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Interactions Between Race, Gender, and Income in Relationship Education Outcomes

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ABSTRACT

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Researchers and policymakers have become interested in the use of relationship education programs as a means to remedy the effects of family instability. Research suggests that relationship education produces positive outcomes with some groups. However, whether populations who are socially and economically more at-risk of relationship problems and relationship dissolution are gaining from relationship education remains an open question. Ecocultural Theory is used to conceptualize the research question and to illustrate the importance of studying diverse populations. The purpose of this study is to assess relationship education outcomes for select at-risk groups. The sample for this study (n=1,907) comes from participants of a relationship education program in a Southern state in the United States. Ordinary Least Squares regression was used to analyze interactions between race, gender, and income in predicting change in individual empowerment, relationship quality, and relationship commitment following participation in a relationship education program. Results did not indicate any significant difference between subgroups of race, gender, and income. Clinical implications for relationship educators working with diverse and at-risk populations and future directions for research are discussed.

Keywords: relationship education, at-risk, low-income, race, gender, demographic

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Introduction

Research on marriage and family from the past fifty years suggests a growing instability in family life across the United States (Cruz, 2013; Manning, Brown, & Payne, 2014; Payne, 2013). Family instability comes with consequences. One conservative estimate pegs the annual taxpayer cost of divorce and unwed childbearing at $112 billion (Scafidi, 2008), and family fragmentation is associated with negative child outcomes (Amato, 2001). In an effort to reduce expenses and negative outcomes associated with divorce and non-marital childbearing, the federal government launched the Healthy Marriage Initiative in 2002 and began funding relationship education services and research (Administration for Children and Families, 2014). The purpose of this project is to explore relationship education outcomes among some of the demographic groups that are most at-risk of relationship problems and relationship dissolution. Because reducing divorce and family dissolution may reduce poverty and increase child well-being (Hawkins & Ooms, 2012), it is crucial to assess how relationship education might prevent negative family outcomes.

The risk factors being examined include race (Bulanda & Brown, 2007; Coverdill, Lopez, & Petrie, 2011), income and education levels (Amato, 2014; McLanahan & Beck, 2010), relationship status (Manning, Smock, & Majumdar, 2004; Bumpass, Sweet, & Cherlin, 1991), and pre-intervention levels of relationship and individual functioning (Adler-Baeder, et al., 2010; Rauer, et al., 2014).

Review of Literature

Diversity and Relationship Education

Relationship education programs have been shown to produce moderate effect sizes in improving relationship quality (.24 - .36) and communication skills (.36 - .54) for a largely

White, middle-class group (Hawkins, Blanchard, Baldwin, & Fawcett, 2008). One of the major struggles in addressing family instability through relationship education, however, is diversity and risk, namely variance across economic, ethnic, and gender differences. Relatively little is known about what works in relationship education, for whom it works, and why it works (Wadsworth & Markman, 2012). Risk factors for relationship problems and dissolution matters in relationship education because resources for delivering interventions are limited, and if risk is ignored, those resources may go toward intervening with couples who need intervention the least (Bradbury & Lavner, 2012).

One of the next steps in relationship education research is to examine program outcomes for more nuanced subgroups within the more general group of at-risk individuals (Adler-Baeder, et al., 2010; Rauer, et al., 2014; Rauer, Karney, Garyan, & Hou, 2008). Risk factors are likely to co-occur in at-risk populations (Rauer, Karney, Garyan, & Hou, 2008), which further complicates the question of whether or not relationship education helps individuals, couples, and families who are part of a specific at-risk group. However, the co-occurrence of risk factors also drives the need to investigate relationship education outcomes among at-risk populations. If one risk factor can be modified by relationship education, the development of future risk factors may be prevented. For example, African-American couples report lower levels of marital quality and are more likely to divorce because of it (Bulanda & Brown, 2007). A relationship education program that helps increase marital quality for African-Americans may prevent future divorce in a participant couple, which in turn may reduce future risk factors for the couple and any children they have.

Researchers continue to debate the usefulness of relationship education as a viable method of addressing social ills such as poverty and negative child outcomes (Hawkins, et al.,

2013; Johnson, 2012; Johnson, 2013; Amato, 2005). The basic question to be answered is this: Are those who are most at-risk of relationship problems and relationship dissolution benefitting significantly from relationship education?

Ecocultural Theory

Ecocultural Theory is a useful tool to guide research on relationship education outcomes across diverse populations, and calls for attention to ethnic and cultural differences in research (Phenice, Griffore, Hakoyama, & Silvey, 2009). Individuals and groups may form ecocultural niches based on ethnicity, gender, income level, or a variety of other factors. An ecocultural niche refers to the lifestyle, rituals, and meaning that groups create in order to maintain a sustainable daily routine of life based on ecological and cultural factors in their lives, such as income level. An example of an ecocultural niche could be the family and community culture of dual-earning couples, who organize their parenting roles and gender roles within the family based on both partners working for pay. A contrasting ecocultural niche could be a traditional family where the husband is the breadwinner and the wife stays at home with the children. The cultures of dual-earning couples and traditional couples may be different as they work to construct sustainable, meaningful daily routines that work for them (Phenice, Griffore, Hakoyama, & Silvey, 2009). Interventions intended to help these families may have different effects based on family culture.

By applying Ecocultural Theory to relationship education research, we can expect that interventions may not affect ethnically, economically, and structurally diverse families in the same way they affect White, middle-class, stable couples. For example, program content that addresses communication skills may benefit middle-class couples, but not be very helpful to low-income couples, whose main concerns are more likely to be financial problems or drug and

alcohol use (Trail & Karney, 2012). In this case, modifying program content based on income level might be an adjustment informed by Ecocultural Theory based research.

Past research shows evidence that those who may be more at-risk based on factors such as income benefitted differently from a relationship education intervention than others who were less at-risk (Amato, 2014; Rauer, et al., 2014). Some researchers found that these groups reported greater increases in later help-seeking (such as attending couples counseling) following premarital education than groups with less economic, ethnic, and educational risk factors (Williamson, Trail, Bradbury, & Karney, 2014). In this case, interventions seem to have varying effects based on demographic factors that may contribute to the development of different ecocultural niches.

Family structure across race is another good example of why Ecocultural Theory is needed in this relationship education research. Children who grow up in households with two biological parents show greater stability and more positive outcomes than children in other family structures (Amato, 2001). In 2013, only 30% of Black children lived with two married biological parents, compared to 69% of White children (Payne, 2013). Clearly, Black families are much more likely to have less stable family structures than White families. Ecocultural theory based research could be applied to relationship education by developing and testing specialized programs for families with diverse family structures that emphasize culture-specific issues and needs.

Studying Relationship Education Among At-Risk Populations

Some evidence indicates that relationship education may produce positive outcomes for some at-risk populations, such as those with low-income (Hawkins & Fackrell, 2010). One of the reasons that relationship education may be helping high-risk participants is that the programs

remedy one or more factors that make them high-risk (Halford & Wilson, 2009). For example, if a couple is at-risk of negative relationship outcomes because of low relationship quality, a program that addresses factors that improve relationship quality would theoretically reduce risk related to low marital quality for that couple. Bradbury and Lavner (2012) calls attention to the difficulty of recruiting and retaining high-risk couples for relationship education, and research about the effectiveness of relationship education with these groups may help advocate the importance of allocating resources to recruit and retain such couples.

Some evidence even suggests that those with lower incomes (below $25,000) in a particular program benefitted even more from relationship education than those with higher incomes for both men and women (Rauer, et al., 2014). Another recent study also found the greatest positive relationship education outcomes for high-risk participants (Amato, 2014).

One possible explanation for the greater positive outcomes reported by high-risk participants in past research is a basement effect. High-risk participants may show greater improvement compared to more stable participants because high-risk participants have more room to improve. An example that may support this theory is the finding that participants with higher income levels entered a relationship education program at higher levels of individual and relationship functioning than those with lower incomes (Adler-Baeder, et al., 2010). This means that those who were more likely to be struggling economically appeared also to be most likely to report lower levels of relationship and individual functioning at the beginning of the program, leaving the most room for possible growth in these areas.

It is crucial to continue investigating relationship education outcomes with participants that are at-risk for relationship problems and dissolution. If relationship education proves to be an effective intervention for at-risk groups, then it may be one of the best ways to promote

family stability, thus decreasing the negative outcomes and high costs that come with relationship dissolution and family problems.

Of course, there are caveats to the theory that relationship education can be used as a remedy for social ills linked to poor relationship and family outcomes. Though some evidence suggests that relationship education outcomes can be maintained long term (Gardner & Boellaard, 2007), other studies suggest that the retention of gains over time may be a struggle for at-risk participants. One meta-analysis found that more distressed couples did not retain program effects as well over time compared to well-functioning couples (Blanchard, Hawkins, Baldwin, & Fawcett, 2009). In addition, Halford and Wilson (2009) found that the maintenance of high relationship satisfaction following couples relationship education after four years was not predicted by risk level. However, reliable, longitudinal outcome research on relationship education participants is scarce, and much more research is required before definitive conclusions can be drawn about how relationship education is or is not helping at-risk families in the long run (Bradbury & Lavner, 2012). It may be too early to give up on relationship education as a method of assisting couples and families who are at greater risk for relationship problems and relationship dissolution.

Demographics: Race, Income, and Gender

Investigating the effects of relationship education on various ecocultural niches represented by demographic variables is an important next step. Several studies have made tentative discoveries about subgroups of race, income, and gender in how they benefit from relationship education (Rauer, et al., 2014; Adler-Baeder, et al., 2010; Trail & Karney, 2012). While some have hypothesized possible explanations for their findings, these hypotheses have yet to be directly tested.

Some federally funded relationship education programs are being proven to produce positive effects for low-income participants and subgroups of gender and income (Rauer, et al., 2014). This is especially important when considering the limited resources available for providing relationship education services. If certain groups are more at-risk and benefit the most from relationship education, then greater portions of the available resources can be allocated for intervening with those groups in order to maximize positive effects. The Building Healthy Marriages program showed increases for low-income participants in the area of marital satisfaction, specifically on problem solving, communication, time together, affective communication, financial disagreement, global distress, and aggression (O'Halloran, Rizzolo, Cohen, & Wacker, 2013). Rauer, et al. (2014) also found preliminary evidence that low-income participants benefitted more from relationship education,and more specifically that lower-income men reported the greatest positive changes in relationship quality. Another study found modest evidence that lower-income men reported greater changes than other groups in couple functioning following participation in relationship education (Adler-Baeder, et al., 2010). Though tentative, this evidence justifies an expectation to find the greatest positive changes over the course of the relationship education program for low-income men in the area of relationship quality compared to other gender/income subgroups. Knowing that low-income men benefit the most from relationship education matters greatly because effort and resources can be directed toward creating opportunities for these men to participate in interventions.

Relationship quality for Blacks can be affected by additional stressors from outside marriage, such as discrimination, in addition to financial strain that may affect low-income couples of all races (Lincoln & Chae, 2010). Trail and Karney (2012) speculated that additional outside stressors such as descrimination could be made worse by financial stress. This is

supported by the findings of Rauer, Karney, Garyan, and Hou (2008), which hypothesized that risk factors can operate differently in relationships based on the presence or absence of additional risk factors. This is another specific example of an ecocultural niche formed by a combination of demographic factors. Because financial stressors combined with outside stressors may be greater for Blacks, it is expected that low-income Blacks may stand to gain the most from relationship education, and are predicted to show more improvement than other race/income subgroups.

Subgroups of race, income, and gender are also expected to benefit more from relationship education than others. Trail and Karney (2012) found that low-income Black and Latino men reported higher levels of problems with alcohol and drug use as well as higher levels of relationship problems related to being faithful than any other race, gender, and income sub-group. This research shows an example of an ecocultural niche formed by gender, ethnic, and income differences. Ecocultural Theory informs empirical investigations of subgroups of race, gender, and income.

Other Variables to Consider

Though the present study intends to focus on interactions between the demographic variables of race, gender, and income, it is also important to give attention to other variables based on research about relationship education and individual and relationship factors and to control for relevant variables. In addition to the basic demographic variables of age and education, the following variables should be considered.

First, pre-intervention levels of relationship quality, relationship commitment, and individual empowerment should be considered because of basement effects (Adler-Baeder, et al., 2010). Those who start with lower functioning in these areas may have the most room to improve.

Second, attendance status has been shown to be a relatively strong predictor of relationship education outcomes (Adler-Baeder, et al., 2010). This study found that attending a relationship education program as a couple rather than individually better predicted positive change in couple functioning and relationship confidence for men and women, than other demographic variables such as race, income, and marital status. Because attending with a partner appears to be so important in predicting positive outcomes for couples, attendance status will be included as a control variable.

Finally, relationship status and cohabitation should be included as a control variable as well. The reason for this is that marital status and cohabitation have been shown to be related to relationship quality and stability (Manning, Smock, & Majumdar, 2004; Skinner, Bahr, Crane, & Call, 2002) and thus should be controlled for when assessing relationship education outcomes that involve relationship quality and commitment.

Hypotheses

In summary, past relationship education research that has found some evidence that low-income men may be benefitting the most from relationship education in the area of relationship quality (Rauer, et al., 2014; Adler-Baeder, et al., 2010). Blacks may be more at-risk of co-occuring risk factors, such as stress from discrimination and low-income (Lincoln & Chae, 2010; Trail & Karney, 2012; Rauer, Karney, Garyan, & Hou, 2008), and generally report lower levels of marital quality and life satisfaction compared to Whites (Bulanda & Brown, 2007; Coverdill, Lopez, & Petrie, 2011), and thus low-income blacks may gain more relationship quality, commitment, and individual empowerment from relationship education. Some evidence suggests spefically that, low-income, Black men reported more problems in relationships and more struggles with alcohol and drug use than Whites (Trail & Karney, 2012). Considering this

research, low-income, Black men may gain the most relationship quality, commitment, and individual empowerment from relationship education.

Based on this research, the following hypotheses are made for this study. Hypotheses are made in the context of controlling for pre-intervention levels of relationship quality, commitment, and individual funtioning, as well as education, age, relationship and cohabitation status, and attending with a partner.

H1: Lower-income men will show greater increases in relationship quality following participation in relationship education than other subgroups of gender and income.

H2: Lower-income Blacks will show greater changes in relationship quality, relationship commitment, and individual empowerment following participation in relationship education than other subgroups of gender and income.

H3: Lower-income, Black men will show greater changes in relationship quality, relationship commitment, and individual empowerment following particpation in relationship education than other subgroups of gender, income, and race.

Methods

Participants

The data used in this study were taken from pre- and post-intervention surveys of participants who completed a federally funded couple relationship education program as part of a healthy marriage initiative in a Southern state in the United States of America from 2006 to 2011. No incentives were offered for participation, though childcare and meals were sometimes provided to participants. Participants enrolled in the relationship education program through Family Resource Centers in their communities (Adler-Baeder, et al., 2011). All classes were open to the community and no selection criteria were used for class participation. The program

was offered at no charge to participants. Classes were taught by a male/female team of relationship/marriage educators. All teaching teams were jointly trained in delivering the program and collecting evaluation data, and were routinely monitored for program fidelity. Classes consisted of 6-12 two hour group educational sessions focused on content that would be helpful in building knowledge and skills for healthy couple relationships and marriages. Participants chose one of four programs that contained research-based core topics and skills identified by The National Extension Relationship and Marriage Education Network (Futris & Adler-Baeder, in press). Program options included *Together We Can* (Shirer, 2009), *Mastering the Mysteries of Love* (Guerney & Ortwein, 2004), *Basic Training for Black Couples* (Slack & Muhammad, 2005), and *Smart Steps for Stepfamilies* (Adler-Baeder F. , 2007). No significant differences between these four curricula in effectiveness have been published.

Participants who reported not being in a committed relationship were excluded from the analysis because this study is examining improvements in relationship quality and commitment as well as individual empowerment, so single participants would have no relationships to report on.

Participants who were not Black (African-American) or White (European-American) were excluded from the analysis due to small numbers (n=77), leaving a final analytic sample of 1,907 participants. The sample was ethnically diverse, containing 44% Blacks and 56% Whites. The majority of the sample was female (69%).

Participants varied in annual household income, with the median income being between $14,000 and $24,999. Of all participants in the sample, 31% reported annual incomes of less than $7,000, 12% reported incomes from $7,000-$13,999, 13% reported incomes from $14,000-$24,999, 14% reported incomes from $25,000-$39,999, 17% reported incomes from $40,000-

$74,999, 6% reported incomes from $75,000-$100,000, 6% reported incomes greater than $100,000.

In regards to education, 23% of the sample did not graduate from high school, 28% completed high school or a GED, 21% had some college, 13% completed 2 years of college or a technical school degree, 10% completed a 4-year college degree, and 6% completed post-college education, such as a Master's or Doctorate degree.

Approximately 56% of participants were married, 9% were engaged and living together, 3% were engaged and not living together, 11% were dating someone and living together, and 21% were dating someone and not living together. The majority of participants attended without a partner (65%), and 35% of participants attended with a partner.

The mean age was 34.9 years old and ranged from 15 years old to 84 years old.

Measures

Measures used to collect data were drawn from established, valid and reliable social science measures designed to assess individual, couple, and family functioning (Adler-Baeder, et al., 2011).

Relationship Quality. The measure for relationship quality (Norton, 1983) used a scale comprised of five items where participants rated aspects of relationship quality on a seven-point Likert scale, where 1="Very strongly disagree" and 7="Very strongly agree". Items included "We have a good marriage/relationship", "My relationship with my spouse/significant other is very stable", "Our marriage/relationship is strong", "My relationship with my spouse/significant other makes me happy", and "I feel like a part of a team with my spouse/significant other". Alpha reliability coefficients for this scale were .96 at pre-test and .97 at post-test.

Relationship Commitment. The scale for relationship commitment (Stanley &

Markman, 1992) was comprised of five items where participants rated their level of relationship confidence and dedication. Confidence is rated on a five-point Likert scale, where 1="Not at all" and 5="Extremely" and includes the items "I feel good about our prospects to make this relationship work for a lifetime", "I feel very confident when I think about our future together", and "We have the skills a couple needs to make a marriage last". Dedication is rated on a five-point Likert scale, where 1="Not at all committed" and 5="Completely committed" and includes the items "My level of commitment to relationship" and "My opinion of my partner's level of commitment to relationship". Alpha reliability coefficients for this scale were .92 at pre-test and .94 at post-test.

Individual Empowerment. The scale used for individual empowerment (Adler-Baeder, et al., 2010) was comprised of six items assessing individual empowerment on a five-point Likert scale, where 1="I have not thought about this" and 5="I do this on a regular basis". Items included "I express myself clearly and without fear", "I have the power to manage the challenges in my life", "I ask for help from others for my family", "I don't stay in a relationship when it is unhealthy and unsafe", "I recognize my strengths", and "I manage the stress in my life". Alpha reliability coefficients for this scale were .70 at pre-test and .71 at post-test.

Variables

Variables described in this section were either used in combination with another demographic variable to assess interactional effects on one or more of the dependent variables or were included individually as control variables. The dependent variables are change scores for pre-intervention to post-intervention levels of relationship quality, relationship commitment, and individual empowerment. Change scores were calculated by subtracting the participant's pre-intervention scores in each of these three variables from post intervention scores.

The analysis included gender (0=Male, 1=Female), race (0=White, 1=Black), annual household income (1=<$7000, 2=$7,000-$13,999, 3=$14,000-$24,999, 4=$25,000-$39,000, 5=$40,000-$74,999, 6=$75,000-$100,000, 7=>$100,000), education (1=<High School, 2=High School degree, 3=Some College, 4=Two-Year College/Technical School, 5=Four Year College Degree, 6=Post-College Degree), age (continuous, 15-84 years old), attendance status (0=Attended Alone, 1=Attended With Partner), and relationship status (1=Married, 2=Engaged/Living Together, 3=Engaged/Not Living Together, 4=Dating/Living Together, 5=Dating/Not Living Together). In addition, pre-intervention levels of relationship quality, relationship commitment, and individual empowerment were included.

Analytic Strategy

The first step in the analysis was to compare mean differences between groups contained in each independent variable relative to each dependent variable. Race, gender, and attendance status are dichotomous variables and were already be coded such that a t-test could be produced. Dummy variables were created for relationship status such that t-tests could be produced to compare means of each dependent variable for participants who were dating (1=Dating, 0=All Other Groups), engaged (1=Engaged, 0=All Other Groups), and married (1=Married, 0=All Other Groups). Cohabitation (1=Living Together, 0=Not Living Together) was also included. ANOVA tests were used to compare means for categories contained in income and education variables.

The next step of the analysis was to produce a correlation matrix of all the variables being used in the analysis. This included gender, race, income, education, age, attendance status, and relationship status as well as pre-program levels of relationship quality, relationship commitment, and individual empowerment. The outcome variables being used in the analysis

were included as well, which are pre-program to post-program changes in relationship quality, relationship commitment, and individual empowerment. The purpose of the correlation matrix was to initially assess possible relationships between each of the dependent variables and each of the independent variables, and also to ensure that each dependent variable did not too closely resemble another dependent variable.

After producing a correlation matrix and mean score comparison tests for all of the dependent and independent variables, Ordinary Least Squares Regression was used for the final analysis. Two-way interaction terms for Gender*Income and Race*Income, and a three-way interaction term for Race*Gender*Income, were analyzed along with the control variables using separate OLS regression models for each interaction and dependent variable as described in the hypotheses for this study. Because data for income and education were defined categorically rather than continuously, each category of income and education was treated as a dummy variable in the regression models. The categories with the most observations were used as the reference categories for income (<$7k, n=511) and education (High School Diploma, n=508).

Results

The first step in the analysis was to conduct mean comparison tests with all independent variables for each dependent variable. To assess mean differences between groups within independent variables, T-tests were conducted for dichotomous categorical variables, and ANOVAs were used to compare means for variables with more than two categories. Results of the mean comparison tests can be seen in Table 2. Whites appear to gain more individual empowerment than Blacks, but no significant differences were found for income or gender.

The next step was to conduct pairwise correlations for all variables to assess relationships between variables. Results can be seen in Table 3, along with significance indicators for

coefficients that were statistically significant. Pre-intervention levels of individual empowerment, relationship quality, and commitment were moderately, negatively correlated with individual empowerment change, relationship quality change, and commitment change, respectively. This reflects expected basement effects. Income and education were moderately, positively correlated. All variables involving relationship quality and commitment were moderately to strongly, positively correlated. Though these variables were correlated, past research has demonstrated that relationship quality and commitment are separate dimensions of relationships (Amato, Booth, & Johnson, 2007).

The next step was to use OLS regression analysis to assess interactions between independent variables in predicting relationship education outcomes. In testing Hypothesis 1, relationship quality change was regressed on an interaction term for gender and income and all control variables. Table 4 shows results for this part of the analysis. Model 1 includes all variables with no interaction terms. Model 2 includes all variables and an interaction term for gender and income. Though the purpose of the analysis is to assess interactions between variables rather than individual predictors of relationship quality change, results for both models are displayed side by side in order to show any differences that appear as a result of including an interaction term for gender and income. Both models were statistically significant at the $p<.001$ level and R^2 values remained consistent across both models.

Model 1 indicates that pre-intervention levels of relationship quality predicted relationship quality change such that as pre-intervention level of relationship quality increased, relationship quality change decreased, indicating a possible ceiling effect. Pre-intervention levels of commitment predicted relationship quality change such that higher levels of pre-intervention commitment predicted greater relationship quality change. Attending with a partner predicted

greater relationship quality gains. Being engaged predicted greater relationship quality gains as well. Cohabitation, however, predicted lower relationship quality change. No other factors in Model 1 significantly predicted relationship quality change.

All significant predictors of relationship quality change as demonstrated in Model 1 remained consistent in Model 2, where the interaction term for gender and income is included. In addition to the predictors discussed from Model 1, Model 2 shows that having a 2-year college degree and those with an income of $25k-$40k both predicted smaller gains in relationship quality. For the interaction term between gender and income, each category of income was tested for an interaction with gender. The only interaction that proved to be significant was the interaction between gender and having an income of $14k-$25k. Because the reference category for income was $0-$7k, this significant interaction indicates that the difference between males in the $0-$7k and $14k-$25k income categories and the difference between females in these income categories in relationship quality change scores were statistically significantly different from each other. Figure 1 is a graph that displays the interaction between gender and income.

Post-hoc analyses were used to test whether the subgroups of gender and income tested in this interaction were actually different from one another. Dummy variables were coded to represent females in the $0-$7k category, females in the $14k-$25k category, males in the $0k-$7k category, and males in the $14k-$25k category. Figure 2 displays the mean relationship quality change scores for each of these four groups, and indicates the number of observations in each group. Using an ANOVA test, mean relationship quality change scores for these four groups were compared. The post-hoc analysis indicated that there were no statistically significant mean differences between these groups. This indicates that while the difference between men whose income was less than $7k and men whose income was $14k-$25k was significantly

different from the difference between women at these income levels, subgroups of gender and income were not actually statistically different from one another in relationship quality gains following relationship education. Hypothesis 1, which predicted that low-income men would gain the most relationship education than other subgroups of income and gender, was not supported by the analysis.

Hypothesis 2 predicted that low-income Blacks would gain the most relationship quality, commitment, and individual empowerment of any subroup of race and gender. This hypothesis was not supported. No interactions were found for race and income in predicting change scores in relationship quality, commitment, and individual empowerment.

Hypothesis 3 predicted that low-income, Black males would gain the most relationship quality, commitment, and individual empowerment of any subroup of race, gender, and income. This hypothesis was not supported. No significant interactions were found between race, gender, and income in predicting change scores in relationship quality, commitment, and individual empowerment.

Discussion

The primary purpose of this study was to begin looking at how subgroups of the demographic variables of race, gender, and income benefit from relationship education. Recent research calls for the need to investigate relationship education outcomes for subgroups found within the more general group of at-risk individuals (Adler-Baeder, et al., 2010; Rauer, et al., 2014; Rauer, Karney, Garyan, & Hou, 2008). Researchers have stated that little is known about what works in relationship education, for whom it works, and why it works (Wadsworth & Markman, 2012). Through analyzing differences among subgroups of race, gender, and income, this study intended to begin examining the question of for whom relationship education works.

This research draws from Ecocultural Theory (Phenice, Griffore, Hakoyama, & Silvey, 2009), which calls for attention to cultural, ethnic, and other differences in social science research. This study intended to examine possible differences in relationship education outcomes across diverse groups of participants. Hypotheses and findings are discussed.

Gender and Income

The first research hypothesis examined differences in relationship quality gains following relationship education among subgroups of gender and income. The hypothesis was that lower-income men would report the greatest gains in relationship quality (Adler-Baeder, et al., 2010). The analysis examined the interaction between gender and income. Results revealed that the difference between men whose income was $0-$7k and men whose income was $14k-$25k was different from the difference between women in these income categories. However, post-hoc analyses indicated that these subgroups of gender and income were not statistically significantly different from one another in how they gained relationship quality following relationship education.

Though past research has speculated that low-income men might be benefitting the most from relationship education in the area of relationship quality (Rauer, et al., 2014; Adler-Baeder, et al., 2010), this research does not provide support for that hypothesis. In their meta-analysis, Hawkins and Fackrell (2010) found smaller effect sizes for low-income participants in relationship education than were found in another meta-analysis that assessed relationship education outcomes for participants in general (Hawkins, Blanchard, Baldwin, & Fawcett, 2008). Considering these findings, especially that these findings come from meta-analytic research which encompasses a broad range of studies, it makes sense that low-income men did not prove to benefit more than other groups in the present study.

Income and Race

No differences were found between Blacks and Whites based on income level in individual empowerment change, relationship quality change, or commitment change.

As previously discussed, relationship quality for Blacks may be affected by additional stressors from outside marriage, such as discrimination, in addition to financial strain that may affect low-income couples of all races (Lincoln & Chae, 2010). Trail and Karney (2012) theorized that these outside stressors could be worsened by financial stress. No evidence from this research suggests that income level operated differently among Blacks and Whites in how each group benefitted from relationship education.

One explanation for why no differences were found between subgroups of gender and race can be drawn from past research. Stanley, Amato, Johnson, and Markman (2006) found no significant differences in the effects of relationship education by race or income. The present research explored subgroups of race and income specifically, and still did not find any significant differences. Amato (2014), however, found that those who were most at-risk benefitted most from relationship education. Amato (2014) assessed risk using a more complex and comprehensive index that accounted for several specific relationship risk factors, such as young age, graduation from high school, and specific factors related to employment, earnings, and assistance from others. This study only used demographic factors such as race, income, and gender. It is likely that while certain risk factors may be more salient for certain demographic groups, demographic variables themselves are not the risk factors that predict change in relationship education. This could explain why differences in relationship education outcomes did not appear for subgroups of race, gender, and income.

Relationship education does not appear to be closing the gap between Blacks and Whites

in relationship quality (Bulanda & Brown, 2007). However, it appears that Blacks and Whites gain similar amounts of relationship quality from relationship education. This may suggest that a basement effect does not entirely explain differences in how various groups benefit from relationship education (Adler-Baeder, et al., 2010). If groups at high-risk of relationship problems and dissolution benefitted more from relationship education just because they had more room to improve, then Blacks likely would have improved more in relationship quality than Whites. One reason for this is that relationship education as an intervention may help increase reltionship quality to a certain degree regardless of pre-intervention levels of relationship quality, and does not necessarily bring all participants to a particular level of relationship quality.

Income, Race and Gender

The hypothesis that lower-income, Black men would benefit more from relationship education was not supported. This does not mean that there is no difference in how well Blacks and Whites at various income levels are doing in relationships (Coverdill, Lopez, & Petrie, 2011), only that relationship education did not necessarily benefit subgroups of income, race, and gender differently. As discussed in the previous section, general demographic variables such as income, race, and gender may not be associated with differences in relationship education outcomes themselves (Stanley, Amato, Johnson, & Markman, 2006). Rather, more specific risk factors are associated with differences in relationship education outcomes (Amato, 2014).

Clinical Implications

This study did not find significant differences in relationship education outcomes between subgroups of gender, race, and income. Though the hypotheses of this study were that more at-risk demographic groups would benefit more from relationship education than other demographic groups, and these hypotheses were not confirmed, there are still some clinical

implications for these findings.

One important implication is that though more at-risk demographic groups did not benefit more than others, they also did not benefit less. This indicates that allocating sufficient resources to recruit and retain at-risk couples may be well worth it, in spite of the difficulty (Bradbury & Lavner, 2012).

In addition, the relationship education curricula used with the participants in this study were tailored for specific groups, such as step-families and Black couples. Since subgroups of gender, race, and income did not appear to benefit differently from relationship education, this could indicate that the programs met the specific needs of these groups because relationship education may work because it modifies the factors that make participants at-risk in the first place (Halford & Wilson, 2009).

Implications for Future Research and Limitations

This study focused on interactions between gender, race, and income in predicting relationship education outcomes. However, these are only a few of the variables that may influence the effectiveness of relationship education for at-risk groups. Future research should continue to consider interactions between other variables, such as relationship status, cohabitation, and education, in predicting relationship education outcomes (Adler-Baeder, et al., 2010; Rauer, et al., 2014).

The results of this analysis also indicated that cohabitation and relationship status, specifically being engaged, play a part in predicting gains in relationship quality and commitment (see Table 4). Future research could explore these factors more thoroughly to discover what effective timing for intervention might be as well as how to best help cohabiting couples through relationship education

This study had several limitations. First, the analytic sample only accounted for Whites and Blacks. Other ethnic groups may have different experiences in relationship education. Other ethnic groups should continue to receive attention in this area of research.

The data did not account for all variables that affect relationship education outcomes, such as dosage level (Hawkins, Stanley, Blanchard, & Albright, 2012), participant-facilitator demographic match (Bradford, Adler-Baeder, Ketring, & Smith, 2012), and facilitator-participant alliance (Quirk, Owen, Inch, France, & Bergen, 2014).

In addition, these results only considered changes in relationship quality and commitment from pre-intervention to post-intervention. No follow up data were available to assess whether gains were maintained over time. These results should not be interpreted to support the use of relationship education as a means to create lasting change for participants. Though participants may or may not maintain improvements over time, this study does not address this question.

Conclusion

This study assessed differences in relationship education outcomes for select at-risk demographic groups. Results indicated did not reveal significant differences between subgroups of income, race, and gender in predicting pre-to-post intervention change in relationship quality, commitment, and individual empowerment for a sample of relationship education participants. The influence of demographic factors on relationship education outcomes is important for relationship educators and policymakers, because if they hope to help at-risk families through relationship education, it is important to know if interventions are effective and how to improve interventions. Further research should continue to explore interactions between other variables that influence the effectiveness of relationship education.

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Table 1: Summary Statistics for All Variables

Variable	Mean	Standard Deviation	Minimum	Maximum
Individual Empowerment Change	.227	.767	-3.167	4
Relationship Quality Change	.321	1.185	-6	6
Relationship Commitment Change	.175	.803	-4	4
T1 Individual Empowerment	3.667	.812	1	5
T1 Relationship Quality	4.998	1.507	1	7
T1 Relationship Commitment	3.91	1.076	1	5
Black	.445	.497	0	1
Female	.693	.461	0	1
Attended With Partner	.352	.478	0	1
Married	.561	.496	0	1
Engaged	.123	.328	0	1
Dating	.316	.465	0	1
Cohabiting	.2	.4	0	1
Income*	3.171	1.92	1	7
Education**	2.758	1.471	1	6
Age	34.901	11.195	15	84

*Income=1 represents Income <$7,000, Income=7 represents Income>$100k+

**Education=1 represents No Diploma, Education=6 represents Post-College Education

Table 2: Mean Comparison Tests for All Independent Variables With Each Dependent Variable

Dependent Variable	Independent Variable	Mean	Test Statistics
Individual Empowerment	White	.287***	3.578
	Black	.159***	
Relationship Quality	White	.310	-.693
	Black	.348	
Relationship Commitment	White	.193	1.78
	Black	.148	
Individual Empowerment	Male	.223	-.213
	Female	.231	
Relationship Quality	Male	.306	-.367
	Female	.328	
Relationship Commitment	Male	.141	-1.154
	Female	.188	
Individual Empowerment	No Partner	.227	-.605
	With Partner	.250	
Relationship Quality	No Partner	.239***	-3.833
	With Partner	.467***	
Relationship Commitment	No Partner	.160	-1.328
	With Partner	.214	
Individual Empowerment	Not Married	.192	-1.77
	Married	.255	
Relationship Quality	Not Married	.250*	-2.226
	Married	.375*	
Relationship Commitment	Not Married	.174	-.03
	Married	.175	
Individual Empowerment	Not Engaged	.232	.679
	Engaged	.195	
Relationship Quality	Not Engaged	.324	.329
	Engaged	.297	
Relationship Commitment	Not Engaged	.175	-.001
	Engaged	.175	
Individual Empowerment	Not Dating	.244	1.412
	Dating	.190	
Relationship Quality	Not Dating	.361*	2.152
	Dating	.232*	
Relationship Commitment	Not Dating	.175	.032
	Dating	.174	
Individual Empowerment	Not Cohabiting	.224	-.354
	Cohabiting	.240	
Relationship Quality	Not Cohabiting	.351*	2.153
	Cohabiting	.203*	
Relationship Commitment	Not Cohabiting	.183	.842

	Cohabiting	.144	
Individual Empowerment	Income<7k	.203	1.11
	Income=7k-14k	.277	
	Income=14k-25k	.208	
	Income=25k-40k	.262	
	Income=40k-75k	.286	
	Income=75k-100k	.106	
	Income>100k	.193	
Relationship Quality	Income<7k	.296	.96
	Income=7k-14k	.230	
	Income=14k-25k	.4	
	Income=25k-40k	.281	
	Income=40k-75k	.403	
	Income=75k-100k	.386	
	Income>100k	.17	
Relationship Commitment	Income<7k	.187	.96
	Income=7k-14k	.076	
	Income=14k-25k	.157	
	Income=25k-40k	.262	
	Income=40k-75k	.2	
	Income=75k-100k	.222	
	Income>100k	.057	
Individual Empowerment	No Diploma	.267	.94
	High School	.233	
	Some College	.239	
	2 yr. Degree	.256	
	4 yr. Degree	.138	
	Post-College	.166	
Relationship Quality	No Diploma	.252	1.07
	High School	.391	
	Some College	.272	
	2 yr. Degree	.399	
	4 yr. Degree	.3	
	Post-College	.411	
Relationship Commitment	No Diploma	.144	1.12
	High School	.241	
	Some College	.138	
	2 yr. Degree	.191	
	4 yr. Degree	.123	
	Post-College	.186	

*p<=.05; **p<=.01; ***p<=.001

Note: Income and Education show results of ANOVAs, and test statistics reported are F-values. All other variables show results of T-tests, and test statistics reported are T-statistics.

Table 3: Pairwise Correlation of All Independent and Dependent Variables

	Individual Empowerment Change	Relationship Quality Change	Commitment Change	T1 Individual Empowerment	T1 Relationship Quality	T1 Commitment	Black	Female	Attended With Partner	Married	Engaged	Dating	Cohabiting	Education	Income	Age
Ind. Emp. Change	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rel. Quality Change	* 0.13	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commitment Change	* 0.14	* 0.55	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-
T1 Individual Emp.	* -0.55	-0.04	* -0.09	1.00	-	-	-	-	-	-	-	-	-	-	-	-
T1 Rel. Quality	-0.04	* -0.45	* -0.27	* 0.21	1.00	-	-	-	-	-	-	-	-	-	-	-
T1 Commitment	-0.03	* -0.21	* -0.44	* 0.20	* 0.78	1.00	-	-	-	-	-	-	-	-	-	-
Black	* -0.08	0.02	-0.03	* 0.09	* -0.05	-0.04	1.000	-	-	-	-	-	-	-	-	-
Female	0.01	0.01	0.03	* 0.07	-0.05	* -0.09	-0.01	1.00	-	-	-	-	-	-	-	-
Attended W/ Partner	0.02	* 0.09	0.03	-0.02	* 0.06	* 0.18	* -0.05	* -0.26	1.00	-	-	-	-	-	-	-
Married	0.04	* 0.05	0.00	* -0.08	-0.04	* 0.07	* -0.19	* -0.14	* 0.26	1.00	-	-	-	-	-	-
Engaged	-0.02	-0.01	0.00	0.02	* 0.12	* 0.13	-0.03	-0.01	0.01	* -0.42	1.00		-	-	-	-
Dating	-0.03	* -0.05	-0.00	* 0.07	-0.05	* -0.17	* 0.23	* 0.15	* -0.29	* -0.77	* -0.26	1.00	-	-	-	-
Cohabiting	0.01	* -0.05	-0.02	-0.02	* 0.07	* 0.05	0.01	-0.02	-0.05	* -0.57	* 0.52	* 0.24	1.00	-	-	-
Education	-0.04	0.02	-0.01	* 0.18	0.08	* 0.13	* -0.13	-0.02	* 0.26	* 0.22	* -0.06	* -0.20	* -0.17	1.00	-	-
Income	0.00	0.01	-0.00	* 0.05	* 0.13	* 0.20	* -0.21	* -0.19	* 0.33	* 0.42	* -0.11	* -0.37	* -0.19	* 0.56	1.00	-
Age	* -0.05	0.00	-0.01	-0.03	0.02	* 0.06	* -0.10	* -0.12	* 0.16	* 0.32	* -0.14	* -0.24	* -0.20	* 0.30	* 0.39	1.00

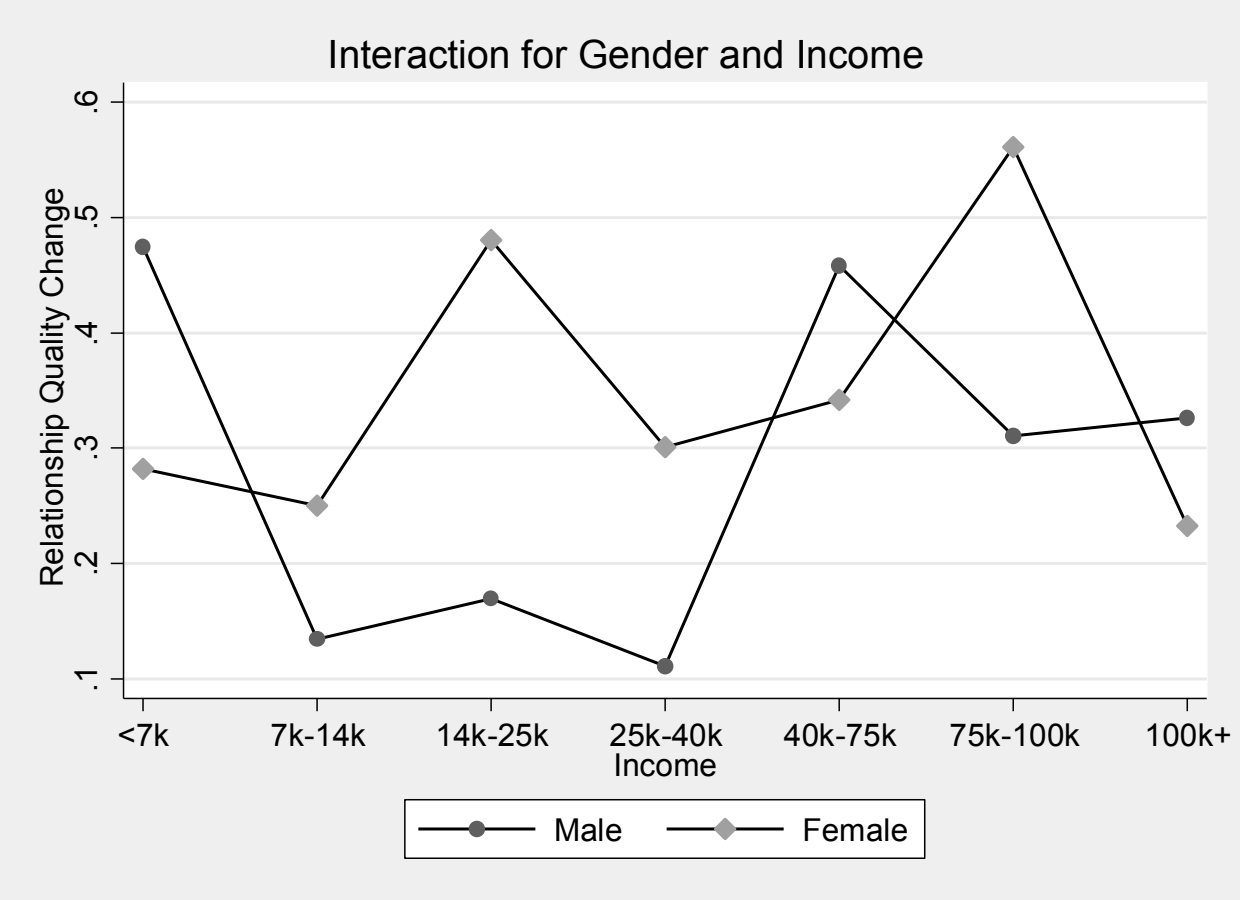
*p<=.05

Table 4: Regression Results for Relationship Quality Change: Unstandardized Coefficients and (Standard Errors)

Relationship Quality Change	Model 1	Model 2
T1 Individual Empowerment	0.042	0.037
	(0.037)	(0.037)
T1 Relationship Quality	-0.555	-0.558
	(0.030)***	(0.030)***
T1 Commitment	0.355	0.360
	(0.044)***	(0.044)***
With Partner	0.249	0.242
	(0.064)***	(0.064)***
Engaged	0.334	0.333
	(0.113)**	(0.114)**
Dating	0.059	0.064
	(0.081)	(0.081)
Cohabiting	-0.190	-0.191
	(0.092)*	(0.092)*
Age	-0.002	-0.002
	(0.003)	(0.003)
<HS Diploma	-0.120	-0.133
	(0.081)	(0.081)
Some College	-0.107	-0.120
	(0.080)	(0.080)
2-Year College Degree	-0.181	-0.206
	(0.096)	(0.096)*
4-Year College Degree	-0.100	-0.117
	(0.111)	(0.111)
Post-College Degree	-0.110	-0.125
	(0.137)	(0.137)
Black	-0.027	-0.029
	(0.058)	(0.058)
Income $7k-14k	-0.096	-0.340
	(0.095)	(0.189)
Income $14k-25k	0.051	-0.305
	(0.095)	(0.171)
Income $25k-40k	-0.081	-0.364
	(0.094)	(0.169)*
Income $40k-75k	0.069	-0.016
	(0.097)	(0.162)
Income $75k-100k	0.143	-0.164
	(0.143)	(0.221)
Income $100k+	-0.045	-0.148
	(0.149)	(0.218)
Female	0.032	-0.193
	(0.063)	(0.130)

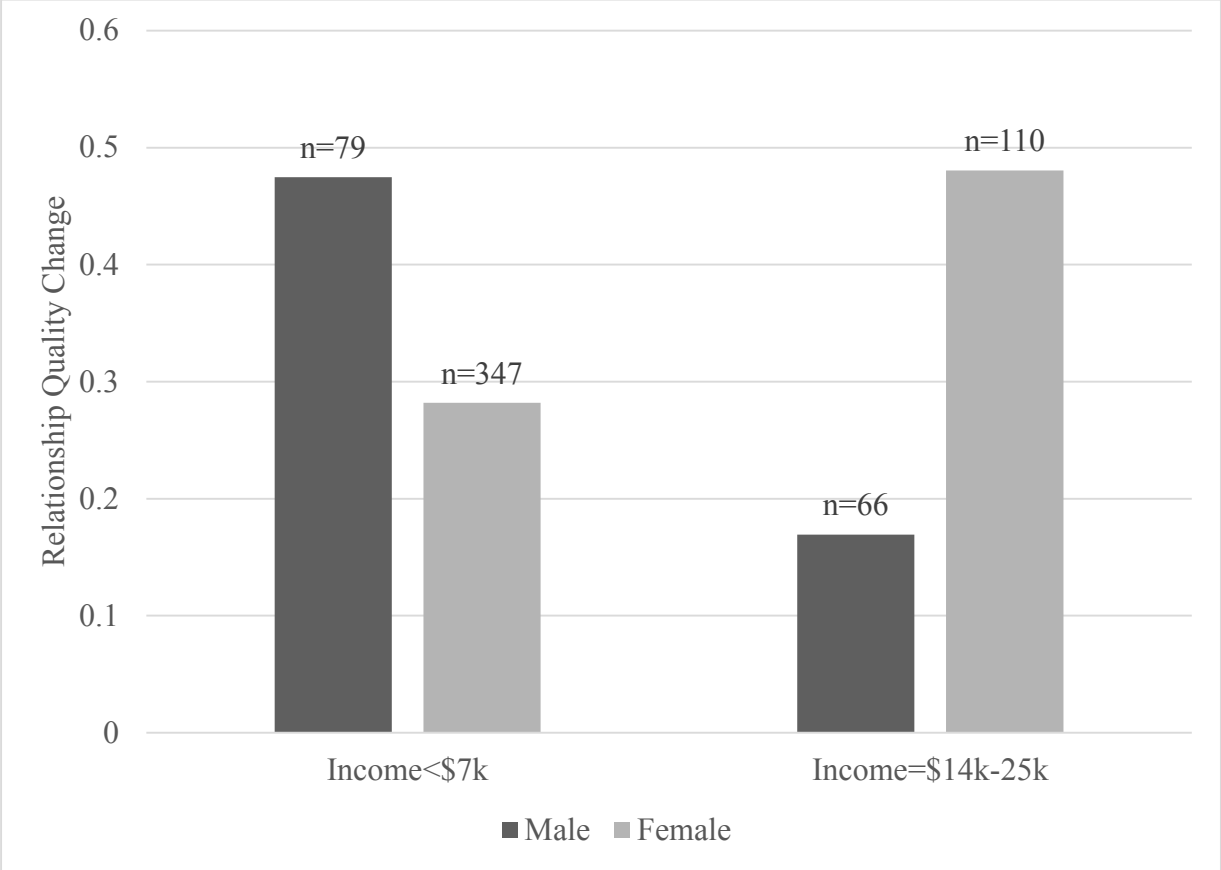
Income $7k-14k*Female		0.309
		(0.217)
Income $14k-25k*Female		0.504
		(0.203)*
Income $25k-40k*Female		0.383
		(0.197)
Income $40k-75k*Female		0.076
		(0.185)
Income $75k-100k*Female		0.443
		(0.258)
Income $100k+*Female		0.099
		(0.255)
Constant	1.605	1.806
	(0.203)***	(0.227)***
R^2	0.27	0.27
N	1,387	1,387

Figure 1



*The difference between Males at <7k and Males at 14k-25k was statistically significantly different from the difference between Females at <7k and Females at 14k-25k.

Figure 2



*Mean differences between groups were not statistically significant at the p<=.05 level