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Knowledge, Trait Mindfulness and Perceived Discrimination as it Relates to Coping Self-Efficacy in African American Women

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KNOWLEDGE, TRAIT MINDFULNESS AND PERCEIVED DISCRIMINATION AS IT
RELATES TO COPING SELF-EFFICACY IN AFRICAN AMERICAN WOMEN

A THESIS SUBMITTED TO THE
HONORS COLLEGE
IN PARTIAL FULFILLMENT OF
REQUIREMENTS FOR HONORS IN THE DEGREE OF

BACHELORS OF SCIENCE
DEPARTMENT OF PSYCHOLOGY
COLLEGE OF LETTERS AND SCIENCES

BY

COLLINS D. NELSON

COLUMBUS, GEORGIA

2020

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ABSTRACT

This is a cross-sectional study that investigated the relationship between preconception care knowledge, trait mindfulness, perceived discrimination, and coping self-efficacy. It addressed the lack of research into the effects of pregnancy-related distress on maternal mortality in African American women. There were 117 participants ages 18 -30 whose data was collected through an online survey. The results suggest that greater preconception care knowledge predicts greater pregnancy-related distress coping self-efficacy. Trait mindfulness also predicted pregnancy-related distress coping self-efficacy. Perceived discrimination did not predict coping self-efficacy in a negative direction as expected.

Keywords: preconception care, coping self-efficacy, trait mindfulness, perceived discrimination, distress

Table of Contents

Introduction	5
Maternal Mortality and Birth Outcomes	6
Preconception Care Knowledge	9
Mindfulness	11
Method	13
Results	16
Discussion	19
Conclusion	22
References	23

Introduction

American women are more likely to die from pregnancy-related health complications than are women from all other technologically comparable countries (Centers for Disease Control [CDC], 2013a; Martin, & Montagne, 2017), especially if they are living in certain areas of the United States (U.S.) such as Georgia (CDC, 2019a). One contributing factor to the high maternal mortality rate in Georgia is the high percentage of rural areas in the state where residents have limited access to healthcare (Meyer, et al., 2016). Women living in places like Georgia may not realize that they are at higher risk for maternal morbidity (illness linked to pregnancy and childbirth), much less for maternal mortality (death linked to pregnancy and childbirth; Georgia Department of Public Health [DPH], 2019), and without such knowledge may not be compelled to implement healthy preconception behaviors that can improve pregnancy and birth outcomes (e.g., take folic acid and maintain a healthy weight; [CDC], 2020). Moreover, African American women present with a 3-fold risk of dying during childbirth compared to other groups of American women (Lewis, 2019), which may stem from their having greater underlying risk factors (e.g., distress from discrimination and minority status, hypertension, (Sims, et al., 2012) and fewer psychological coping resources (e.g., trait mindfulness, self-efficacy; Miller, Rote, & Keith, 2013) due to these risk factors, but researchers have yet to explore these possibilities. Such risk factors and reduced coping resources may create health disparities in maternal morbidity and mortality rates by exacerbating the mental and physical health effects of distress for African American women whenever distressing events (e.g., problems with health care, changes to birth plans) inevitably arise during pregnancy and childbirth. The current study examines how risk factors for pregnancy-related health problems relate to coping self-efficacy in African American women who are in the preconception phase

(i.e., planning a pregnancy, but not yet pregnant). This study also focuses specifically on women living in Georgia where the risk for maternal morbidity and mortality are high.

Maternal Mortality and Birth Outcomes

Self-efficacy is a person's confidence in their ability to perform a task (Bandura, 1994). Self-efficacy is an important indicator of medication adherence for the treatment of HIV and other medical conditions (Johnson, Neilands, Dilworth, Morin, Remien, & Chesney, 2007). It also plays a role in how active patients will be in directing their health care (Saha, Arbelaez, & Cooper, 2003). Knowledge and understanding of how to do a task are related to adherence to health behaviors (Miller, 2016). One way to potentially decrease the health disparity in maternal mortality experienced by African American women could be to increase African American women's self-efficacy in coping with distress related to pregnancy and childbirth. One way to do this could be to provide African American women with a better understanding of healthy behaviors and birth outcomes, along with providing them with tools needed to reduce the effects of everyday life stressors (e.g., increased mindfulness). If African American women possessed that knowledge and skill, it could raise their self-efficacy and in turn promote factors like medical treatment adherence. This could be especially important among those African American women experiencing relatively high discrimination-related stressors on an everyday basis.

The adverse effects of distress are clear even outside of the pregnancy context. Distress is a negative psychological response that occurs whenever people appraise stressful events as "threats." A state of distress induces negative affect as well as a "fight-or-flight" response that sets off a series of physiological reactions in the body causing inflammation and tension (Kozusznik, Rodríguez, & Peiró, 2015). For example, if someone fears for their life, the body will begin to release stress hormones like cortisol and stop performing functions that are not

necessary for immediate survival, such as digestion, reproductive, and immune functions. Instead, blood flow is diverted to the muscles and blood pressure increases to get more oxygen to the peripheral areas of the body. In the short-term, distress can cause changes in mood (irritability, anger, or sadness), or changes in appetite and trouble falling or staying asleep (Schneiderman, Ironson, & Siegel, 2005). Over time, chronic distress can lead to a lasting increase in blood pressure, or hypertension, which makes the heart work harder every day (Schneiderman, Ironson, & Siegel, 2005). Chronic distress can lead to a multitude of cardiovascular issues such as hypertension, heart disease, stroke, or kidney disease (Whelton, et al., 2018), as well as mental health disorders like general anxiety or major depression. Thus, distress has an overall negative impact on a person's health (Shields, Moons, & Slavich, 2017).

Chronic distress may also place women at a higher risk of severe maternal morbidity and mortality (Howell, 2018). For example, it can cause irregular menstrual cycles, an egg to not be released, and a decline in sexual desire, all of which can make it hard to conceive (Negro-Vilar, 1993). Women of childbearing age may also suffer from a variety of chronic conditions (e.g., hypertension), due to a lifetime of chronic distress, which could contribute to adverse pregnancy outcomes (CDC, 2019a). Through its effects on women's bodies pre-conception, chronic distress can cause issues such as premature labor, low birth weight, preeclampsia, and delayed mental development in the child (Cardwell, 2013). Chronic distress has negative effects on the health of the mother, pregnancy, and attempts to conceive. For this reason, women need to find ways to reduce their distress, especially when pregnant or planning to conceive.

Many psychosocial factors such as access to prenatal care, socioeconomic status, ethnicity, and cultural background are known factors of distress during pregnancy (Cardwell, 2013). Perhaps not surprisingly, American women of a minority background, especially African

American women, are known to be at significantly higher risk for maternal morbidity and mortality (Howell, 2018). Access to medical services and racial discrimination have been suggested as possible causes for the difference in rates of maternal mortality or complications during birth among African Americans and Whites (Howell, 2018). African American women may experience racial discrimination more than White women and may have less access to preconception care, which could lead to greater distress (Howell, 2018). African Americans experiencing discrimination is associated with hypertension, and studies have shown African Americans presented an elevated cardiovascular reactivity to race-related stressors (Merritt, Bennett, Williams, Edwards, & Sollers, 2006). There is an increased risk of maternal mortality for women who have chronic hypertension (Gilbert, Young, & Danielsen, 2007).

In addition to the adverse physiological effects that distress can have on a woman's body, distress also has psychological effects. The effects of distress can cause people to overeat or not eat enough, misuse drugs and alcohol, and/or develop depression and anxiety, which can indirectly harm birth outcomes by causing low or high birth weight or birth defects and could negatively affect the baby's development and the woman's overall health (U.S. Department of Health and Human Services [DHHS], Office on Women's Health [OWH], 2019). Chronic distress can cause biological aging and can play a role in maternal mortality. The biological age of the mother is important because studies have shown that older mothers (e.g. 35 years and older) tend to have higher maternal morbidity and mortality (Restrepo-Méndez & Victora, 2014), suggesting that the extent of aging that has happened to a woman's body will play a role in birth outcomes. This is especially troubling for African American women, who have been shown to have shorter telomeres than White women of the same age and therefore are often considered biologically older (Conger, 2015). Researchers speculate that chronic distress, such as the

distress African American women experience due to day-to-day discrimination, can promote aging via shortening telomeres (Cardwell, 2013; Howell, 2018). It stands to reason that one way to reduce the high risk of maternal mortality in African American women may be to educate African American women on how to deal with stressors that they are likely to face in the preconception period before they are pregnant (e.g., discrimination).

Preconception Care Knowledge

Researchers need to share the prevalence of maternal mortality in Georgia with African American women and further explore how distress can play a key role in hypertension and other cardiovascular issues that can cause maternal mortality. An important first step would be for African American women to be taught that they are at a heightened risk for maternal mortality and that preconception distress can affect maternal mortality so that they can reduce it effectively (Howell, 2018). Education about a health issue is known to be a positive indicator of medical adherence (Miller, 2016). Meaning that women with a greater education about reproductive health behaviors should be more likely to maintain stress-reducing practices and receive overall health benefits. Having knowledge about risk for a health issue and how to prevent it may improve confidence in their ability to correctly follow their plans or tasks that then translates into an increase in women's self-efficacy to correctly manage their distress.

Preconception care has been defined as behavioral interventions meant to recognize and change risks to a woman's health or outcomes of her pregnancy before she becomes pregnant (Hawks, McGinn, Bernstein, & Tobin, 2018). Women should be encouraged to have healthy practices; for example, to eat healthily, take vitamins and folate supplements, exercise regularly, and maintain a healthy weight. People that are more knowledgeable about preconception care would be better prepared for pregnancy and know what to expect before and during pregnancy. This knowledge could then allow them to better manage pregnancy-related distress as they will

have a better understanding, which could help to reduce the risk of maternal mortality (Miller, 2016). Treating pre-existing health conditions and poor stress management leading up to pregnancy can be a significant factor in reducing their risk of maternal mortality. Consider, for instance, a woman with diabetes who is not properly managing her blood sugar before getting pregnant and during the pregnancy. If the mother does not know how to properly manage her blood sugar, it can lead to preventable unwanted birth outcomes (American College of Obstetricians and Gynecologists [ACOG], 2019) and could make the birth more difficult on the mother (Stotland, Caughey, Breed, & Escobar, 2004).

Another reason that it would be beneficial to educate women, especially African American women, about preconception health behaviors is unintentional pregnancy. Although many pregnancies in the United States are unintentional (CDC, 2019b), African American women have a significantly higher rate of unintended pregnancies than White women (68% and 40%, respectively) (Kim, Dagher, & Chen, 2016). Moreover, many young women do not have a primary care physician before they become pregnant and therefore, may not be following healthy preconception (and early conception) behavior practices (Boodman, 2018). This is a major issue for African American women. From 2016 to 2018, 18% of African American women reported not having a primary care doctor (The Kaiser Family Foundation [KFF], 2020). Therefore, many African American women may not be able to address and mitigate any conditions related to distress that could lead to an unfavorable maternal or infant outcome before an unplanned pregnancy.

If women knew about distress management habits in the preconception period, they may have greater distress coping self-efficacy, or greater confidence in their ability to overcome distress positively. In turn, when African American women experience distress as a result of

discrimination, they may be more confident in their ability to cope with the stressor, which could help reduce the risk of maternal mortality. That could also improve their ability to cope with the higher number of stressors that African American women may encounter on an everyday basis before conception (Pisanti, 2012). High coping self-efficacy is known to promote changes in daily health behaviors by either reducing bad or adopting good habits (Bandura, 1994). In the current study, I examined if preconception care knowledge and stress reactivity to perceived discrimination affected stress-coping self-efficacy.

Mindfulness

Mindfulness is being nonjudgmentally aware and attentive to the present moment (Brown-Iannuzzi, Adair, Payne, Richman, & Fredrickson, 2013). Mindfulness promotes conscious awareness of one's experiences as a way to improve their health and overall well-being by using purposeful mental, physical, and behavioral techniques (Woods-Giscombé and Black, 2010). People with higher trait mindfulness tend to have better acceptance and understanding of their emotions and awareness of their behaviors and reactions (Black, Sussman, Johnson, & Milam, 2012); this may predispose them to have greater ability to regulate their reactions to discrimination and potentially lessen the physiological stress responses such as increased blood pressure (Brown-Iannuzzi, Adair, Payne, Richman, & Fredrickson, 2013).

It may be that African American women who have both greater knowledge of how to care for their bodies in the preconception phase and higher trait mindfulness may have a greater awareness of how distress affects them, which in turn, may increase their coping self-efficacy. When someone is experiencing instances of distress and are aware that they are experiencing distress, it provides them the ability to actively counteract their reaction to that distress. A person having repeated instances of overcoming stress will then increase their stress coping self-efficacy

(Bandura, 1994). There is little research on the extent to which distress from discrimination affects birth and/or pregnancy outcomes, such as maternal mortality, therefore I am researching that interaction in African American women in Georgia. In the current study, I also examined if stress-coping self-efficacy is affected by stress reactivity to perceived discrimination and levels of trait mindfulness in African American women.

Study Overview

The purpose of this study was to investigate the effects that coping resources (e.g., knowledge of healthy preconception behaviors, higher trait mindfulness) and underlying risk factors (e.g., distress due to perceived discrimination) have on African American women's belief that they can overcome pregnancy-related health complications, or having higher coping self-efficacy. Previous research has determined that African American women present with a greater incidence of maternal mortality (Howell, 2018), but researchers have not examined the factors that may explain this health disparity and thus have not identified active points of intervention for reducing this problem in the African American community. Thus, the data collected in this study will help researchers identify if targeting African American women's knowledge of healthy preconception behaviors, mindfulness practice, and perceptions of discrimination can offer opportunities for active intervention in the maternal mortality health disparity. Figure 1 shows a conceptual model of the hypothesized relations, and the hypotheses for the study were as follows. Hypothesis 1 (H_1) states that greater preconception care knowledge will predict greater coping self-efficacy in African American women. Hypothesis 2 (H_{2A}) is that greater trait mindfulness will predict greater coping self-efficacy and H_{2B} states that greater perceived discrimination will predict greater coping self-efficacy. Hypothesis 3 (H_{3A}) states there will be an interaction between preconception care knowledge and mindfulness to predict coping self-

efficacy. I predicted that when people had high preconception care knowledge and high trait mindfulness, they would also have high coping self-efficacy. If someone had high preconception care knowledge and low trait mindfulness, they would have medium coping self-efficacy. If someone had low preconception care knowledge and high trait mindfulness, they would have medium coping self-efficacy. If someone had low preconception care knowledge and low trait mindfulness, they would have low coping self-efficacy. H_{3B} states there will be an interaction between preconception care knowledge and perceived discrimination to predict coping self-efficacy in African American women. I predicted that when people had high preconception care knowledge and high perceived discrimination, they would also have medium coping self-efficacy. If someone had high preconception care knowledge and low perceived discrimination, they would have high coping self-efficacy. If someone had low preconception care knowledge and high perceived discrimination, they would have low coping self-efficacy. If someone had low preconception care knowledge and low perceived discrimination, they would have medium coping self-efficacy.

Method

Participants

Participants in this study were young (ages 18-30), African American/Black women who indicated that they had or planned to have children. Participants were recruited via the Columbus State University's psychology research participant pool and asked to complete a broad set of experimental materials that included the measures for this study. All participants received research credit for participation. The participants were ($n = 117^1$) freshmen (32.5%), sophomores

¹Of the 146 people that attempted to complete the study, I only retained and analyzed the data of 117 people. This is because the 29 people whose data was not included in the analyses did not appear to be reliable as these participants were excluded for failing attention checks, or having

(28.2%), juniors (16.2%), and seniors (23.1%). Seven of the participants were also of Hispanic descent. On average, participants were 20.15 years old ($SD = 2.06$ years; minimum age = 18, maximum age = 30), 8 were parents already, 46 were in a monogamous romantic relationship (5.1%; $n = 6$ engaged/married, 34.2%; $n = 40$ were dating one person for longer than two consecutive weeks). Most participants rated their overall health as excellent (13.7%) or good (53%) for their age (27.4% rated their health as fair, and 6% rated their health as poor).

Measures

Preconception Care Knowledge. I assessed participants' knowledge of health behaviors that should be done before conception or early on in the pregnancy to improve birth outcomes, which will hereafter be referred to as their preconception care knowledge. To assess preconception care knowledge, I developed a 12-item health care questionnaire for this study. The behaviors on the scale were from the CDC website for healthy preconception behaviors. It includes items that ask participants if they know the importance of preconception care behaviors and whether they perform these behaviors. Sample items were "Taking folate supplements or folic acid," and "Having a healthy diet." The response scale was a sliding bar ranging from "0" to "100."

Trait Mindfulness. Trait mindfulness was assessed using the Describe and Nonreact subscales from the Five Facet Mindfulness Questionnaire Scale (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The Describe subscale ($k = 8$ items) measures a person's ability to describe how they are feeling (e.g., "I'm good at finding words to describe my feelings"). This subscale was used in this study because if African American women can describe what they feel when they experience discrimination, they may have a better understanding of how they are

extreme outlier scores regarding self-reported accuracy, self-reported effort, survey completion time, and response variability.

affected by the distress caused by discrimination and may, therefore, be more confident in their ability to cope with the distress. The Nonreact subscale ($k = 9$ items) measures a person's capacity for down-regulating their emotional responses when they are triggered to "react" with distress (e.g., "I perceive my feelings and emotions without having to react to them"). This subscale was used in this study because if African American women cannot react to negative feelings or distress, they have experienced, then they may be more confident in their ability to cope with distress when they experience discrimination. Participants indicated their agreement with the subscale items using a Likert scale that ranged from 1 (*never or very rarely true*) to 5 (*very often or always often true*). Brown-Iannuzzi et al. (2013) have used the Five Facet Mindfulness Scale in their past research examining trait mindfulness as a moderator of the relation between perceived discrimination and depression.

Perceived Discrimination. Distress from perceived discrimination was defined by how often the participants felt they were discriminated against or treated unfairly in their everyday lives. Perceived discrimination was measured using the 5 item Everyday Discrimination Scale (Short Version; Sternthal, Slopen, Williams, 2011). The responses were measured on a Likert type 7-point scale ranging from *never* to *almost every day*. Sample items were "You are treated with less courtesy or respect than other people," and "You receive poorer service than other people at restaurants or stores." There was a secondary scale that participants were shown if they had indicated they had experienced at least two instances of discrimination. This scale assessed what the participant perceived to be the reason(s) for their discriminatory experiences. Sample items were "Gender", "Race", and "Your shade of skin color".

Coping Self-Efficacy. Coping Self-Efficacy (CSE) was defined as how the participants perceived their ability to cope effectively with life challenges related to pregnancy and

discrimination. CSE was measured using the 26 item Coping Self-Efficacy Scale (Chesney, Neilands, Taylor, & Folkman, 2006). The responses were measured on a ten-point scale ranging from cannot do at all to certain can do. Sample items were “Keep from getting down in the dumps” and “Look for something good in a negative situation”.

Procedure

All procedures were approved by the University’s Institutional Review Board, and all participants provided informed consent before participation. Eligible participants were provided a link to the online survey, which took approximately 30 minutes to complete. Once participants indicated their consent to participate in the study, they were asked to provide basic demographic information (e.g., about their age, relationship status, religiosity, GPA, etc.). Next, participants completed the study measures (i.e., the health care questionnaire, Five Facet Mindfulness Questionnaire scale, Everyday Discrimination Scale (Short Version), and Coping Self-Efficacy Scale) which was presented to participants in a random/counterbalanced order to control for potential order effects. Provided that the data for this study were collected as part of a broader data collection, participants were then asked to complete additional materials that were not used for the current study and thus will not be discussed further. At the end of the data collection, participants were provided with an electronic debriefing document, which, in addition to providing contact information for the research team, disclosed the study aims and hypotheses and included resources where they can learn more about maternal mortality, healthy preconception care practices, and stress management.

Results

Data Analysis Plan

This was an online cross-sectional study. The data collected in this study were analyzed using a moderated multiple regression model in Process for SPSS (Hayes, 2018). All continuous variables were mean-centered in the analyses and any statistically significant interaction effects were probed at one standard deviation above and below the mean (Hayes, 2018). Two moderated regression models were examined, which tested the hypotheses shown in Figure 1. In the first model, I tested the main effects and interactive effects of preconception care knowledge and mindfulness on coping self-efficacy (describe and nonreact were each tested as a separate moderating variable in the same analysis). The second model involved the main effects and interactive effects of preconception care knowledge and perceived discrimination on coping self-efficacy.

The data were examined before the hypothesis test to ensure that the data met the statistical assumptions for the model. Based on the Shapiro-Wilks test of normality, the data for all the variables except preconception care knowledge were normally distributed at $\alpha = .001$. The preconception care variable was slightly negatively skewed thus indicating when people were knowledgeable about one healthy behavior, they seemed to be knowledgeable about many healthy behaviors. However, this skew was unlikely to have a meaningful impact on the overall results. I also examined the zero-order correlations between the variables before running the model tests and was able to confirm that there were no unexpected relations between the variables and thus that it was appropriate to proceed with the model tests. Table 1 contains these correlations, as well as the descriptive statistics for the study variables.

Hypothesis Tests

Results of the first regression model showed that the overall path model was statistically significant, $F(5, 111) = 13.19, p < .001$, and that all the predictors in the model accounted for a combined 37% of the variance in African American women's coping self-efficacy for overcoming pregnancy-related distress scores ($r = .61, p < .05$). Examination of the paths in the model provided support for H₁, indicating that greater preconception care knowledge scores significantly predicted greater coping self-efficacy scores, $t(111) = 2.14, p = .035$. There was also a main effect of describe mindfulness indicating that greater describe mindfulness scores predicted greater coping self-efficacy scores, $t(111) = 2.63, p = .010$; the main effect of nonreact mindfulness indicated that greater nonreact mindfulness scores predicted greater coping self-efficacy scores, $t(111) = 5.83, p < .001$. Together, these results provided support for H₂.

In addition to the main effects, the first regression analysis indicated that there were no statistically significant interaction effects in the model (Preconception Care Knowledge by Describe Mindfulness: $t(111) = .86, p = .390$; Preconception Care Knowledge by Nonreact Mindfulness: $t(111) = .48, p = .634$). These results did not provide support for H_{3A}. Figure 2 contains the results of the first regression analysis.

Results of the second regression model showed that the overall path model was statistically significant, $F(3, 113) = 2.78, p = .044$, and that all the predictors in the model accounted for a combined 6.9% of the variance in African American women's coping self-efficacy for overcoming pregnancy-related distress ($r = .26, p < .05$). Examination of the paths in the model provided support for H₁, indicating that greater preconception care knowledge scores significantly predicted greater coping self-efficacy scores, $t(113) = 2.88, p = .005$. There was not a main effect of perceived discrimination indicating that greater perceived discrimination did not

predict greater coping self-efficacy. These results did not provide support for H_{2B}. In addition, the regression analysis indicated that there was not a statistically significant interaction effect in the model (Preconception Care Knowledge by Perceived Discrimination: $t(113) = .089, p = .929$). These results did not support H_{3B}. Figure 3 contains the results of the second regression analysis.

Discussion

The main focus of the study was to investigate how trait mindfulness and perceived discrimination might moderate the effect of the relation between people's knowledge of healthy preconception behaviors and their confidence in their ability to overcome stressors related to pregnancy. The major findings from this study were that if African American women had greater knowledge of healthy preconception behaviors, they also tended to have greater confidence in their ability to cope with distress during a future pregnancy. I also found that if African American women had greater mindfulness, they also tended to have greater confidence in their ability to cope with future pregnancy-related distress. Although I expected that these two factors (preconception care knowledge and trait mindfulness) would interactively affect coping self-efficacy, there were no significant interaction effects in this study. Moreover, the results showed that, overall, overall African American women's perceived discrimination did not relate to their confidence in being able to cope with future pregnancy-related stress.

Discussion of Results

African American women with greater knowledge of healthy preconception behaviors did have greater pregnancy-related distress coping self-efficacy. As has been stated in the research, self-efficacy is related to adherence to health behaviors. This goes to show that if resources were put into educational efforts for African American women about healthy preconception behaviors

early on it could promote African American women's confidence in the ability to cope with distress, thus, this could lead to African American women coping better with pregnancy-related distress and potentially reducing their risk of maternal mortality.

Mindfulness is known to play a role in lessening the effects of distress. As predicted in this study African American women with higher trait mindfulness did tend to have higher coping self-efficacy. The African American women with high describe mindfulness may be more prepared to both articulate and understand their feelings and how they react to distress. These women being able to understand what and how they are feeling thus made them more confident in their ability to cope with their negative feelings of distress constructively and healthily. The women with higher nonreact mindfulness may not only be able to express how they feel, but also tended to report having higher self-confidence that, even if they felt upset by a negative or distressing experience related to pregnancy, they could avoid reacting to it. That ability to not react could potentially minimize the negative health effects that would have been caused by reacting to the distressing pregnancy-related experience. Knowledge of healthy preconception care behaviors and trait mindfulness did not interact with each other to affect coping self-efficacy as I predicted. Although, both affected coping self-efficacy independently. This could serve as a sign of relief if women are not both knowledgeable and high in mindfulness as it implies that they may have an additive result on coping self-efficacy. This may mean that if African American women are not knowledgeable about preconception, but they are high in trait mindfulness or if they are low on trait mindfulness and are knowledgeable of healthy preconception behaviors they could still have higher coping self-efficacy. However, further research will need to be conducted to examine this interaction effect as I found a null result,

indicating that I cannot conclude the interaction effects not existing. I can only conclude that I did not find evidence that the interaction does exist in these data.

Contrary to what I predicted perceived discrimination was not related to coping self-efficacy in this study. This could be a result of African American women being overwhelmed by the amount of distress they experienced. That could have caused them to believe they could not adequately cope with the distress and, ultimately, reduced their confidence in this ability. Perceived discrimination and knowledge of healthy preconception behaviors also did not interact with each other to predict coping self-efficacy. Even so, I cannot draw these conclusions based on this study. I can only conclude that there was not sufficient evidence to support these hypotheses.

Implications, Strengths and Limitations

The results from this study could be used in several ways. For example, the results may be informative for the development of educational programs for African American women to convey the negative effects of distress on health or to raise their self-efficacy in their ability to correctly manage pregnancy-related distress. The results of this study provide new information to the research literature examining maternal mortality in African American women and how preconception risk factors may be associated with pre-conception self-efficacy. This was a correlational study, which prevents me from exploring the potential causal link between preconception care knowledge, trait mindfulness, and perceived discrimination with coping self-efficacy.

One strength of this study is that I was able to collect descriptive information about some potential precursors to the maternal morbidity and mortality crisis affecting African American women in a rural area in Georgia, which is a high-risk location for these health problems.

Although the sample size is modest and data cannot be generalized beyond women living in rural areas in the Southeast U.S., the data found in this study does apply to those women at highest risk and as such may be contribute to secondary analyses if combined with data from other studies in this research area

Conclusion

This study provided new evidence that the more preconception care knowledge young African American women have, the more confident they feel about their ability to cope with pregnancy-related stressors. Trait mindfulness appeared to play a role in African American women's confidence in their ability to cope with distress. That is due to women who are predisposed to better understand and be less reactive of their feelings may feel more confident in their ability to deal with distress related to pregnancy. The findings of this study could be used to further research on coping self-efficacy and health outcomes in African American women and as guidance to intervention programs targeting maternal morbidity and mortality.

References

- American College of Obstetricians and Gynecologists' Committee on Practice Bulletins—
Obstetrics [ACOG]. (2019). Practice Bulletin No. 173: Fetal Macrosomia. *Obstetrics and Gynecology*, 128(5), e195-e209. doi:10.1097/AOG.0000000000001767
- Bandura, A. (1994). *Self-efficacy* [PDF file]. Retrieved from
<https://www.uky.edu/~eushe2/Bandura/Bandura1994EHB.pdf>
- Black, D. S., Sussman, S., Johnson, C. A., & Milam, J. (2012). Trait Mindfulness Helps Shield Decision-Making from Translating into Health-Risk Behavior. *Journal of Adolescent Health*, 51(6), 588–592. doi: 10.1016/j.jadohealth.2012.03.011
- Boodman, S. G. (2018). *Spurred by Convenience, Millennials Often Spurn The 'Family Doctor' Model*. Retrieved from <https://khn.org/news/spurred-by-convenience-millennials-often-spurn-the-family-doctor-model/>.
- Brown-Iannuzzi, J. L., Adair, K. C., Payne, B. K., Richman, L. S., & Fredrickson, B. L. (2013). Discrimination hurts, but mindfulness may help: Trait mindfulness moderates the relationship between perceived discrimination and depressive symptoms. *Personality and Individual Differences*, 56, 201–205. doi: 10.1016/j.paid.2013.09.015
- Cardwell, M. S. (2013). Stress: pregnancy considerations. *Obstetrical and Gynecological Survey*, 68(2), 119–129. doi: 10.1097/OGX.0b013e31827f2481
- Conger, K. (2015). *Telomere extension turns back aging clock in cultured human cells, study finds*. News Center, med.stanford.edu/news/all-news/2015/01/telomere-extension-turns-back-aging-clock-in-cultured-cells.html.
- Georgia Department of Public Health [DPH]. (2019). *Maternal mortality*. Retrieved from <https://dph.georgia.gov/maternal-mortality>

- Gilbert, W. M., Young, A. L., & Danielsen, B. (2007). Pregnancy outcomes in women with chronic hypertension: a population-based study. *The Journal of Reproductive Medicine*, 52(11), 1046–1051. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/18161404>
- Hawks, R. M., McGinn, A. P., Bernstein, P. S., & Tobin, J. N. (2018). Exploring Preconception Care: Insurance Status, Race/Ethnicity, and Health in the Pre-pregnancy Period. *Maternal and Child Health Journal*, 22(8), 1103–1110. doi: 10.1007/s10995-018-2494-1
- Hayes, A. F., (2018). PROCESS macro for SPSS (Version 3.4.1) [Computer software].
- Howell, E. A. (2018). Reducing Disparities in Severe Maternal Morbidity and Mortality. *Clinical Obstetrics and Gynecology*, 1. doi: 10.1097/grf.0000000000000349
- Johnson, M. O., Neilands, T. B., Dilworth, S. E., Morin, S. F., Remien, R. H., & Chesney, M. A. (2007). The role of self-efficacy in HIV treatment adherence: validation of the HIV Treatment Adherence Self-Efficacy Scale (HIV-ASES). *Journal of Behavioral Medicine*, 30(5), 359–370.
- Kim, T. Y., Dagher, R. K., & Chen, J. (2016). Racial/Ethnic Differences in Unintended Pregnancy: Evidence from a National Sample of U.S. Women. *American Journal of Preventative Medicine*, 50(4), 427–435. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/26616306>
- Kozusznik, M. W., Rodríguez, I., & Peiró, J. M. (2015). Eustress and distress climates in teams: Patterns and outcomes. *International Journal of Stress Management*, 22(1), 1–23. doi: 10.1037/a0038581
- Lewis, K. (2019). Graphic: Georgia leads U.S. in maternal death rates, report shows. 90.1 FM WABE, www.wabe.org/maternal-mortality-georgia/.

- Martin, N., & Montagne, R. (2017, May 12). *U.S. Has the Worst Rate of Maternal Deaths in The Developed World*. Retrieved from <https://www.npr.org/2017/05/12/528098789/u-s-has-the-worst-rate-of-maternal-deaths-in-the-developed-world>
- Merritt, M. M., Bennett, G. G., Williams, R. B., Edwards, C. L., & Sollers, J. J. (2006). Perceived racism and cardiovascular reactivity and recovery to personally relevant stress. *Health Psychology, 25*(3), 364-369. doi:10.1037/0278-6133.25.3.364
- Miller, B., Rote, S. M., & Keith, V. M. (2013). Coping with racial discrimination: Assessing the vulnerability of African Americans and the mediated moderation of psychosocial resources. *Society and Mental Health, 3*(2), 133–150.
<https://doi.org/10.1177/2156869313483757>
- Miller, T. A. (2016). Health literacy and adherence to medical treatment in chronic and acute illness: A meta-analysis. *Patient Education and Counseling, 99*(7), 1079–1086.
- Meyer, E., Hennink, M., Rochat, R., Julian, Z., Pinto, M., Zertuche, A. D., ... Cota, P. (2016). Working Towards Safe Motherhood: Delays and Barriers to Prenatal Care for Women in Rural and Peri-Urban Areas of Georgia. *Maternal and Child Health Journal, 20*(7), 1358–1365. doi: 10.1007/s10995-016-1997-xdoi:10.1016/j.pec.2016.01.020
- Negro-Vilar, A. (1993). Stress and other environmental factors affecting fertility in men and women: overview. *Environmental Health Perspectives, 101*(suppl 2), 59–64. doi: 10.1289/ehp.93101s259
- Pisanti, R. (2012). Coping self-efficacy and psychological distress: Results from an Italian study on nurses. *PsycEXTRA Dataset*. doi: 10.1037/e544762013-003
- Restrepo-Méndez, M. C., & Victora, C. G. (2014). Maternal mortality by age: who is most at risk?. *The Lancet Global Health, 2*(3). doi: 10.1016/s2214-109x(14)70007-5

- Schneiderman, N., Ironson, G., & Siegel, S. D. (2005). Stress and health: Psychological, behavioral, and biological determinants. *Annual Review of Clinical Psychology, 1*(1), 607–628. doi: 10.1146/annurev.clinpsy.1.102803.144141
- Shields, G. S., Moons, W. G., & Slavich, G. M. (2017). Better executive function under stress mitigates the effects of recent life stress exposure on health in young adults. *Stress, 20*(1), 92–102. doi: 10.1080/10253890.2017.1286322
- Sims, M., Diez-Roux, A. V., Dudley, A., Gebreab, S., Wyatt, S. B., Bruce, M. A., ... Taylor, H. A. (2012). Perceived discrimination and hypertension among African Americans in the Jackson heart study. *American Journal of Public Health, 102*(S2). doi: 10.2105/ajph.2011.300523
- Stotland, N., Caughey, A., Breed, E., & Escobar, G. (2004). Risk factors and obstetric complications associated with macrosomia. *International Journal of Gynecology & Obstetrics, 87*(3), 220–226. doi: 10.1016/j.ijgo.2004.08.010
- The Centers for Disease Control and Prevention [CDC]. (2019a). *Pregnancy mortality surveillance system*. Retrieved from https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm?CDC_AA_refVal=https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-mortality-surveillance-system.htm
- The Centers for Disease Control and Prevention [CDC]. (2019b). *Unintended Pregnancy*. Retrieved from <https://www.cdc.gov/reproductivehealth/contraception/unintendedpregnancy/index.htm>.
- The Centers for Disease Control and Prevention [CDC]. (2020). *Women*. Retrieved from <https://www.cdc.gov/preconception/women.html>

The Kaiser Family Foundation [KFF]. (2020). *Women who report having no personal doctor/health care provider by race/ethnicity* [Infographic].
<https://www.kff.org/disparities-policy/state-indicator/no-personal-doctor/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D#notes>

U.S. Department of Health and Human Services [DHHS], Office on Women's Health [OWH]. (2019). *Stress and your health*. Retrieved from <https://www.womenshealth.gov/mental-health/good-mental-health/stress-and-your-health>

Whelton, P. K., Carey, R. M., Aronow, W. S., Casey, D. E., Collins, K. J., Himmelfarb, C. D., ... Wright, J. T. (2018). 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. *Journal of the American College of Cardiology*, 71(19). doi: 10.1016/j.jacc.2017.11.006

Woods-Giscombé, C. L., & Black, A. R. (2010). Mind-body interventions to reduce risk for health disparities related to stress and strength among African American women: the potential of mindfulness-based stress reduction, loving-kindness, and the ntu therapeutic framework. *Complementary Health Practice Review*, 15(3),115-131. doi: 10.1177/1533210110386776

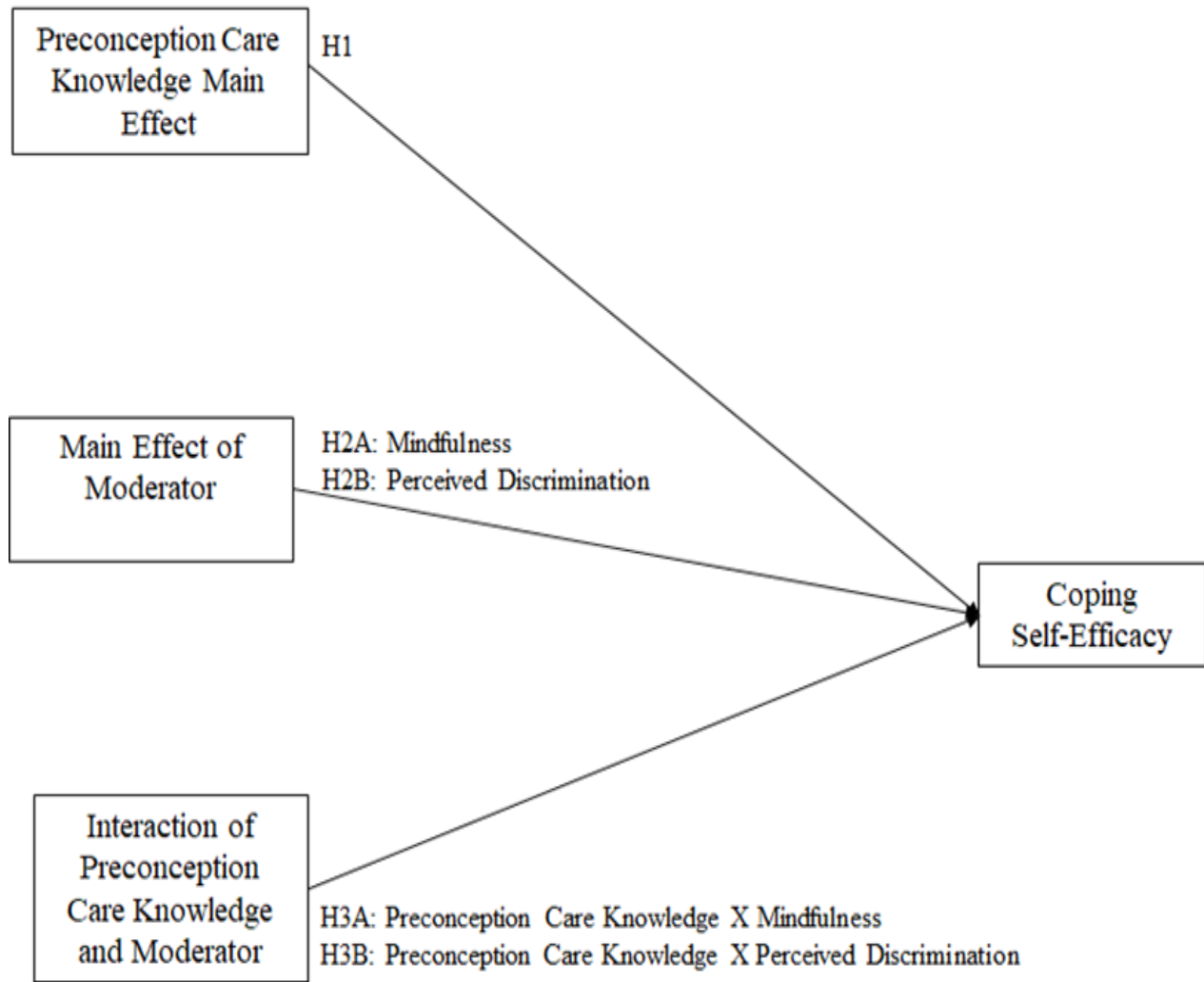


Figure 1. Conceptual Model

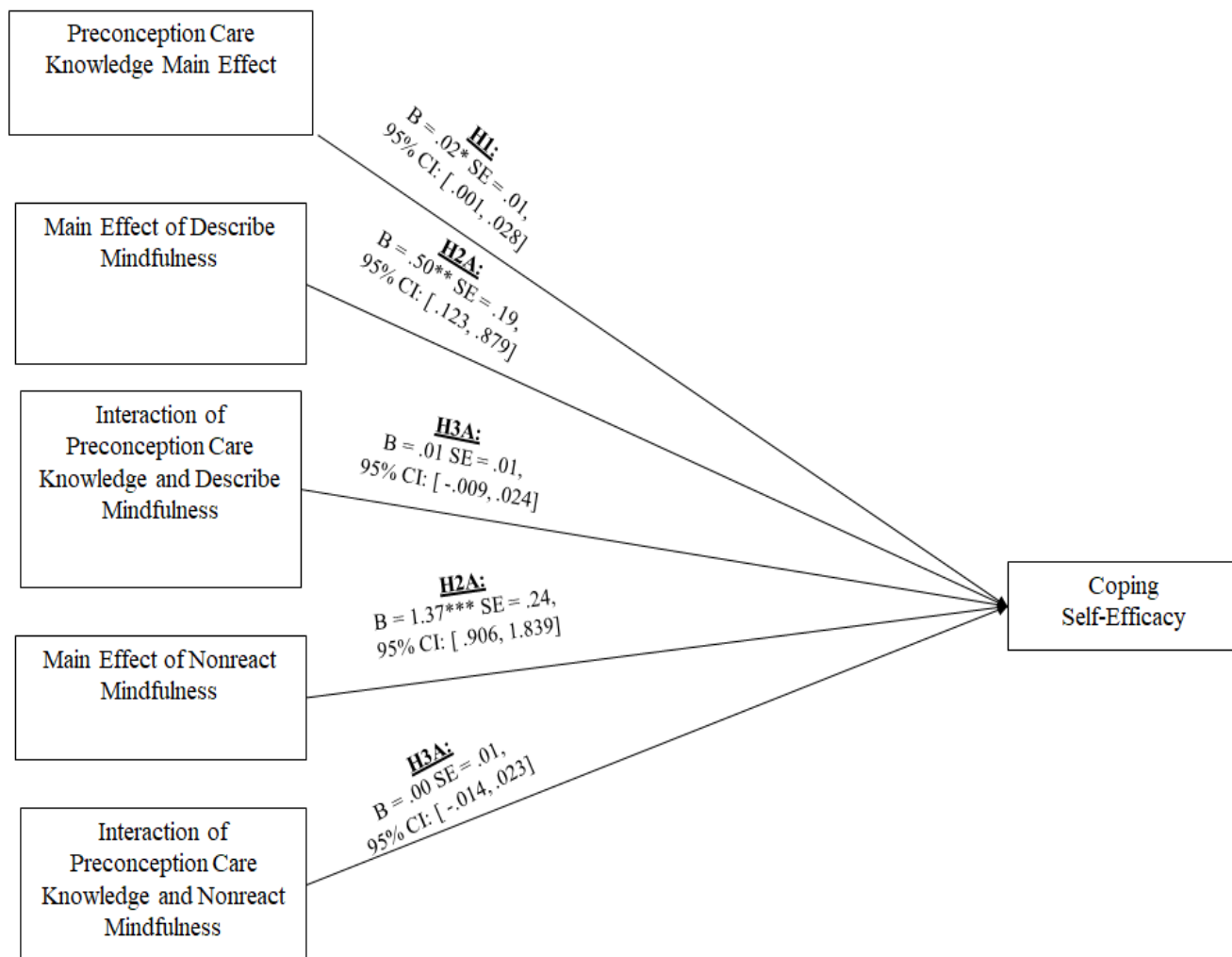


Figure 2. First Regression Model

Notes. * is $p < .05$. ** is $p < .01$. *** is $p < .001$.

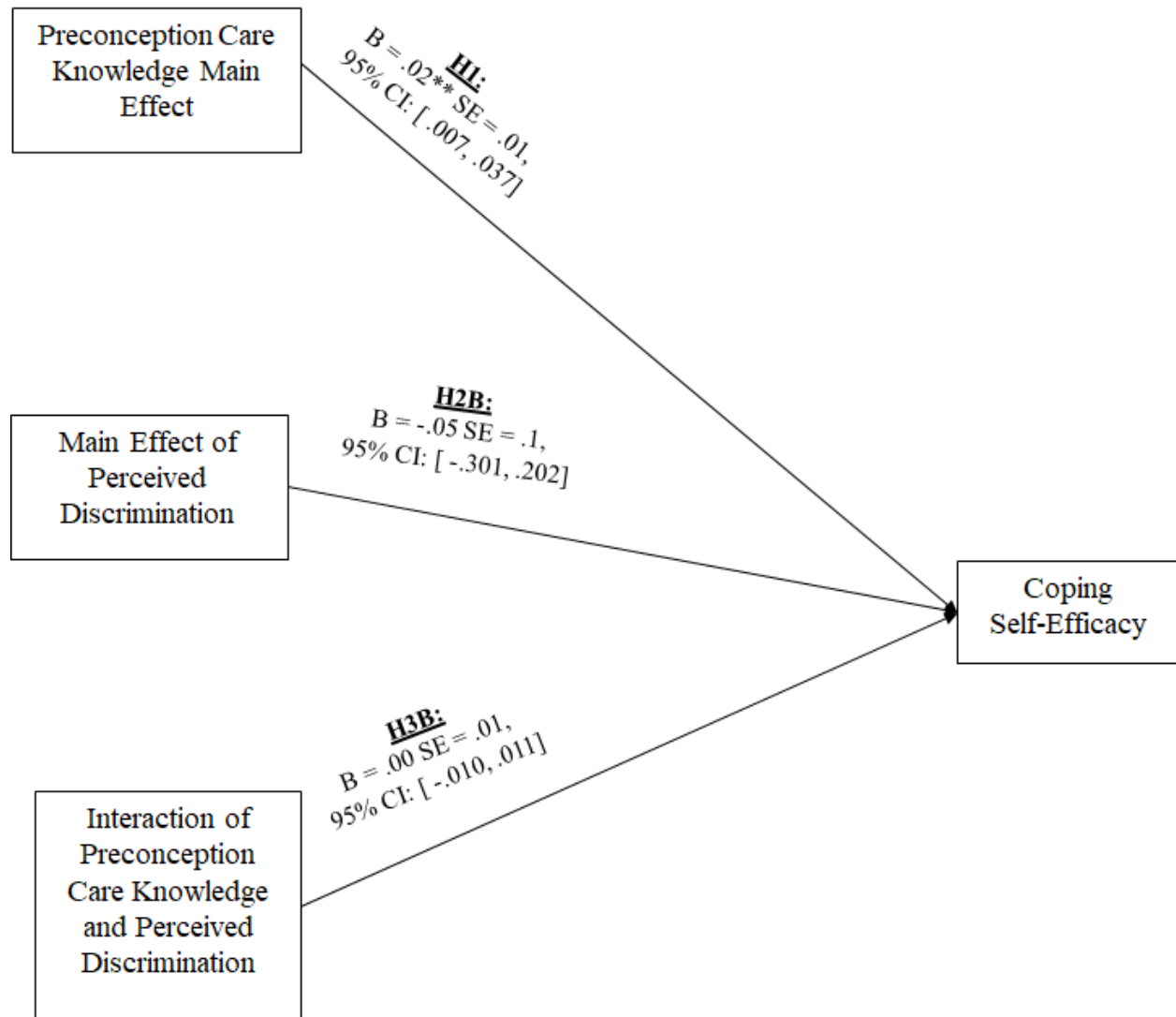


Figure 3. Second Regression Model

Notes. * is $p < .05$. ** is $p < .01$. *** is $p < .001$.

Table 1

Descriptive Statistics and Zero-Order Correlations for Study Variables (N = 117)

Variable	1	2	3	4	5
1. Coping Self-Efficacy	(.95)				
2. Preconception Care Knowledge	.26**	(.89)			
3. Describe Mindfulness	.36***	.24**	(.85)		
4. Nonreact Mindfulness	.53***	.13	.22*	(.66)	
5. Perceived Discrimination	-.02	.04	-.09	.11	(.80)
<i>M</i>	6.63	76.29	3.37	2.93	2.90
<i>SD</i>	1.79	21.47	.75	.60	1.28

Notes. *M* is mean. *SD* is standard deviation. Internal consistency reliability (Cronbach's alpha) is in the diagonals.

* is $p < .05$. ** is $p < .01$. *** is $p < .001$.