Published in final edited form as:

West J Nurs Res. 2019 March ; 41(3): 372–387. doi:10.1177/0193945918790930.

Is There More to Resourcefulness than Personal and Social Skills?

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Abstract

This study examined relationships among personal and social resourcefulness and spiritual practices and their associations with perceived stress, depressive symptoms, and self-assessed health in 138 women caregivers of elders with dementia. Caregivers who rated high on personal and social resourcefulness and spiritual practices (by median splits) had the lowest perceived stress, fewest depressive symptoms, and best self-assessed health, followed in sequence by women rating high on two of the three, high on one of the three, and low on all three. Hierarchical regression analyses that introduced spiritual practices after resourcefulness showed significant increases in the R-square change by 3% and 5% for perceived stress and depressive symptoms, respectively, but no significant change for self-assessed health. Strong associations among personal and social resourcefulness and spiritual practices, and similar relationships with two health outcomes, suggest that spiritual practices may be a third dimension of resourcefulness.

Keywords

caregivers; resourcefulness; spirituality; stress; depressive symptoms

For more than two decades, resourcefulness has been conceptualized to include two dimensions: a personal dimension, which captures the use of self-help skills, and a social dimension, which involves seeking help from others (Zauszniewski, 1996). Through the years, Zauszniewski's middle range theory of resourcefulness and quality of life has described two dimensions of resourcefulness in relation to health outcomes that reflect quality of life. (Zauszniewski, 2006, 2012). More recently, the theory has been revised to also include a spiritual dimension of resourcefulness (Zauszniewski, 2018).

In addition, the most widely used measure of resourcefulness in adults, the Resourcefulness Scale, consists of two subscales that reflect the personal and social dimensions of resourcefulness (Zauszniewski, Lai, & Tithiphontumrong, 2006). Given the availability of a theoretical framework that could be operationalized and tested, and a psychometrically sound conceptual measure, the Resourcefulness Training[®] (RT) intervention by

Zauszniewski was originally developed for elders with chronic conditions and caregiver populations (Zauszniewski, Eggenschwiler, Preechawong, Roberts, & Morris, 2006) and has since been adapted and refined through continued research (Bekhet, Zauszniewski, & Matel-Anderson, 2012; Gonzalez, Polansky, Lippa, Gitlin, & Zauszniewski, 2014; Musil, Zauszniewski, Burant, Toly, & Warner, 2015; Toly, Musil, & Zauszniewski, 2014; Zauszniewski, Bekhet, Lai, McDonald, & Musil, 2007; Zauszniewski, Lekhak, Burant, Variath, & Morris, 2016; Zauszniewski, Musil, Burant, & Au, 2014). However, research on resourcefulness conducted through the years, which ranges from descriptive studies to clinical trials, has not explored whether other, additional dimensions, such as spiritual resourcefulness, might exist.

To date, empirical studies suggest that personal (self-help) and social (help-seeking) resourcefulness are important for achieving optimal health and health-related quality of life across various populations (Au, Zauszniewski, & King, 2012; Bekhet, 2014; Huang et al., 2010; Hung, Perng, Chen, & Lai, 2008; Potter & Zauszniewski, 2000). However, recent literature has also suggested the possibility of additional forms or dimensions of resourcefulness, including academic, entrepreneurial, exercise, sexual, parenting, and spiritual (Zauszniewski, 2016) may exist. Yet the extent to which these additional forms of resourcefulness affect quality of life, particularly spiritual practices, which was recently added to Zauszniewski's theory of resourcefulness and quality of life (Zauszniewski, 2016, 2018), remain unknown.

A small number of empirical studies have examined the association between measures of resourcefulness and spiritual practices (e.g., Au et al., 2012; Dreyer & Dreyer, 2012; Potter & Zauszniewski, 2000). These studies have revealed modest but significant correlations between the personal or social dimensions of resourcefulness and indicators of spiritual practices, ranging between .32 and .49, to suggest that resourcefulness and spiritual practices are related but not redundant. The magnitude of the relationship between resourcefulness and spiritual practices is consistent with the association reported between personal and social resourcefulness (Zauszniewski, Lai, et al., 2006). Indeed, the relationship between personal and social resourcefulness may be demonstrated by an individual who uses self-help to independently seek advice from another (i.e., help-seeking). Similarly, one can envision an overlap between personal or social resourcefulness and spiritual practices. For example, one may independently engage in prayer or meditation, or one may seek help from a minister or other religious person. Thus, interplay between personal and social resourcefulness and spiritual practices warrants further exploration.

In addition, intervention studies show that teaching the skills constituting personal and social resourcefulness within the context of RT are beneficial for health promotion and self-management (Bekhet et al., 2012; Gonzalez et al., 2014; Musil et al., 2015; Toly et al., 2014; Zauszniewski et al., 2007; Zauszniewski, Lekhak, Burant, Variath, & Morris, 2016; Zauszniewski, Musil, Burant, & Au, 2014). However, when findings describing the implementation fidelity of RT are examined in relation to findings regarding RT effectiveness (Zauszniewski, Lekhak, Burant, Underwood, & Morris, 2016; Zauszniewski, Lekhak, Burant, Variath, & Morris, 2016; Zauszniewski, Musil, Burant, Standing, et al., 2014; Zauszniewski, Musil, Burant, & Au, 2014), one might speculate that intervention

recipients could have used skills other than those taught during RT, which may have positively affected their health outcomes, i.e., skills not discussed or measured in those studies, such as those reflecting spiritual practices (e.g., prayer or meditation).

Thus far, research has not been conducted to investigate whether persons who rate highly on measures of both resourcefulness and spiritual practices have better health outcomes than those who are either highly resourceful and low in spiritual practices or vice versa, or those who are low in both resourcefulness and spiritual practices. In addition, studies have not examined the combined effects of resourcefulness and spiritual practices on measures of health outcomes or whether the addition of spiritual practices to resourcefulness in a predictive model has a significant impact on health outcomes. The study reported here is a secondary analysis of baseline data from a sample of women caregivers of persons with dementia who participated in clinical trial testing a Resourcefulness Training® intervention. Although dementia caregiving is not limited to women, women, who comprise about two thirds of dementia caregivers (Gilmore-Bykovskiy, Johnson, Walljasper, Bolck, & Werner, 2018) were targeted for the parent study.

The aims of this study were (1) to examine the relationship between personal and social resourcefulness and spiritual practices and their associations with three health outcomes (perceived stress, depressive symptoms, and self-assessed health); (2) to compare study participants categorized by median splits as high or low on resourcefulness and spiritual practices (i.e., four groups) on the three health outcomes; and (3) to determine the combined and additive effects of resourcefulness and spiritual practices on perceived stress, depressive symptoms, and self-assessed health. The selection of the study outcomes was informed by the theories of resourcefulness in which resourcefulness is associated with indicators of quality of life that include stress relief, absence of depressive symptoms, and health perception (Chen, Palmer, & Lin, 2018; Zauszniewski, 2016, 2018). In this secondary analysis, measures of perceived stress, depressive symptoms, and self-assessed health were used as health outcomes that reflect aspects of quality of life.

Methods

Study Design and Sample

A convenience sample of 138 women caregivers of elders with dementia was recruited for the parent clinical trial through posting and distribution of flyers in community health centers, churches, and local businesses (e.g., grocery stores, department stores, restaurants, coffeehouses, bookstores, libraries). Inclusion criteria for the study were (1) female gender; (2) aged 21 years or older; (3) in the caregiving role for a minimum of 6 months; (4) providing supervision or direct care for a minimum of 4 hours per day; and (5) residing in the same household with the care recipient. The parent study was approved by the University's Institutional Review Board. Baseline data, which were collected during face-to-face interviews with the caregivers, were used for this secondary analysis. The sample size of 138 was considered adequate for this descriptive, correlational analysis of resourcefulness and spiritual practices. For correlational analysis, the sample size of 138 was sufficient for detecting a moderate effect size as small as .21 with a significance level of $\alpha = .05$, and a power of .80 (J. Cohen, 1992).

Instruments

Measures used for this secondary analysis included a demographic questionnaire to briefly describe sample characteristics, two scales capturing the variables of primary interest (resourcefulness and spiritual practices), and three well-known health outcome scales tapping perceived stress, depressive symptoms, and self-assessed health.

Demographic Questionnaire—Demographic information collected from the women caregivers included age, race/ethnicity, marital status, education, annual income, length of caregiving and average hours per day, and a general rating of their health. A complete report of the demographic characteristics is published elsewhere (see Zauszniewski, Lekhak, Burant, Variath, et al., 2016) and briefly summarized in the results section of this study.

Resourcefulness—Resourcefulness was measured by the 28-item Resourcefulness Scale (RS; Zauszniewski, Lai, et al., 2006), which is comprised of two subscales: 16 items reflecting personal resourcefulness, and 12 items reflecting social resourcefulness. Item responses were rated on a 6-point Likert scale, from extremely nondescriptive of the respondent's behavior (0) to extremely descriptive (5). Scores may range from 0 to 140, with higher scores indicating greater resourcefulness (Zauszniewski, Lai, et al., 2006). The RS has been reported to be internally consistent (Cronbach's $\alpha = .83$) and construct validity has been supported by confirmatory factor analysis verifying the presence of two subscales reflecting personal and social resourcefulness, which were moderately correlated ($r = .41$, $p < .001$) (Zauszniewski, Lai, et al., 2006). Cronbach's α in the study sample was .81.

Spiritual Practices—Spiritual practices were measured by the 10-item Spiritual Perspectives Scale (SPS; Reed, 1986). Four of the SPS items were rated on a 6-point Likert scale capturing frequency from "not at all" to "about once per day" and the other six items were rated on a 6-point Likert scale from "strongly disagree" to "strongly agree." Ratings from all 10 items were tallied and higher scale scores reflect greater use of spiritual practices. Reported internal consistency ranged from .81 to .95 (Cavendish et al., 2004; Conner & Eller, 2004; Jesse, Walcott-McQuigg, Mariella, & Swanson, 2005; Reed, 1986). Construct validity has been supported by evidence of a positive correlation with religious background of subjects (Reed, 1986). In the study sample, the Cronbach's α was .86.

Perceived Stress—Perceived stress was measured by the 14-item Perceived Stress Scale (PSS; S. Cohen, Kamarck, & Mermelstein, 1983). PSS items were rated on a 5-point Likert scale from "never" to "very often." Seven items were phrased in the opposite direction and require reverse-coding, so that higher scores indicate greater perceived stress. Reported internal consistency estimates for the PSS ranged from .84 to .87 (S. Cohen et al., 1983; S. Cohen & Williamson, 1988). Construct validity was supported by evidence of predictive relationships with theoretically related constructs such as self-assessed health, health service use, health behaviors, help-seeking behavior, and salivary cortisol (Schwartz & Dunphy, 2003; Wright et al., 2004). In the study sample, the Cronbach's α was .83.

Depressive Symptoms—Depressive symptoms were measured by the well-known 20-item Center for Epidemiological Studies-Depression (CES-D) scale (Radloff, 1977). Items

on the CES-D were rated on a 5-point scale from “rarely” to “always.” Four CES-D items were written in a positive direction and require reverse-coding so that higher scores reflect greater frequency of depressive symptoms (Radloff, 1977). In studies of healthy elders, Cronbach’s alphas for the CES-D have ranged from .80 to .88 (Lewinsohn, Seely, Roberts, & Allen, 1997; Zhang, Sun, Kong, & Wang, 2012). The CES-D has widely reported construct validity and it has been standardized for diverse age groups and races/ethnicities (Radloff, 1977). In the study sample, the Cronbach’s alpha was .87.

Self-assessed Health—Self-assessed health was operationalized by three items developed by Cockerham, Sharp, and Wilcox (1983). The items included a health rating (excellent, good, fair, or poor), comparison of one’s health with peers (worse, same, or better), and self-evaluation of interference with daily activities (none, some, or extreme). The third item is reverse-scored. Scores on the three items were tallied and composite scores may range from 0 to 7, with higher scores indicating better perceived health. This and similar subjective measures of perceived health have been widely used in studies of older adults (Cockerham et al., 1983). Results of those studies have shown that self-assessed health is a reliable and valid proxy for objective measures (Kaplan & Camacho, 1983). The Cronbach’s alpha in this study was .70.

Data analysis

This study involved three analyses to gain a better understanding of how resourcefulness and spiritual practices contribute to health outcomes. Pearson correlations were used to examine the relationships among personal and social resourcefulness, spiritual practices, and three health outcomes (perceived stress, depressive symptoms, and self-assessed health). Four-group, one-way ANOVAs were used to determine how high and low levels of resourcefulness and spiritual practices predicted health outcomes. Thus, for the ANOVAs, the independent predictor variables—personal resourcefulness, social resourcefulness, and spiritual practices—were broken down into four categories using the median split technique to determine if they were high or low on the two forms of resourcefulness and spiritual practices: high on all three, high on two of the three, high on one of the three, or low on all three. The dependent variables were three health outcomes (perceived stress, depressive symptoms, and self-assessed health) that were continuous in nature. Finally, three multiple linear regressions were run to determine how the two continuous variables, resourcefulness and spiritual practices, impacted the three continuous health outcomes.

Results

Sample characteristics

The average age of the women caregivers was 56 years (SD = 12.06; range = 25–89 years). Almost half of them were married/cohabitating (47%; $n = 65$); 25% were single ($n = 35$), 22% were divorced or separated ($n = 30$), and 6% were widowed ($n = 8$). More than half were White (55%; $n = 76$); 45% were non-White ($n = 62$). About 20% had graduate or doctoral degrees ($n = 27$), 27% had undergraduate degrees ($n = 38$), 42% had some college or associate degrees ($n = 58$), 10% completed high school ($n = 14$), and one only completed junior high school (1%). Of those who reported their income (9% did not; $n = 13$), 56%

reported an income < \$30,000 ($n = 70$), 25% reported an income between \$30,001 and \$50,000 ($n = 31$), and 19% reported an income > \$50,001 ($n = 24$). The women caregivers claimed they spent an average of 14 hours per day providing care ($SD = 8.19$; range = 4–24 hours) and had been doing so for an average of 4 to 5 years ($SD = 4.25$; range = 1–23 years). Yet, in general, the women caregivers rated their health as “good” to “excellent.”

Associations among personal and social resourcefulness, spiritual practices, and three health outcomes

First, we examined the relationships among the two known forms of resourcefulness (personal and social) and spiritual practices to determine the direction, magnitude, and significance of the correlations among measures of the three variables. Both forms of resourcefulness were found to have substantial correlations with spiritual practices; correlations ranged from .29 to .37, and the correlation between the two types of resourcefulness was .39 ($p < .001$). Correlations between total resourcefulness and the three health outcomes (perceived stress, depressive symptoms, and self-assessed health) were somewhat stronger than correlations between spiritual practices and the same health outcomes, ranging from .37 to .63 ($p < .001$) compared with .31 to .34 ($p < .001$). Table 1 provides the correlation matrix.

Categorization of caregivers

Using the median split technique, caregiver scores of the measures of resourcefulness (RS) and spiritual practices (SPs) were categorized as high or low. Those scores were then used to determine the numbers of women who rate high on personal resourcefulness, social resourcefulness and spiritual practices, high on two and low on one, high on one and low on two, or low on all three. Then, using this categorization, we explored differences across the four groups on perceived stress, depressive symptoms, and self-assessed health. The results show clear trends to indicate that those who rate highly on personal and social resourcefulness and spiritual practices have the best health outcomes. More specifically, we found that the mean score on self-assessed health for women high on all three (personal and social resourcefulness and spiritual practices) was double the mean for women who were low on all three. And, women who were high on all three measures had substantially lower average scores on perceived stress (26% lower score) and depressive symptoms (58% lower score) when compared with women who were low on personal and social resourcefulness and spiritual practices. Results from the analysis of variance are found in Table 2.

Effects on health outcomes

Next, we investigated the separate and combined effects of personal and social resourcefulness (composite score) and spiritual practices on the three health outcomes (perceived stress, depressive symptoms, and self-assessed health) using linear regression. However, prior to conducting these analyses, the investigators assured normal distribution of the data and constant error variance. Two models were created for each health outcome, a simultaneous model and a hierarchical model using block entry with resourcefulness entered for the first block and spiritual practices for the second block. In the simultaneous models, resourcefulness and spiritual practices together explained 16%, 29%, and 41% of the variance of perceived stress, depressive symptoms, and self-assessed health, respectively. All

three of these simultaneous entry models were significant (F s(2,137) = 13.85, 28.17, and 46.08, $p < .001$, respectively).

The hierarchical regression models showed that when spiritual practices were added to the model that already included resourcefulness, the effects (i.e., R-square change) on perceived stress and depressive symptoms were significant (F change (2,137) = 5.14, $p = .02$ and F change = 4.49, $p = .04$), but there was no significant change on self-assessed health (R -square change = .006; F change (2,137) = 1.24, $p = .27$). However, adding spiritual practices to the model increased the R-square change by 3% for perceived stress and 2% for depressive symptoms. Table 3 summarizes these findings.

Discussion

The purpose of this study was to examine the association between personal and social resourcefulness and spiritual practices in order to determine whether the strength of their interrelationship and similarity in their relationships with other health outcomes might suggest they are three dimensions of a larger construct. While the relationship between personal and social resourcefulness and spiritual practices were examined in a previous study (Potter & Zauszniewski, 2000), the study reported here was the first of its nature to uncover the relationship between personal and social resourcefulness and spiritual practices. Although our findings revealed substantial and significant correlations among personal resourcefulness, social resourcefulness, and spiritual practices, the correlations would not be considered large (Cohen, 1992) and would therefore not suggest that the three concepts are redundant. Yet, these associations among personal resourcefulness, social resourcefulness, and spiritual practices may indicate they are part of a larger construct as proposed in the most recent revision of the resourcefulness and quality of life theory (Zauszniewski, 2018).

However, in order to establish whether spiritual practices may constitute a third dimension of resourcefulness along with personal and social dimensions, we explored whether spiritual practices had associations with and potential effects on health outcomes that were similar to those of resourcefulness. Although our findings showed that correlations between resourcefulness and the three health outcomes (self-assessed health, perceived stress, and depressive symptoms) that were somewhat stronger than the correlations between spiritual practices and the same health outcomes, the correlations between spiritual practices and the three health outcomes were of medium size, in the expected directions, and significant.

In addition, the regression analyses with simultaneous entry of resourcefulness and spiritual practices showed that the relationships between spiritual practices and perceived stress and between spiritual practices and depressive symptoms were consistent with those found between resourcefulness and those same two outcomes. In addition, the hierarchical regression models revealed that adding spiritual practices to resourcefulness increased the impact on perceived stress and depressive symptoms by 2 to 3%. Collectively, these findings provide evidence for similar relationships for resourcefulness and spiritual practices in relation to those same two outcomes and support for considering them together as dimensions of a larger construct as suggested by the revised theory of resourcefulness and quality of life (Zauszniewski, 2018).

However, the relationship between spiritual practices and self-assessed health did not mirror the relationship detected between resourcefulness and self-assessed health; spiritual practices did not impact self-assessed health significantly when simultaneously entered with resourcefulness. Although the significant correlation between spiritual practices and self-assessed health suggests an association, the impact of spiritual practices on self-assessed health was obliterated when entered into simultaneous regression with resourcefulness, which was strongly correlated with that outcome. To determine whether this finding may have been affected by the measurement of self-assessed health with a scale composed of three items, all scaled differently (Cockerham, et al., 1983) and, on average, study participants rated their health as “good” to “excellent,” we recommend further examination of relationships among spiritual practices, resourcefulness, and self-assessed health.

Of greatest interest were the findings that showed that individuals who rated high on both resourcefulness and spiritual practices perceived their stress as lower, reported fewer depressive symptoms, and rated themselves as healthier than those who rated high on either resourcefulness or spiritual practices; in contrast, those rating low on both resourcefulness and spiritual practices were found to have the worst health outcomes. Consistent with resourcefulness theory (Zauszniewski, 2016), these findings indicate that optimal health might best be attained by using self-help skills (personal resourcefulness), help-seeking skills (social resourcefulness), along with spiritual practices. A study conducted in 1996 established the importance of self-help and help-seeking, which reflect two dimensions of resourcefulness (personal and social) for attaining optimal health (Zauszniewski, 1996). The study reported here suggests the possibility that a third dimension, spiritual resourcefulness, may exist. The findings from this study suggest that spiritual practices, which may reflect spiritual resourcefulness, are a vitally important component of caregiver health. Spiritual practices in this study were highly associated with indicators of caregiver health. Therefore, future intervention studies may examine spiritual practices (i.e. prayer or meditation interventions) to reduce stress and depressive symptoms and improve health in this vulnerable population.

The sample size of 138 women caregivers was adequate for the number of variables included, as well as to detect descriptive trends; however, it remains possible that the results of this study may not be generalizable to other geographic areas or populations beyond women dementia caregivers. Second, because the study participants rated their health as “good” to “excellent” on average, the findings may be limited to healthy persons who may rely on personal, social, or spiritual resources differently from those who may be less healthy (Koenig, 2009, 2015; Zauszniewski, 2016). Additionally, the Spiritual Perspectives Scale (Reed, 1986) is greatly influenced by the participant’s health status. Therefore, the physical capacity to perform the spiritual practices mentioned on the scale may be diminished. A third limitation is that the scale used to measure spiritual practices is scaled differently than the Resourcefulness Scale. Thus, it cannot be assumed that the measure used in this study would capture spiritual resourcefulness.

A final limitation was that this study was a secondary analysis. Thus, there is an inherent limitation in the lack of control over the measures used and sample characteristics (i.e. exclusively female sample). To address this limitation, future researchers might examine

gender differences on all study variables, including spiritual practices, the two forms of resourcefulness and the three health outcomes, by including male caregivers as this population continues to grow (Alzheimer's Association and National Alliance for Caregiving, 2004; Richardson, Lee, Berg-Weger, & Grossberg, 2013). In particular, there may be gender differences in spiritual practices (Australian Institute of Health and Welfare, 2007; Campbell, Wright, & Oyeboode, 2008; Prince, 2004; Schneider, Murray, Banerjee, & Mann, 1999) as well as differences in spiritual practices across different caregiver populations (Collins & Bowland, 2012; Murray-Swank et al., 2006).

Despite the study's limitations, the findings provide evidence for relationships among personal and social resourcefulness, spiritual practices, and health outcomes that are consistent with existing theory and support the likelihood that a third dimension of resourcefulness exists—spiritual resourcefulness. Further research in regard to personal, social, and spiritual resourcefulness is recommended in other populations. However, the development of a reliable and valid subscale to measure spiritual resourcefulness that is parallel to the existing subscales capturing personal and social resourcefulness may be the next logical step.

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Table 1

Pearson Correlations between Personal Resourcefulness, Social Resourcefulness, and Spiritual Practices, and Among Health Outcomes (Self-Assessed Health, Perceived Stress, and Depressive Symptoms) (*N* = 138).

	Spiritual Practices	p-value	Resourcefulness	p-value
Resourcefulness				
Personal Resourcefulness	.365	< .001	Social Resourcefulness	
Social Resourcefulness	.286	< .001	--	< .001
Health Outcomes				
Self-Assessed Health	.314	< .001	.633	< .001
Perceived Stress	-.306	< .001	-.366	< .001
Depressive Symptoms	-.344	< .001	-.521	< .001

Table 2

Means, Standard Deviations, and ANOVA Results by High and Low Categories of Personal and Social Resourcefulness and Spiritual Practices

Variables	High on None (n=25) Mean (SD)	High on 1 (n=33) Mean (SD)	High on 2 (n=52) Mean (SD)	High on 3 (n=28) Mean (SD)	F-test	p-value
Self-Assessed Health	1.92 (1.26)	3.09 (1.13)	3.35 (1.15)	3.82 (1.02)	13.43	< .001
Perceived Stress	30.28 (7.36)	30.27 (6.64)	26.90 (6.87)	22.36 (6.79)	8.46	< .001
Depressive Symptoms	22.92 (12.62)	15.48 (8.70)	12.21 (7.49)	9.68 (7.69)	11.38	< .001

Table 3
Hierarchical Regression Analyses Predicting Self-Assessed Health, Perceived Stress, and Depressive Symptoms ($N = 138$).

	Health Outcomes					
	Self-Assessed Health		Perceived Stress		Depressive Symptoms	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Predictors						
Block 1						
Total Resourcefulness Standardized Beta; p-value	.633 $p < .001$	.601 $p < .001$	-.366 $p < .001$	-.290 $p < .001$	-.521 $p < .001$	-.456 $p < .001$
Block 2						
Spiritual Practices Standardized Beta; p-value	--	.080 $p = .268$	--	-.193 $p = .025$	--	-.166 $p = .036$
Model Summaries						
R-Square	.400	.406	.134	.165	.271	.294
Change in R-Square;	--	.006	--	.032	--	.023