

HOPE AS A STRATEGY FOR IMPROVING STUDENT ACHIEVEMENT AND
DISSUADING REPEAT PREGNANCY IN PREGNANT AND PARENTING
ADOLESCENTS

A Dissertation

by

ELISA HUTSON MCNEILL

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

May 2010

Major Subject: Health Education

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ABSTRACT

Hope as a Strategy for Improving Student Achievement and Dissuading Repeat
Pregnancy in Pregnant and Parenting Adolescents. (May 2010)

Elisa Hutson McNeill, B.S., Texas A&M University; M.S., Texas A&M University

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This dissertation examines the construct of hope and its ability to be taught to pregnant and parenting adolescents as a strategy to improve academic achievement and dissuade repeat adolescent pregnancy. A systemic review of the literature examined fourteen (n=14) empirical studies to ascertain if a relationship existed between achievement and the construct of hope. With 92% of the studies reporting a positive correlation between hope and achievement, one can answer yes to the question of an existing relationship between hope and achievement.

A manuscript is presented to summarize the development and implementation of a curriculum, designed to develop requisite skills among adolescent mothers to elevate their levels of hope. The Helping Optimize Planning Efforts (HOPE) curriculum presents specific methods for adolescent mothers to enhance skills related to goal setting, goal attainment and the use of positive self-talk as a mechanism for developing hope or increasing existing levels of hope. The study attempted to assess the ability of the HOPE curriculum to enhance the adolescent mother's level of hope with the underlying assumption that increasing levels of hope might decrease the probability of a repeat

adolescent pregnancy. Findings suggested there was a significant difference in the scores for the Dispositional Trait Hope Scale (DTHS) pre-test ($M = 68.5, SD = 7.0$) and the DTHS post-test scores ($M = 73.2, SD = 5.61$) ($t(11) = 3.18, p = .009$) indicating an increase in global hope. A significant difference was also found in between the State Hope Scale (SHS) pre-test scores ($M = 39.0, SD = 4.84$) and SHS post-test scores ($M = 41.5, SD = 5.21$) ($t(11) = 4.19, p = .002$) indicating an increase in the students point in time level of hope. The evaluation of the curriculum indicated that adolescent mothers can be taught to increase their levels of hope using the HOPE curriculum.

Data collected during the evaluation of the HOPE curriculum was further analyzed to identify the constructs that contribute to the building of hope in adolescent mothers. The data suggests that two distinct components, agency and pathway, contribute to increase the level of hope. Examination of the subscales within the DTHS, showed there was a significant difference between the pre-test agency ($M = 25.42, SD = 5.81$) and the post-test agency scores ($M = 27.85, SD = 3.65$) ($t(11) = 2.83, p = .017$). Also, among the DTHS pathway subscale, a significant difference was found between the scores on the pre-test ($M = 25.08, SD = 3.58$) and the post-test score ($M = 26.67, SD = 2.35$) ($t(11) = 2.22, p = .048$). These findings suggest that the increased level of hope on the DTHS for was a reflection of the improvements in components, agency and pathway. These findings suggests that adolescent mothers can be taught to be more hopeful when the components of agency and pathway are developed.

DEDICATION

To my friend and mother-in-law Eugenia Williams for her support, encouragement and
countless hours of editing

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CHAPTER I

INTRODUCTION

Approximately 35% of teenage mothers in the United States experience a repeat or second pregnancy within two years of the birth of their first child (Ventura & Curtin, 1999; Thurman, Hammond, Brown, & Roddy, 2007; Omar, Fowler, & McClanahan, 2008). Adolescent pregnancy is correlated with multiple negative implications, and a poor academic outcome is one of them. Teenage mothers who have subsequent births during their adolescent years are more likely to have lower educational attainment and to live in poverty or receive welfare than mothers who have one child during adolescents (Dillard, 2000; Manlove, Mariner, & Papillo, 2000). A need exists for the implementation of interventions to enhance skills that foster academic success which may, in turn, function as a deterrent for adolescent repeat pregnancy.

With the current body of literature suggesting a relationship between hope and achievement, the next step should be to research strategies for increasing levels of hope. Can “hope”ful thinking be taught? If it can so, it would certainly provide health professionals and educators with a valuable tool for use in addressing many problems and concerns—adolescent repeat pregnancies among them. Therefore the purpose of this study is to examine the relationship between levels of hope and achievement while ascertaining the answer to the overarching research question: can pregnant and parenting adolescent mothers be taught to be more hopeful?

This dissertation follows the style of *The Journal for Vocational Special Needs Education*.

The current document is separated into five distinct chapters. It should be noted that each chapter is written as a standalone manuscript for publication in a peer reviewed journal. Below is a description of each of the chapters:

- Chapter I: General overview and rationale for the investigation
- Chapter II: A systematic literature of the current body of literature
- Chapter III: Provides an overview of the development, implementation and evaluation of the Helping Optimize Planning Efforts (HOPE) Curriculum.
- Chapter IV: Elaborates on the findings from the evaluation of the HOPE curriculum and its impact on the ability to improve the level of hope in pregnant and parenting adolescents.
- Chapter V: Provides a conclusion for the dissertation. Appendices will follow the references.

CHAPTER II

HOPE AND ACHIEVEMENT: A SYSTEMATIC REVIEW OF THE LITERATURE

INTRODUCTION

Lay people and practitioners who work with pregnant teens, are often surprised that an adolescent would choose to have a second or third child. Yet, statistically, the odds of this occurring are substantial. Adolescent pregnancy and repeat pregnancy, a national concern for many years, will likely be a continuing dilemma in the United States, with the number of adolescent females (ages 13 to 19) of childbearing age increasing by 5% to 10% per year (Pekrun, Goetz, & Wolfram, 2002). Approximately 35% of teenage mothers experience a repeat or second pregnancy in the United States within two years of the birth of their first child (American Academy of Pediatrics Committee on Adolescent Care, 2001). Repeat adolescent births are associated with negative outcomes: such as, less likelihood of graduating from high school, lower probability of being employed, and increased dependence on governmental support (Pekrun et al., 2002). Such societal problems, occurring from continuing the cycle of adolescent childbearing, are serious and justify the exploration of methods to decrease repeat adolescent pregnancies.

The absence of goals and aspirations is consistently cited as a contributing factor in the dynamics related to repeat adolescent pregnancy. Trish Davis found, "...as educational expectations increased, the probability of an unwed repeat pregnancy decreased" (2002, p. 337). Low educational expectations and aspirations lead to lack of motivation to delay sexual activity and, consequently, parenthood (Rauch-Elnekave,

1994). Seemingly, the presence of long-term goals, educational and professional, provides the motivation to resist sexual encounters or be more proactive in use of contraceptives (Davis, 2002). Helping students create expectations for their future through the development of hope, intuitively, makes sense. One would expect the building of hope (by teaching adolescents how to set and accomplish goals) would empower them to make positive behavioral choices which should diminish the likelihood of repeat pregnancy. This conjecture, however, is based upon the assumption that there is a relationship between hope and academic achievement. The study of hope has been left largely to psychologists and theologians, and it is somewhat neglected in academic circles (Haplin, 2001). Because of the potential impact that hope could have on reducing the incidence of repeat adolescent pregnancies, a closer examination of this construct and its potential relationship to achievement is warranted, thus justifying this systematic literature review. A systematic approach will help to answer the question: Is a person's level of hope related to her academic achievement?

Although this researcher is interested in the relationship between academic achievement and hope, few studies are available on this particular topic. Achievement is "something accomplished by valor, boldness, or praiseworthy exertion" (*Webster's New International Dictionary*, 1961, p.20). Simply put, achievement is a desired result gained through effort. The term achievement—for purposes of this study—will be compromised of four reviewer-determined domains: (a) academic achievement, (b) performance, (c) emotional indicators, and (d) behavioral indicators. Elements within each category will be examined, empirically investigated, and the information used to

answer such questions as: Is there a relationship between hope and achievement? If there is, what is the nature of the relationship? Can hope be a predictor of academic achievement?

Understanding Hope

Hope appears, initially, to be a concept too abstract to define or measure; however, a closer look at the literature presents a different picture. Although most studies frame the definition of hope according to the context of what is being studied, there appears to be a consistent representation of its fundamental concept. The construct of hope has distinctive properties that make it function differently than related constructs such as self-efficacy or optimism (Goodson, Buhi, & Dunsmore, 2006). All three of these constructs (hope, self-efficacy, and optimism) are related to expectancies; however, hope is unique in that it "... is not monolithic but has two components that are interrelated but of which both are essential" (Magaletta & Oliver, 1999, p.541). Hope is considered to be a construct reflecting the reciprocal interaction of *agency* (goal directed determination) and *pathways* (planning of ways to meet goals). This precise definition of hope enables the construct to be measured and forms the theoretical foundation on which many of the studies related to hope are explored.

In Hope Theory, people are assumed to be goal-oriented in their everyday thinking, with such goal-directed thoughts being attended by two related components: pathway thoughts involving the perceived capacity to produce ways of reaching goals and agency thoughts tapping the perceived capacity to initiate and sustain movement along those pathways (Snyder, 1999, p.206).

Following the development of Hope Theory, C.R. Snyder and his colleagues attempted to create an instrument that could generate valid and reliable data to indicate a person's

level of hope. The Dispositional Hope Scale is an eight-point, Likert-type scale which contains four items to measure agency, four items to measure pathways, and four filler items to act as distracters. The summative score on the agency and pathway items reflects a person's hope score (Snyder, et al., 1991). The Dispositional Hope Scale has been validated and consistently used in the bulk of research on the topic. "The hope scale has demonstrated internal and test-retest reliabilities, as well as concurrent construct validity in terms of correlations with other related measures; moreover, it has discriminate utility in predicting goal-related outcomes beyond variances attributable to other measures" (Curry, Snyder, Cook, Ruby & Rhem, 1997b, p.1259).

METHODS

This systematic literature review was developed by applying Garrard's Matrix Method procedures (Garrard, 1999). Various databases were explored to locate empirical studies related to hope and achievement; these included: Academic Search Premier, PsycINFO, ERIC, Medical Sciences Library catalog, Science Direct, MLA Bibliography, Business Source Premier, Illumina, Web of Science, Metalib, First Search, Education: A SAGE Full-Text Collection, and Social Sciences Full Text. The keyword *hope* was paired with various combinations of the terms--*academic achievement, achievement, success, and performance*. Additionally, a snowball technique was used to identify other potential studies that did not appear in the listings from the databases.

In order to be considered for this review, the studies had to meet the following inclusion requirements: (a) have been published in a peer-reviewed, English language

journal; (b) have empirically examined the relationship between hope and indicators of achievement; and (c) focused primarily on current students or students who had recently completed their formal education. Studies were excluded from this review if they examined hope but did not empirically explore the association between hope and achievement, gauged by academics, performance, or emotional/behavioral indicators. Studies that were considered theoretical commentary pieces were also excluded. Of the 141 available publications, 14 met these criteria. The 14 qualifying articles were abstracted and systematically reviewed. One of the reports contained 3 different studies; therefore, each study was reviewed as a separate study within the abstraction for a total of 16 reviews.

Once the fourteen studies were identified, the reviewer evaluated the quality of the literature, considering such criteria as: sample size, sample design, reporting of validity and reliability of the sample data, and the type of data analysis. These items and seven other markers were incorporated into an abstraction form that was used in reviewing the studies to assess the methodological characteristics and to assign an overall methodological quality score (MQS). Point values were assigned to each of the 7 indicators and the total number of points was calculated to arrive at a MQS score. For example, point values were assigned based upon sample size. Small samples (< 100) were awarded 1 point, medium samples (>100 and < 300) were awarded 2 points and 3 points were credited for large samples (>300). MQSs were used to rate the quality of the literature objectively. The abstraction form was a modified version of a previously developed instrument used in a literature review on the topic of self-esteem and sexuality

(Goodson, et al., 2006). Table 2.1 summarizes the criteria and point values used to assign the MQS.

Hope and achievement were empirically examined in the 14 reviewed reports. Each relationship found between hope and the independent variable was considered to be a separate finding. This reviewer used Lipsey's definition of a *finding* as a, "statistical representation of one empirical relationship involving the variable(s) of interest...measured on a single...sample" (Lipsey & Wilson, 1999, p. 35; Goodson et al., 2006).

Three different types of findings were reported which included those: (a) exhibiting a positive relationship; (b) exhibiting an inverse linear relationship; or (c) not statistically significant in relationship. A positive relationship indicated that a higher level of hope was found to be associated with greater academic achievement, increased performance, or positive emotional/behavioral characteristics. Conversely, as the level of hope decreased, the variable under consideration diminished. An inverse relationship indicated that as the level of hope increased, the achievement variable being studied decreased, thus, exhibiting an inverse relationship in its influence. A finding was classified as not statistically significant when the level of hope had little, if any, relationship to the measured indicator.

Table 2.1: Criteria for methodological characteristics and frequency distributions

Methodological Characteristics	Scoring options (Maximum score = 20)	Distribution of characteristics among 16 studies reviewed	
		Frequency (n)	Percent (%)
Definition of hope	Global = 1 point	0	0%
	Facet-specific = 2 point	16	100%
Validity data for hope scores	Reported = 1 point	13	81.25%
	Not reported = 0 point	3	18.75%
Reliability data for hope score	Reported = 1 point	14	87.5%
	Not reported = 0 point	2	12.5%
Validity / Reliability data academic achievement, performance or productivity/success indicator	Reported = 1 point	13	81.25%
	Not reported = 0 point	3	18.75%
Theoretical framework presented	Theoretical framework presented = 1 point	8	50%
	No theoretical framework presented = 0 points	8	50%
Research Paradigm	Quantitative paradigm Qualitative paradigm = 1 point	14	87.5%
	Mixed method = 2 points	2	12.5%
Design	Correlation /Cross-sectional Design = 1 point	15	93.75%
	Longitudinal design = 2 points	1	6.25%
Sample size	Small sample (<100) = 1 point	5	31.25%
	Medium sample (>100 and < 300) = 2 points	7	43.75%
	Large sample (> 300) = 3 points	4	25.00%
Sample design	Convenience/ non-probability = 0 points	9	56.25%
	Random/ probability but not nationally representative = 1 point	5	31.25%
	Random/ probability and nationally representative = 2 points	2	12.5%
Data analysis (Statistical technique employed)	Qualitative analyses (content analysis; emergent themes analysis; grounded theory) = 1 point	0	0%
	Univariate statistics/descriptive = 1 point	3	18.75%
	Bivariate statistics/AVOVA = 2 points	7	43.75%
	Multiple/logistic regression = 3 points	2	12.5%
	Multivariate statistics (canonical correlation; discriminate function analysis; path analysis; structural equation modeling) = 4 points	4	25%
Appropriate inferences of causality	Study's conclusion inappropriately implies causality = 0 points	2	12.5%
	Study's conclusion does not inappropriately imply causality = 1 point	14	87.5%
Total MQS for all studies = 209, Mean 13.06 (SD = 2.88)			

RESULTS

Studies' Characteristics

The fourteen abstracted publications appeared during a twenty-year period, between 1985 and 2009. Literature searches from 1974 to 2000 indicated that studies linking emotions to learning and achievement have only recently been explored. No studies investigated the concept of hope and academics from 1974 to 1990; however, nine different studies were conducted from 1991 to 2000 (American Academy of Pediatrics Committee on Adolescent Care, 2001). Four studies explored the relationship between hope and academic performance from the year 2001 to 2009. The increases in studies suggest the influence of hope on academic performance is becoming a more enticing area of interest for researchers.

The evaluation of hope, as a construct related to achievement, has been the focus, predominately, of psychological counseling. Over half of the reviewed studies (n=9) appeared in psychological periodicals such as the *Journal of Personality and Social Psychology* and the *Journal of Clinical Psychology*. Hope, and its relationship to scholastic achievement, was explored specifically in four journals related to academics, the *Journal of Educational Psychology*, *Urban Education*, *Journal of Learning Disabilities* and *Education*. Studies were also located in what might be considered atypical journals such as, the *Journal of Adolescent Research and Work* and *Perceptual and Motor Skills*.

Studies' Variables and Constructs

Hope was the focal variable in the majority of the reviewed studies. It functioned as the independent variable in 13 of the studies, which examined how the level of hope influenced other variables of interest such as grade point average (GPA), productivity, and athletic performance. Additionally, emotional/behavioral indicators of achievement (self-worth, attitude, anxiety, adaptability, and problem-solving) were also considered (Curry, Snyder, Cook, Ruby & Rhem, 1997a; Curry et al., 1997b; Curry, Snyder, Cook, Ruby & Rhem, 1997c; Chang, 1998; Gardner, 1985; Hagen, Meyers, and Mackintosh, 2005; Onwuegbuzie, 1998; Snyder et al., 1991; Snyder et al., 2002b). The remaining 3 studies treated hope as the dependent variable, assessing how an individual's hope level was influenced by factors such as GPA, life optimism, self-perception, social support, or social relationships (Carifio & Rhodes, 2002; Jackson, Weiss, Lundquist & Hooper, 2003; Onwuegbuzie, 1999). All 14 studies consistently defined hope in the same context, focusing on the reciprocal relationship of agency and pathways.

Studies' Theory

Half (50%) of the studies indicated the use of a theoretical framework to guide the inquiry. Initially, hope was explored from an atheoretical perspective (Gardner, 1985); however, in 1991, Snyder et al., referenced Bandura's Social Learning Theory in an effort to develop a theory of hope. One of the studies in this review attempted to validate the theory of hope and to standardize instruments of measurement (Snyder et al., 1991). Following this validation, use of Hope Theory became a dominate feature of the literature. The use of theoretical principles better facilitates behavioral change by

capitalizing on related constructs. Of the 8 studies that included a theoretical framework, 7 were guided by Hope Theory (Curry et al., 1997a; Curry et al., 1997b; Curry et al., 1997c; Chang, 1998; Rand, 2009; Snyder et al., 1991; Snyder et al., 2002b). The remaining four studies did not reference any type of theoretical foundation for their inquiry (Adelabu, 2008; Chang, 1998; Jackson et al., 2003; Lackaye & Margalit, 2006; Nalkur, 2009; Onwuegbuzie, 1998; Onwuegbuzie & Daley, 1999). Two of the studies that did not mention theory were conducted by the same researcher (Onwuegbuzie, 1998; Onwuegbuzie & Daley, 1999).

Studies' Methodological Quality

Each of the studies was assigned a methodological quality score (MQS), representing a composite of individual elements for rating each study's quality and the frequency distribution of the scores for each category (Table 2.1). Values for the MQS range from 8 to 20 points (maximum possible = 20). The mean, median, and mode values for the distribution of MQSs were close in proximity (mean = 13.06, SD = 2.88, median = 13.0, mode = 13.0). The actual mean fell within the 95% confidence interval of 11.65 through 14.47. The width of the confidence interval is a reflection of one study's acting as an outlier, having a MQS value of 20 (Snyder et al., 1991). This particular study's purpose was to assess the validity of the data obtained from the hope scale measurement, unlike all the other studies that explored the level of hope and its correlation to various constructs. Removal of the outlying score altered the measures of central tendency to become more representative of the entire data set (range = 8 to 16, mean = 12.6, SD = 2.29, median 13.0, mode = 13.0) with a 95% confidence interval for actual mean of

11.44 through 13.76. The researcher chose to include the outlier in the review, for it provided insight on the validity of data obtained from measurements in other reviewed pieces. The “outlier” validated the data obtained from C.R. Snyder’s Dispositional Hope Scale. This scale became the instrument used to measure hope in the subsequent studies in this review (Adelabu, 2008; Carifio & Rhodes, 2002; Curry et al., 1997a; Curry et al., 1997b; Curry et al., 1997c; Chang, 1998; Hagen et al., 2005; Jackson et al., 2003; Lackaye & Margalit, 2006; Onwuegbuzie, 1998; Onwuegbuzie & Daley, 1999; Rand, 2009; Snyder et al., 2002b).

Studies’ Samples

Randomization appears to be a significant challenge in the research related to hope. The data collected in 14 of the 16 studies were gathered from non-random, convenience samples, with all the data being collected in a one-shot method (Adelabu, 2008; Carifio & Rhodes, 2002; Curry et al., 1997a; Curry et al., 1997b; Curry et al., 1997c; Chang, 1998; Gardner, 1985; Hagen et al., 2005; Jackson et al., 2003; Lackaye & Margalit, 2006; Nalkur, 2009; Onwuegbuzie, 1998; Onwuegbuzie & Daley, 1999) One study in the sample used a longitudinal, non-probability sample (Snyder et al., 1991). Unique to the selection of reviewed studies was one that employed a longitudinal method with a random, national sample which focused on the validation of hope constructs (Snyder et al., 1991). The dominate research paradigm was a quantitative approach. Only one study, with a small sample size (N=9) used a mixed method of both quantitative and qualitative (Curry et al., 1997b).

Small sample sizes (<100) represented 31.25% (n=5) of the studies (Carifio & Rhodes, 2002; Curry et al., 1997b; Hagen et al., 2005; Onwuegbuzie & Daley, 1999; Rand, 2009). Most of the inquiries, 43.75% (n=7), used medium sample sizes (>100 and <300) (Curry et al., 1997a; Curry et al., 1997c; Chang, 1998; Hagen et al., 2005; Jackson et al., 2003; Onwuegbuzie, 1999). A large sample size was found four of the studies, (Adelabu, 2008; Lackaye & Margalit, 2006; Rand, 2009; Snyder et al. 1991) two of which were focused specifically on exploring hope-measurement instruments (Rand, 2009; Snyder et al., 1991).

Sample characteristics indicate that the majority 68.75% (n=11) of the studies examined hope in college students. Undergraduate students, from mid-southern universities, were represented in eight (50%) of the studies (Curry et al., 1997a; Curry et al., 1997b; Curry et al., 1997c; Chang, 1998; Jackson et al., 2003; Rand, 2009; Snyder et al., 1991; Snyder et al., 2002b). Graduate students from the mid-south and west comprised 12.5% of the samples (Onwuegbuzie, 1998; Onwuegbuzie & Daley, 1999). The relationship between hope and other variables was examined in three from the perspective of children (age 6-14) (Carifio & Rhodes, 2002; Lackaye & Margalit, 2006; Rand, 2009) and in two other studies from the perspective of young adult, African-American males (Adelabu, 2008; Chang, 1998)].

About half of the studies reported no specific information on ethnicity, samples from three of the studies (25%) consisted mainly of Caucasian respondents [Curry et al., 1997a; Curry et al., 1997b; Gardner, 1985; Rand, 2009). Ethnicity in the remaining five studies (31.25%) was considered as African-American/minority (Adelabu, 2008; Carifio

& Rhodes, 2002; Gardner, 1985; Hagen et al., 2005; Rand, 2009). Gender specific samples, male or female only, were used in 18.75% of the studies (Curry et al., 1997b; Curry et al., 1997c; Gardner, 1985); both genders were examined in the remaining 81.25% with females being predominate in representation (~ 37.5%) of the time (Carifio & Rhodes, 2002; Curry et al., 1997c; Hagen et al., 2005; Jackson et al., 2003; Onwuegbuzie, 1998; Onwuegbuzie & Daley, 1999).

Data Collection

The preferred method of data collection for 12 of the 16 studies was a self-administered survey completed in groups or in classrooms (Carifio & Rhodes, 2002; Curry et al., 1997a; Chang, 1998; Gardner, 1985; Jackson et al., 2003; Lackaye & Margalit, 2006; Onwuegbuzie, 1998; Onwuegbuzie & Daley, 1999; Rand, 2009; Snyder et al., 1991; Snyder, et al., 2002b). Two surveys, involving children, used the interview process for data collection (Hagen et al., 2005; Nalkur, 2009). Two other studies employed the use of self-report journals, training logs, or coaches' evaluations (Curry et al., 1997b; Curry et al., 1997c). Fourteen (87.5%) of the studies utilized global measures of hope by using the standardized Dispositional Hope Scale (DHS) and a modified version of the DHS (called the Trait Hope Scale or the Children's Hope Scale). One study (6.25%) utilized an interview where participants to respond to open ended questions which were analyzed for themes (Nalkur, 2009). A facet-specific instrument was used in one study (6.25%) which utilized a semantic differential made up of a number of scales anchored in three concepts that were considered to be indicators of hope (Chang, 1998)

Measurement of Achievement

Since the construct achievement consisted of four domains, measuring instruments needed to be widely varied in their assessments. Fifty percent of the measures in the academic achievement domain were based upon grade point average (GPA), graduation rates, or scores on standardized exams (Adelabu, 2008; Carifio & Rhodes, 2002; Curry et al., 1997a; Gardner, 1985; Jackson et al., 2003; Lackaye & Margalit, 2006; Rand, 2009; Snyder et al., 2002b). A second domain—performance—reflected work competence, productivity and athletic performance. Measurement, in this category, was done by using Seasonal Achievement Measures-NCAA; Physical Ability Rating Scale (PARS-coaches' evaluations); State Sport Confidence Scale, Self-perception Profile, as well as, training logs and work status. Sub-sets of emotional indicators of achievement gauged such traits as positive-negative affectivity, self-worth, confidence, and coping skills. Some instruments used were: Positive-Negative Affectivity; Profile of Mood States (POMS); Coping Strategies Inventory; Statistical Anxiety Rating Scale; Extended Satisfaction with Life; State Self-esteem Scale, and Self-Perception Profile for College Students (SPPCS). Two studies included facet-specific measures which examined physical ability in relationship to levels of hope (Curry et al., 1997b; Curry et al., 1997c) and one used an author-created scale to measure social activity (Hagen et al., 2005). Qualitative data was collected in one study to examining self-perceptions on achievement and the data was analyzed for themes (Lackaye & Margalit, 2006).

Testing individual studies' data for validity and reliability was a standard procedure in all but four of the publications. Two studies (12.5%) reported measures of internal

consistency for the construct of hope but not the other variable of interest (Curry et al., 1997b; Curry et al., 1997c). Validity measures were reported in two (12.5%) of the studies reviewed; however, these data were based upon previous uses of the measurement instruments (Onwuegbuzie, 1998; Onwuegbuzie & Daley, 1999).

Research in the majority of the studies ($n = 10$) employed bivariate statistics to analyze data (62.5%) with an emphasis on correlations or analysis of variance. A multivariate technique (canonical correlations or discriminate function analysis) was utilized in three of the studies (Carifio & Rhodes, 2002; Onwuegbuzie, 1998; Snyder et al., 1991). Logistic regression was utilized in 12.5% of the studies (Adelabu, 2008; Lackaye & Margalit, 2006). Only one study used qualitative methods which included content analysis to identify emergent themes (Nalkur, 2009).

Inferences made by the author(s) of the studies were also considered in the methodological quality score. All but two of the studies appropriately implied the relationship between hope and the identified variable according to the data collected. Of these two, one implied that hope was a cause of the other variable or that the results were generalizable beyond the study's limitations (Gardner, 1985; Hagen et al., 2005). Although citing of limitations was not included in the MQS, 18.75% ($n=3$) of the studies examined did not report limitations of study designs.

Studies' Findings

The 16 reviewed studies contained a total of 24 findings distributed among 18 sub-categories of the four domains of achievement (Table 2.2). Five sub-categories comprised the academic domain. Grade point average was examined and found to be positively correlated with the level of hope in seven of the studies (Adelabu, 2008; Carifio & Rhodes, 2002; Curry et al., 1997a; Gardner, 1985; Lackaye & Margalit, 2006; Rand, 2009; Snyder et al., 2002b), but it was found to have no significant difference in another study (Gardner, 1985). Conversely, at-risk college students with lower hope scores were found to have lower SAT and GPA's (Carifio & Rhodes, 2002). Hope was positively correlated with higher graduation rates and higher scores on standardized exams (Carifio & Rhodes, 2002; Snyder, et al., 2002b). Snyder and his colleagues (2002b) concluded that those with high hope were more likely to graduate from college than their low-hope counterparts. Individuals with higher hope set a greater number of more difficult goals than those with low hope (Nalkur, 2009; Snyder, et al., 1991).

The performance domain contained three variables. Job competencies/abilities were positively correlated with the level of hope as was work productivity (Gardner, 1985; Onwuegbuzie & Daley, 1999). Work productivity decreased when the level of hope was low. The researchers of this study exploring work productivity speculated that loss of hope might lead to failure to act, and this, in turn, might lead to achievement dysfunction (Gardner, 1985). Two studies examined the relationship of hope on athletic performance; findings revealed that even when controlling for athletic ability and training, athletes

with higher hope had greater sports achievement (Curry et al., 1997b; Curry et al., 1997c).

Table 2.2: Findings of relationships between hope and domains of achievement

Domain	Variable	Relationship finding by study #			Legend: Study #
		Positive	Inverse	Not Significant	
Academic achievement					1 Adelabu, 2008
	Grade point average	2, 3a, 5, 8,12, 14		6	2 Carifiro & Rhodes, 2002
	SAT score	7			3(a,b,c) Curry, Snyder, Cook, Ruby & Rhem, 1997
	Setting higher number of goals	13			
	Setting of more difficult goals	9,13			
	Graduation status	14			4 Chang, 1998
Performance	Work productivity	5			5 Gardner, 1985
	Job competence	11			6 Hagen, Meyers & Mackintosh, 2005
	Athletic performance (student athletes)	3b,3c			7 Jackson, Weiss, Lundquist & Hooper, 2003
Emotional indicators	Positive affectivity	3c			8 Lackaye & Margalit, 2006
	Negative affectivity		13, 3c		
	Global self-worth in athletes	3a			9 Nalkur, 2009
	Sports Confidence	11			10 Onwuegbuzie, 1998
	Anxiety (statistics)		10		11 Onwuegbuzie & Daley, 1999
	Coping behavior	4			
	Life satisfaction	4			12 Rand, 2009
Behavioral indicators	Internalizing and externalizing problems		7		13 Snyder, et al., 1991
	Social support	1,6			14 Snyder, Shorey, Cheavens, Pulvers, Adams & Wilklund, 2002b
	Problem-solving ability	4			

Similar to the performance domain, emotional indicators consistently showed positive relationship. One study found a significant relationship in the level of global self-worth and the level of hope (Curry et al., 1997a). Variables (including sports' confidence, mental coping behavior, and life satisfaction) were all significantly and positively correlated to the level of hope (Chang, 1998; Nalkur, 2009; Onwuegbuzie & Daley, 1999). As expected, positive and negative affectivity evidenced a reciprocal relationship. Positive affectivity was higher in those who possessed higher hope scores, and negative affectivity was associated with lower hope scores (Curry et al., 1997c). An inverse relationship was noted when the construct of hope was compared to what is considered a negative emotion. Students with higher levels of anxiety about statistics more frequently reported lower levels of hope (Onwuegbuzie, 1998). Table 2.2 summarizes the relationship of hope to domains of achievement.

Behavioral indicators were examined in the final domain. Children of incarcerated mothers were studied to compare their level of hope to the number of internalizing and externalizing behavioral displays they exhibited. Children who were more hopeful reported fewer internalizing and externalizing problems, indicating an inverse relationship between level of hope and the practice of negative behaviors (Jackson et al., 2003). Additionally, the level of hope, among the at-risk children, increased as the amount of social support increased (Hagen et al., 2005). When considering problem-solving abilities and hope level, a positive relationship was reported (Chang, 1998).

Table 2.2 summarizes the findings from the reviewed studies. The majority of the 24 findings (79%) revealed a positive relationship between hope and the achievement

variables measured. Three of the variables related to achievement showed an inverse relationship; however, each of these indicators is considered to be deterrents of achievement. Only one study reported a level of no significance. This study contradicted four others in its finding (Jackson et al., 2003).

DISCUSSION

This systematic review serves to augment existing academic literature in two basic ways. First, it is a fore-runner in its field; for, to date, no other study attempts to ascertain the existence of a relationship between hope and achievement. Second, this review attempts to critically assess the literature's overall methodological quality, offering an analytical dimension absent from non-systematic reviews. It establishes a more legitimate critique of the research's internal validity and implications for practice.

This review is not without limitations. Search strategies may have led the researcher to miss specific reports, especially in those databases not considered probable sources for pertinent articles. Although the researcher was originally interested in the relationship between hope and academic achievement, limiting the search to academics placed strenuous restrictions on the number of available studies to review. As a result, it was necessary for the researcher to examine achievement in a broader context and with a wider range of unique variables. Expanding the parameters led to a greater variety in the types of publications containing relevant material. Publications from diverse fields may be evidence of widespread current interest in the construct of hope and its relationship to achievement in general. This expansion complicated the researcher's goal by introducing a greater number of variables related to achievement. Only six of the studies

looked at the same variable (GPA); thus, the reviewer could not make inferences from dissimilar constructs in other studies. Investigation of dissimilar constructs limited the researcher's ability to compare and contrast results and to accurately assess the quality of the research findings.

The MQSs were useful in providing some insight, for a mean MQS of 13.06 (on a twenty point scale) suggests that there may be room for improvement in efforts to study the potential relationships between hope and achievement. Another thing to consider about the MQS ratings is that the instrument used to assess the methodological quality was adapted from a previously used instrument and may have lacked effectiveness because it was not "custom made" for this particular investigation. The instrument was not tested for validity, either in this study or the study from which it was adapted. Each of the studies was reviewed by only one researcher; thus, the issue of inter-rater reliability is absent. The MQS is biased toward rigor, and it may have tainted the representation of the overall quality of the selected literature. Large probability samples, longitudinal or mixed-method designs, and biases toward multivariate statistical techniques may have contributed to an elevated MQS.

Although most studies referenced theory in their design, the studies that failed to acknowledge this aspect may have been inappropriately penalized. It is conceivable that these criteria may have been exceedingly stringent; thus, skewing the inference relationship. Finally, one must deliberate the generalizability of this research when one considers the characteristics of the samples' populations. The majority of the studies examined collegiate populations, leaving one to question if the findings here are truly

representative of non-students or adolescent students as well. It seems plausible that college athletes would represent a unique group in the population with a predisposition—a group predisposed to goal setting and achievement.

There is potential, obviously, for improving the depth and breath of available literature. Another suggestion might be to focus on replication and exploration of similar constructs to allow for comparison which might address reliability of findings. Lack of such comparisons weakens the argument that a relationship between hope and “academic” achievement exists. It might also be beneficial to examine more studies of hope outside the academic setting. One might question whether or not hope is different for individuals who are not attending college. The very fact that a young person is in college reflects his/her abilities to set and accomplish goals. Is it possible that being a college student acts as a confounding variable when examining hope and achievement? The use of larger sample sizes and more longitudinal approaches to data collection could reveal a clearer relationship between hope and achievement.

Even when limitations are considered, the findings from this systematic review have merit, for they answer the research questions proposed. With 92% of the studies reporting a positive correlation between hope and achievement, one can answer yes to the question of an existing relationship. There is a positive linear relationship between these two variables, indicating that: As the level of hope increases, the level of achievement rises as well.

What practical use can be made of this knowledge that a person’s level of hope is related to achievement? Awareness of this fact increases the desirability of fostering

hope and recognizing it as a predictor for future achievement. Irving, Snyder & Crowson reported, "...higher hope has been found to predict better performance on cancer facts tests among college women, with these women reporting stronger intentions to engage in cancer-prevention activities" (1998, p. 3). They also found that higher levels of hope have been correlated to intentions to limit engagement in high-risk sex and to participate in health-enhancing activities like physical exercise. "Empirical evidence is mounting on the positive role of hope in predicting psychological and physical well-being as well as athletic and academic success" (Snyder, Feldman, Shorey, & Rand, 2002a, p. 9).

Although the empirical evidence points to the usefulness of hope as a tool for predicting achievement, caution should be exercised to avoid treating hope as a panacea for all social ills. Certainly, supportive evidence is needed to substantiate hope's role. According to Goodson, Buhi, and Dunsmore "... the No Child Left Behind Act of 2001 and the Educational Sciences Reform Act of 2002 provide important reminders that education should be an evidence-based field..." (2006, p. 317). With the current body of literature suggesting a relationship between hope and achievement, perhaps the next step should be to research strategies for increasing levels of hope. Can "hope"ful thinking (reflecting agency and pathways) be taught? If this is so, it would certainly provide health professionals and educators with a valuable tool for use in addressing many problems and concerns—adolescent repeat pregnancies among them. Hence, further research and validation of current research is an essential if we are to truly identify a new tool for use by professionals.

CHAPTER III

HELPING OPTIMIZE PLANNING EFFORTS (HOPE) CURRICULUM: USING HOPE THEORY AS A POTENTIAL MECHANISM FOR REACHING EDUCATIONAL GOALS AND POTENTIALLY REDUCING REPEAT ADOLESCENT PREGNANCY

INTRODUCTION

Approximately 35% of teenage mothers experience a repeat or second pregnancy within two years of the birth of their first child (Ventura and Curtin, 1999; Thurman, Hammond, Brown, & Roddy, 2007; Omar, Fowler, & McClanahan, 2008). Annually, almost 20% of births to teens are repeat births (Sacco, Phillips & Raker, 2009). These statistics merit concern because adolescent pregnancy is correlated with multiple negative implications, and a poor academic outcome is one of them. Teenage mothers who have subsequent births during their adolescent years are more likely to have lower educational attainment and to live in poverty or receive welfare than mothers who have one child during adolescents (Dillard, 2000; Manlove, Mariner, & Papillo, 2000). A need exists, therefore, for the implementation of interventions designed to enhance skills that foster academic success which may, in turn, function as a deterrent for adolescent repeat pregnancy. The purpose of this article is to describe the development and evaluation of a curriculum designed to foster an adolescent mother's hope for her attainment of educational goals which, in turn, may reduce the likelihood of a repeat pregnancy.

Many people, including practitioners who work with pregnant teens, find it hard to believe that an adolescent (between 15 and 19 years of age) would choose to have a

second or third child. Yet, statistically, the odds of this occurring are substantial, for in 2004 one-fifth of teen births in the United States were *repeat* births occurring within two years of the initial delivery (Schelar, Franzetta & Manlove, 2007). Since 1991, rates of teenage pregnancy and childbearing among all racial/ethnic groups in the United States were on the decline (Terry-Humen, Manlove & Cottingham, 2006). Rates of repeat teen birth paralleled the drop in adolescent birth rates with a 5% reduction between 1990 [at 25%] and 2004 [at 20%] (Schelar, Franzetta & Manlove, 2007). Data from 2006, however, indicated that teen pregnancy rates had increased for the first time since 1991. Between 2005 and 2006, the birth rate increased 3% for teens aged 15-17 and 4% for teens aged 18-19 (Martin, Sutton & Ventura, 2009). Compared to the 2006 teen birth rate of 41.9 births per 1,000, rates grew to 42.5 births per 1,000 in 2007 (Moore, 2009). Little, if any, data currently exist on rates of *repeat* pregnancy, however it is logical to speculate that repeat trends would follow the same pattern. Adolescent pregnancy and repeat pregnancy will likely continue to be a concern in the United States, for the number of adolescent females (ages 13 to 19) is increasing by 5 to 10% per year (Pfitzner, Hoff & McElligott, 2003).

Repeat pregnancies adversely affect adolescent mothers in a variety of facets. Foremost is the belief that teen mothers, particularly those with more than one child, are less likely to graduate from high school. Female secondary students commonly cite pregnancy as a reason for dropping out of school (Brindis & Philliber, 2003). Adolescents who become pregnant often have had low educational expectations prior to conception and then experience additional academic difficulties afterwards (Coles, 2005;

Koshar, 2001). Understandably, the risk of dropping out of school becomes greater as adolescent mothers have additional children. The increased demands of parenting multiple children may lead to a feeling of hopelessness in their ability to continue their academic training.

Lack of educational attainment limits the ability and opportunity to obtain financially advantageous employment, thus limiting adolescent mothers to non-professional occupations (Bissell, 2000; Brindis & Philliber, 2003; Farber, 2003). Without a high school diploma or General Equivalency Diploma (GED), teens have a lower probability of being employed and have an increased chance of becoming dependent upon governmental support (Pfitzner, et al., 2003). These limitations place the adolescent mother and her child(ren) at risk for becoming economically dependent. Domenico and Jones (2007) concur that adolescent mothers frequently have limited educational skills, have little or no job training and lack work experience. These hardships contribute to minimizing opportunities for future employment and for fulfilling academic potential. Additionally, teen mothers are likely to remain single parents into adulthood—a known risk factor for increasing the probability of living in poverty (Corcoran & Pillai, 2007).

Lack of hope may play a role in the adolescent mother's failure to set high educational goals and to delay subsequent pregnancies. Such absence of hope could act as a barrier to reaching those goals. The social, emotional and economic demands of parenting may dissuade teen mothers from pursuing educational goals that they may perceive as too difficult to attain. As a consequence, feelings of hopelessness or helplessness about the future may develop (Rothenberg & Weissman, 2002). Developing

hope in adolescent mothers by helping them identify educational and personal goals could be an effective incentive to delay a subsequent pregnancy. The Helping Optimize Planning Efforts (HOPE) curriculum presents specific methods for adolescent mothers to enhance skills related to goal setting, goal attainment and the use of positive self-talk as a mechanism for developing hope or increasing existing levels of hope.

Hope and Hope Theory

Typically, hope is associated with believing one can be successful in achieving desires and in producing positive outcomes. It is important, however, to recognize that hope—for the purposes of this study—is more than an emotion or mere goal-setting process; it is a thoughtful, motivational mechanism through which individuals actively pursue goals through specific cognitive procedures. Hope Theory shares some similarities with Achievement Goal Theory in that they both emphasize the importance of attaining set goals. Achievement Goal Theory, however, places more emphasis on cognitive processes. According to Pintrich, (2000) "...goal achievement construct address the issues of the purpose or reason students are pursuing an achievement task as well as the standards or criteria they construct to evaluate their competence or successes on the task" (p. 94). Hope Theory is unique in that it accounts for the individual's ability to make use of positive thinking as a means to achieve goals. According to Snyder, Feldman, Shorey, and Rand (2002a), Hope Theory has two fundamental elements or sub-components—*pathway and agency*.

Pathway

The pathway component functions as a help, means, strategy or plan to accomplish a desired goal. Goals are of little use without the necessary means to achieve them.

Pathway thinking involves the formation of a route from one point to another, essentially a plan for action. In Hope Theory, it is often necessary to break larger goals into sub-goals for ease of attainment. “Once adolescents accomplish the first sub-goal along the pathway to the larger goal, they often gain the confidence and motivation necessary to move on to the next sub-goal” (Snyder, et al., 2002a, p. 6).

It is often feasible to plan multiple routes to get from A to B, for there may be obstructions along the way. Suppose for example, a young mother has set a goal to graduate from high school in the spring and then begin college in the following fall semester; an unexpected pregnancy is likely to jeopardize the ability of the mother to reach her goal. If a teen mother identifies only one route—sequence of steps—to a goal and if that route is obstructed, she may experience negative emotions that could lead to the abandonment of the entire goal (Snyder, Feldman, et al., 2002a). The adolescent may need to make a detour along her goal-path. This may be true in reaching the immediate goal and, perhaps, in facing future roadblocks in life. Exploring multiple pathways is an excellent strategy for hypothesizing potential barriers, such as a second pregnancy. Providing teen mothers with the knowledge and skills to regulate and adapt their actions may help to build confidence which can be applied to future goal attainment.

Agency

Pathways, though important, will not lead to goal attainment without the second cognitive component of Hope Theory: agency thinking. This involves "...the thoughts that people have regarding their ability to begin and continue movement on selected pathways towards those goals" (Snyder, Michael, Cheavens, 1999, p.208). Agency thinking is one's perception of one's likelihood for success. A key strategy in agency thinking is to encourage students to use *positive self-talk*. Statements such as: "I can handle this challenge;" "I believe I have the ability to do this;" or "There is no stopping me now," serve to energize adolescent mothers in striving toward goals. Negative goal statements such as: "I am so dumb," or "I just can't do this," work to drain confidence and to inhibit the process of working toward goal quests. One way to minimize the deteriorating process of negative self-talk is to teach students that negative statements are just thoughts, not facts; therefore, they can be replaced with more adaptive, realistic and positive thoughts (McDermott & Snyder, 1999).

Agency thinking—belief in one's ability to perform a task or accomplish a goal—has some similarity to Bandura's construct of self-efficacy. Bandura (1994) proposes that people's beliefs about their capabilities to produce designated levels of performance will exercise influence over events that affect their lives; hence, self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Snyder and his colleagues have found empirical parallels between self-efficacy and the agency component of hope (Snyder, Harris, Anderson, Holleran, Irving, Sigmon, Yoshinobu, Gibb, Langelle & Harney, 1991). Both have in common an emphasis on persistence,

which reinforces the relationship between agency thinking and goal determination. The “can do” attitude provides the motivation and confidence to start and to continue with the pathways outlined in the goal-setting process. Self-efficacy and the agency thinking of Hope Theory, however, are not the same construct. According to Snyder, et al., (1991, p.572), “. . .[in] Bandura’s perspective, judgments of self-efficacy refer to specific assessments of how well one will perform on a particular task in a particular setting. In contrast, hope (like optimism) is conceptualized as a more general cognitive set that applies across particular settings and, as such, hope may yield a wider range of goal-related predictions.” Mageletta and Oliver (1999) have found that hope scale items are factorally distinct and produce unique variance in predicting well-being as compared to self-efficacy items. Moreover, Snyder, et al., (2002a), suggest that hope is different from optimism in that optimism relates more to the agency component and fails to account for the reciprocal relationship between pathways and agency in building hope. It is the unique combination of hope pathway with hope agency that differentiates hope from optimism (Peterson, 2000). According to Onweuegbuzie and Delay (1999) neither agency nor pathways—in isolation—is sufficient to generate high hope; both must be functional for high hope to be activated and maintained. These two components, pathways and agency, sustain each other.

HOPE CURRICULUM

Goal

In an examination of factors related to repeat adolescent pregnancy, the absence of goals and aspirations is consistently cited as a contributing factor. Davis (2002), who

investigated repeat pregnancy in relationship to problem behavior theory, supports the important influential role of goal expectations on repeat pregnancy. “Educational expectations were found to be negatively related to the likelihood of an unwed repeat pregnancy; as educational expectations increased, the probability of an unwed repeat pregnancy decreases” (Davis, 2002, p.339). Low educational expectations and aspirations potentially lead to lack of motivation in delaying sexual activity and, consequently, parenthood (Rauch-Elnekave, 1994). Davis (2002) suggests, instead, that the *presence* of long-term goals—educational and professional—provides motivation for adolescent mothers to resist sexual encounters or be more proactive in using contraceptives.

The primary goal, therefore, of the HOPE curriculum is to develop or increase the current level of hope in adolescent mothers by:

- 1) teaching knowledge and skills related to pathway development, and
- 2) promoting the use of agency thinking.

The curriculum, based upon Hope Theory (Snyder, 1999) was designed to help teen mothers practice positive self-talk and to devise strategies for achieving educational goals and aspirations. As goal-attainment strategies are developed, the teen mothers exposed to the curriculum will also identify and plan methods to minimize potential barriers to goal achievement, such as a repeat pregnancy.

Development

Given that the scientific literature suggests increasing hope in adolescent mothers can be educationally beneficial the essential question to be considered, therefore, is: *Can*

hope be taught to adolescent mothers? The HOPE curriculum was developed as a tool to explore the answer to this very question. If the answer to this question proves to be yes, the finding paves the way for the direction of future studies. For example, the next logical research step might be to ascertain if a relationship exists between an adolescent mother's level of hope and the likelihood of her experiencing a repeat pregnancy. To the best of the researchers' knowledge, there are no health promotion studies focusing on testing this relationship.

Prior to the writing of the curriculum, the researchers felt it was important to uncover the personal perspectives of pregnant and parenting teens. In order to obtain these personal perspectives, focus group interviews were conducted to explore their thoughts and viewpoints about hope, among a group of teens who were either pregnant or parenting (N=12). The focus group participants were enrolled in a self-paced alternative education program located on a satellite campus from the primary high school. Students were given the option to participate in the group discussion during their parenting class. The racial makeup of the interviewees was Hispanic (N=6), African American (N=4) and Caucasian (N=2). The adolescent mothers ranged in age from 16-18.

When asked what came to mind when they thought about hope, themes about the future dominated the responses. The mothers used words/phrases related to aspirations such as: "dreams," "desires" and "something I want." An underlying theme also suggested a relationship between hope and faith; for example, one mother said "...it [hope] is believing that good things will happen." When asked, "What are characteristics of hopeful people?" adolescent mothers consistently referenced the presence of a

positive outlook and a quest for something beneficial in the future. Teen mothers reported that hopeful people are: “optimistic,” “upbeat,” “positive” and “willing to work for their goals.” They also suggested that hopeful people: “have a happy outlook,” “see the good side” and “know how to get what they want.” The responses to these two questions provided support for the development of the agency sub-component in Hope Theory (goal-directed thinking and the belief in one's ability to be successful in goal attainment).

All participants reported the belief that people can be *taught* to be more hopeful. When asked how hope could be taught, suggestions emphasized the need to set goals and experience success in meeting those goals. One mother said, “Help people figure out what they really want.” She also suggested, “Let them experience small successes.” Not surprisingly, when adolescent mothers were asked to identify barriers to being hopeful, they immediately mentioned previous failures. One mother said, “Failure causes you to be negative and lack confidence.” These statements indicate the pathway sub-component (planning of ways to successfully meet goals) of Hope Theory should also be incorporated into the curriculum design.

Themes related to the importance of social support and the influence of others on a person's ability to be hopeful also emerged. Teen mothers indicated that social-support barriers to being hopeful included “pessimistic people,” “outside negative people” (people who they associated with that were negative) and “being told by others that you can't do it.” This perspective brought to light the need for curriculum developers to include social support as part of the curriculum design. Social support is defined by

Caplan, (1974) as attachments which promote mastery, offer guidance and provide feedback that validates identity and behavior. Theorists suggest that social support is provided within support networks which are typically defined as people (friends, family members, coworkers) who are linked to the individual by emotional and/or behavioral interactions (Gottlieb, 1993; Saulnier,1982). During adolescence, peers play an important and influential role in providing a social network. Peer relationships have great potential to positively or negatively influence psychosocial development (Brendgen, Vitaro & Bukowski, 2000). For example, positive peer relationships are linked to emotional well-being and achievement in school (Wentzel, 2003). Ladd and colleagues (2003) suggest that peer relationships are a key factor in the social competence of adolescents. Findings from the focus group indicated a need to address social support in addition to the agency and pathway sub-components of Hope Theory, when developing the curriculum.

DESIGN

Participants

School-based programs dedicated to improving educational outcomes for pregnant and parenting teens are common throughout the nation. For example, the Options for Young Parents Program (Options) is an elective course available to pregnant or parenting adolescents which strives to eliminate barriers to high school graduation for male and female teens. The Options program provides a variety of resources related to positive parenting education, childcare, mentoring, post-partum home-instruction and academic

tutoring. Participation in the program is voluntary; however, all students enrolled in the course must be pregnant or parenting.

The students in the Options program were chosen to be taught the HOPE curriculum so that that the researchers could evaluate its impact. At the time of the curriculum implementation and data collection, a total of 21 female students were enrolled in the program and all students elected to participate. No male students were enrolled at the time. The students' ages ranged from 16 to 18. Their school classifications were: 9th grade (n=4), 10th grade (n=4), 11th grade (n=4), and 12th grade (n=9). Sixteen of the participants were parenting with one child of their own and not presently pregnant. The remaining five were pregnant for the first time. The ethnic distribution of the participants was African American (n=7), Hispanic origin (n=12), Caucasian (n=1), and multi-racial (n=1).

The target population was selected for two primary reasons. Access to vulnerable populations—such as pregnant and parenting teens—is often a barrier to research. Curriculum designers were fortunate to have an established relationship with the Options faculty and staff through previous employment with the program. This connection provided the foundation of trust that enabled the curriculum designers to have access to this unique population. Additionally, the Options program is offered in the state of Texas, which, in 2004 led the nation in repeat births [24% for Texas; 20% for the nation] (Perper and Manlove, 2009). Again in 2006, Texas had the nation's third highest teen birth rate [63.1 births per thousand females aged 15 to 19] (Martin, et al., 2009). This

prevalence of high adolescent pregnancy renders Texas a logical choice to explore preventative interventions.

Curriculum Writing

The HOPE curriculum has at its core many of the beliefs expressed in Paulo Freire's book *Pedagogy of Hope*. Freire promotes the need to take into account the social context of the student and to create learning experiences that challenge the learner to think critically about her place in society and the world, what Freire calls conscientization (Freire, 2004). Freire's approach uses the teacher as a guide to promote dialogue from the perspective of the learner, rather than a top-down type of curriculum that dictates what the learner is to know and do. According to Freire (2004), dialogue implies a sincere, fundamental respect between teacher and student. It is not one person acting on another, but people working with each other. Each session of the HOPE curriculum allows the student to contribute her unique perspective and to rely on the support of her social network to determine her individual goals.

The HOPE curriculum was written by a team of educators (N=3) enrolled in a graduate level curriculum and instruction course. Lessons were developed to ensure that each activity facilitated the teaching of pathway and/or agency thinking skills. The curriculum design team placed a great deal of emphasis in designing activities that promoted self-discovery through inquiry learning. A brief synopsis of the curriculum activities can be found in Table 3.1 See Appendix A for expanded summary of the curriculum.

Table 3.1: Brief curriculum synopsis

Session	Activities
<p><i>Session 1</i></p> <p><i>Students were made aware of the potential impact of using goal-setting strategies for their future accomplishments. Students provided baseline data by completing both hope scales (SHS and DTSH) as a pretest.</i></p>	<p>Introduced concepts of pathway (goal identification) and agency thinking (positive thoughts).</p> <p>Used classroom activity to highlight the need for individual responsibility and persistence in achieving goals.</p> <p>Challenged students (in a journal prompt) to set an immediate, short term goal (which could be achieved by the following day) to practice presented skills.</p>
<p><i>Session 2</i></p> <p><i>Students were provided instruction on skills for goal-setting.</i></p>	<p>Brainstormed for possible goals—short, medium and long range.</p> <p>The teacher pointed out the need for setting specific and measurable goals. The brainstormed goals were then traded between groups and were assessed for specificity and measurability.</p>
<p><i>Session 3</i></p> <p><i>Students practiced identifying multiple pathways when goal setting and evaluated the influence of barriers and distracters on the successfulness of various pathways. The session also emphasized the use of social support.</i></p>	<p>Experimented with goal completion complicated by barriers, distracters and disruptions.</p> <p>Learned the importance of having social support in attaining goals.</p> <p>Hypothesized divergent/alternate pathways for reaching sample goals.</p>

Table 3.1: Continued

Session	Activities
<p><i>Session 4</i></p> <p><i>Students continued to examine alternate pathways for goal accomplishment by considering the impact of broken pathways and by exploring the benefits of using social support in goal accomplishment.</i></p>	<p>Practiced problem-solving skills related to managing barriers, utilizing social support and remaining persistent in goal pursuits.</p> <p>Discussed and evaluated the advantages of social support when solving problems and meeting goals.</p> <p>Evaluated the consequences of a subsequent pregnancy and recorded the potential impact on attaining goals in the student journal.</p> <p>Explored concept of agency thinking by recording positive comments on open-ended statements. For example, the student would complete the statement: “Two things I do best are ___” or “One of the many positive traits I have is _____”.</p>
<p><i>Session 5</i></p> <p><i>Students were formally introduced to the concept of agency thinking and taught to the use of positive self-talk.</i></p>	<p>Participated in an experiment that highlighted the influence of positive self-talk to complete a task.</p> <p>Discussed the difficulty some adolescents have with thinking positively about themselves and practiced skills related to agency thinking by writing positive statements about themselves.</p> <p>Summarized, in the journal, the concept of agency thinking and explained the importance of thinking about herself in a positive manner.</p>

Table 3.1 Continued

Session	Activities
<p><i>Session 6</i></p> <p><i>Students discovered how thinking negatively interferes with goal accomplishment while recognizing the advantages of agency thinking and using positive self-talk.</i></p>	<p>Practiced agency thinking, with the help of peers, by using positive self-talk in a game activity and in an art project.</p> <p>Displayed positive comments, provided by peers, in places where they could be frequently viewed.</p> <p>Recorded, in the student journal, positive statements that were meaningful to her from the game as reinforcement for the concept of agency thinking.</p>
<p><i>Session 7</i></p> <p><i>Students recognized examples of agency thinking in life situations depicted in the DVD clip. Students also explored the need for commitment and accountability in goal attainment.</i></p>	<p>Viewed a DVD clip to identify examples of positive and negative self-talk used by the main character.</p> <p>Discussed the impact of agency thinking and the influence of social support portrayed in the DVD clip.</p> <p>Agreed to utilize social support by signing a commitment contract with a classmate.</p> <p>Recorded, in the student journal, two or more examples of positive self-talk and explained reasons why it was important to have social support when setting challenging goals.</p>

Table 3.1 Continued

Session	Activities
<p><i>Session 8</i></p> <p><i>Students completed an open-ended assignment which assessed the ability of the student to apply the principles of pathway, agency and social support</i></p>	<p>Reviewed a case study and synthesized a plan, with a partner, to identify potential pathway, agency and social support strategies for accomplishing the identified goal.</p> <p>Assessed previously set goals to determine if they had been met. Unmet goals were revised, and new goals were created.</p> <p>Created positive, self-talk statements to be displayed in places where they could be frequently viewed as a reminder to practice agency thinking.</p>
<p><i>As part of the conclusion for the unit, the teacher provided feedback from the case study assessment. Students were evaluated on their ability to apply the concepts of pathway, agency and social support in resolving the case study provided. Both hope scales (SHS and DTSH) were completed as post-tests by the students.</i></p>	

Preliminary Activities

Prior to the delivery of the HOPE curriculum, measures were taken to facilitate its implementation and effectiveness. The curriculum designers met with the faculty and staff of the Options program to provide explanation and justification for the curriculum and to secure necessary permissions. To ensure fidelity to the curriculum design, the regular classroom teacher for the Options program met with a representative of the curriculum design team to receive training. Curriculum lessons were pilot tested by the Options teacher two school years prior to the actual implementation of the experimental

curriculum. The two year interval between field testing the curriculum elements and the actual curriculum implementation ensured that it was a first time exposure for the participants. An evaluation of curriculum elements was provided by the Options instructor and the students at the conclusion of the field testing.

Revisions to the curriculum were made to respond to students' and instructors feedback. For example, in one of the lessons related to the use of positive-self talk, students were to identify and analyze the dialogue of the main character featured in a DVD. Students were asked to recognize examples of self-talk and to assess the impact of the statements on the character's belief about the attainability of the designated goal. Data from the evaluation indicated the pedagogy of the exercise was appropriate; however, the selected 35 minute DVD was too lengthy. The excessive length resulted in the students engaging too deeply in the story line and losing focus on identifying examples of positive self-talk. In response to this feedback, curriculum designers substituted a shorter (7 minute) DVD clip, which allowed students to remain focused on the specific assigned task. Another modification was the addition of a student workbook as part of a daily planner and journal. In the original design, students were provided a journal which had space for recording daily responses along with a calendar for planning. As the curriculum was delivered, students were given additional handouts and supplemental materials related to the daily topics. Participants suggested incorporating the additional resources as part of the journal, which would enable them to "keep everything together." Other minor modifications were made related to time sequencing and workspace on handouts.

THE EXPERIMENTAL CURRICULUM

Content

The HOPE curriculum was designed to target pregnant and parenting adolescents ages 15-19 as a means to develop or increase the adolescents' level of hope. Prior to, and after the implementation of the pilot curriculum, each adolescent mother's level of hope was measured using the Dispositional Trait Hope Scale (DTHS) and the State Hope Scale (SHS). Both instruments are recognized as acceptable mechanisms for the measurement of hope levels.

Although the curriculum did include content related to repeat pregnancy, avoidance of a subsequent pregnancy is more of an underlying idea than an overt curriculum objective. It is hypothesized that developing or elevating the level of hope will, theoretically, motivate adolescent mothers to delay subsequent pregnancies while in high school. The eight-session-curriculum incorporated peer education methodologies for social support, while highlighting the sub-components of agency and pathway. Peer education builds on the existing school networks to improve the availability, accessibility and appropriateness of social and personal support (Dillon and Swinbourne, 2007). As the teen mother work together on activities that develop agency and pathway skills, they are acting to provide social support for one another while building their level of hope. With greater levels of hope the adolescent mother may choose to be more cognizant to avoid an additional pregnancy.

Measurement of Hope

Snyder and his colleagues developed three different hope scales: Children's Hope Scale (CHS) [ages 7 through 14], Dispositional Trait Hope Scale (DTHS) [ages 15 through adulthood] and State Hope Scale (SHS) [ages 15 through adulthood]. The DTHS measures the overall level of hope, while the SHS accounts for a person's state of hope at a given point in time (Snyder, Lopez, Shorey, Rand & Feldman, 2003). The two adult instruments, SHS and DTHS, were implemented as part of the curriculum (that is the focus of this article) and the data were used to evaluate the effectiveness of developing or elevating the level of hope. Both instruments utilized an 8-point Likert scale, with 1 meaning definitely false and 8 meaning definitely true.

Measuring Dispositional Trait Hope

The DTHS measures the individual's overall level of hope and is not point-in-time specific. This scale is designed to measure four items of agency, four items of pathway, and contains four distracter items. Wide use of the instrument over the last ten years has led to its acceptance as a creditable measure of hope traits. "Having been used with a wide range of samples, the Hope Scale has exhibited acceptable (1) internal consistency (overall alphas from .74 to .88; agency alphas of .70 to .84; and pathway alphas of .63 to .86); (2) test-retest reliability ranging from .85 for three weeks to .82 for ten weeks; and (3) concurrent and discriminate validity (Snyder, et al., 1991). The DTHS is presented in Appendix B. The scale scores are useful in categorizing individuals as high or low-hope human beings. The subscales provide useful information in differentiating which

component of hope—agency or pathway—contributes more to the individual's hope level and, subsequently, identifies the component that needs more development.

Measuring State Hope

The State Hope Scale differs from the DTHS because it is expressly designed to assess the present state of the individual's level of hope. The State Hope instrument is a 6-item scale that includes three items to measure pathways and three items to measure agency. The State Hope items are adapted from the dispositional trait hope scale to add phrases to represent a point-in-time context. For example, “At the present time, I am meeting the goals I have set for myself” (Snyder, Sympson & Ybasco, 1996, p. 335). In a comprehensive evaluation of the SHS, the findings suggest that both reliability and validity are within acceptable ranges for credibility. Tests of internal reliability found the Cronbach alpha for the overall SHS to be .88 with item-remainder coefficients of .52 to .79. The agency subscales are reported to be .86 with an item remainder coefficient of .73 to .76. Pathway subscale yielded an alpha of .59, with item-remainder coefficients of .31 to .49. Together the agency and pathway subscales correlated to .82 in the study (Snyder et al., 1996).

An examination of the discriminate validity suggests that the SHS meets the psychometric standards for self-report scales. In the SHS validation study, Snyder et al. (1996), report. “...using correlation and causal designs, construct validation support is garnered for the State Hope scale and its subscales; moreover, the scale exhibits discriminate validity in that it cannot be explained in terms of other related state self-report indices related to social desirability, self-esteem, positive and negative affectivity,

and academic performance” (Snyder, et al. 1996, p.334). The SHS is presented in Appendix C.

METHODS

Data Collection

Prior to the delivery of the HOPE curriculum, base line data were collected. All the students enrolled in Options program at the time of data collection elected to participate in the study. Each student indicated her responses to the hope scale indicators on paper-and-pencil assessment. The DTSH was administered by the students’ regular classroom teacher to both groups (A and B) during the students’ regular class period. Only Group A was given the SHS during the first data collection period to ensure that their measurement of the point-in-time level of hope was assessed immediately before the delivery of the curriculum. Group A was asked to respond to the Dispositional Trait Hope Scale two weeks after the curriculum intervention was delivered. The same procedure was followed for Group B. The staggered presentation helped to provide a control group for comparison while keeping time increments consistent between the two groups. To minimize effects of bias from multiple testing exposures, the measurement of state hope was delayed for Group B. Delaying the administration of SHS in Group B provided a congruent point in time measurement (to that of Group A) of the level of hope immediately prior to the delivery of the intervention. Two weeks after the curriculum was delivered, the DTSH and the SHS were administered again as a follow-up point for data collection and analysis by the researcher.

FINDINGS

In this pilot of the HOPE curriculum, analysis of the data suggests that adolescent mothers can be taught to be more hopeful. Using a paired t-test, data was analyzed to compare the pre-test and post-test from both the SHS (point in time measurement of level of hope) and DTHS (overall level of hope). There was a significant difference in the scores for the SHS pre-test ($M = 38.05$, $SD = 5.16$) and SHS post-test ($M = 40.28$, $SD = 6.17$) scores; $t(20) = 2.86$, $p = .01$. After a further examination of the DTHS, there was a significant difference between the pre-test ($M = 69.52$, $SD = 6.72$) and DTHS post-test ($M = 73.57$, $SD = 6.43$) scores; $t(20) = 3.29$, $p = .004$. The presence of a statistically significant difference between the two testing periods for each of these measures was deemed a promising finding when one considers the sample size ($n = 21$).

DISCUSSION

Findings of this study suggest that adolescent mothers, with the use of social support, can be taught to be more hopeful when a theoretical foundation is used to foster hope development. The HOPE curriculum could be an educational strategy to develop hope in other pregnant and parenting programs. Extending the delivery to multiple school districts with existing programs would not only minimize concerns about the limited sample size of this study, but also allow for multiple comparisons between different populations of adolescent mothers.

Theoretically, teaching adolescent mothers to embrace positive-thinking and to practice goal-setting behaviors in an environment that provides social support can improve and strengthen the possibility of developing high levels of hope. As mentioned

earlier, an increase in hope level is correlated with positive academic outcomes (Curry, et al, 1997a). Hope Theory and its sub-components, agency and pathway; provide the cognitive foundation on which to develop knowledge and skills for achieving individual, social and academic goals.

Implications for Practice

Although the curriculum was designed with pregnant and parenting students as the target population, the knowledge and skills taught in the curriculum could be applicable for other at-risk populations and also general population groups. The HOPE curriculum offers teachers or practitioners a way to help to students with unique educational needs.

Based upon the data for the experimental delivery, modifications for future delivery should be considered. The implementation schedule for this pilot study was dictated by the school calendar which required students to complete all state mandated testing prior to the delivery of the experimental curriculum. This resulted in the HOPE curriculum being delivered in late April through May. Consequently, the students were very close to completion of the school year which may have contributed to their initial level of state hope being elevated on the pre-test. Implementing at the beginning of the year would allow the teachers and students to practice the concepts learned throughout the remainder of the school year.

A second suggestion for future studies would be to develop an adolescent specific instrument to measure hope levels. Both the SHS and DTHS instruments measure an extremely wide range of ages (15 to adult). Although the SHS and DTHS are psychometrically sound, perhaps the development of a “hope scale” specifically

designed for adolescents (ages 15-19) could provide a more accurate measurement of the level of hope in teens.

Future research could also explore other areas where building hope might be influential. For instance, if adolescent mothers can be taught to be more hopeful, will it decrease their likelihood of experiencing a subsequent pregnancy? Another interesting question that was not considered in this article is the influence of faith on an individual's level of hope. Do spiritual beliefs play a role in a person's hopeful thinking? Obviously the concept of hope and its influence on personal and academic achievement has the potential for further exploration and wider applications.

Conclusion

Many educational theories influence and guide teachers and curriculum writers. These theories are not student-useful until they are conceptualized and used in an applicable form. Snyder's Hope Theory offered a concept with two specific and identifiable components—agency and pathway. Students, however, could not fully benefit from this theoretical tool until they had **help** to enable them to **optimize** their **planning efforts** in setting goals. Students were given a concrete plan for directing their efforts in a way to maximize their goal attainment with the help of positive self-talk. This pilot curriculum was designed to help an at-risk and growing student population—pregnant and parenting adolescents. A variety of methodologies were used in the delivery of the curriculum which included: journaling, group brainstorming, peer support and feedback, analytical thinking (SMART method), hypothesizing outcomes (with or without barriers) for short, medium and long range goals and positive self-talk

techniques. Students, ideally, will continue to utilize the concepts learned from these strategies after their school careers. Helping optimize planning efforts (the HOPE curriculum) is in itself a *pathway* containing many *agency* thinking aids that could be beneficial to those needing help—pregnant and parenting adolescents—while in school now and potentially in their future lives.

CHAPTER IV

CAN PREGNANT AND PARENTING TEENS LEARN TO BE HOPEFUL?

INTRODUCTION

The purpose of this study is to determine if adolescent mothers (ages 15-19) can learn to increase their levels of hope. The long-term goal is to establish the ground work for future explorations of the relationship between adolescent mothers' level of hope and their intention to prevent a subsequent pregnancy.

The rationale for this study lies in the notion that helping adolescents to create expectations for their future through the development of hope, intuitively, makes sense. Research suggests that students who display heightened feelings of hope are more likely to take action to prepare themselves to achieve academically (Adelabu, 2008). One would expect the building of hope—by teaching adolescents how to set and accomplish goals and to develop positive thoughts about their abilities—would benefit them. Providing students with the knowledge, skills and attitudes to make positive behavioral choices might even diminish the likelihood of repeat pregnancies.

RATIONALE

Hope, and its development within an individual, is synonymous with the concepts of setting and believing in the ability to achieve goals. In an examination of factors related to repeat adolescent pregnancy, the absence of goals and aspirations has been cited as a contributing factor. Educational aspirations have been specifically tied to subsequent pregnancy. “Educational expectations were found to be negatively related to the likelihood of an unwed repeat pregnancy; as educational expectations increased, the

probability of an unwed repeat pregnancy decreases” (Davis, 2002 p. 339). Low educational expectations and aspirations lead to lack of motivation to delay sexual activity and, consequently, parenthood. (Rauch-Elnekave , 1994). High educational expectations provide the motivation for students to graduate (Meade & Ickovics, 2005). Sugland, Manlove, and Romano (1997) found that high educational expectations were less likely to become teen mothers. They suggested this was especially true when adolescents had aspirations to attend college and a desire for a professional career (Sugland, Manlove and Romano, 1997). Seemingly, the presence of long-term goals—educational and professional—provides the motivation to resist sexual encounters or to be more proactive in use of contraceptives (Davis, 2002).

An adolescent mother’s level of hope can directly influence her ability to reach established goals. When individuals of high-hope encounter failure, they employ adaptive strategies to reach their goals. Failure represents important feedback for identifying ineffective pathways (strategies to meet goals), thereby leading to other feasible approaches (Snyder, 1996). As these mothers adopt these other approaches and positive reinforcements result, they increase their skills for future goal achievement. The ability to use feedback as a diagnostic tool encourages the high-hope individual to seek a solution to temporary setbacks.

Individuals with low-hope often do not use feedback constructively. They fail to use past experiences to improve future performance, leading those with low hope into a mind-set of self-doubt and negative cogitation (Snyder, 1999; Michael, 2000). Negative thoughts feed a person’s sense of helplessness. This fosters the idea that circumstances

are beyond a person's control and lowers his or her expectations; this results in deteriorate performance (Diner & Dweck, 1978; 1980). Negative thoughts usurp the behavioral beliefs (thoughts about the likely consequences of the behavior) necessary for persistence in goal acquisition and disrupt positive agency thinking (Ajzen, 1991; 2006a; 2006b). Negative thoughts impede an individual's belief in the ability to attain set goals.

One way to counter act negative thoughts is using positive personal inner dialogues (positive self-talk) as a source of motivation. Using positive self-talk is referred to as agency thinking. Snyder and colleagues (2003) conducted a study in which participants recorded their internal dialogue using "self-talk" diaries (Snyder, Lopez, Shorey, Rand, and Feldman, 2003). These written records were used to identify characteristics of agency thinking among participants. Persons of high-hope were more likely to effectively exercise agency thinking. The researchers also state that high-hope people embrace "self-talk;" they use agency phrases such as, "I can do this" and "I am not going to be stopped" (Snyder et al., 2003). The use of positive self-talk works to redirect the goal seeker's expectancies and provides reinforcement to continue seeking the goal. On the contrary, persons of low-hope maintain internal dialogues that are more negative and hypercritical. Negative self scripts, such as "I won't..." or "I can't..." act as an impediment to goal acquisition by diluting positive thinking. A review of the literature suggests that helping individuals learn how to use positive self-talk—thereby developing their agency thinking—would be academically beneficial. For example, Nolting (2002) suggests that using positive self-talk during tests can boost student confidence and reduce test anxiety. The use of agency thinking by students could provide an academic

advantage by contributing to their successful mastery of goals. Students could benefit from the ability to channel the requisite motivation from agency thinking in order to pursue their identified pathways.

The Theory of Hope

Combining the use of agency and pathways leads to the development of hope. Consistent with the elements of Hope Theory Snyder defines hope as the perceived capacity to: (1) develop workable goals; (2) find routes to those goals [pathways thinking]; and (3) become motivated to use those pathways [agency thinking] (Snyder 1994; 2000; 2005). Hope Theory speculates that goals are the targets of mental action-sequences, and they anchor purposeful behavior (Snyder, 1989; 1994; 2000; Snyder, Michael & Cheavens, 1999). “In other words, when an individual initiates an intentional behavior sequence, it [the behavior] must be directed toward achieving some specific outcome. Prior to initiating that behavior sequence, however, one must engage in two other types of cognitions: pathways and agency thinking” (Snyder, Feldman, Shorey, and Rand, 2002a p. 298). Hope Theory functions to explain the relationship between the three components: goals, pathways thinking, and agency thinking.

Hope appears, initially, to be a concept too vague to define or to measure; however, a closer look at the literature presents a different picture. The theory of hope originated in the late 1960’s proposing hope as an influential construct related to behavioral outcomes. According to Stotland (1969), hope is “...an expectation greater than zero of achieving a goal”(p.2). He suggests that elevated hope represents a perception of high probability of attaining a goal. His theory emphasizes a person’s cognitive analysis of goal-related

outcomes by dividing the concept of hope into two sub-components: *agency* (goal-directed determination) and *pathways* (planning of ways to meet goals). The establishment of agency and pathways as a foundation for the definition of hope helped to offer direction for further studies testing Hope Theory. “Stotland’s theory has the advantage of parsimoniously defining hope, but the two cognitive components of agency and pathways may provide a more complete exposition of the goal-seeking process” (Snyder, 1995 p. 336). Snyder and members of the University of Kansas Hope Laboratory (2002) re-conceptualized hope. These scholars suggest hope is a process through which individuals actively pursue their goals through goal-directed cognitive mechanisms. Such mechanisms consist of the dynamic relationship between agency and pathways in goal attainment. In this light, hope is not just an emotion, but it is a thoughtful motivational process in which emotions follow a path of logical thinking. In this process feed-back reciprocally interacts with future thoughts in the process of pursuing future goals. (Snyder et al., 2002a). Goal acquisition and, consequently, hope-building are learned patterns of thinking (Snyder, 1993; 1995).

Although most studies frame the definition of hope according to the context of what is being studied, there appears to be a consistent representation of fundamental concepts. The construct of hope has distinctive properties that make it function differently than related constructs such as self-efficacy or optimism (Magaletta & Oliver, 1999). All three of these constructs (hope, self-efficacy and optimism) are related to expectancies; however, hope is unique in that it “... is not monolithic but has two components that are interrelated ... both [of which] are essential” (Magaletta & Oliver, 1999 p. 541). Hope

is considered by most scholars to be a construct reflecting the reciprocal interaction of agency and pathways. This clear definition of hope enables the construct to be measured and forms the theoretical foundation on which many of the studies related to hope are explored. According to Snyder (1999):

In Hope Theory, people are assumed to be goal-oriented in their everyday thinking, with such goal-directed thoughts being attended by two related components: pathway thoughts involving the perceived capacity to produce ways of reaching goals and agency thoughts tapping the perceived capacity to initiate and sustain movement along those pathways (p. 206).

Purpose of the Study

The purpose of the current study was to determine if adolescent mothers (ages 15-19) can be taught to increase their levels of hope. Findings from this study will provide a foundation for future exploration of the relationship between the adolescent mother's level of hope and her intention to prevent a subsequent pregnancy. It is hypothesized in this study that adolescent mothers *can* be taught to elevate their levels of hope.

METHODS

Design

The study attempted to explore an intervention to enhance the adolescent mother's level of hope with the underlying assumption that increasing levels of hope might decrease the probability of a repeat adolescent pregnancy. A curriculum was developed as an intervention to increase an adolescent mother's level of hope. Due to the constraints of delivering the curriculum in a public school, a quasi-experimental design was used to explore the mother's level of hope.. Participants were randomly enrolled in one of the two course offerings. The existence of two class periods (Group A and Group

B) allowed researchers to use a pre-test/post-test control group time series survey design. In this design pre-test data were collected on both Groups A and B at the beginning of the data collection period. Following the pretest, the two-week intervention was delivered to treatment Group A and then the post-test data was collected at the conclusion of the curriculum. Group B did not receive the intervention at the same time as Group A and therefore Group B served as a control group for comparison. Upon conclusion of Group A's data collection period, Group B began their data collections and treatment with the intervention. Both Groups A and B completed a follow-up survey two weeks after their treatment period. The program consisted of six phases during which the participants' level of hope was assessed.

The initial step in this study was to develop the intervention. An educational curriculum based on Hope Theory was developed, pilot tested and implemented to teach adolescent mothers the knowledge and skills for hope development. The Helping Optimize Planning Efforts (HOPE) curriculum presented methodologies for adolescent mothers to enhance skills related to goal setting, goal attainment (pathway skills) and the use of positive self-talk (agency thinking) as mechanisms for developing hope or increasing existing levels of hope. For example, in one lesson students were asked to view a seven minute DVD clip and then assessed the goals the main character established for himself, according to the criteria for optimal goals—as discussed in the curriculum. The students were also asked to identify the use of self-talk (positive and negative) by the main character and to analyze the influence of self-talk on the character's belief that his goals could be accomplished. The DVD clip was selected

because it provided multiple examples of self-talk being used in relationship to the characters goals. Although the main character in the DVD clip was male, the students were able to infer the influential relationship of self- talk on his ability to meet goals. Participant adolescent mothers were then asked to develop their own goals and to identify positive personal attributes they might possess that could help them accomplish these identified goals. As goal attainment strategies were developed, teen mothers also identified and planned methods to minimize potential barriers to the attainment of their goals, such as a subsequent pregnancy.

For example, students were provided problem-solving scenarios which challenged them to consider multiple factors related to goal accomplishment and to develop strategies for goal accomplishment. The following scenario is a sample of one prompt that was used in the problem-solving activity and the discussion questions used to develop strategies.

Lisa, a parenting high school student, has a dream of becoming a nurse one day. She wants to be able to provide for her son and help others. There is a junior college nearby that offers a nursing program. The cost of day care and college tuition are more than Lisa can afford. Lisa's grandmother sometimes helps her by taking care of her son, Jamal. Lisa has thought about applying for financial aid but does not know how to do it. She wants to be a nurse very badly but feels very overwhelmed by the financial barriers.

Using the prompt, students brainstormed multiple strategies Lisa could use to make progress toward her goal of becoming a nurse. Students then evaluated the various strategies they identified to determine the best course of action for Lisa. The participants explored potential resources available, identified the major barriers and how they might be minimized as well as the positive and negative implications of the available

alternatives. The intervention taught pregnant or parenting students how to: set goals, develop pathways to accomplish those goals, and build constructive thinking through positive self-talk. The primary goal of the program was to elevate the mother's level of hope with the assumption that hope-building might be an effective strategy to decrease the likelihood of a subsequent pregnancy until after high school graduation.

Sample

The participants of this study consisted of pregnant and parenting adolescents enrolled in a parenting education course in a South Central Texas school district. The course is offered as an elective credit and functions to teach adolescent requisite knowledge and skills to become effective parents. The course is one component of a parenting program, called Options for Young Parents (Options), which is designed to eliminate barriers to high school graduation. Although the Options program does not exclude males from participation, males typically do not elect to enroll in the program. The researchers in this study had an existing relationship, through previous employment, with the Options program providers which granted access to this distinct target population. The sample was selected because they were currently pregnant or parenting and offered an opportunity to document characteristics unique to adolescent parents.

As part of the standard curriculum in the Options parenting course, goal-setting is a standard topic. The Options class had incorporated the use of the HOPE goal-setting curriculum which was designed to elevate levels of hope. Participants in the Options course were asked to complete two short (6 items and 12 items) surveys which functioned as a pre-test/post test for the curriculum. Participation in curriculum

activities were course requirement, however, responding to the surveys was optional activity for the students. The students were informed that their responses to the surveys would be used by researchers to discover adolescent mothers' perspectives related to goals and goal setting. Student consents were collected and the regular classroom teacher administered the surveys at the designated collection points during the curriculum. All twenty-one of the participants enrolled in the Options class elected to participate and responded to the surveys.

Measuring Dispositional Trait Hope

A student's level of hope can be measured using Likert type scales. The use of a measurement scale provides an objective means for assessing a student's level of hope. Snyder and his colleagues developed three different hope scales: Children's Hope Scale [CHS]{for use with ages 7 through 14}, Dispositional Trait Hope Scale [DTHS] {for use with ages 15 through adulthood}, and State Hope Scale [SHS]{for ages 15 through adulthood} (Snyder et al., 2003). This study utilized two of these scales. The DTHS was used to calculate the *overall* level of hope, while the SHS was used to measure the level of hope at *a given point-in-time*.

This DTHS scale was designed to measure four items of agency, four items of pathway and contained four distracter items. Wide use of the instrument over the last ten years has led to its acceptance as an appropriate measure of hope traits. "Having been used with a wide range of samples, the Hope Scale has exhibited acceptable (1) internal consistency (overall alphas from .74 to .88; agency alphas of .70 to .84; and pathway alphas of .63 to .86); (2) test-retest reliabilities ranging from .85 for three weeks

to .82 for ten weeks; and (3) concurrent and discriminate validities” (Snyder, Harris , Anderson, Holleran, Irvng, Sigmon, Yoshinobu , Gibb, Langelle, and Harney, 1991 p. 582). The scale scores are useful in categorizing individuals as “high-hopers” and “low-hopers”. The sub-scales provided valuable information in determining which component of hope contributes more to an individual's hope level and, subsequently, identifies the component that needs more development. The Dispositional Trait Hope Scale is presented in Appendix B.

Measuring State Hope

The State Hope Scale (SHS) differs from the Dispositional Trait Hope Scale (DTHS) because it is expressly designed to assess the *present state* of an individual's level of hope. The State Hope instrument is a six-item scale that includes three items to measure pathways and three items to measure agency. The State Hope items are adapted from the DTHS with added phrases that provide a point-in-time context. For example, the phrase, *At the present time*, was added to: *I am meeting the goals I have set for myself* (Snyder, Sympton , and Ybasco, Borders, Babyak, and Higgins, 1996). The 8-point Likert scale asks participants to describe how they feel right now with 1 meaning “definitely false” and 8 meaning “definitely true”. In a comprehensive evaluation of the State Hope Scale, the findings suggest that both reliability and validity are within acceptable ranges for credibility. Tests of internal reliability carried out with samples ages 15 to adult, found the Cronbach’s alpha for the overall State Hope Scale to be .88 with item-remainder coefficients of .52 to .79 (Snyder et al., 1996). The agency subscales are reported to be .86 with an item remainder coefficient of .73 to .76 (Snyder

et al., 1996). The Pathway subscale yielded an alpha of .59, with item-remainder coefficients of .31 to .49 (Snyder et al., 1996). Together the agency and pathway subscales correlated at .82 in their study (Snyder et al., 1996).

An examination of the discriminate validity suggests that the State Hope Scale meets the psychometric standards for self-report scales. Snyder and others (1996) report in the State Hope Scale validation study, "...using correlation and causal designs, construct validation support is garnered for the State Hope Scale and its subscales; moreover, the scale exhibits discriminate validity in that it cannot be explained in terms of other related state self-report indices related to social desirability, self-esteem, positive and negative affectivity, and academic performance" (p. 334). The State Hope Scale is presented in Appendix C.

Data Collection

A phase approach was used in the data collection process. The first phase was to collect baseline data on both groups prior to the delivery of the intervention—the HOPE curriculum. During phase one (week one) the DTSH was administered by the students' regular classroom teacher to both groups (A and B) during the students' regular class period. The data was analyzed to ensure there were no significant differences between the Groups A and B on their global level of hope. Only Group A was given the SHS during the first data collection period (week one). To minimize effects of bias from multiple testing exposures, the measurement of state hope (point-in-time measurement of hope) was delayed for Group B until they began their treatment cycle. Phase two involved the delivery of the two week curriculum by the classroom teacher to Group A.

At the conclusion of the two week unit, phase three was completed when students in group A completed the DTHS and SHS post-tests.

The phases for Group B followed a similar pattern to those of Group A. During Phase three Group B completed the SHS survey. This provided researchers with the data related to the participants' point-in-time level of hope just prior to the delivery of the intervention. It was important to collect this data on Group B at this time in order to parallel the data collection intervals of Group A. Phase four occurred during the third and fourth week and consisted of the delivery of the curriculum to Group B. Data collected during Phase five (in the fourth week) included DTHS and SHS for both groups. The Phase five data represented the post test for group B and the two-week follow-up for group A. In the Phase six (week 6) the DTHS and SHS were used to collect follow-up data on Group B. Table 4.1 summarizes the program implementation phases and time intervals.

Table 4.1: Program implementation phases and time intervals

	<i>Phase I</i>	<i>Phase II</i>	<i>Phase III</i>	<i>Phase IV</i>	<i>Phase V</i>	<i>Phase VI</i>
	Assessment DAY 1 WEEK 1	Intervention WEEKS 1 and 2	Assessment WEEK 2	Intervention WEEK 3 and 4	Assessment WEEK 4	Assessment WEEK 6
Group A	Pre-test: DTHS SHS	Deliver the curriculum	Post-test: DTHS SHS		Follow up: DTHS SHS	
Group B	Pre-test: DTHS		Pre-test: SHS	Deliver the curriculum	Post-test: DTHS SHS	Follow up: DTHS SHS

Data Analysis

Data collected at each stage of the intervention were analyzed using SPSS 17.0. Descriptive statistics were used to identify participant characteristics. Internal consistency of the hope scales was calculated using Cronbach's alpha (Cronbach, 1951). To determine if any significant differences existed between the two groups, t-tests and analysis of variance (ANOVA) were conducted. To determine if any differences existed across testing periods for pre- and post-testing within each group, paired t-tests were conducted. Time constraints precluded performing a test-retest reliability assessment.

FINDINGS

Participant Characteristics

The sample consisted of 21 female high school students enrolled in the Options for Young Parents program in an Independent School District during the 2008-2009 academic school year. There were no males enrolled in the program at the time of data collection. The participants ranged in age from 16 to 18 years and were primarily of a low to middle class economic background. Based on data from the 2007-2008 school year, the estimated ethnic composition of Options was 45% Hispanic, 37% Black (not of Hispanic origin), 13 % Caucasian/White (not of Hispanic origin), and 5% other. The majority of participants in this sample was of Hispanic origin (n = 12), 57.1%, with 33.3% African American (n = 7), 4.8% Caucasian (n = 1), and 4.8% identifying as multi-racial (n = 1).

Most of the participants were in the twelfth grade (n = 9), 43.0%, with the remaining participants being equally distributed across three other grade levels: ninth (n = 4),

19.0%, tenth (n = 4), 19.0%, and eleventh (n = 4), 19.0%. Five of the participants (23.8%) were pregnant for the first time. The remaining (n=16) 76.2% were not currently pregnant, but were parenting one child of their own.

Effects of the Intervention in Increasing Levels of Hope

Data analysis revealed that adolescent mothers in our study could be taught to be more hopeful. A paired t-test was used to compare the total number of scores on the pre-tests and post-tests for both the DTHS (overall level of hope) and the SHS (point in time measurement of level of hope). After a further examination of the total scores on the DTHS, there were significant difference between the pre-tests (M = 69.52, SD = 6.72) and DTHS post-tests (M = 73.57, SD = 6.43) scores $t(20) = 3.29, p = .004$. There was also a significant difference in the total scores for the SHS pre-tests (M = 38.05, SD = 5.16) and SHS post-tests (M = 40.28, SD = 6.17) scores ($t(20) = 2.86, p = .01$). The presence of a statistically significant difference between the two testing periods for the total scores on both of these measures was deemed a promising finding when one considers the sample size (n = 21) (Table 4.2).

Paired t-tests were conducted to identify any differences across testing periods for each group, the analyses revealed significant differences for the pre- and post-tests on both the DTHS and the SHS for only Group A. The findings indicated that state hope and global hope increased following the delivery of the HOPE curriculum (Table 4.3).

Table 4.2: Pre/post-test total scores (Groups A and B) comparison for DTHS and SHS

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
<i>DTHS</i>	Post_trait_total	73.5714	21	6.43095	1.40335
Total	Pre_trait_total	69.5238	21	6.72026	1.46648
<i>SHS</i>	Post_state_total	40.2857	21	6.17368	1.34721
Total	Pre_state_total	38.0476	21	5.16213	1.12647

Paired Samples Test						
		Mean	Std. Deviation	t	df	Sig. (2-tailed)
<i>DTHS</i>	Post_trait_total -	4.04762	5.63450	3.292	20	.004
Total	Pre_trait_total					
<i>SHS</i>	Post_state_total -	2.2381	3.59033	2.857	20	.010
Total	Pre_state_total					

Table 4.3: Pre/post-test comparison for the DTHS and SHS for Group A

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Group A	Post_trait_total	73.2500	12	5.61046	1.61960
<i>DTHS</i>	Pre_trait_total	68.5000	12	7.02593	2.02821
Group A	Post_state_total	41.5000	12	5.21362	1.50504
<i>SHS</i>	Pre_state_total	39.0000	12	4.84299	1.39805

Paired Samples Test						
		Mean	Std. Deviation	t	df	Sig. (2-tailed)
Group A	Post_trait_total - <i>DTHS</i> Pre_trait_total	4.75000	5.17204	3.181	11	.009
Group A	Post_state_total - <i>SHS</i> Pre_state_total	2.50000	2.06706	4.190	11	.002

There was a significant difference in the scores for the DTHS pre-test ($M = 68.5$, $SD = 7.0$) and the DTHS post-test scores ($M = 73.2$, $SD = 5.61$) ($t(11) = 3.18$, $p = .009$) in group A indicating an increase in global hope. A significant difference was also found in Group A between the SHS pre-test scores ($M = 39.0$, $SD = 4.84$) and SHS post-test scores ($M = 41.5$, $SD = 5.21$) ($t(11) = 4.19$, $p = .002$) indicating an increase in state hope. The data indicates that both point in time and overall levels of hope can be improved (Table 4.3).

Table 4.4: Pre/post-test comparison of the agency and pathway components of the DTHS and SHS for Group A

Paired Samples Statistics					
	Mean	N	Std. Deviation	Std. Error Mean	
Agency <i>DTHS</i>	27.5833	12	3.65459	1.05499	
Group A	25.4167	12	5.80687	1.67630	
Pathway <i>DTHS</i>	26.6667	12	2.34844	.67794	
Group A	25.0833	12	3.57919	1.03322	
Agency <i>SHS</i>	21.2500	12	2.86436	.82687	
Group A	20.0000	12	2.82843	.81650	
Pathway <i>SHS</i>	20.2500	12	2.56285	.73983	
Group A	19.0000	12	2.55841	.73855	

Paired Samples Test					
	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Agency <i>DTHS</i>	2.16667	2.65718	2.825	11	.017
Group A					
Pathway <i>DTHS</i>	1.58333	2.46644	2.224	11	.048
Group A					
Agency <i>SHS</i>	1.25000	1.42223	3.045	11	.011
Group A					
Pathway <i>SHS</i>	1.25000	1.13818	3.804	11	.003
Group A					

No significant differences were found between the DTHS pre- and post-test scores or the SHS pre- and post-test scores for Group B. After a further examination of the subscales within the DTHS, there was a significant difference between the pre-test agency ($M = 25.42$, $SD = 5.81$) and the post-test agency scores ($M = 27.85$, $SD = 3.65$) ($t(11) = 2.83$, $p = .017$). Also, among the DTHS pathway subscale, a significant difference was found between the scores on the pre-test ($M = 25.08$, $SD = 3.58$) and the post-test score ($M = 26.67$, $SD = 2.35$) ($t(11) = 2.22$, $p = .048$). These findings suggest that the increased level of hope on the DTHS for group A was a reflection of the improvements in components, agency and pathway. In Group A the SHS agency subscale also showed a significant difference between the pre-test ($M = 20.00$, $SD = 2.83$) and the post-test score ($M = 21.25$, $SD = 2.86$) scores ($t(11) = 3.05$, $p = .011$). Further, the SHS pathway subscale showed a significant difference between the pre-test ($M = 19.00$, $SD = 2.56$) and the post-test ($M = 20.25$, $SD = 2.56$) scores ($t(11) = 3.80$, $p = .003$). These findings suggest that both components (agency and pathway) contributed to the improved level of hope in Group A (Table 4.4). There was no significant difference from the post-test and scores collected in the two week follow-up. When Groups A and B were compared regarding their scores on the pre-test, no significant differences were found; comparisons of their post-test scores also revealed no differences.

Cronbach's alpha was used to evaluate the internal consistency of the scores. The values discovered indicated good internal consistency for the combined totals on the pre/post/follow-up trait scale .823 and excellent internal consistency the combined totals

on the pre/post/follow-up state scale .933. George and Mallery (2003), suggest the following guidelines for assessing the quality based upon the Cronbach score, “ $\geq .9$ -Excellent, $\geq .8$ -Good, $\geq .7$ -Acceptable, $\geq .6$ Questionable, $\geq .5$ Poor, and $< .5$ -Unacceptable” (p.231). The strength of the Cronbach alpha scores indicates that the instruments demonstrated internal consistency.

The findings suggest adolescent mothers can be taught to be more hopeful with the practice of agency strategies and knowledge of practical skills for reaching goals. Group A’s hope levels for both measures, DTHS and SHS, were increased through the implementation of the HOPE curriculum. Further analysis of the data using one way ANOVA revealed that both the sub-components, pathways and agency, contribute to the increase in levels of hope on both the DTHS and SHS for Group A. This finding supports the Hope Theory hypothesis, which suggests that it is the combination of building agency and pathway skills that leads to elevated levels of hope.

DISCUSSION

Students with higher levels of hope are more likely to have academic success and educational achievement. Research indicates that college students who maintain higher levels of academic hope experience a higher level of academic success (Lopez, 2008). Lopez (2008) also suggests that students who set more goals, are more likely to engage in school activities and to pursue goals beyond the classroom (Lopez, 2008). The HOPE curriculum, in this study, functioned to elevate the hope level of adolescent mothers. Since hope levels have been linked to academic success, one would speculate that the improving levels of hope could have a positive impact on the academic success of

adolescent mothers in a similar way to college students. Even a small step in improving educational outcomes warrants further consideration, analysis and trials for the Helping Optimize Planning Efforts curriculum and its impact on academic success.

Although t-tests revealed there was no statistically significant difference between Groups A and B initially, scores indicated greater improvement in Group A. Multiple factors could explain the improvement found in Group A but not found in Group B. One factor that might account for the limited improvement in Group B could be the delayed delivery of the program to that group. The implementation schedule was dictated by the school calendar, which required students to complete all state mandated testing prior to the delivery of the experimental curriculum. Due to this schedule, Group A participated in the program 2 weeks earlier than Group B. Therefore, the delivery of the HOPE curriculum to Group B occurred closer to the end of the academic semester. This proximity to the end of the school year may have contributed to a higher state hope pre-test score. As a result, smaller changes between pre- and post-test scores might be explained by already-high levels of State Hope, at pre-test, for this group.

Two other factors that may explain the differences in improvement observed between Groups A and B are the variations in sample size and initial levels of hope. Although Group A (n=12) only had three more students than Group B (n=9), the difference represented was fourteen percent. The smaller sample size found in Group B could have made it more difficult to detect differences at a statistically significant level.

Another influential factor that could have limited the ability to find statistical significance in the SHS of Group B is the demographics of that group. Approximately

42% of the targeted population was in the 12th grade and about to graduate at the time the curriculum was delivered. The researchers speculated that the elevated level of hope discovered on the SHS pre-test was likely attributable to the ensuing graduation. This close proximity to graduation may have made it more difficult to find a significant difference on various measures of the pre-tests and post-tests.

The presence of a statistically significant difference was deemed a promising finding and provides important evidence to support the hypothesis that hope can be taught, however this study is not without limitations. The small sample (n=21) created a challenge for finding significance on many of the scale measurements. The lack of randomization limits the generalizability; however, the unique characteristics of the sample coupled with the inclusion of the total population provided valuable insights related to levels of hope—and the ability to alter it—in adolescents. One other limitation is related to biases created due to the research design. Since the scales were administered multiple times, testing effects associated with test/re-test practices may place limitations on the internal validity of the study.

Implications for Practice

This attempt to study the ability to elevate levels of hope in adolescent mothers was intentionally limited to one small population. Such limitations served the purpose to circumscribe the evaluation to a well-defined group, in order to test its effectiveness. Because the populations similar to the one in our study are limited in numbers, the researcher wished not to “contaminate” other groups that might, in the future, receive the intervention.

Further exploration of the ability to teach individuals to be more hopeful is most assuredly needed. Plans to replicate this study, with modifications to reduce the number of limitations, are currently in place. The first modification will be to alter the time of delivery of the curriculum. October and February appear to be more appropriate times for delivery because the students have had time to acclimate to the routines of the semester but still have more than half the semester remaining, and this minimizes the potential confounding influence of proximity to graduation.

A second alteration will be to expand the sample size. Such expansions could well be multi-faceted. There is certainly the possibility of having greater representation of ages since this initial program included primarily ages 17 and 18. Increasing the sample size could also facilitate the inclusion of greater cultural diversity, for it was limited in this application primarily to African American and Hispanic participants enrolled in an existing program. Inclusion of other cultural groups would more likely reflect the demographics of the school population in South Central Texas.

When planning future replications of this study, broadening the target population to include teenagers that are neither pregnant nor parenting should be considered. Should only pregnant and parenting teens benefit from the findings of this study? The answer is definitely not. If the Helping Optimize Planning Efforts (HOPE) curriculum is effective with one population (pregnant/parenting teens), it certainly may be applicable to other populations (non-pregnant/non-parenting). Vocational programs, remedial courses and health education offerings are some venues for delivering the HOPE curriculum. In addition to being adapted for other areas and groups, it could be “tailored” for a variety

of ages. The concepts of the curriculum could be incorporated into team sport situations and might also be used by school counselors in individual or group sessions. Future studies could explore the wide range of possibilities.

Conclusion

Although much emphasis has been placed on interventions to avoid adolescent pregnancy, research addressing repeat pregnancy—from a theoretically grounded approach—is conspicuously absent. This research contributes to the field by filling a void in the literature offering a new perspective for identifying those who might be at greater risk for subsequent pregnancies prior to high school graduation.

An additional benefit of teaching adolescent mothers to become more hopeful is the potential for a positive impact upon their academic success. A correlation between academic success and students with higher levels of hope exists. According to Chang (1998), students with higher levels of hope report significantly greater academic and interpersonal life satisfaction than their low- hope counterparts. When assessing college students, high-hope individuals have greater problem-solving abilities, and use fewer disengagement strategies when challenged by difficult academic situations in comparison to low-hope individuals (Chang , 1998). One would expect that these problem-solving skills would also be advantageous adolescent mothers. The main piece of evidence this study provides is that adolescent mothers can be taught to be more hopeful. With such hope-producing proficiency, adolescent mothers are more likely to possess the knowledge and skills requisite to making decisions that will lead to positive academic outcomes.

CHAPTER V

CONCLUSION

The primary purpose of this research report is to explore the use of hope as a strategy for improving personal achievement in pregnant and parenting adolescents by answer the overarching research question: *Can pregnant and parenting adolescents be taught to be more hopeful?* More specifically, this report seeks to make three contributions to the literature which includes:

1. identifying a relationship between hope and achievement,
2. developing an intervention for improving levels of hope,
3. and measuring the effectiveness of an intervention to teach an adolescent mother to be more hopeful.

The first manuscript, found in Chapter II, is a systematic review of the literature. It provides evidence that a positive relationship exists between an individual's level of hope and his/her achievement, in a variety of settings. Based upon the findings from the review, 92% of the studies report a positive correlation between high levels of hope and achievement. There is a positive linear relationship between these two variables, indicating that: As the level of hope increases, the level of achievement increases as well.

The second manuscript describes development and implementation of the Helping Optimize Planning Efforts (HOPE) curriculum (see Chapter III). Designed in accordance with Hope Theory, the curriculum emphasizes building pathway and agency skills as a mechanism for improving hope levels. Findings from the study suggest that

adolescent mothers, with the use of social support, can be taught to be more hopeful when a theoretical foundation is used to foster hope development. Hope Theory and its sub-components of agency and pathway provide the cognitive foundation on which to develop knowledge and skills for achieving individual, social and academic goals.

Chapter IV contains the final manuscript which summarizes the evaluation of the HOPE curriculum discussed in Chapter III. The presence of statistically significant differences is deemed a promising finding and provides important evidence to support the hypothesis that hope can be taught. With such hope-producing proficiency, adolescent mothers are more likely to possess the knowledge and skills requisite to making decisions that will lead to positive academic outcomes.

This report is a valuable asset to the field of health education literature, for it offers evidence that the development of hope can be an effective strategy for promoting positive academic outcomes. It is hypothesized that as an adolescent mother experiences more positive academic outcomes, she will be less likely to experience a repeat pregnancy. This initial research provides valuable and necessary groundwork for future studies to explore the relationship between the level of hope and the likelihood of subsequent pregnancy.

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APPENDIX A

Session 1

Students were made aware of potential impact using goal-setting strategies on their future accomplishments.

- Baseline data was collected on both hope scales (SHS and DTHS).
- As an introduction to pathway (goal identification) and agency thinking (positive thoughts), students brainstormed some of their hopes, dreams and desires and identified some previous successes.
- An experiment was completed to examine the probability of meeting a goal when the process was left to chance. This emphasized the need to be persistent when striving for a goal. Students were led to the conclusion that to achieve desired goals, they must take responsibility for designing a plan for goal attainment (pathway) and for remaining positive and persistent in seeking their goal (agency).
- A journal prompt challenged student to explain why identifying pathways to reach a goal was critical to goal achievement. Students were asked to set an immediate goal that could be accomplished by tomorrow. This challenge facilitated the ability to experience a small success and practice skills related to identifying the pathway for meeting a goal.

Session 2

Students were provided instruction on skills for goal-setting.

- In small groups of 3 or 4, students brainstormed short range (able to be accomplished within the week), medium range (this month) and long range (this year) goals. To generate ideas, a round robin method was used. Each student recorded her idea and then passed the paper to the next person for additional ideas to be added. The object was to list as many goals as possible in 10 minutes. The post-brainstorming discussion questions highlighted the difficulty of setting goals. For example, one question posed was, “Were some goals harder to set than others?”
- The teacher pointed out the need for setting specific and measurable goals. The brainstormed goals were then traded between groups and were assessed for specificity and measurability.
- Lecture was provided to teach the SMART method for goal setting. This method is commonly used in strategic planning by government, industry, non-profit organizations and in education. Using this method teachers and students are empowered and share responsibility for learning to use a goal-setting and monitoring process. The SMART acronym represents: Specific and Strategic, Measurable, Attainable, Results-based [Realistic] and Time-bound (O’Neill, 2004 p. 32). According to the SMART method, goals should be Specific about what is to be accomplished, and Strategies are identified for meeting the goal. SMART goals are also Measurable, providing indicators that demonstrate progress toward the goal. The difficulty in achieving a goal is an assessment of

its attainability. Attainable SMART goals are challenging but not so difficult to meet that the student gives up on her goal pursuit. SMART goals are Result-based (Realistic), considering the knowledge, skill set and competency necessary to accomplish the goal. Finally, SMART goals are Time-bound—having a designated time frame for completion. The SMART method enhanced the development of pathway skills in the HOPE curriculum by teaching a structured sequence for the development of tangible goals.

- Examples of goals were analyzed to ensure that they met the SMART criteria. If the sample goal failed to meet the SMART criteria, the goal was corrected.
- Students were provided graphic organizers that were used to break up the goal statements according to the SMART categories. Students were also provided a “check tool” to test the measurability of their goal or pathway.
- The group was then asked to review their brainstormed goals and to adjust the goal statements using the SMART method. This social support was an aid to developing skills related to pathway.
- The journal prompt asked the students to determine whether or not the previous session’s goal had been met and to discuss feelings about meeting or not meeting it. Students recorded a positive picture (star, smiley face) beside met goals. If the goal was not met, students were to provide suggestions for a new pathway or to justify why they might choose to abandon the goal. For example, it was not

specific enough. Assessing the meeting of goals provided an opportunity for practicing agency skills of self-praise and pathway skills of self-redirection.

- SMART method was used to set new goals and pathways for tomorrow. Additionally, two new goals and pathways were recorded (a week away and a month away) using the SMART method.
- Students were assigned homework. To develop pathway skills, students were asked to practice using the SMART method of goal setting. Students were provided 3 different colored 3X5 cards to record a short, medium, and long range goal. They were to return the cards to class the following session.

Session 3

Students practiced identifying multiple pathways when goal setting and evaluated the influence of barriers and distracters on the successfulness of various pathways. The session also emphasized the use of social support.

- Students were asked to list the goals they recorded on the 3X5 cards in their journal. The cards were saved in a file for later review at designated intervals to assess the accomplishment of the stated goal.
- Students completed an experiment in which they were asked to perform a task while distracters and barriers were added. The experiment highlighted how barriers and distracters inhibit the ability to reach goals by disrupting pathways.

The purpose was to discover the need to remain focused and to eliminate or minimize distracters that could decrease the likelihood of accomplishing a goal.

- Students were given a mind teaser to challenge them to look beyond their initial solution to the problem. The group discussion pointed out the idea that there are usually multiple ways to solve a problem. It also revealed the importance of seeking help from trusted others before taking action. The concepts of social support and pathway development were incorporated while students weighed the pros and cons of the alternatives and sought input from trusted others before acting.
- Students were asked to identify 3-5 different pathways to reach sample goals. Students analyzed how each of the pathways listed might be obstructed and then hypothesized alternative pathways to accomplish each goal.
- Students were asked to evaluate and discuss how a repeat pregnancy might impact the ability to accomplish the sample goals.
- The journal prompt asked each student to identify distracters that might be undermining progress toward her current goals and to list alternate pathways to help.

Session 4

Students continued to examine alternate pathways for goal attainment by considering the impact of broken pathways and by exploring the benefits of using social support.

- Students participated in a demonstration which challenged them to continue seeking the goal despite the introduction of multiple barriers. The activity

required students to rely on help from others to accomplish the desired outcome. Working together, students used problem solving skills to identify alternate pathways to accomplish the task. The activity stressed the need to continue seeking the goal despite the presence of unforeseen barriers.

- Students were then asked to work in groups of 2 or 3 to identify goals and pathways in problem scenarios. Given a goal and a barrier, students identified alternative pathways to accomplishing the goal while evaluating the advantages and disadvantages of the options.
- In the post-discussion of the scenario problems, students evaluated the benefits of having help when solving a problem. Students then analyzed the importance of social support in the solving of problems and the meeting of goals.
- The journal prompt asked the individual to consider the consequences of becoming pregnant again by recording the implications of an additional pregnancy on the meeting of her goals.
- Students were assigned homework. As an introduction to agency thinking, students were asked to respond to open-ended statements that self-describe themselves as individuals. For example, the student would complete the statement: “Two things I do best are ___” or “One of the many positive traits I have is _____.”

Session 5

Students were introduced to the concept of agency thinking and taught to use positive self-talk. They explored the impact of their thinking on their ability to accomplish their goals and to develop the confidence to make positive statements about themselves.

- Students participated in an experiment that challenged them to direct the movement of an object in a given direction by concentrating on the object and orally telling themselves the instructions. Students explored the influence of their thinking on the ability to accomplish an assigned task. The concepts of agency thinking and the self-fulfilling prophesy were discussed as students recognized that they could do what they believed they could do.
- A teacher-led discussion highlighted the difficult time some adolescents have with thinking positively about themselves and the importance of adopting a positive perspective. Students practiced skills related to agency thinking by writing short, positive statements about themselves.
- Students were then asked to select one of the positive statements and to expand upon it by sharing the meaning behind the statement in words and pictures.
- The journal prompt asked each student to explain the concept of agency thinking and to explain why it was important to think in a positive manner.

Session 6

Students discovered how thinking negatively interfered with goal accomplishment while recognizing the advantages of agency thinking and using positive self-talk.

- Students were asked to play a game where a dice-roll determined if a positive or negative comment was to be stated. Negative statements resulted in the loss of air needed to fill an inflatable ball. Positive statements added air to the ball which was advantageous for playing the game that followed. During the game, peers provided social support by recording all the positive statements about each student on post-it notes. The game allowed the participants to practice agency thinking by orally stating positive comments about themselves. The recorded comments from the game were given to the individual at the conclusion of the game.
- After reviewing all the positive comments on their post-it notes, students were instructed to place their positive notes in places where they would frequently see them (ie. bathroom mirror, wallet, make-up bag, etc...) as a reminder to practice agency thinking.
- Each student then had the opportunity to use agency thinking to create an acrostic using her name as the beginning letters to state her special abilities.
- The journal prompt asked each student to record a few of the positive statements that were meaningful to her from the game using post-it-notes as reinforcement for the concept of agency thinking.

Session 7

Students recognized examples of agency thinking in life situations depicted in the DVD clip. They also explored the need for commitment and accountability in goal attainment.

- After viewing a DVD clip, students identified examples of both positive and negative self-talk used by the main character. Students discussed the impact of the main character's comments on his ability to accomplish his goal. They also discussed the social support role provided by the other characters in the clip. Students evaluated the importance of the primary supporting character in providing accountability and encouragement for the accomplishment of his desired goal.
- Students then identified a partner in the classroom who could provide social support in helping her to meet her goals. The partners signed commitment contracts to indicate their willingness to help one another by holding each other accountable for the meeting of goals.
- The journal prompt asked each student to record two or more of her own positive statements about herself and to state reasons why it is important to have social support when setting challenging goals.

Session 8

Students completed an open-ended assignment which assessed the ability of the students to apply the principles of pathway, agency and social support.

- Students worked in pairs to examine a case study and synthesized a plan. The students were asked to identify and set appropriate goals for the individual in their case. They were also asked to develop a plan for the accomplishment of the target goal that identified multiple pathways, provided examples of agency techniques and incorporated methods for using social support.
- The journal prompt asked each student to review the daily goals that she had set during this unit and to record her perceptions on the difficulty of accomplishing her goals. Each described what she believed was the most important thing she learned during the HOPE curriculum. Students were instructed to flip forward 3 weeks in their daily planners and to record two or more of their own positive statements about themselves.

Session 9

As part of the conclusion for the unit, the teacher provided feedback from the case study assessment. Students were evaluated on their ability to apply the concepts of pathway, agency and social support in resolving the case study provided. Students again completed both hope scales (SHS and DTHS).

Follow Up

Two weeks after the completion of the HOPE curriculum, students were again surveyed to assess the retention of both hope levels.

APPENDIX B

The Dispositional Trait Hope Scale

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

- 1. = Definitely False
- 2. = Mostly False
- 3. = Somewhat False
- 4. = Slightly False
- 5. = Slightly True
- 6. = Somewhat True
- 7. = Mostly True
- 8. = Definitely True

- _____ 1. I can think of many ways to get out of a jam.
- _____ 2. I energetically pursue my goals.
- _____ 3. I feel tired most of the time.
- _____ 4. There are lots of ways around any problem.
- _____ 5. I am easily downed in an argument.
- _____ 6. I can think of many ways to get the things in life that are important to me.
- _____ 7. I worry about my health.
- _____ 8. Even when others get discouraged, I know I can find a way to solve the problem.
- _____ 9. My past experiences have prepared me well for my future.
- _____ 10. I've been pretty successful in my life.
- _____ 11. I usually find myself worrying about something.
- _____ 12. I meet the goals that I set for myself.

During the administration of the Dispositional Trait Hope Scale, its title is changed to, "The Future Scale." The agency subscale is derived by summing items 2, 3, 10 and 12; the pathway subscale score is derived by adding items 1, 4, 6 and 8. The total DTHTS score is derived by summing the four agency and four pathway items.

APPENDIX C

The State Hope Scale

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes *how you think about yourself right now* and put that number in the blank provided. *Please take a few moments to focus on yourself and what is going on in your life at this moment. Once you have this "here and now" set, go ahead and answer each item according to the following scale:*

1 = *Definitely False*, 2 = *Mostly False*, 3 = *Somewhat False*, 4 = *Slightly False*,

5 = *Slightly True*, 6 = *Somewhat True*, 7 = *Mostly True*, and 8 = *Definitely True*.

- _____ 1. If I should find myself in a jam, I could think of many ways to get out of it.
- _____ 2. At the present time, I am energetically pursuing my goals.
- _____ 3. There are lots of ways around any problem that I am facing now.
- _____ 4. Right now I see myself as being pretty successful.
- _____ 5. I can think of many ways to reach my current goals.
- _____ 6. At this time, I am meeting the goals that I have set for myself.

Note. When administering the measure, it is labeled the Goals Scale. The even-numbered items are agency, and the odd-numbered items are pathways. Subscale scores for agency or pathways are derived by adding the three even- and odd-numbered items, and the total State Hope Scale score is the sum of all six items.

Taken from Snyder, C. R., Simpson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the State Hope Scale. *Journal of Personality and Social Psychology*, 2, 321-335. The scale can be used for research purposes without contacting the author.

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