities and behaviors commonly performed for the items measuring their conceptualization of positive health practices.

Concurrent validity was established with the administration of the PLQ with the Stevens Point Lifestyle Questionnaire, a measure of wellness, in two different adult samples (Brown et al., 1983). The correlations obtained were .83 and .72 respectively.

To provide evidence of construct validity, Mahon, Yarcheski, and Yarcheski (2002) used factor analysis in a sample of 100 middle (aged 15-17) and 122 late adolescents (aged 18-21). A principle component analysis followed by a Varimax orthogonal rotation yielded a two-factor solution. Factor I was labeled General Health Practices and Factor II was given the label, Substance Use. The loading of most health behavior items on Factor I lent support to positive health behaviors regarded as a unidimensional construct. The coefficient alpha scores for Factor I was .72 and for Factor II was .58, with a coefficient alpha of .73 for the total PLQ instrument.
Internal consistency reliability of the PLQ was demonstrated when a coefficient alpha of .77 was reported by Ayres (2008), in a sample of 204 middle adolescents, aged 15-17. Ayres et al. (2010) reported a coefficient alpha of .82 in a sample of 89 Filipino women,

aged 18 to 21. Ayres and Mahat (2012) reported a coefficient alpha of .72 in a sample of 163 college students aged 18 to 21. Initial test-retest reliability was confirmed by Brown et al. (1983) within a four-week interval (r = .78) and again for a three-week interval (r = .88).

The Brief Resilience Scale.

The Brief Resilience Scale (BRS) is a 6-item self-report instrument designed to assess an individual's ability to bounce back or recover from stress (Smith et al., 2008; see Appendix C). Smith et al. (2008) stated that the definition of resilience used in developing the scale is closest to the original meaning of the unitary construct as described in a vocabulary dictionary. The self-rated measure of resilience is scored using a Likert-type scale with each statement recorded as either 1 *(strongly disagree*), 2 (*disagree*), 3 (*neutral*), 4 (*agree*), or 5 (*strongly agree*). Items 2, 4, and 6 are negatively worded and are reversed scored to avoid response set bias. The BRS is scored by finding the mean of the six items; higher scores are indicative of greater resilience. Smith, Epstein, Ortiz, Christopher, and Tooley (2010) determined that a mean of 3.70 is an overall average score of resilience, with scores below 3.00 rated low in resilience and those above 4.30 rated high in resilience.

Relative to content validity, Smith et al. (2008) developed items for a brief resilience scale to assess their conceptualization of resilience as the ability to bounce back or recover from stress. The final BRS was developed using a potential list of items based on feedback provided by team researchers and pilot testing of undergraduate students. The parsimonious design was reflective of the conceptualization of resilience

as a unitary construct, distinct from other variables and resiliency instruments (Smith et al., 2008).

Construct validation was determined using principal components analysis in four samples: Sample 1 (n = 128) and 2 (n = 64) consisted of undergraduate students who were primarily young and female, Sample 3 (n = 112) consisted of male cardiac patients, and Sample 4 (n = 50) women with fibromyalgia or were healthy controls (Smith et al., 2008). The Varimax rotation yielded a one-factor solution for each sample and accounted for 55 to 67% of the variance across all samples. Specifically, the variance by each sample was as follows: Sample 1 = 61%, Sample 2 = 61%, Sample 3 = 57%, and Sample 4 = 67%. The item loadings on the factor ranged from .68 to .91.

Concurrent validity findings provided by Smith et al. (2008) were shown by significant positive correlations between the BRS and resilience measures represented by the Connor-Davidson Resilience Scale (CD-RISC) in Sample 1 (r = .59, p < .01) and the Ego Resiliency Scale (ER) in Sample 1(r = .51, p < .01) and Sample 4 (r = .49, p < .01).

Discriminant validity was obtained using zero-order correlations in Sample 1 consisting of 128 undergraduate students (Smith et al., 2008). The findings revealed that the measures of resilience were statistically significantly (p < .01) related in the direction expected for perceived stress (r = -.60), anxiety (r = -.46), depression (r = -.41), negative effect (r = -.34), positive affect (r = .46), and physical symptoms (r = -.39). Additionally, Sample 3, consisting of 112 cardiac rehabilitation patients, showed statistically significant (p < .01) zero-order correlations in the expected direction between the BRS and perceived stress (r = -.61), anxiety (r = -.53), depression (r = -.50), negative affect (r = -.51), positive affect (r = .45), fatigue (r = -.32), and exercise days (r = .23).

Convergent validity revealed significant positive and negative correlations between the BRS and variables of personal characteristics, social relationship, coping, and health-related outcomes among samples 1-4 (Smith et al., 2008). Statistically significant positive correlations were found for optimism (r = .69), purpose in life (r = .67), social support (r = .40), active coping (r = .40), positive reframing (r = .40), and positive affect (r = .63). Statistically significant negative correlation were revealed with pessimism (r = -.56), alexithymia (r = -.47), negative interactions (r = -.47), disengagement (r = -.52), denial *(*r = .53), self-blame (r = -.47), stress (r = .71), anxiety (r = -.60), depression (r = -.66), and negative affect (r = -.68).

Internal consistency reliability for the BRS obtained in Samples 1 and 2 containing 192 undergraduate students, Sample 3, 112 cardiac rehabilitation patients, and Sample 4, 20 women with fibromyalgia or 30 healthy controls revealed good coefficient alphas of .84, .87, .80, and .91, respectively (Smith et al., 2008). Smith et al. (2010) obtained coefficient alphas of .84, .90, .87, .80, .75, and .70 in a study using samples made up of 2 groups of (a) college students, (b) healthy women, (c) cardiac patients, (d) fibromyalgia patients, and (e) urban firefighters. Smith, Tooley, Christopher, and Kay (2010) reported coefficient alphas of .86 in 289 college students from Study I and .84 in 259 college students from Study II. Test-retest reliability coefficients were obtained in a one-month period for 48 students from Sample 2 (r = .69) and for a three-month period in a sample of 61 cardiac patients from Sample 3 (r = .62). Harville et al. (2011) reported Cronbach's alpha of .83 in a sample of 102 women, aged 18 and older.

The General Self-Efficacy Scale.

The General Self-Efficacy Scale (GSE) is a self-administered, 10-item instrument developed to measure an individual's general belief in his or her own ability to cope with or respond to difficult situations by adapting behaviors to daily life stressors (Schwarzer, 1992; Schwarzer & Jerusalem, 1995; see Appendix D). The GSE was originally developed in the German language with 20 items and has since been translated by other researchers into 26 additional languages, including an English version and revised to the current 10-item instrument. The scale was designed to measure general self-efficacy in adult and adolescent populations, but not in individuals under the age of 12 years (Schwarzer & Jerusalem, 1995). A 4-point summated rating is used to score the responses ranging from 1 (*not true at all*) to 4 (*exactly true*). Scores can range from 10 to 40; higher scores are indicative of an individual's generalized self-efficacy belief (Schwarzer & Jerusalem, 1995).

Relative to content validity, Schwarzer and Jerusalem (1995) developed the GSE to measure their conceptualization of general self-efficacy as a unidimensional construct that deals with an individual's general self-efficacy beliefs in being able to cope with demanding stressors or difficult tasks. The final 10 items were selected from the original 20 items written in German and subsequently adapted into 28 languages by bilingual native speakers.

Concurrent validity was found between the GSE and several personality measures. Statistically significant positive correlations were found between GSE and self-esteem (r = .52), internal control beliefs (r = .40), and optimism (r = .49) in a sample of 901 East German men and women (Schwarzer & Jerusalem, 1995). In addition,

statistically significant negative correlations were found between GSE and with anxiety (r = -.54), performance anxiety (r = -.42), shyness (r = -.47), and pessimism (r = -.28); (Schwarzer & Jerusalem, 1995).

Schwarzer and Jerusalem (1995) established predictive validity with a two year follow-up of East German men and women migrants. In both the men and women samples, there were statistically significant positive correlations of self-efficacy with self-esteem (r = .51, men; r = .59, women) and with optimism (r = .48, men; r = .51, women).

Internal consistency reliability of the GSE was demonstrated by a coefficient alpha of .86 obtained by Scholz, Gutierrez-Dona, Sud, and Schwarzer (2002) in a sample of 19,120 respondents from 25 countries. Luszczynska, Gutierrez-Dona, and Schwarzer (2005), in a study involving subjects from five countries, reported coefficient alphas of .85 for 902 workers from Costa Rica; .90 for 963 students from Costa Rica, mean age of 21years; .88 in 1535 East German migrants; .86 in 313 German teachers; .79 in 3255 German students, mean age of 16 years, .81 in 660 Polish students, mean age of 17 years; .79 in 538 American students, mean age 16 years; and .82 in 300 Turkish students, mean age 17 years. Hung (2011) reported a coefficient alpha of .80 in a sample of 103 Chinese college students with a mean age of 24 years. Kausar and Kazmi (2011) reported a coefficient alpha of .75 in a sample of Pakistani adolescents, aged 12 to 17. Ebstrup, Eplov, Pisinger, and Jorgensen (2011) reported a coefficient alpha of .90 in a sample of 3471 Danish adults, aged 18 to 69. A test-retest reliability of .47 for men and .63 for women was reported by Schwarzer, Hahn, and Jerusalem (1993) in a sample of 991 East German adults over a two-year period.

Spiritual Health Subscale

The Spiritual Health Subscale (SHS) is a factor of the Adolescent Lifestyle Profile (ALP- R2; Hendricks, Murdaugh, & Pender, 2006; see Appendix E), a reliable and valid measure of health-promoting lifestyle in early, middle, and late adolescents. The SHS consists of 6 items measuring spiritual health on a 4-point summated rating scale from *never* to *always*. The coefficient alpha for this subscale is .82 (Hendricks et al., 2006). The SHS will be used for secondary analysis purposes in relation to the study variables.

Demographic Data Sheet

A Demographic Data Sheet (see Appendix F) was constructed to elicit personal information from subjects. This information included such demographics as age, gender, and ethnicity. In addition, an open-ended question was asked to determine participants response to activities engaged in to stay healthy. The ordering of the surveys in the instrument package was as follows: PRQ85-Part 2, PLQ, BRS, and GSE, followed by the demographic sheet and then the ALP-Spiritual Health Subscale.

Data Collection Procedures

Written permission approval from college officials (see Appendix G) to conduct the study at the community college as well as from the IRB of Rutgers University (see Appendix H) to ensure adherence of ethical procedures were obtained prior to start of data collection procedures. With prior permission from the faculty member, students from selected classrooms were ask to stay after class for approximately 30 minutes to complete the instrument packet and demographic data sheet. Classes used were unoccupied by others, well lit, and relatively quiet. Prior to completing the instruments, the purpose of the study, the procedures, the rights of human subjects, and the

delimitations of the study were explained to interested students. Those agreeing to participate signed a written informed consent (see Appendix I) and were given a copy of the signed form. The participating students completed the instrument packets with the primary investigator present in the classroom to answer any questions. After return of the instrument packet to the primary investigator, each participant was thanked for their participation. This procedure was replicated over a six week period until the required sample size for the study had been achieved. All collected data were coded and locked in a file cabinet to be kept for a period of no less than five years as specified by Rutgers IRB.

Chapter IV

Data Analysis

The purpose of this study was to examine the relationship between positive health practices as the dependent variable and (a) social support, (b) resilience, and (c) self-efficacy as the independent variables. Additionally, the study tested the relationship between social support and resilience and self-esteem as the dependent variables. This study also aimed to test two mediational models with the variables of resilience and self-efficacy to further examine the relationship between social support and positive health practices. Data were collected from 199 respondents using the Personal Resource Questionnaire85- Part 2 (PRQ85-Part 2), the Personal Lifestyle Questionnaire (PLQ), the Brief Resilience Scale (BRS), and the General Self-Efficacy Scale (GSE). The final sample was comprised of 179 respondents. The analysis of the data and findings obtained are presented in this chapter.

Statistical Description of the Variables

Positive health practices, as measured by the PLQ, had scores that ranged from 47 to 89 (*M=69.16, SD= 8.09*). On the PRQ85-Part 2, which measured social support, the respondents scores ranged from 67 to 175 (*M = 138.62, SD = 18.68*). The respondents total scores on the BRS, which measures resilience, ranged from 10 to 30 (*M* = 20.87, *SD* = 4.27) and their mean scores on the BRS ranged from 1.67 to 5 (*M= 3.48, SD = .71*). On the GSE, which measures an individual's perception of their general self-efficacy, scores ranged from 10 to 40 (*M = 31.98, SD = 4.90*). These findings are summarized in Table 2. Thus, it was found that these Black students had a moderately high level of

engagement in positive health practices, perceived a high level of social support, moderate resilience, along with high general self-efficacy beliefs.

Table 2

Descriptive Statistics of Study Variables (*N* = 179)

Variable	Range	*M*	Median	*SD*
Positive Health Practices	47-89	69.16	69	8.09
Social Support	67-175	138.62	139	18.68
Resilience				
Total	10-30	20.87	21.0	4.27
Mean	1.67-5	3.48	3.5	.71
Self-Efficacy	10- 40	31.98	32.0	4.90

Psychometric Properties of the Instruments

The study instruments demonstrated coefficient alphas higher than .70 for internal consistency reliability which, according to Nunnally and Bernstein (1994), is the minimally acceptable level for instrument reliability. The PLQ had a coefficient alpha score of .72, which is similar to the one reported by Ayres and Mahat (2012) in a sample of college students. The PRQ85-Part 2 had a coefficient alpha of .87, which is less than the score (.93) reported by Ayres and Mahat (2012) in a sample of Asian American college students, aged 18 to 21. The BRS had a coefficient alpha of .75, which is less than the .83 reported by Harville et al. (2011) in a sample of women and the .84 and .86 reported by Smith et al. (2010) in samples of college students. The GSE had a coefficient alpha of .88, which is similar to the .90 reported by Luszczynska et al. (2005) for Costa Rican college students, yet higher than the coefficient alpha (.80) reported by Hung (2011) in a sample of Chinese college students and by Kausar and Kazmi (2011) in

a sample of Pakistani adolescents (.75). A summary of these findings in the present study is reported in Table 3.

Table 3

Coefficient Alpha Reliabilities for Study Variables

Instruments	α (coefficient alpha)
Personal Lifestyle Questionnaire	. 72
Personal Resource Questionnaire85-Part 2	. 87
Brief Resilience Scale	. 75
General Self-Efficacy Scale	. 88

Hypotheses

Hypotheses 1, 2, 3, 5, and 6 were all tested using the Pearson Product-Moment correlation coefficient. One-tailed tests of significance were used to test these hypotheses (see Table 4). Hypotheses 4 and 7 were tested using a series of multiple regression analysis. According to Baron and Kenny (1986), multiple regression analyses are appropriate for testing mediational hypotheses. SPSS Student Version 21.0 for Windows was used for statistical analyses.

Table 4

Correlation Matrix Among Study Variables

Variable	Social Support	Resilience	Self-Efficacy
Positive Health Practices	.45*	.31*	.38*
Social Support	--	.28*	.40*

* $p < .001$, one-tailed.

Hypothesis 1

Hypothesis 1 stated that there is a positive relationship between social support and positive health practices. The Pearson Product-Moment correlation testing this relationship was $r = .45$, $p < .001$. The correlation was statistically significant and in the direction hypothesized. Thus, Hypothesis 1 was supported.

Hypothesis 2

Hypothesis 2 stated that there is a positive relationship between social support and resilience. The Pearson Product-Moment correlation testing this relationship was $r = .28$, $p < .001$. The correlation was statistically significant and in the direction hypothesized. Thus, Hypothesis 2 was supported.

Hypothesis 3

Hypothesis 3 stated that there is a positive relationship between resilience and positive health practices. The Pearson Product-Moment correlation testing this relationship was $r = .31$, $p < .001$. The correlation was statistically significant and in the direction hypothesized. Thus, Hypothesis 3 was supported.

Hypothesis 4

Hypothesis 4 stated that when resilience is controlled for statistically, the relationship between social support and positive health practices will diminish and will not be statistically significant in Black late adolescents. Three regression equations as specified by Baron and Kenny (1986) were used to test the first mediational model. Accordingly, the first equation regressed resilience (the mediator variable) on social support (the independent variable). The second equation regressed positive health practices (the dependent variable) on social support (the independent variable). The third

equation regressed positive health practices (the dependent variable) on both social support (the independent variable) and resilience (the mediation variable).

The results for testing the first regression equation as indicated by the first mediation model (see Figure 3) found that social support positively influenced resilience, $F(1, 177) = 15.55$, $p < .001$, explaining 8% of the variance in resilience. The second regression equation found that social support positively influenced positive health practices, $F(1, 177) = 44.21$, $p < .001$, explaining 20% of the variance in positive health practices. The third regression equation found that resilience positively influenced positive health practices ($t = 2.88$, $p = .005$) explaining 4% of the variance in positive health practices. With both social support and resilience included in the third equation, it was determined that social support added 15% to the explained variance in positive health practices beyond the 4% provided by resilience. With resilience present, the proportion of variance in positive health practices accounted for by social support was reduced from 20% to 15%, with a decrease from .45 to .39 in the standardized regression coefficient derived from the second to the third equation (see Figure 3). Although social support still had a statistically significant influence on positive health practices in the third equation ($t = 5.69$, $p = .001$), the loss of 6% of explained variance in positive health practices by social support was due to mediation of resilience. These results indicated that resilience is one partial mediator in the relationship between social support and positive health practices in Black late adolescents, but the mediation is very minimal. Thus, Hypothesis 4 was not supported because resilience was not a total mediator as predicted. These results are summarized in Figure 3.

According to Baron and Kenny (1986) two assumptions must be met when using multiple regression to estimate a mediational model. The first assumption suggests that there be "no" measurement error in the mediator. The reliability estimate using coefficient alpha for the BRS instrument measuring resilience was .75, which exceeds the acceptable standard reliability of .70 (Nunnally & Bernstein, 1994). Although a higher coefficient alpha would have been desirable, the present finding suggests that measurement error was not a major issue when estimating the mediational model. The second assumption presumes that the temporal order of the variables in the relationship between the mediator and the dependent variable is correctly specified. Because the relationship between resilience and positive health practices was derived from theoretical propositions specifying the order of the variables, this assumption was met in the present study.

The post-hoc Sobel test as recommended by Dudley, Benuzillo, & Carrico (2004), when the Baron and Kenny (1986) mediation method is used, was performed to determine whether the resilience mediation path had a statistically significant influence in the relationship between the independent variable and dependent variable. The results of the Sobel test statistic was 1.53, $p = .06$, for a one-tailed test of significance. Accordingly, social support had no statistically significant indirect effect on positive health practices through the mediator variable of resilience.

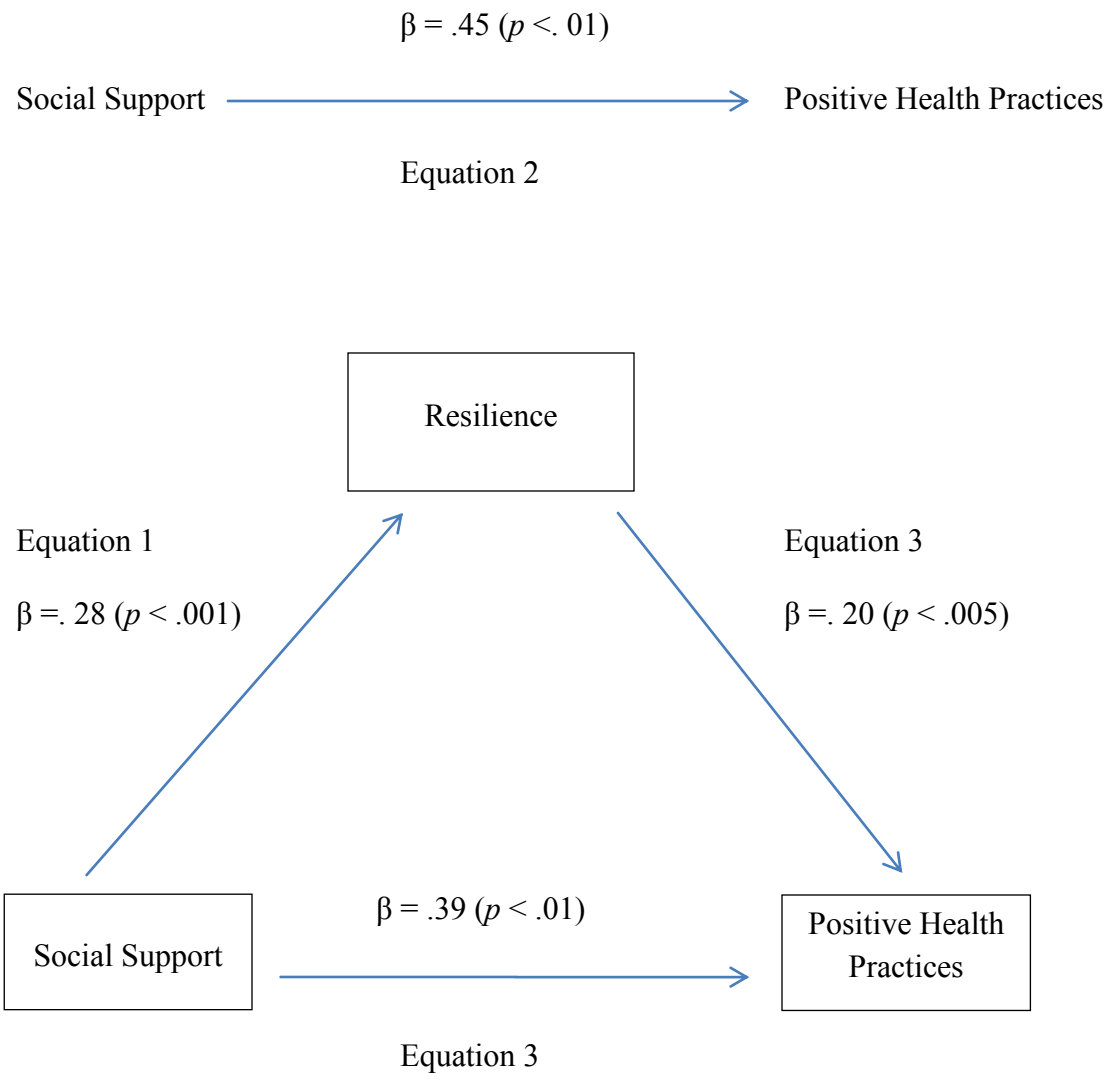

Figure 3. Results of testing the resilience mediation model.

Hypothesis 5

Hypothesis 5 stated that there is a positive relationship between social support and self-efficacy. The Pearson Product-Moment correlation testing this relationship was $r = .40$, $p < .001$. The correlation was statistically significant and in the direction hypothesized. Thus, Hypothesis 5 was supported.

Hypothesis 6

Hypothesis 6 stated that there is a positive relationship between self-efficacy and positive health practices. The Pearson Product-Moment correlation testing this relationship was $r = .38$, $p < .001$. The correlation was statistically significant and in the direction hypothesized. Thus, Hypothesis 6 was supported.

Hypothesis 7

Hypothesis 7 stated that when self-efficacy is controlled for statistically, the relationship between social support and positive health practices will diminish and will not be statistically significant in black late adolescents. Three regression equations as specified by Baron and Kenny (1986) were used to test the second mediational model. Accordingly, the first equation regressed self-efficacy (the mediator variable) on social support (the independent variable). The second equation regressed positive health practices (the dependent variable) on social support (the independent variable). The third equation regressed positive health practices (the dependent variable) on both social support (the independent variable) and self-efficacy (the mediation variable).

The results for testing the second regression equation indicated by the second mediation model (see Figure 4), found that social support positively influenced self-efficacy, $F(1, 177) = 32.81$, $p < .001$, explaining 16% of the variance in self-efficacy.

The second regression equation expressed that social support positively influenced positive health practices, $F(1, 177) = 44.21$, $p < .001$, explaining 20% of the variance in positive health practices. In the third regression equation self-efficacy positively influenced positive health practices ($t = 3.33$, $p = .001$) explaining 6% of the variance in positive health practices. With both social support and self-efficacy included into the third equation, it was determined that social support added 12% to the explained variance in positive health practices beyond the 6% contributed by self-efficacy. With self-efficacy present, the proportion of variance in positive health practices accounted by social support was reduced from 20% to 12%, with a decrease from .45 to .35 in the standardized regression coefficient derived from the second to the third equation (see Figure 4). Although social support still had a statistically significant influence on positive health practices in the third equation ($t = 4.96$, $p = .001$), the loss of 10% of explained variance in positive health practices by social support was due to mediation of self-efficacy. These results indicated that self-efficacy is another partial mediator in the relationship between social support and positive health practices in Black late adolescents but the mediation was minimal. Hypothesis 7 was not supported because self-efficacy was not a total mediator as predicted.

According to Baron and Kenny (1986) two assumptions must be met when using multiple regression to estimate a mediational model. The first assumption suggests that there be "no" measurement error in the mediator. The reliability estimate using coefficient alpha for the self-efficacy instrument measuring general self-efficacy was .88, which far exceeds the acceptable standard reliability of .70 as established by Nunnally and Bernstein (1994). The present findings suggest that measurement error was not a

major issue when estimating the second mediational model. The second assumption presumes that the temporal order of the variables in the relationship between the mediator and the dependent variable is correctly specified. The relationship between self-efficacy and positive health practices was derived from theoretical propositions found in the literature specifying the order of the variables. Thus, this assumption was met in the present study.

The Sobel test was performed to provide an approximate estimate of the indirect effect of the independent variable, social support, on the dependent variable, positive health practices, via the mediator, self-efficacy and whether the effect is statistically significant. The Sobel test statistic for the second mediation model was 2.03, $p = .02$, for a one-tailed test of significance. Thus social support had a statistically significant indirect effect on positive health practices through the mediator variable of self-efficacy.

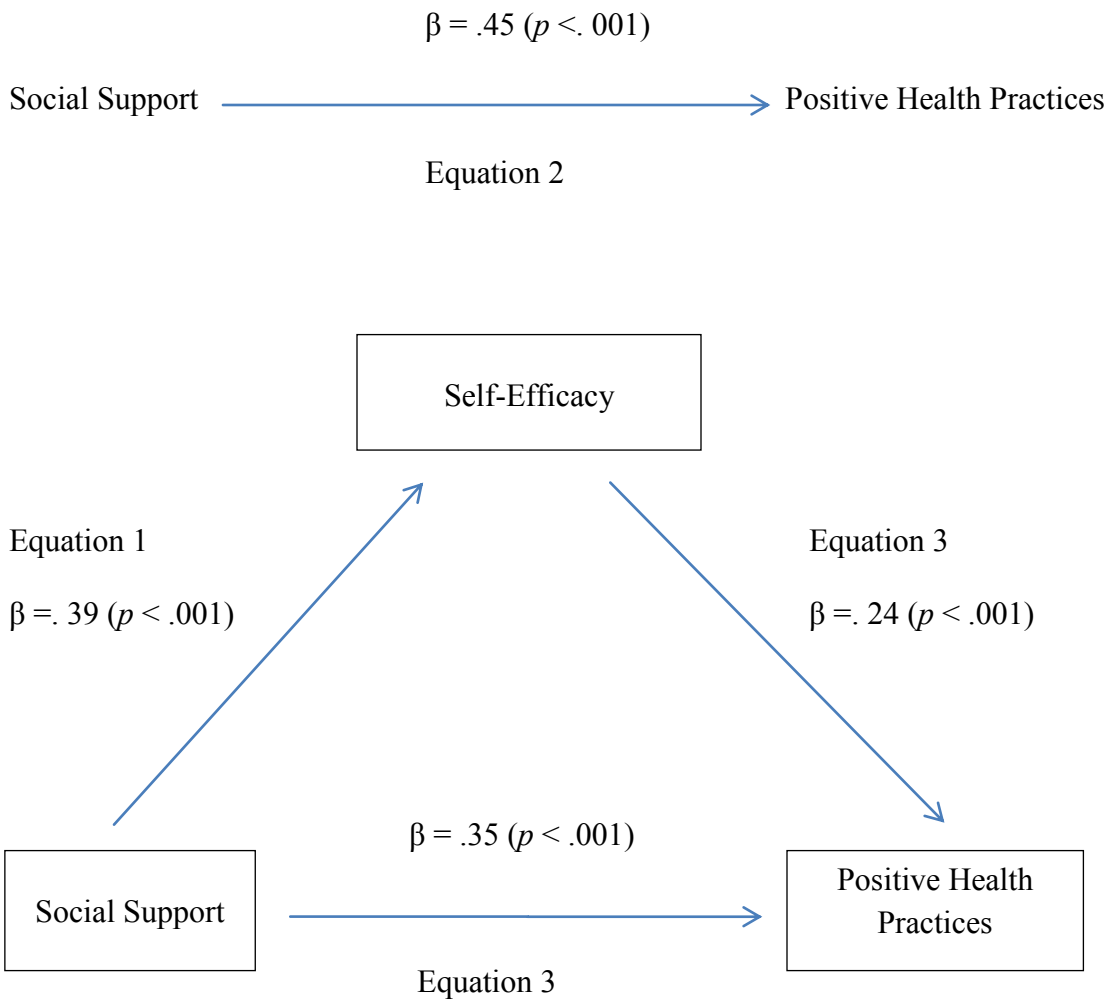

Figure 4. Results of testing the self-efficacy mediation model.

Additional Findings

In order to explore the data further, the demographic variable of age was examined in relation to each of the study variables. The relationships were examined using the Pearson Product-Moment correlation for a two-tailed test of significance.

Pearson correlations between age and social support ($r = .11$, $p = .13$) and age and resilience ($r = .14$, $p = .06$) were not statistically significant. However, a statistically significant positive correlation was found between age and general self-efficacy ($r = .18$, $p < .02$) but the relationship was weak. A statistically significant negative correlation was found between age and positive health practices ($r = -.18$, $p < .02$) but again the relationship was weak.

Independent t-tests were performed to determine if there were differences in each of the study variables of social support, positive health practices, resilience, and self-efficacy according to gender. Adolescent females had higher social support scores ($M = 140.10$, $SD = 18.50$) than adolescent males ($M = 135.97$, $SD = 18.86$), but the differences failed to reach statistical significance ($t(177) = -1.42$, $p = .16$). Males had higher scores ($M = 70.83$, $SD = 8.25$) than females ($M = 68.04$, $SD = 7.75$) on positive health practices ($t(177) = 2.25$, $p = .03$), indicating that males performed more positive health practices than females at a statistically significant level. Further, there were no statistically significant differences between mean scores for males ($M = 3.54$, $SD = .66$) and females ($M = 3.44$, $SD = .74$) on resilience ($t(177) = .90$, $p = .37$) and mean scores for males ($M = 32.41$, $SD = 5.24$) and females ($M = 31.74$, $SD = 4.72$) on general self-efficacy scores ($t(177) = .86$, $p = .39$).

Chapter V

Discussion of the Findings

The purpose of this study was to examine the theoretical relationships between the dependent variable of positive health practices in Black late adolescents and each of the independent variables of (a) social support, (b) resilience, and (c) self-efficacy. The research also examined the relationship between social support and the dependent variables of resilience and self-efficacy. The relationship between social support and positive health practices was further explained when this study tested two mediational models with the variables of resilience and self-efficacy. This chapter interprets the findings of the hypotheses tested with references to the theories that generated the propositional relationships. Furthermore, discussion regarding additional findings other than the hypothesized relationships is included.

Social Support and Positive Health Practices

Hypothesis 1 stated that there was a positive relationship between social support and positive health practices. This hypothesis was derived from theory that postulated social support influences engagement in positive health behaviors (Langlie, 1977; Lewis & Rook, 1999; Pender & Stein, 2002; Umberson, 1987) and as a health promoter, social support is antecedent to engagement in positive health practices (S. Cohen, 1988).

According to the theorists (S. Cohen, 1988; Langlie, 1977; Lewis & Rook, 1999; Pender & Stein, 2002; Umberson, 1987), belonging to a social group that shares similar social characteristics and norms provides information or aids engagement in health-promoting behaviors such as exercise, seat belt use, good nutrition, proper sleep, medical

care, and appropriate cigarette and alcohol usage. This premise and underlying theory was supported when testing Hypothesis 1 in this study.

Hypothesis testing demonstrated a positive and moderate relationship between social support and positive health practices in Black late adolescents. This finding ($r = .45$, $p < .001$) is comparable with previous research that examined the relationship between social support and positive health practices in adolescents. In a sample of middle adolescents, Mahat and Scoloveno (2001) reported a correlation of $r = .32$, $p < .01$. Similarly, Mahat, Scoloveno, and Whalen (2002) found a positive correlation ($r = .37$, $p < .01$) in a sample of urban minority adolescents. Mahon, Yarcheski, Yarcheski, and Hanks (2007) reported a moderately strong correlation of $r = .61$, $p < .001$ in a sample of early adolescents. Ayres (2008) reported a correlation of $r = .44$, $p < .01$ in middle adolescents, aged 15 to17. Ayres and Mahat (2012) reported a positive correlation of $r = .44$, $p < .01$ between social support and positive health practices in a sample of minority college students, aged 18 to 21.

The present finding from this study extends the theory regarding the relationship between social support and positive health practices to a sample of Black late adolescents, aged 18 to 23. In addition, the moderately strong relationship found between social support and positive health practices ($r = .45$, $p < .001$) satisfied the criteria and formed the basis for examining the association between the mediating variables of resilience and self-efficacy in Black late adolescents (Baron & Kenny, 1986).

Social Support and Resilience

Hypothesis 2 stated that there is a positive relationship between social support and resilience. This hypothesis was derived from theories that suggested that social support

provided by family, peers, teaches, clergy, and other significant members of the community such as coaches and neighbors, help foster resilience in children exposed to stressful situations and risk (Fergus & Zimmerman, 2005; Fine & Schwebel, 1991; Garmezy, 1993; Tusai & Dyer, 2004). Theorists further explained that social support conveyed through meaningful communication, role modeling, and a sense of cohesiveness, can influence the development of resilience (Fergus & Zimmerman, 2005; Fine & Schwebel, 1991; Garmezy, 1993; Tusai & Dyer, 2004). These theoretical tenets were supported when testing Hypothesis 2 in this study.

The testing of Hypothesis 2 found a positive relationship between social support and resilience in Black late adolescents. This finding ($r = .28$, $p < .001$) was similar to results found in the research literature that tested the relationship between social support and resilience in adolescents. Markstrom, Marshall, and Tyron (2000) found, in a sample of White and Black middle adolescents, a correlation between social support from family and resilience ($r = .41$, $p < .01$) and between social support from friends and resilience ($r = .41$, $p < .01$). Smith et al. (2008) reported correlations of $r = .28$, $p < .01$ and $r = .27$, $p < .05$ respectively in two samples of undergraduate students with a mean age of 20.4 years. In a sample of middle to late adolescents, Trask-Tate, Cunningham, and Lang-DeGrange (2010) reported a correlation of $r = .22$, $p < .05$ between father support and resilience and a correlation of $r = .24$, $p < .01$ between grandparent support and resilience. Kim and Lee (2011) found a correlation of $r = .43$, $p < .001$ between social support and resilience in a sample of Korean college students. Thus, the research finding from this present study extends the knowledge of the relationship between social support and resilience to a sample of Black late adolescents.

Resilience and Positive Health Practices

Hypothesis 3 stated that there is a positive relationship between resilience and positive health practices in Black late adolescents. This hypothesis was derived from theoretical literature that proposed that resilience contributes to a health-promoting lifestyle relevant to engagement in positive health behaviors such as avoiding smoking and alcohol use, exercising, eating appropriately, getting adequate sleep, and relaxing (Edward, 2005; Monteith & Ford-Gilboe, 2002; Stewart, Reid, & Mangham, 1997). Resilience forms the strength needed to adapt to stress, challenges, and adversity which promote the capacity to change and grow affecting health behavior (Atkinson, Martin, & Rankin, 2009; Monteith & Ford-Gilboe, 2002). The underlying theory was the basis for Hypothesis 3 tested and supported in this study.

Hypothesis-testing demonstrated a positive relationship between resilience and positive health practices. The correlation ($r = .31$, $p < .001$) was statistically significant and in the direction hypothesized as in other empirical studies which examined the relationship between resilience and health-promoting lifestyle. Solem (2001) found correlations ranging from $r = .25$, $p < .05$ to $r = .48$, $p < .05$ in a sample of students, aged 13 to 18, when examining the relationship between specific resilience abilities and self-care practices. Black and Gilboe (2004) reported a positive correlation of $r = .42$, $p < .001$ between resilience and health-promoting lifestyle in a sample of adolescent single mothers. Results from the present supported hypothesis can be used to extend the proposition between resilience and positive health practices in Black late adolescents.

A Mediational Model with Resilience Explaining the Relationship between Social Support and Positive Health Practices

Hypothesis 4 specified that when resilience is controlled for statistically, the relationship between social support and positive health practices will diminish and not be statistically significant. This hypothesis was derived from theory that linked social support to positive health practices (S. Cohen, 1988; Langlie, 1977; Lewis & Rook, 1999; Pender & Stein, 2002; Umberson, 1987), social support to resilience (Fergus & Zimmerman, 2005; Fine & Schwebel, 1991; Garmezy, 1993; Tusai & Dyer, 2004), and resilience to positive health practices (Atkinson, Martin, & Rankin, 2009; Edward, 2005; Monteith & Ford-Gilboe, 2002; Stewart, Reid, & Mangham, 1997). In the mediational model, it was found that resilience did have a minimal effect on social support and positive health practices in the predicted direction. However, resilience did not completely mediate the relationship as predicted. Therefore, Hypothesis 4 was not supported.

The two assumptions for multiple regression procedures were met: a) controlling measurement error in the mediator and b) using theory to ensure the mediator "causes" the dependent variable rather than the reverse. Baron and Kenny (1986) suggested that mediation is best done when there is a strong relationship between the independent variable (social support) and the dependent variable (positive health practices). In the present study, the correlation for this relationship was .45 which was moderate not strong. The relationships between social support and resilience (r = .28) and between resilience and positive health practices (r = .31) were considerably weaker than the basic relationship between social support and positive health practices. However, when testing

resilience as the mediator, the relationship between social support and positive health practices remained statistically significant. As a result, the impact of the mediator did not reduce the social support-positive health practices relationship to zero, suggesting that multiple mediating factors may exist to explain the relationship between social support and positive health practices rather than one dominant mediator as hypothesized.

Social Support and Self-Efficacy

Hypothesis 5 stated that there is a positive relationship between social support and self-efficacy. The theoretical propositions that explain this relationship were posited by several theorists who suggested that self-efficacy develops within a supportive environment which includes verbal reinforcement, positive academic and social models, mutual respect, emotional support, and social connectedness (Schunk & Meece, 2005; Caprara, Scabini, & Regalia, 2006). Bandura (1986) suggested that self-efficacy is influenced by support received from others that convince individuals that they can succeed in performing difficult tasks through the confidence that is instilled in them by others to accomplish such tasks. Hypothesis 5 was derived from these theoretical propositions and supported.

Hypothesis testing demonstrated a positive and moderate relationship between social support and self-efficacy. This finding ($r = .40$, $p < .001$) is stronger than the correlations found in the empirical literature relevant to this relationship in other adolescent samples. Jackson, Tucker, and Herman (2007) found a positive correlation of $r = .34$, $p < .01$ in a sample of late adolescents. Frank, Plunkett, and Otten (2010) reported a correlation of $r = .22$, $p < .01$ in a sample of adolescents aged, 13 to 20.

Similarly, Cicognani (2011) found a positive but weak correlation ($r = .18$, $p < .0001$) in a sample of adolescents, aged14 to 19. Hung (2011) reported a positive correlation of $r = .36$, $p < .01$ in a sample of Chinese college students with a mean age of 24. In a sample of African American and Hispanic male adolescents, a positive but weak correlation ($r = .18$, $p < .05$) was found between family relationship index and self-efficacy and perceived social support from peers and general self-efficacy ($r = .32$, $p < .01$). The finding obtained from this present study serves to extend the theory regarding the relationship between social support and self-efficacy to Black late adolescents.

Self-Efficacy and Positive Health Practices

Hypothesis 6 stated that there is a positive relationship between self-efficacy and positive health practices. This hypothesis was derived from theories explaining that self-efficacy is linked to health-promoting behaviors. Self-efficacy is instrumental in the adoption, execution, and maintenance of health behaviors that benefit individuals in all age groups and socioeconomic levels (Bandura, 1997; Schwarzer & Fuchs, 1996). Pender, Murdaugh, and Parsons (2011) identified self-efficacy as a cognitive-perceptual factor that has a direct and indirect effect on the commitment to a plan of action in promoting one's health. Thus, based on these theoretical propositions, a positive relationship between self-efficacy and positive health practices was posited. These theories were supported when testing Hypothesis 6.

Hypothesis testing demonstrated a moderately positive relationship between self-efficacy and positive health practices in Black late adolescents. The magnitude of this finding ($r = .38$, $p < .001$) is lower or comparable to those found in earlier studies that

examined this relationship in various college student populations. Jackson et al. (2007) reported a moderately strong correlation of $r = .61$, $p < .01$ between health self-efficacy and health-promoting lifestyle in a sample of college students, mean age 20 years. Peker and Bermek (2011) found a strong correlation of $r = .79$, $p < .001$ in a sample of Turkish dental students, aged 18 to 22. Hung (2011) reported a correlation of $r = .38$, $p < 0.03$ in a sample of international college students, mean age 24 years. The finding from this present study adds to theory regarding the relationship between self-efficacy and positive health practices especially in Black late adolescents.

A Mediational Model with Self-Efficacy Explaining the Relationship between Social support and Positive Health Practices

Hypothesis 7 specified that when self-efficacy is statistically controlled, the relationship between social support and positive health practices will diminish and not be statistically significant. The formulation of this hypothesis was derived from theory linking social support and self-efficacy (Bandura, 1986; Caprara et al., 2006; Schunk & Meece, 2005) and self-efficacy with positive health practices (Bandura, 1997; Pender et al., 2011; Schwarzer & Fuchs, 1996). In the mediational model, it was found that self-efficacy did have a minimal effect on social support and positive health practices in the predicted direction, yet self-efficacy did not completely mediate the relationship as specified. Therefore, Hypothesis 7 was not supported.

The two assumptions for multiple regression procedures were met: a) controlling measurement error in the mediator and b) using theory to ensure the mediator "causes" the dependent variable rather than the reverse. Baron and Kenny (1986) suggested that mediation is best done when there is a strong relationship between the independent

variable (social support) and the dependent variable (positive health practices). In the present study, the correlation for this relationship was .45 which was moderate not strong. The relationships between social support and self-efficacy (r = .40) and between self-efficacy and positive health practices (r = .38) were slightly weaker than the basic relationship between social support and positive health practices. However, when testing self-efficacy as the mediator, the relationship between social support and positive health practices remained statistically significant. As a result, the impact of the mediator did not reduce the social support-positive health practices relationship to zero, suggesting that multiple mediating factors may exist that explain the relationship between social support and positive health practices rather than one dominant mediator. However, based on the post-hoc Sobel test, general self-efficacy has an indirect effect as a partial mediator of the basic relationship.

Additional Findings

In the present study, age was negatively correlated with positive health practices (r = -.18, p < .02). This finding suggests that as the chronological ages of Black late adolescents increase, they performed fewer positive health practices, which is contrary to previous reports. In a sample of 202 adolescents, aged 15 to 21, Yarcheski, Mahon, and Yarcheski (1997) reported a positive correlation (r = .06, *ns*) between age and positive health practices, that was not statistically significant. Mahat, Scoloveno, and Whalen (2002) reported a statistically significant positive correlation (r = .27, p = .05) between age and positive health practices in a sample of 65 minority adolescents, aged 15 to 17. Based on these inconsistent findings, the relationship between age and positive health

practices warrants clarification using Pender's Health Promotion Model (Pender et al., 2011) in which age is a sociodemographic variable in relation to health behaviors.

In the present study of Black late adolescents, males reported higher levels of positive health practices than females ($t(177) = 2.25$, $p = .03$), which was statistically significant. This finding is inconsistent with earlier findings. Yarcheski et al. (1997) reported a correlation of $r = -.06$, *ns* between gender and positive health practices indicating that males performed slightly more positive health practices than females, but the relationship was not statistically significant in a sample of 202 adolescent, aged 15 to 21. Mahat et al. (2002) stated that no differences in positive health practices were found between males and females in a sample of 65 minority adolescents, aged 15 to 17. Thus, gender differences in positive health practices warrant further clarification using Pender's Health Promotion Model (Pender et al., 2011) in which gender is considered a sociodemographic variable in relation to health behaviors.

In the present study of Black late adolescents, the relationship between age and social support was positive but was not statistically significant ($r = .11$, $p < .13$). Yarcheski et al. (1997) found a negative correlation of $r = -.02$, *ns* in a sample of 202 adolescents, aged 15 to 21, which was not statistically significant. In contrast, Mahat et al. (2002) reported a statistically significant positive correlation ($r = .32$, $p < .01$) between age and social support in a sample of 65 minority adolescents, aged 15 to 17. The relationship between age and social support in adolescents warrants clarification, giving consideration to adolescent developmental theory (Weiss, 1974) in relation to the perception of social support over the lifespan.

In the present study of Black late adolescents, there were no statistically significant differences in social support between males and females ($t(177) = -1.42$, $p = .16$). This finding is consistent with that reported by Mahat et al. (2002) who found no differences in social support according to gender in a sample of 65 minority adolescents, aged 15-21. This finding, however, is not consistent with that reported in an earlier study by Yarcheski et al. (1997) who reported that adolescent females perceived more social support than adolescent males ($r = -.20$, $p < .01$) in a sample of adolescents, aged 15-21. Theories that propose gender differences in the perception of social support need to be explored further.

In the present study of Black late adolescents, the relationship between age and resilience was positive but not statistically significant ($r = .14$, $p = .06$). This finding is consistent with that reported by Kim and Lee (2011) who found a positive but nonsignificant correlation of $r = .16$, *ns* in a sample of 459 Korean college students, with a mean age of 21 years. Smith, Epstein, Ortiz, Christopher, and Tooley (2010) also found a positive but nonsignificant correlation ($r = .11$, *ns*) between age and resilience in a sample of 259 college students. Based on these accrued findings, age is not appreciably related to resilience.

The present study found no statistically significant differences in resilience between mean scores for males ($M = 3.54$, $SD = .66$) and females ($M = 3.44$, $SD = .74$) ($t(177) = .90$, $p = .37$) for Black late adolescents. This finding is consistent with that reported by Solem (2001) who found no difference in resilience abilities according to gender in a sample of 100 adolescents, aged 13-18, and with that reported by Smith et al. (2008) who reported no gender differences in resilience scores in Sample 1 ($n = 128$) and

Sample 2 (n = 64) consisting of college students, with a mean age of 20 years. Based on these accrued findings, there are no differences in resilience according to gender.

In the present study of Black late adolescents, age was positively correlated with self-efficacy (r = .18, p < .02). This finding is consistent with that reported by Newcomb, Locke, and Goodyear (2003) who also found a positive albeit weak correlation of r = .08, p < .05 in a sample of 904 Latina adolescents, aged 13 to 24. Scholz, Gutierrez-Dona, Sud, and Schwarzer (2002) found a nonsignificant weak correlation (r = .07, *ns*) in a sample of 13,098 respondents from 25 countries. These inconsistent results suggest that the relationship between age and self-efficacy deserves clarification, giving consideration to the size and characteristics of the sample, such as ethnicity and socioeconomic status.

In the present study of Black late adolescents, there were no statistically significant differences in self-efficacy between males and females (t(177) = .86, p = .39). Similarly, Kauser and Kazmi (2011) reported no differences in self-efficacy between males and females in a sample of 162 Pakistani adolescents, aged 12-17. However, these findings are inconsistent with that reported by Cicognani (2011) who reported that males had statistically significant higher levels of general self-efficacy than females (F(1,341) = 11.83, p = .001, in a sample of 342 adolescents, aged 14 to 19. Based on these inconsistent findings, gender differences in self-efficacy need to be explored in future research using an appropriate theoretical framework and considering sample size and demographic characteristics, such as age and ethnicity.

Chapter VI

Summary, Conclusions, Implications and Recommendations

Summary

In this study, the relationship between social support and positive health practices was examined in a sample of Black late adolescents, aged 18 to 23. The study empirically tested the theoretical relationships postulated between the dependent variable, positive health practices, and each of the independent variables of (a) social support, (b) resilience, and (c) self-efficacy. In addition, the theoretical relationship between social support and resilience and social support and self-efficacy were empirically tested. Two mediational models using either the variable of resilience or self-efficacy were tested to further explain the relationship between social support and positive health practice as a means to develop and test theory.

Positive health practices are those health behaviors that consist of six domains: nutrition, exercise, relaxation, safety, avoidance of substance use, and health promotion and preventive practices (Brown, Muhlenkamp, Fox, & Osborn, 1983) performed by an individual to protect, promote, or maintain health (Harris & Guten, 1979). Harris and Guten (1979) further assumed that all individuals engage in these behaviors to protect their health irrespective of medical guidance. The work synthesized by Brown et al. (1983) became the theoretical basis for the operational definition of positive health practices used in this study.

A number of theorists view social support as means to giving, perceiving, or receiving help from those individuals in a relationship with one another (Barrera, 1986; Cohen & Syme, 1985; Weiss, 1974) that allows for love, trust, guidance, financial

assistance, and self-improvement in seeking well-being and health throughout one's life (Cobb, 1976; Heaney & Israel, 2008; House, 1981; Kahn & Antonucci, 1980). Langlie (1977) postulated that social support influences the adoption of preventive health behaviors such as seat belt use, exercise, good nutrition, immunizations, and other screening health exams. S. Cohen (1988) suggested that social support is a promoter of health and antecedent to positive health practices and as such may increase the practice of health behaviors. Theorists (Lewis & Rook, 1999; Umberson, 1987) have proposed a positive relationship between social support and engagement in positive health behavior. Specifically, Pender and Stein (2002) theoretically linked social support to healthy lifestyle choices as a part of adolescent behavior. Therefore in this study, the theoretical propositions between social support and positive health practices were tested in Black late adolescents.

Empirical studies (Ayres, 2008; Ayres & Mahat, 2012; Mahat & Scoloveno, 2001; Mahat, Scoloveno, & Whalen, 2002; Mahon, Yarcheski, Yarcheski, & Hanks, 2007) have consistently demonstrated a moderate to moderately strong positive correlation between social support and positive health practices in all stages of adolescence. As a result of these findings being fairly strong, an investigation of variables that may serve to mediate the relationship between social support and positive health practices were identified and studied according to the procedures specified by Baron and Kenny (1986). The variables of resilience and self-efficacy were identified as possible mediators in the theoretical literature.

Defined as the ability to bounce back or recover after exposure to stress or adversity (Garmezy, 1985; Smith et al., 2008), resilience as an unitary construct, is

viewed as either a trait, process, or from a developmental perspective (Block & Kremen,1996; Rutter, 1993; Tusaie & Dyer, 2004; Unger, 2004; Wagnild & Young, 1993). Theorists have proposed that social support is antecedent to resilience (Fergus & Zimmerman, 2005; Fine & Schwebel, 1991; Garmezy, 1993; Tusaie & Dyer, 2004). Social support in the form of good communication, role modeling, and cohesiveness, provided by families and significant others in the community influence the development of resilience especially in children and adolescents (Fergus & Zimmerman, 2005; Fine & Schwebel, 1991; Garmezy, 1993; Tusaie & Dyer, 2004). In addition, resilience is theoretically related to positive health behaviors (Atkinson, Martin, & Rankin, 2009) and a healthy life-style (Edward, 2005; Monteith & Ford-Gilboe, 2002; Stewart, Reid, & Mangham, 1997).

Research studies have demonstrated a moderate and positive relationship between resilience and social support in adolescents (Markstrom, Marshall, & Tryon, 2000; Trask-Tate, Cunningham, & Lang-DeGrange, 2010), in college students (Kim & Lee, 2011; Smith et al., 2008), and in African-American adult women (Mitchell & Ronzio, 2011). Other studies found a moderate and positive relationship between resilience and health-promoting lifestyle in young mothers (Black & Ford-Gilboe, 2004; Monteith & Ford-Gilboe, 2002), older adults (Wagnild, 2003), and middle adolescents (Solem, 2001). Therefore, based on theoretical linkages and empirical findings, this study tested theory that suggests that resilience is a possible mediator of the relationship between social support and positive health practices.

Self-efficacy is described as the belief individuals have in the ability to think, behave, and feel in such a way as to produce a desired effect or outcome (Bandura, 2001;

Resnick, 2004; Schwarzer, 1992). Self-efficacy determines how individuals will react to new information and experiences that can adapt behavior to control environmental demands (Bandura, 2001; Resnick, 2004). Theory suggested that self-efficacy can develop within a supportive social environment (Schunk & Meece, 2005), through observation of others convincing communication (Bandura, 1986), and with the recognition of mutual respect, emotional support, and social connectedness in adolescents (Caprara, Scabini, & Regalia, 2006). Bandura (1997) theorized that there is a positive relationship between self-efficacy and positive health practices in that self-efficacy affects health behavior directly by the habits managed by the individual. Likewise, Pender et al. (2011) explained that self-efficacy provides motivation and commitment to a plan of action of health-promoting behaviors.

Research studies have demonstrated positive associations between social support and self-efficacy in adolescents (Cicognani, 2011; Frank, Plunkett, & Otten, 2010; Hung, 2011; Jackson, Tucker, & Herman, 2007; Tangeman & Hall, 2011). Additional studies have found moderate to strong positive associations between self-efficacy and health-promoting lifestyle in mostly late adolescent college students (Hendricks & Hendricks, 2005; Hung, 2011; Jackson et al., 2007; Peker & Bermek, 2011). Therefore, based on theoretical linkages and empirical findings, this study tested theory that suggests that self-efficacy is a possible mediator of the relationship between social support and positive health practices.

The following hypotheses were formulated from the above-referenced theory and tested in this study.

1. There is a positive relationship between social support and positive heath practices.
2. There is a positive relationship between social support and resilience.
3. There is a positive relationship between resilience and positive health practices.
4. When resilience is controlled for statistically, the relationship between social support and positive health practices will diminish and will not be statistically significant.
5. There is a positive relationship between social support and self-efficacy.
6. There is a positive relationship between self-efficacy and positive health practices
7. When self-efficacy is controlled for statistically, the relationship between social support and positive health practices will diminish and will not be statistically significant.

The final sample was made up of 179 Black late adolescents between the ages of 18 and 23 years. The sample was comprised of students who were attending an urban community college in New Jersey. Of the students who responded, 64 were males and 115 were females. All participants self-identified as Black with ethnic backgrounds classified as: African-American (54.7%), African Black (11.2%), Caribbean Black (28 %), and Biracial Black (6.1%). Of the 179 respondents, 42.1% were in their first year of college, 40.4 % in the second year, 12.4 % in the third year, and 5.1% were in their fourth year of college. Additionally, 36 % chose social science as a major, 16.2% chose Biology and Chemistry, 12.4% chose Allied Health, 10.7% chose Humanities, 7.9% chose Business, 7.9% chose Engineering, and 8.9% were undecided. Of the participants, 31.3 % reported working full-time, 34.6% worked part-time, 23.5% were unemployed,

and 10.6% were never employed. Most respondents (82.7%) reported that they had no medical condition while 17.3% reported having a condition that limited or restricted activity. Of the 31 participants reporting having a medical condition, 23 had asthma, 1 had a heart murmur, 1 had arthritis, 1 had diabetes, 1 had severe acne, and 1 was pregnant with diabetes.

The respondents completed the Personal Lifestyle Questionnaire (PLQ), the Personal Resource Questionnaire85-Part 2 (PRQ85-Part 2), the Brief Resilience Scale (BRS), the General Self-Efficacy Scale (GSE), and a demographic data form. The Spiritual Health Subscale from the Adolescent Lifestyle Profile (Hendricks, Murdaugh, & Pender, 2006) was completed by participants for the purpose of secondary analysis. In this study, all the instruments demonstrated good reliability for internal consistency with coefficient alphas ranging from .72 to .88. The Statistical Package for the Social Sciences (SPSS) Student Version 21 was used for the statistical analyses performed in this study.

Using the Pearson Product-Moment correlation coefficient for a one-tailed test of significance, Hypotheses 1, 2, 3, 5, and 6 were tested. Hypotheses 4 and 7 were tested using a series of multiple regression analysis as specified by Baron and Kenny (1986) for mediation models. Hypothesis 1 stated that there is a positive relationship between social support and positive health practices. This hypothesis was supported ($r = .45$, $p < .001$). Hypothesis 2 stated that there is a positive relationship between social support and resilience. This hypothesis was supported ($r = .28$, $p < .001$). Hypothesis 3 stated that there is a positive relationship between resilience and positive health practices. This hypothesis was supported ($r = .31$, $p < .001$).

Hypothesis 4 stated that when resilience is controlled for statistically, the relationship between social support and positive health practices will diminish and not be statistically significant in Black late adolescents. This hypothesis was not supported because resilience was found not to be a complete mediator as predicted. Using three regression equations specified by Baron and Kenny (1986), the first regression equation found that social support positively influenced resilience, $F(1, 177) = 15.55$, $p < .001$, explaining 8% of the variance in resilience. In the second equation, social support positively influenced positive health practices, $F(1, 177) = 44.21$, $p < .001$, explaining 20% of the variance in positive health practices. The third regression equation established that resilience positively influenced positive health practices ($t = 2.88$, $p = .005$) explaining 4% of the variance in positive health practices. The analysis determined that social support added 15% to the explained variance in positive health practices beyond the 4% provided by resilience when both social support and resilience were included in the third equation. With resilience present, the proportion of variance in positive health practices accounted by social support was reduced from 20% to 15%, with a decrease from .45 to .39 in the standardized regression coefficient (Beta) derived from the second to the third equation. Although social support still had a statistically significant influence on positive health practices in the third equation ($t = 5.69$, $p = .001$), the loss of 6% of explained variance in positive health practices by social support was due to mediation of resilience. These results indicate that resilience is one partial mediator in the relationship between social support and positive health practices in Black late adolescents, but the mediation is very minimal.

Hypothesis 7 stated that when self-efficacy is controlled for statistically, the relationship between social support and positive health practices will diminish and not be statistically significant in Black late adolescents. This hypothesis was not supported because self-efficacy was found not to be a complete mediator as predicted. Using three regression equations as specified by Baron and Kenny (1986), the first regression equation found that social support positively influenced self-efficacy, $F(1, 177) = 32.81$, $p < .001$, explaining 16% of the variance in self-efficacy. The second equation found that social support positively influenced positive health practices, $F(1, 177) = 44.21$, $p < .001$, explaining 20% of the variance in positive health practices. The third regression equation found that self-efficacy positively influenced positive health practices ($t = 3.33$, $p = .001$) explaining 6% of the variance in positive health practices. Social support added 12% to the explained variance in positive health practices beyond the 6% contributed by self-efficacy when both social support and self-efficacy were included in the third equation. With self-efficacy present, the proportion of variance in positive health practices accounted by social support was reduced from 20% to 12%, with a decrease from .45 to .35 in the standardized regression coefficient (Beta) derived from the second to the third equation. Although social support still had a statistically significant influence on positive health practices in the third equation ($t = 4.96$, $p = .001$), the loss of 10% of explained variance in positive health practices by social support was due to mediation of self-efficacy. These results indicated that self-efficacy was another partial mediator in the relationship between social support and positive health practices in Black late adolescents but the mediation was minimal. However, the post hoc Sobel Test

did demonstrate at a statistically significant level that self-efficacy has an indirect effect as a mediator of the relationship between social support and positive health practices.

Conclusions

In this study, hypotheses were derived from theories that posited that links existed between social support and resilience; between resilience and positive health practices; between social support and self-efficacy; between self-efficacy and positive health practices and between social support and positive health practices. Each of these hypotheses was tested and supported thereby supporting the underlying theories. Therefore, based on present empirical findings, it can be concluded that those who perceive social support will be more resilient and those who experience resilience will participate more often in positive health practices. Additionally, it can be concluded that those who perceive more social support have higher self-efficacy beliefs and that having self-efficacy beliefs motivate and provide confidence in abilities to engage in positive health practices in Black late adolescents. Importantly, it can be concluded that social support is positively related to positive health practices in Black late adolescents, as theorized in the literature.

Hypotheses 4 and 7 which tested the two mediation models of the relationship between social support and positive health practices with resilience and self-efficacy as mediators were not supported. Because of the lack of empirical support for these two models, it can be concluded that neither resilience nor self-efficacy are complete mediators of the relationship between social support and positive health practices and did not help to further explain this relationship in Black late adolescents, as suggested by the theories constructed.

Implications for Nursing

In the present study, positive health practices were viewed as activities of behavior that are performed to protect, promote, or maintain health (Harris & Guten, 1979; Brown et al., 1983). Findings were obtained regarding the relationships of social support, resilience, and self-efficacy to positive health behaviors. Studying variables that influence the adoption of these health behaviors are important in all ages, but according to the Centers for Disease Control and Prevention (CDC, 2011), adolescents may need assistance to help them embrace positive health behaviors that can be carried into adulthood. With knowledge gained from this study, nurses in care settings where adolescents are represented can design interventions that assist Black late adolescents to carry out strategies to maintain and promote their health.

Social support from family, friends, teachers, and other community members are integral to the adoption of positive health behaviors in Black late adolescents as demonstrated in the present study. Helping these adolescents to feel connected to those deemed most important to them at this time can influence their involvement in healthy behavior (Pender & Stein, 2002). Therefore nurses who interact with adolescents in schools and colleges can help them develop and maintain good relationships with people in their social networks. Subsequently, nurses can encourage active participation in these socially constructed environments and provide information that will be instrumental in enhancing adoption of positive health behaviors in this age group.

Resilience is said to form the strength needed to adapt to stress, challenges, and adversity which promote the capacity to change and grow toward a healthy lifestyle (Atkinson, Martin, & Rankin, 2009; Monteith & Ford-Gilboe, 2002) as well as protect

the adolescent from further risk (Ahern, 2006; Fergus & Zimmerman, 2005; Luthar & Zigler, 1991). This study found that Black late adolescents experienced moderate resilience and have a moderately high level of engagement in positive health practices. Therefore, nurses should assess resilience qualities of adolescents to be better able to promote their engagement in positive health practices. Those adolescents with weak resilience can benefit from a strong socially supportive environment.

Similarly, as found in this study, self-efficacy allows the Black late adolescent to have confidence and feel competent in the ability to control their actions and behaviors for desired outcomes (Bandura, 2001), such as in performing positive health practices. Again, based on findings that emerged from this study, the adolescents' self-efficacy can be strengthened in socially supportive environments. As their self-efficacy and confidence increases, these adolescents will tend to practice more positive health practices.

The findings from this study can contribute to the knowledge base and address the gap in the literature that exists in Black late adolescents regarding adoption and maintenance of positive health behaviors. Nurses who work with this population can use information from this study to assist Black late adolescents to adopt positive health behaviors that can be carried into adulthood.

Recommendations

Based on the empirical findings of this study that support theoretical relationships among social support, resilience, self-efficacy, and positive health practices, direction for future research is provided. Recommendations for future studies include the following:

1. To confirm the findings reported, the present study should be replicated.

2. More studies of positive health behaviors in Black adolescents are needed. Therefore, the present study should be extended to early and middle adolescents.
3. In the interest of theory building, additional mediators need to be identified and tested to help explain the relationship between social support and positive health practices in Black late adolescents.
4. To understand the meaning of positive health practices to Black adolescents, qualitative research is needed in this age group.
5. To facilitate scientific studies, a new instrument to measure positive health practices that reflect contemporary and culturally-specific views of health behavior needs to be developed.
6. To clarify the relationship, adolescent gender differences in positive health practices need to be examined to determine whether males or females perform more health behavior.
7. To clarify the relationship, the association between age and positive health practices needs to be examined during adolescence to determine trends over the adolescents span of development.

References

Abel, T. (1991). Measuring health lifestyles in a comparative analysis: Theoretical issues and empirical findings. *Social Science Medicine*, *32*, 899-908.

Ahern, N. R. (2006). Adolescent resilience: An evolutionary concept analysis. *Journal of Pediatric Nursing, 21*, 175-185.

Atkinson, P. A., Martin, C. R., & Rankin, J. (2009). Resilience revisited. *Journal of Psychiatric and Mental Health Nursing, 16,* 137-145.

Ayres. C. G. (2008). Mediators of the relationship between social support and positive health practices in middle adolescents. *Journal of Pediatric Health Care, 22,* 94-102.

Ayres, C. G., Atkins, R., & Li, J. H. (2010). Factors related to health practices: Cervical cancer screening among Filipino women. *Research and Theory for Nursing Practice: An International Journal, 24*, 197-208.

Ayres, C. G., & Mahat, G. (2012). Social support, acculturation, and optimism: Understanding positive health practices in Asian American college students. *Journal of Transcultural Nursing, 23*, 270-278.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1-26.

Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology*, *14*, 413-445.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator distinction in social psychology research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.

Black, C., & Ford-Gilboe, M. (2004). Adolescent mothers: Resilience, family health work and health-promoting practices. *Journal of Advanced Nursing*, *48*, 351-360.

Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology, 70*, 349-361.

Brandt, P. A., & Weinert, C. (1981). The PRQ-A Social Support measure. *Nursing Research, 30*, 277-280.

Brown, N., Muhlenkamp, A., Fox, L., & Osborn, M. (1983). The relationship among health beliefs, health values and health promotion activity. *Western Journal of Nursing Research*, *5*, 155-163.

Caprara, G. V., Scabini, E., & Regalia, C. (2006). In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 97-115). Greenwich: Information Age.

Centers for Disease Control and Prevention. (2011). Adolescent Health. Retrieved from http://www.cdc.gov/healthyyouth/adolescenthealth/index.htm.

Cicognani, E. (2011). Coping strategies with minor stressors in adolescence: Relationships with social support, self-efficacy, and psychological well-being. *Journal of Applied Social Psychology, 41*, 559-578.

Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine, 38*, 300-314.

Cockerham, W. C. (1997). Lifestyles, social class, demographic characteristics, and health behavior. In D. S. Gochman (Ed.), *Handbook of health behavior research: Personal and social determinant* (pp. 253-265). New York: Plenum Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale: Lawrence Erlbaum.

Cohen, S. (1988). Psychosocial models of the role of social support in the etiology of physical disease. *Health Psychology, 7*, 269-297.

Cohen, S., & Syme, S. (1985). Issues in the study and application of social support. In S. Cohen & S. Syme (Eds.), *Social support and health* (pp. 3-22). Orlando: Academic Press.

Curtis, A. C., Waters, C. M., & Brindis, C. (2010). Rural adolescent health: The importance of prevention services in the rural community. *The Journal of Rural Health*, *27*, 60-71.

Dudley, W. N., Benuzillo, J. G., & Carrico, M. S. (2004). SPSS and SAS programming for the testing of mediation models. *Nursing Research*, *53*, 59-62.

Eakin, J. M. (1997). Work-related determinants of health behavior. In D. S. Gochman (Ed.), *Handbook of health behavior research I: Personal and social determinants* (pp.337-357). New York: Plenum Press.

Ebstrup, J. F., Eplov, L. F., Pisinger, C., & Jorgensen, T. (2011). Association between the five factor personality traits and perceived stress: Is the effect mediated by general self- efficacy? *Anxiety, Stress, & Coping, 24*, 407-419.

Edward, K. (2005). The phenomenon of resilience in crisis care mental health clinicians. *International Journal of Mental Health Nursing, 14*, 142-148.

Elliot, G. R., & Feldman, S. S. (1990). Capturing the adolescent experience. In S. S. Feldman & G. R. Elliot (Eds.), *.At the threshold: The developing adolescent* (pp.1-13). Cambridge: Harvard University Press.

Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health, 26*, 399-419.

Fine, M. A., & Schwebel, A. I. (1991). Resiliency in Black children from single-parent families. In W. A. Rhodes & W. K. Brown (Eds.), *Why some children succeed despite the odds* (pp. 23-40). New York: Praeger.

Frank, G., Plunkett, S. W., & Otten, M. P. (2010). Perceived parenting, self-esteem, and, general self-efficacy of Iranian American adolescents. *Journal of Child and Family Studies*, *19*, 738-746.

Garmezy, N. (1985). Stress-resistant children: The search for protective factors. In J. S. Stevenson (Ed.), *Recent research in developmental psychopathology* (No. 4, pp. 213-233). Oxford, UK: Pergamon Press.

Garmezy, N. (1993). Children in poverty: Resilience despite risk. *Psychiatry*, *56*, 127-136.

Gochman, D. S. (1997). Health behavior research: Definitions and diversity. In D. S. Gochman (Ed.), *Handbook of health behavior research: Personal and social determinants* (pp. 3-20). New York: Plenum Press.

Groft, J. N., Hagen, B., Miller, N. K., Cooper, N., & Brown, S. (2005). Adolescent health: A rural community's approach. *Rural and Remote Health*, *5*, 366.

Harris, D. M., & Guten, S. (1979). Health-promoting behavior: An exploratory study. *Journal of Health and Social Behavior*, *20*, 17-29.

Harville, E. W., Xiong, X., Smith, B. W., Pridjian, G., Elkind-Hirsch, K., & Bukens, P. (2011). Combined effects of hurricane Katrina and hurricane Gustav on the mental health of mothers of small children. *Journal of Psychiatric and Mental Health Nursing, 18*, 288-296.

Heaney, C. A., & Israel, B. A. (2008). Social networks and social support. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (4th ed.). San Francisco: Wiley & Sons.

Hendricks, C., Murdaugh, C., & Pender, N. (2006). The Adolescent Lifestyle Profile: Development and psychometric characteristics. *Journal of National Black Nurses Association, 17*, 1-5.

Hendricks, D. L., & Hendricks, C. S. (2005). The relationship of hope and self-efficacy to health promoting behaviors among student-athletes attending historically Black colleges and universities. *The Journal of Multicultural Nursing & Health*, *11*, 23-34.

House, J. S. (1981). *Work stress and social support*. Englewood Cliffs: Prentice Hall.

Hung, Y.Y. K. (2011). Adjustment to college as a mediator on health-promoting behaviors. *Western Journal of Nursing Research*, *33*, 1108-1109.

Jackson, E. S., Tucker, C. M., & Herman, K. C. (2007). Health value, perceived social support, and health self-efficacy as factors in a health-promoting lifestyle. *Journal of American College Health, 56,* 69-74.

Kahn, R. L., & Antonucci, T. C. (1980). Convoys over the life course: Attachment, roles, and social support. In P. Baltes & O. Brim Jr. (Eds.), *Life-span development and behavior* (Vol. 3, pp. 253-286). New York: Academic Press.

Kasl, S. V., & Cobb, S. (1966). Health behavior, illness behavior, and sick role behavior. *Archives of Environmental Health, 12*, 246-266.

Kausar, R., & Kazmi, S. R. (2011). Perceived parental acceptance-rejection and self-efficacy of Pakistani adolescents. *Journal of Indian Academy of Applied Psychology, 37*, 224-232.

Kim, H. K., & Lee, M. H. (2011). Factors influencing resilience of adult children of alcoholics among college students. *Journal of Korean Academy of Nursing, 41*, 642-651.

Kulbok, P. P. (1985). Social resources, health resources, and preventive health behavior: Patterns and predictions. *Public Health Nursing*, *2*, 67-81.

Langlie, J. K. (1977). Preventive health behavior: A review of research and issues. *Health Psychology, 2*, 277-301.

Lewis, M. A., & Rook, K. S. (1999). Social control in personal relationships: Impact on health behaviors and psychologically distress. *Health Psychology, 18*, 63-71.

Luszczynska, A., Gutierrez-Dona, B., & Schwarzer, R. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal of Psychology, 40,* 80-89.

Luthar, S. S., & Zigler, E. (1991). Vulnerability and competence: A review of research on resilience in childhood. *American Journal of Orthopsychiatry, 61*, 6-22.

Mahat, G., & Scoloveno, M. A. (2001). Factors influencing health practices of Nepalese adolescent girls. *Journal of Pediatric Health Care, 15,* 251-255.

Mahat, G., Scoloveno, M. A., & Whalen, C. (2002). Positive health practices of urban minority adolescents. *The Journal of School Nursing, 18*, 163-169.

Mahon, N. E., Yarcheski, A., & Yarcheski, T. J. (2002). Psychometric evaluation of the Personal Lifestyle Questionnaire for adolescents. *Research in Nursing & Health, 25*, 68-75.

Mahon, N. E., Yarcheski, A., & Yarcheski, T. J. (2004). Social support and positive health practices in early adolescents: A testing of mediating variables. *Clinical Nursing Research, 13*, 216-236.

Mahon, N. E., Yarcheski, A., Yarcheski, T. J., & Hanks, M. M. (2007). Mediational models of health practices in early adolescents. *Clinical Nursing Research, 16*, 302-316.

Markstrom, C. A., Marshall, S. K., & Tryon, R. J. (2000). Resiliency, social support, and coping in rural low-income Appalachian adolescents from two racial groups. *Journal of Adolescence, 23*, 693-703.

Mitchell, S. J., & Ronzio, C. R. (2011). Violence and other stressful life events as triggers of depression and anxiety: What psychological resources protect African American Mothers? *Maternal and Child Health Journal*, *15*, 1272-1281.

Mohamadian, H., Eftekhar, H., Rahimi, A., Mohamad, H. T., Shojaiezade, D., & Montazeri, A. (2011). Predicting health-related quality of life by using a health promotion model among Iranian adolescent girls: A structural equation modeling approach. *Nursing and Health Sciences, 13*, 141-148.

Monteith, B., & Ford-Gilboe, M. (2002). The relationships among mother's resilience, family health work, and mother's health-promoting lifestyle practices in families with preschool children. *Journal of Family Health, 8*, 383-407.

Newcomb, M. D., Locke, T. F., & Goodyear, R. K. (2003). Childhood experiences and psychosocial influences on HIV risk among adolescent Latinas in Southern California. *Cultural Diversity and Ethnic Minority Psychology, 9*, 219-235.

Nunnaly, J., & Bernstein, I. (1994). *Psychometric theory* (3rd). New York: McGraw-Hill.

Peker, K., & Bermek, G. (2011). Predictors of health-promoting behaviors among freshman dental students at Istanbul University. *Journal of Dental Education, 75*, 413-420.

Peltzer, K. (2009). Health behavior and protective factors among school children in four African countries. *International Journal of Behavioral Medicine*, *16*, 172-180.

Pender, N. J., Murdaugh, C., & Parsons, M. A. (2011). *Health promotion in nursing practice* (6th ed.). Upper Saddle River: Pearson.

Pender, N. J., & Stein, K. F. (2002). Social support, the self-system, and adolescent health and health behaviors. In L. L. Hayman, M. M. Mahon, & J. R. Turner (Eds.), *Health and behavior in childhood and adolescence* (pp. 37-66). New York: Springer.

Peterson, P. E., Jiang, H., Peng, B., Tai, B. J., & Bian, Z. (2008). Oral and general health behaviors among Chinese urban adolescents. *Community Dentistry and Oral Epidemiology*, *36*, 76-84.

Resnick, B. (2004). Self-efficacy. In S. J. Peterson & T. S. Bredlow (Eds.), *Middle range theories: Application to nursing research* (pp. 97-124). Philadelphia: Lippincott.

Rutter, M. (1993). Resilience: Some conceptual considerations. *Journal of Adolescent Health, 14*, 626-631.

Scholz, U., Gutiérrez-Doña, B., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment, 18,* 242–251.

Schunk, D. H., & Meece, J. L. (2005). Self-efficacy development in adolescences. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 71-96). Greenwich: Information Age.

Schwarzer, R. (Ed.). (1992). *Self-efficacy: Thought control of action*. Washington DC: Hemisphere Publishing.

Schwarzer, R., & Fuchs, R. (1996). Self-efficacy and health behaviors. In M. Connor & P. Norman (Eds.). *Predicting health behavior: Research and practice with social cognition models* (pp. 163-196). Buckingham, UK: Open University Press.

Schwarzer, R., Hahn, A., & Jerusalem, M. (1993). Negative affect in East Germans migrants: Longitudinal effects of unemployment and social support. *Anxiety, Stress, and Coping, 6,* 57-69.

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy Scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor: NFER-Nelson.

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The Brief Resilience Scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine, 15*, 194-200.

Smith, B. W., Epstein, E. M., Ortiz, J. A., Christopher, P. J., & Tooley, E. M. (2010). The foundations of resilience: What are the critical resources for bouncing back from stress? In S. Prince-Embury & D. H. Saklofske (Eds.), *Resilience in children, adolescents, and adults: Translating research into practice* (pp. 167-187). New York: Springer Science + Business Media.

Smith, B. W., Tooley, E., Christopher, P., & Kay, V. S. (2010). Resilience as the ability to bounce back from stress: A neglected personal resource? *The Journal of Psychology, 5*, 166-176.

Solem, S. (2001). *Factors related to resilience abilities and self-care practices in adolescents* (Unpublished doctoral dissertation). University of San Diego, California.

Stewart, M., Reid, G., & Mangham, C. (1997). Fostering children's resilience. *Journal of Pediatric Nursing, 12*, 21-31.

Tangeman, K. R., & Hall, S. R. (2011). Self-efficacy in incarcerated adolescents: The role of family and social supports. *Child & Youth Services, 32*, 39-55.

Trask-Tate, A., Cunningham, M., & Lang-DeGrange, L. (2010). The importance of family: The impact of social support on symptoms of psychological distress in African American girls. *Research in Human Development, 7,* 164-182.

Tusaie, K., & Dyer, J. (2004). Resilience: A historical review of the construct. *Holistic Nursing Practice, 18*, 3-8.

Umberson, D. (1987). Family status and health behaviors. *Journal of Health and Social Behavior, 28*, 306-319.

Ungar, M. (2004). A constructionist discourse on resilience: Multiple contexts, multiple realities among at-risk children and youth. *Youth and Society, 35*, 341-365.

U.S. Department of Health and Human Services, Healthy People 2020 Framework. (2012). Retrieved from http://www.healthypeople.gov

Wagnild, G. (2003). Resilience and successful aging: Comparison among low and high income older adults. *Journal of Gerontological Nursing, 29*, 42-49.

Wagnild, G., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience scale. *Journal of Nursing Measurement, 1,* 165-167.

Weinert, C. (1987). A social support measure: PRQ85. *Nursing Research*, *36*, 273-277.

Weinert, C. (1988). Measuring social support: Revision and further development of the Personal Resource Questionnaire. In C. F. Waltz & O. L. Strickland (Eds.), *Measurement of nursing outcomes: Measuring client outcomes* (Vol. I, pp. 309-327). New York: Springer.

Weinert, C., & Brandt, P. A. (1987). Measuring social support with the Personal Resource Questionnaire. *Western Journal of Nursing Research, 9*, 589-602.

Weiss, R. S. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing unto others: Joining, molding, conforming, helping, loving* (pp. 17-26). Englewood Cliffs: Prentice-Hall.

Yarcheski, A., Mahon, N.E., Yarcheski, T.J. (1997). Alternate models of positive health practices in adolescents. *Nursing Research, 46, 85- 92.*

Yarcheski, A., Mahon, N. E., & Yarcheski, T. J. (1992). Validation of the PRQ85 Social Support measure for adolescents. *Nursing Research, 41*, 332-337.

Zarrett, N., & Eccles, J. (2006). The passage to adulthood: Challenges of late adolescence. In S. Piha & G. Hall (Series Eds.), *New directions for youth development: No. 111. Preparing youth for the crossing: From adolescence to early adulthood* (pp. 13-28). doi:10.1002/yd.179

Appendix A

The Personal Resource Questionnaire 85-Part2

Directions: Below are some statements with which some people agree and others disagree. Please read each statement and **CIRCLE** the response most appropriate for you. There is no right or wrong answer.

	Strongly Disagree	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
1. There is someone I feel close to who makes me feel secure.	1	2	3	4	5	6	7
2. I belong to a group in which I feel important.	1	2	3	4	5	6	7
3. People let me know that I do well at my work (job, school).	1	2	3	4	5	6	7
4. I can't count on my relatives and friends to help me with my problems.	1	2	3	4	5	6	7
5. I have enough contact with the person who makes me feel special.	1	2	3	4	5	6	7
6. I spend time with others who have the same interests I do.	1	2	3	4	5	6	7
7. There is little opportunity in my life to be giving and caring to another person.	1	2	3	4	5	6	7
8. Others let me know that they enjoy working with me (job, committees, projects).	1	2	3	4	5	6	7

The Personal Resource Questionnaire 85-Part2

	Strongly Disagree	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
9. There are people who are available if I needed help over an extended period of time.	1	2	3	4	5	6	7
10. There is no one to talk to about how I am feeling.	1	2	3	4	5	6	7
11. Among my group of friends we do favors for each other.	1	2	3	4	5	6	7
12. I have the opportunity to encourage others to develop their interests and skills.	1	2	3	4	5	6	7
13. My family lets me know that I am important for keeping the family running.	1	2	3	4	5	6	7
14. I have relatives or friends that will help me out even if I can't pay them back.	1	2	3	4	5	6	7
15. When I am upset there is someone I can be with who lets me be myself.	1	2	3	4	5	6	7
16. I feel no one has the same problems as I.	1	2	3	4	5	6	7
17. I enjoy doing little "extra" things that make another person's life more pleasant.	1	2	3	4	5	6	7

The Personal Resource Questionnaire 85-Part2

	Strongly Disagree	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
18. I know that others appreciate me as a person.	1	2	3	4	5	6	7
19. There is someone who loves and cares about me.	1	2	3	4	5	6	7
20. I have people to share social events and fun activities with.	1	2	3	4	5	6	7
21. I am responsible for helping provide for another person's needs.	1	2	3	4	5	6	7
22. If I need advice there is someone who would assist me to work out a plan for dealing with the situation.	1	2	3	4	5	6	7
23. I have a sense of being needed by another person.	1	2	3	4	5	6	7
24. People think that I'm not as good a friend as I should be.	1	2	3	4	5	6	7
25. If I got sick, there is someone to give me advice about caring for myself.	1	2	3	4	5	6	7

Appendix B
The Personal Lifestyle Questionnaire (PLQ)

Directions: The following list includes a description of activities which may or may not relate to your usual living pattern. Please indicate to what extent the activity applies to you by **Circling** the number which best describes your usual living pattern.

	Never	Occasionally	Frequently	Almost Always
1. See a health care provider for a check-up at least yearly.	1	2	3	4
2. Get together with friends.	1	2	3	4
3. Eat at regular times during the day.	1	2	3	4
4. Wear seatbelts while riding in an automobile.	1	2	3	4
5. Eat foods from each of the food groups (meat, milk, breads, fruits, and vegetables).	1	2	3	4
6. Communicate concerns with another person.	1	2	3	4
7. Drive after drinking two or more alcoholic beverages.	1	2	3	4
8. Update emergency numbers kept by the telephone.	1	2	3	4
9. Get adequate sleep.	1	2	3	4
10. Have a planned exercise program.	1	2	3	4
11. Climb at least five flights of stairs or walk one mile each day.	1	2	3	4

The Personal Lifestyle Questionnaire (PLQ)

	Never	**Occasionally**	**Frequently**	**Almost Always**
12. Stay within 10 miles per hour of the speed limit while driving.	1	2	3	4
13. Smoke one or more packs of cigarettes daily.	1	2	3	4
14. Add salt to food after preparation.	1	2	3	4
15. Take time to relax 15-20 minutes daily.	1	2	3	4
16. Drink more than 2 alcoholic beverages per day.	1	2	3	4
17. Play sports, jog, or participate in other physical activity at least three times weekly.	1	2	3	4
18. Meet needs for intimacy.	1	2	3	4
19. Limit caffeine intake to 3 cups daily (includes tea, coffee, and colas).	1	2	3	4
20. Smoke in bed.	1	2	3	4
21. Have a dental check-up yearly.	1	2	3	4
22. Do a monthly self-breast exam **(females only).**	1	2	3	4
22. Do a monthly testicular self-exam **(males only)**	1	2	3	4

The Personal Lifestyle Questionnaire (PLQ)

	Never	**Occasionally**	**Frequently**	**Almost Always**
23. Maintain weight within desirable limits avoiding both underweight and overweight.	1	2	3	4
24. Avoid alcoholic beverages when taking medications.	1	2	3	4

Appendix C

Brief Resilience Scale

Instructions: Use the following scale and circle one number for each statement to indicate how much you disagree or agree with each of the statements.
1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I tend to bounce back quickly after hard times.	1	2	3	4	5
2. I have a hard time making through stressful events.	1	2	3	4	5
3. It does not take me long to recover from a stressful event.	1	2	3	4	5
4. It is hard for me to snap back when something bad happens.	1	2	3	4	5
5. I usually come through difficult times with little trouble.	1	2	3	4	5
6. I tend to take a long time to get over set-backs in my life.	1	2	3	4	5

Appendix D

General Self-Efficacy Scale

Directions: Use the following scale and circle one number for each statement to indicate the extent to which each statement applies to you.

	Not at all true	Barely true	Moderately true	Exactly true
1. I can always manage to solve difficult problems if I try hard enough.	**1**	**2**	**3**	**4**
2. If someone opposes me, I can find means and ways to get what I want.	**1**	**2**	**3**	**4**
3. It is easy for me to stick to my aims and accomplish my goals.	**1**	**2**	**3**	**4**
4. I am confident that I could deal efficiently with unexpected events.	**1**	**2**	**3**	**4**
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	**1**	**2**	**3**	**4**
6. I can solve most problems if I invest the necessary effort.	**1**	**2**	**3**	**4**
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	**1**	**2**	**3**	**4**
8. When I am confronted with a problem, I can usually find several solutions.	**1**	**2**	**3**	**4**
9. If I am in a bind, I can usually think of something to do.	**1**	**2**	**3**	**4**
10. No matter what comes my way, I'm usually able to handle it.	**1**	**2**	**3**	**4**

Appendix E

Permission to Use the Adolescent Lifestyle Profile©

I plan to use the **Adolescent Lifestyle Profile©** in a research or evaluation project entitled:

An investigation of the Mediators of the Relationship between Social Support and Positive Health Practices in Black Late Adolescents.

I plan to use the Spiritual Health subscale in particular.

__ X___ I am enclosing a check/money order for ten dollars **($10.00)** payable to the **Adolescent Health Promotion Project**

___X___ I agree to provide a copy of the psychometric properties of the ALP from my research when completed.

___X___ I understand that the instrument **may not** be produced in the appendix of a thesis, dissertation or research grant proposal without further permission. Reproduction for any other purpose, including the publication of study results, is prohibited without specific permission.

Gale Gage
Print Name

Signature

Doctoral Student, PhD Candidate
Rutgers, The State University of New Jersey
Position/Institution

973-877-3485
Area Code Telephone#

38 Silvercrest Drive, Tinton Falls, NJ 07712-3144
Mailing Address

gsgage@pegasus.rutgers.edu
Email

Permission is granted to the above investigator to copy and use the Adolescent Lifestyle Profile© for non-commercial data collection purposes such as research or evaluation projects provided that content is not altered in anyway and the copyright/permission statement at the end is retained.

Constance S. Hendricks, PhD, RN

6/5/13
Date

Please send **two signed copies** of this page to:

Constance S. Hendricks, PHD, RN, FAAN
300 North Dean Road, Suite 5-118 Auburn, AL 36830
334-844-6749 ; FAX 334-844-5654

Appendix F

Demographic Data Sheet

Directions: Please check one response to each question and/or fill in the missing blanks.

1. Gender
   1.1 ____Male 1.2 ____Female

2. Age _____

3. What do you consider yourself?
   3.1_____ Black, African American
   3.2_____ Black, African
   3.3_____ Black, Caribbean/West Indian
   3.4 _____Biracial, (I self-identify as Black)
   3.5_____ Biracial, (I do not identify as Black)

4. What year in college are you currently in?
   4.1_____ First year
   4.2_____ Second year
   4.3 _____Third year
   4.4_____ Fourth year

5. What is your Major or area of interest? _____

6. Employment Status outside of school
   6.1 _____ Full-Time
   6.2 _____ Part-Time
   6.3 _____ Currently unemployed
   6.4 _____ Never employed

7. Do you currently have a medical condition that limits or restricts normal activity? (e.g. asthma, heart condition)
   7.1 _____NO
   7.2 _____YES
   7.3 If yes, what is the condition? _____

Demographic Data Sheet (cont)

8. List two activities that you engage in to stay healthy? (e.g. exercise, eat balanced diet)

   8.1 _____

   8.2_____

Appendix G

ESSEX COUNTY COLLEGE
303 University Avenue, Newark, New Jersey 07102

(973) 877-3370 Office of Institutional Research

May 6, 2013

Professor Gale S. Gage
Nursing Program
Essex County College
Newark, NJ

Dear Professor Gage,

Thank you for sending us your proposal, *An Investigation in the Mediators of the Relationship Between Social Support and Positive Heath Practices in Black Late Adolescents*.

Our Institutional Review Board reviewed your proposal and is pleased to approve your research efforts at Essex County College. Please contact me if you have any questions.

Sincerely,

J. Scott Drakulich, Ed.D.
Associate Dean, Office of Planning, Research, and Assessment

Appendix H

RUTGERS UNIVERSITY
Office of Research and Sponsored Programs
ASB III, 3 Rutgers Plaza, Cook Campus
New Brunswick, NJ 08901

August 20, 2013

P.I. Name: Gage
Protocol #: 13-842

Gale Gage
38 Silvercast Drive
Tinton Falls NJ 07712

Dear Gale Gage:

✓
(Initial / Amendment / Continuation / Continuation w/ Amendment)

Protocol Title: "An Investigation of the Mediators of the Relationship between Social Support and Positive Health Practices in Black Late Adolescents"

This is to advise you that the above-referenced study has been presented to the Institutional Review Board for the Protection of Human Subjects in Research, and the following action was taken subject to the conditions and explanations provided below:

Approval Date:	7/16/2013	**Expiration Date:**	7/15/2014
Expedited Category(s):	7	**Approved # of Subject(s):**	165

This approval is based on the assumption that the materials you submitted to the Office of Research and Sponsored Programs (ORSP) contain a complete and accurate description of the ways in which human subjects are involved in your research. The following conditions apply:

- **This Approval-**The research will be conducted according to the most recent version of the protocol that was submitted. **This approval is valid ONLY for the dates listed above;**
- **Reporting-**ORSP must be immediately informed of any injuries to subjects that occur and/or problems that arise, in the course of your research;
- **Modifications-**Any proposed changes MUST be submitted to the IRB as an amendment for review and approval prior to implementation;
- **Consent Form(s)-**Each person who signs a consent document will be given a copy of that document, if you are using such documents in your research. The Principal Investigator must retain all signed documents for at least three years after the conclusion of the research;
- **Continuing Review-**You should receive a courtesy e-mail renewal notice for a Request for Continuing Review before the expiration of this project's approval. However, it is your responsibility to ensure that an application for continuing review has been submitted to the IRB for review and approval prior to the expiration date to extend the approval period;

Additional Notes: **Expedited Approval per 45 CFR 46.110**

Failure to comply with these conditions will result in withdrawal of this approval.
Please note that the IRB has the authority to observe, or have a third party observe, the consent process or the research itself. The Federal-wide Assurance (FWA) number for the Rutgers University IRB is FWA00003913; this number may be requested on funding applications or by collaborators.

Respectfully yours,

Michelle Fidel

Acting For--
Dr. Beverly Tepper, Ph.D.
Professor
Chair, Rutgers University Institutional Review Board

cc: Dr. Adela Yarcheski

Appendix I

STUDENT CONSENT FORM

You are invited to participate in a research study about factors that contribute to positive health practices of Black college students. The primary investigator is Gale Gage, a doctoral student in the College of Nursing at Rutgers University, who is conducting this study as part the final requirements for a PhD in Nursing. A minimum of 165 participants between the ages of 18 and 23 years old will be recruited to comprise the sample and participate in the study.

If you agree to participate, you will be asked to answer five questionnaires that will take about 30 minutes in total to complete. Prior to filling out the surveys, there will be an additional 15 minutes for explaining the directions and for answering any questions you may have. This is an anonymous data collection. Anonymous means that I will record no information about you that could identify you. This means that I will not record your name, address, phone number, date of birth, etc. The research team and the Institutional Review Board at Rutgers University are the only parties that will be allowed to see the data, except as may be required by law. If a report of this study is published, or the results are presented at a professional conference, only group results will be stated. All study data will be kept locked in a cabinet and office for 5 years and then shredded and destroyed.

If you agree to take part in the study, a random code number will be used on each test and the questionnaire. There will be no way to link your responses back to you. Therefore, data collection is anonymous.

Your grades or college standing will in no way be affected by your decision to participate or not participate in the study. You will not receive any benefit from taking part in this study aside from your answers informing the researcher of students' engagement in positive health practices.

Your participation in this study is strictly voluntary. You may stop participation in the study at any time without any consequences. You may also choose not to answer any question with which you are not comfortable in answering.

If you have any questions about the study or study procedures, you may contact me or my advisor at:

Gale Gage, Primary Investigator
38 Silvercrest Drive, Tinton Falls, NJ 07712
Tel: 973-877-3485
Email: gsgage@pegasus.rutgers.edu

Dr. Adela Yarcheski , Advisor
180 University Avenue, Ackerson Hall
Newark, NJ, 07103
Tel: 973-353-3842
Email: Yarchesk@rutgers.edu

If you have any questions about your rights as a research subject, you may contact the IRB Administrator at Rutgers University at:

Rutgers University, the State University of New Jersey
Institutional Review Board for the Protection of Human Subjects
Office of Research and Sponsored Programs
3 Rutgers Plaza
New Brunswick, New Jersey 08901-8559
Tel: 848-932-0150
Email: humansubjects@orsp.rutgers.edu

If you agree to participate in the study, please sign below and you will be given a copy of this consent form for your records.

Signature _____ Date_____

Name (printed) _____ Date_____

Investigator signature_____ Date_____

Vita

Gale S. Gage

1956	Born In Long Branch, New Jersey
1974	Graduated Monmouth Regional High School
1978	BSN, Florida A & M University
1978-1980	Registered Nurse, Monmouth Medical Center
1980-1984	Public Health Nurse/Supervisor, North Jersey Community Union Health Center
1984-1986	Private Duty Nurse, Bayada Nurses
1986-1992	LPN Educator, NYC Board of Education
1990-Present	Associate Professor of Nursing, Essex County College
1994	MS, Rutgers, Graduate School-Newark, Community Health
1997-Present	NCLEX-RN Instructor, Rutgers, College of Nursing, CPDN
1999	Contributor, The Princeton Review NCLEX-RN Q &A (1st). New York: Random House.
2001	Inducted to membership Sigma Theta Tau, Kappa Rho Chapter
2005	Post-Master's Certificate, Adult Nurse Practitioner Program, Monmouth University
2010	Kirby Foundation Research Fellowship Award
2012	Certified Nurse Educator (CNE), NLN
2012	Elizabeth M. Fenlason Alumni Award
2013	Dorothy J. DeMaio Research Award
2014	PhD, Rutgers, Graduate School-Newark