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ABSTRACT

This study investigated the influence of specific cognitive factors believed associated with the onset and maintenance of depression. Of specific interest was the relationship of dysfunctional attitudes to levels of depression in a comparison of two research populations of helping professionals: Presbyterian Church (USA) clergy and mental health professionals. Data from 515 respondents (51.5 percent clergy, 54.2 percent female) were utilized in regression analysis procedures. Results of the data analysis confirmed a positive, directional association between the level of dysfunctional attitudes and level of depression. The presence and persistence of these dysfunctional attitudes evidently heightened the development of symptoms associated with depression. This finding emphasizes the importance of attending to the influence of cognitive features in personal and professional life. The results do not support the idea that a significant pattern of cognitive resistance to depression was present by virtue of membership in the clergy sample. Test scores indicated that clergy members were at greater risk for symptoms associated with depression than their counselor counterparts. Further study is needed to explore those variables which may increase the efficiency of belief systems as coping mechanisms and thereby reduce the effect of underlying attitudes which predispose a person to depression. (Contains 48 references.) (RJM)

# Cognitive Factors Associated with Depression in a Comparison Study of Helping Professionals

Wayne D. Griffin, Ph.D.



Running head: Cognitive Factors in Depression

## Abstract

This study examines the association of cognitive factors theorized to contribute to the onset and maintenance of depression. Of specific interest is the relationship of dysfunctional attitudes to levels of depression in a comparison study of two helping professions, Presbyterian (USA) ministers and mental health professionals.

Data from five hundred and fifteen respondents (51.5% clergy) were utilized in regression analysis procedures. Results confirmed prior research findings that level of dysfunctional attitudes is associated in a positive direction with level of depression. While no difference by group was established on level of depression, clergy were found to have significantly higher levels of dysfunctional attitudes. No evidence for a cognitive immunity based on an underlying clergy belief system was established.

## Introduction to the Study

### Need for the Study

The goal of this study was to gain a better understanding of the influence of specific cognitive factors which are theorized to contribute to the onset and maintenance of depression. Of specific interest was the relationship of dysfunctional attitudes to levels of depression in a comparison of two research populations of helping professionals, notably Presbyterian Church (USA) clergy and mental health professionals affiliated with the American Mental Health Counselors Association (AMHCA).

Results of longitudinal studies appear to confirm an upward trend in levels of emotional distress in our society (National Institute of Mental Health (NIMH), 1990; U.S. Bureau of the Census, Statistical Abstract, 1991). Symptoms associated with depression are ranked as one of the most often diagnosed mental health problems (Ponderotto, Pace, & Kavan, 1989)). In the United States, of the 28.9 million persons who may have suffered from any mental disorder during a one month period in 1989, an estimated 5.2% were depressive in nature. It is further estimated that 8.3% of the adult population over the age of 18 will suffer with symptoms of clinical depression at some point in the course of their lifetime (NIMH, 1991).

A 1986 survey of mental health inpatient, outpatient and partial care programs established a primary diagnosis of mood disorder in 22% of all persons currently under care and 14% of all admissions (NIMH, 1990). It was estimated for 1989 one in every twenty employees experienced

depression with overall associated costs of lost time from work to be $17 billion (Rice, Kelman, & Miller, 1991).

Outcome studies on depression also suggest an alarmingly high comorbidity with other physical ailments. Diagnosis with any psychiatric disorder is related to a higher risk for some form of medical illness (Hall, Gardner, Stickney, LeCann, & Popkin, 1980). In a recent 1-year outcome study of persons diagnosed with major depression, half of the participants were diagnosed with a coexistent, nonaffective psychiatric or medical illness (Keitner, Ryan, Miller, Kohn, & Epstein, 1991).

Persons practicing in the helping professions are not immune from many of the same factors that diminish the well-being of the general public. Depression in this sector of our population may produce not only the expected losses in personal health and productivity, but also have a detrimental impact on those persons for whom the professional serves as a caregiver. The existence of emotional distress and problems with role and work overload have been described in several helping professions including social workers (Cournoyer, 1988; Oberlander, 1990; Ratliff, 1988) and psychologists (Ross, Altmaier, & Russell, 1989; Thoresen, Budd, & Krauskopf, 1986). White and Franzoni (1990) also reported that graduate counseling students exhibited higher levels of disturbance than did the general population norms on 6 of the 7 Minnesota Multiphasic Personality Inventory scales under study, including depression.

In summary, depression has been determined to be one of the leading diagnoses of emotional distress. As such, depression has a

significant impact on the personal health, economic productivity, and social vitality of our population.

Research Populations As helping professionals, clergy and mental health specialists are often utilized by others as resources for education and problem solving associated with personal life change. Both professions share some similarities in formal training and practice. Each requires a graduate education in curricula which includes components in psychological theory, problem assessment, and intervention strategies. Clergy and counselors alike also subscribe to a set of standards which determine ethical decision making and conduct. Finally, both professions require a form of certification based on minimal standards of knowledge and skills, ordination in the case of the clergy and corresponding certification or licensure for mental health counselors.

Differences between the two professions exist around the roles of consensual belief or ideological orientations and rituals enacted within the context of a voluntary and propositional community. Presbyterian clergy, unlike their counselor counterparts, actively promote the content and meaning of a specific religious belief system along with the attendant symbols and activities. Ministers as a function of their vocation also regularly engage in community rituals with their clients which reinforce a particular world view. While mental health counselors may personally subscribe to religious beliefs and activities, a distinction is maintained between the professional's core belief structure and the right of the client to determine their own path of belief and activity.

The Presbyterian (USA) clergy were selected for this study because they espouse a belief system comprised of specific core schema or attitudes about life. It was hypothesized that, if adhered to, these core beliefs may attenuate the exaggeration and influence of cognitive factors Weissman and Beck (1978) found to be associated with depression. It is logical to think a belief system which contrasted with the dysfunctional attitudes might provide a level of cognitive resistance to depression.

## Theoretical Rationale for the Study

Aaron Beck has theorized that the basic problems of emotional disturbance may be located in a person's misconception about self, irrational beliefs, and faulty assumptions about reality. Beck's (1976) concept of maladaptive cognitions is described in a structural model which consists of three components, immediate events or the automatic thoughts associated with first impressions, information processing styles, and underlying patterns of beliefs called schemata. The focus of this study was the influence of a person's underlying patterns of belief or schema on the development and maintenance of depression. It is this salient attitudinal component which explains why a person maintains self-defeating thoughts, despite evidence which exists to suggest the contrary is true.

Because any experience consists of multiple stimuli, an individual selectively chooses to attend to specific facets of the event. This screening produces a pattern that becomes meaningful when associated to the event and predisposes one's future decision making based on a history of its

prior encounters. The resulting patterns of meaning are construed as schema and constitute a person's underlying cognitive structure. Under duress, certain dysfunctional schema or attitudes may be activated which negatively bias an individual's perception of reality. This distortion of experience potentiates a negative view of self, environment, and future and thereby reduces the effectiveness of information processing (Beck, Rush, Shaw, & Emery, 1979). The more active the idiosyncratic schema are, the less control the person has with which to recall and utilize more adaptive cognitive and emotional resources (Billings & Moos, 1985). Once established, this closed feedback loop is thought to produce a heightened vulnerability to depression.

Weissman and Beck (1978) identified seven dysfunctional attitudes associated with depression. These attitudes consist of content which when exaggerated can predispose a person to negatively interpreting life experience. They describe the personal desires for approval, love, achievement, perfectionism, entitlement, omnipotence, and autonomy. Beck, Rush, Shaw, & Emery (1979) suggested the presence of these activated schema primed the individual for the cycle of depression.

Results of research have confirmed the relationship of dysfunctional attitudes to current measures of depression in a number of studies with various populations (Bowers, 1990; Eaves & Rush, 1984; Levine & Fieve, 1990; Power, 1988; Simon, Murphy, Levine, & Wetzel, 1986; Weissman & Beck, 1978; Wierzbicki & Rexford, 1989). A decrease in dysfunctional attitude scores has also been associated with the course of treatment for

depression (Bowers, 1990; Miller, Norman, & Keitner, 1991; Peselow, Robins, Block, Barouche, & Fieve, 1990). When compared to self-reported symptoms of depression, measured levels of maladaptive schema evidenced stability over time. (Dobson & Shaw, 1986; Oliver & Baumgart, 1985; Weissman, 1980; Weissman & Beck, 1978).

Dysfunctional attitudes have been correlated with several types of distress related to symptoms of depression. These include negative life experiences and stress (Barrett & Gotlib, 1988; Wise & Barnes, 1986), perceived stress of events and depression (Robins & Block, 1989), public self-consciousness and stress (Olinger, Kuiper, & Shaw, 1987), frequency of pleasant activities and level of depression (Wierzbicki & Rexford, 1989), and concurrent low social support (Barrett & Gotlib, 1990). Dysfunctional attitudes have been described as a discriminant factor in suicidal ideation in psychiatric patients (Ellis & Ratliff, 1986; Ranieri, Steer, Lawrence, Rissmiller, & Piper, 1987).

## Method

One thousand research booklets were sent to computer-generated nationwide random samples. Mailing lists were provided by the Presbyterian Church (USA) and American Mental Health Counselors Association (AMHCA). Five hundred were sent to Presbyterian (USA) clergy and 500 to AMHCA members. Each research sample was stratified for gender to compensate for the greater percentage of men in the clergy membership and women in the mental health professional affiliation. A cover letter enclosed with the booklet assured participant anonymity and

included a self-addressed, stamped return envelope. Cards inviting persons to participate in the study were mailed one week in advance of the booklets' distribution. A follow-up card encouraging return of the materials was posted ten days after the research booklets were mailed.

The research instrument for this study included an announcement card, cover letter, a booklet incorporating the assessments and demographic questionnaire, and follow-up card. The demographic questionnaire requested information regarding gender, marital status, age, racial and ethnic identity, tenure in the profession, and type of service (i.e., direct or indirect). Counselors were also requested to indicate if ordination was held as a minister. Two open ended questions regarding prevalent work stressors and means employed to cope with stress were included.

Assessment Instruments

1. The Dysfunctional Attitudes Scale-A (DAS) (Weissman & Beck, 1978), is a 40 item self-report questionnaire developed to assess the level of dysfunctional attitudes. The abbreviated DAS form was selected over the longer 200 item instrument for its measurement efficiency and brevity of administration. The DAS-A utilizes items rated on a 7-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree) with total scores from 40 to 280 possible. Higher scores are indicative of the presence of negative schema associated with depression. Outcome studies describe mean scores for the DAS short forms in normal populations in a range between 90 and 113 (Corcoran & Fischer, 1987; Dobson & Breiter, 1983; Dobson & Shaw, 1986; Oliver & Baumgart, 1985; Peselow et al., 1990).

Concurrent validity for the DAS is based on studies correlating it with other measures of depression. These include reported coefficients of .59, .64., and .78 with the HRSD, BDI and Automatic Thoughts Questionnaire (Dobson & Shaw, 1986), and .71 with the HRSD (Reda, Carpiniello, Secchiaroli, & Blanco, 1985). Oliver and Baumgart (1985) established a coefficient of .54 with the BDI in an unselected adult population with coefficients of .65 and .56 for men and women, respectively.

Reliability coefficients on internal consistency are reported in a range from .81 to .93. Reported Cronbach's alphas include coefficients of: .90 (Zemore & Veikle, 1989), .90 and .88 for males and females, respectively (Dobson & Breiter, 1983), and .87 .93, and .91 in normals, psychiatric control group, and depressed patients (Dobson & Shaw, 1986). In a comparison of the DAS's three forms, Oliver and Baumgart (1985) established an alpha of .85 on form A.

2. The Center for Epidemiological Studies-Depression Scale (CES-D) (Radloff, 1977) was developed to identify groups with current symptoms of depression in the general population. The CES-D has been utilized notably to identify "possible" cases of depression rather than the severity of the disorder (Corcoran & Fischer, 1987; Radloff, 1977; Rehm, 1988; Wells, 1985).

The CES-D is a 20 item self-report questionnaire whose item content targets the following areas of the syndrome of depression: depressive mood and crying, positive affect (reversed scored), vegetative psychomotor symptoms, and interpersonal difficulty (Wells, 1985). Ratings on the scale

are constructed to measure current symptom experience within a week ranging from 0 (rarely or less than 1 day) to 3 (most or all of the time 5-7 days). Total scores may range from 0 to 60 with higher scores indicative of more symptom presence weighted by frequency of experience. A cutoff score of 16 was established by Radloff (1977). A cutoff score of 17 was utilized in this study to increase high end sensitivity in a general population (Lewinsohn, Zeiss, & Duncan, 1989).

The CES-D has been positively correlated with a number of instruments in concurrent measures of depression. These instruments and their respective coefficients include: .70 with the Depression Adjective Checklist (Lubin, 1967), .55 with the Bradburn Balance (Bradburn, 1966), .74 with the Cantril Ladder (Cantril, 1963), .44 with the HRSD (Hamilton, 1960), .54 with the Raskin Rating Scale (Raskin, Schulterbrandt, Keating, & Mckeon, 1969), .81 with the BDI (Beck, Ward, Mendelson, Mock & Erbaugh, 1961), and .90 with the Zung (Zung, 1965).

The internal consistency of the CES-D is considered high for its short form. Corcoran and Fischer (1987) described a range of split-half and Spearman-Brown coefficients from .77 to .92. Radloff (1977) reported a range of coefficient alphas of .85 to .87 for normal groups.

Analysis of Data

The analysis of data for this study was accomplished through the use of the SAS General Linear Model. Model 1 designated the level of depression by CES-D score as the criterion. Model 2 established the level of dysfunctional attitudes as the output variable. For purposes of

determining levels of statistical significance, the type 1 error .05 was established.

Model 1 included two equations, the first incorporating all of the independent variables including interactions between group and each of the input terms. The goal was to perform the regression analysis and select the most parsimonious model which accounted for the existence of interaction terms and the most significant proportion of variance. If the equation which incorporated the interaction effects was found to have no significant improvement in model fit, the main effects equation was utilized. The regression coefficients for that model were then tested for levels of attained significance. A similar procedure was utilized with the second model and its two equations.

## Results

### Descriptive Data

Research booklets were sent to 500 clergy and 500 mental health professionals. A total of 585 booklets were returned with 18 requesting no participation. Twenty-four were excluded after being received following the 31 day eligibility period utilized to reduce history effects. An additional 28 counselor's booklets were disqualified for dual status as ordained clergy. Five hundred and fifteen returned booklets were eligible for the data analysis of which 265 (51.5%) were ministers. Two hundred seventy-nine (54.2%) of the participants were female. Fifty-four percent (137) of the ministers and 57% (142) of the counselors were women.

Reliability estimates for the CES-D and DAS were derived. The Cronbach's alpha for the CES-D was .898, suggesting about 90% of the total score variance was from true score variance. This estimate is somewhat higher than the range of .85 to .87 reported by Radloff (1977) on normal populations. The coefficient alpha for the DAS-A was calculated at 90.2 suggesting about 90% of the variance on the instrument was attributable to true score variance. This estimate is consistent with the alphas reported in a range of .81 to .93 and exceeds the alpha of .87 derived from Dobson and Shaw's (1986) administration on a normal population.

Regression Results

Neither model 1 nor model 2 established the existence of significant interaction effects. Both equations in each of the models had significant F values. The F values of Model 1 were 7.74,$p<.0001$ and 13.75,$p<.0001$ for the interaction and main effects equations, respectively. Model 2 produced F values of 4.45,$p<.0001$ and 7.21,$p<.0001$ for the interaction and main effects equations, respectively. Therefore, an overall test was performed in each of the models to determine whether any significant differences existed between their respective equations. The F values for the overall tests were $F(1.1017),p=.05$ and $F(1.2015),p=.05$ for models 1 and 2, respectively. There being no significant differences, the more parsimonious main effects equations were utilized in each model.

Results of Model 1. Table 1 shows the sources for variance in the model. Table 2 describes the regression coefficients elaborated by the model to test for the main effects with CES-D as the outcome variable. This

equation was determined to account for approximately 24% of the total variance in the model, R-square equal to .2358.

Insert Table 1 Here

Insert Table 2 Here

In model 1 it was established that four variables contributed substantially to the scores on the CES-D. The regression results indicated DAS scores were positively associated with the level of depression ($t=10.41, p<.05$). That is, for every 5 points increase on the DAS, there was a resultant increase of .70 point on the CES-D. Mean scores on the CES-D were 8.288 and 8.276 for the clergy and counselors, respectively.

Results of Model 2. Table 3 describes the sources of variance in the model. Table 4 shows the regression coefficients elaborated by the model to test for the main effects with DAS score as the outcome variable. This model was determined to explain approximately 13% of the variance, R-square equal to .1278.

Insert Table 3 Here

Insert Table 4 Here

Three variables were found to be statistically significant to the model. Group membership, affiliation as either a minister or mental health professional, was determined to make a significant contribution to the level of dysfunctional attitudes (F value 20.02,p=.0001). A comparison of the groups' adjusted means was made. The adjusted mean score for clergy on the DAS was 100.71 as compared to the mean of 89.91 for the counselors. The comparison test yielded a t-value of 4.4746,p=.0001. This finding suggests that, when compared to counselors, the clergy achieved significantly higher scores on the DAS.

In summary, results of the data analysis utilizing the two models established significant associations between selected independent variables and the outcome measures. Level of dysfunctional attitudes had a positive directional association with level of depression. In the second model, it was established that, when compared to the mental health professionals, clergy scored significantly higher on the DAS.

## Discussion

Of interest to this study were three key questions. First to what degree is a cluster of particular cognitive schema associated with the syndrome of depression? These attitudes or schema have been identified by Beck (1976) to be codeterminants with other environmental and biological factors in onset and maintenance of depression.

A second line of inquiry was the capacity of a belief system to attenuate the presence and influence of the dysfunctional schema. Based on the content of their theology, a rationale was developed to utilize Presbyterian (USA) clergy as a research population to test the idea of cognitive resiliency. Lastly, in order to ascertain the strength of any findings on the part of the ministers, a similarly trained group of helping professionals, mental health counselors, were selected as a comparison group.

Results of the data analysis in this study confirmed a positive, directional association between the level of dysfunctional attitudes and level of depression. This finding underscores similar results in a number of studies (Bowers, 1990; Eaves & Rush, 1984; Peselow et al., 1990; Power, 1988; Weissman & Beck, 1978). The results of this study contribute additional evidence to the cognitive theory of depression. The presence and persistence of these dysfunctional attitudes potentiates the development of symptoms which are associated with depression. This finding emphasizes the importance of attending to the influence of cognitive features in personal and professional life.

Additionally, while the results of Model 1 established the existence of a significant and positive relationship between scores on the DAS and CES-D, no significant difference in mean scores or direct effect on the CES-D by group was determined. The difference in mean scores between groups was .39 with averages of 11.29 and 11.66 for clergy and counselors, respectively. This means that if clergy and counselors were equivalent on

the DAS, no significant difference in level of depression as measured by the CES-D would be expected. A difference established between groups on DAS scores may, however, suggest an indirect effect by group on level of depression.

The results of this study do not support the idea that a significant pattern of cognitive resistance to depression was present by virtue of membership in the clergy sample. A statistically significant relationship on the measure of dysfunctional attitudes by group membership was established. The difference in DAS mean scores of 103.62 for clergy and 90.85 for counselors was 12.77 points. While no direct effect of group membership on CES-D scores was described, the higher scores of the Presbyterian ministers on the DAS suggested an indirect effect on the level of depression. Given the significantly higher DAS scores, it is logical to conclude the clergy may be expected to be at greater risk for symptoms associated with depression than their counselor counterparts. The findings of this research do not provide evidence the clergy possessed any advantage in underlying schema which attenuated their level of dysfunctional attitudes.

Further study is needed to explore which variables may increase the efficiency of belief systems as coping mechanisms and thereby reduce the effect of underlying attitudes which predispose a person to the symptoms associated with depression. The importance of this heightened susceptibility and its implications for the well-being of the ministers merits further consideration and research.

As comparison groups, findings of the study did not support the existence of a significant difference between clergy and counselors on the level of depression as measured by the CES-D. When Chi-Square tests were done to determine the dependency of status as "possibly" depressed on the independent variable group, a level of significance ($p=.05$) was not achieved. The status of "possible" depression was assigned by a score of 17 or greater on the CES-D. Of the 265 ministers, 30 (11.3%) attained this description. Thirty-nine (15.6%) of the 250 counselors were similarly designated. While there is debate about how high the CES-D score must be to confirm a diagnosis of depression (Lewinsohn et al., 1989), the cutoff score of 17 was selected for this study to increase high end sensitivity to symptoms associated with depression.

While no significant difference on level of depression between the comparison populations in this study was confirmed, it is important to note that as groups their rates exceed the NIMH statistics for the general population lifetime prevalency rates (NIMH, 1991). If these scores on the CES-D are at least representative as a measure of symptoms associated with depression, the percentage of clergy and counselors scoring at the cutoff point is cause for concern within the professions. Further study needs to be undertaken to establish the relationship between the severity of the identified symptoms and their effects on the personal and vocational well-being of these professionals.

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Table 1

Source Table for the Model to Test the Main Effects with CES-D as the Dependent Variable

| Source | DF | Type IIISS | F Value | p value |
|---|---|---|---|---|
| Group | 1 | 12.1810 | 0.26 | 0.6115 |
| DAS | 1 | 5109.1342 | 108.38 | *0.0001 |
| Gender | 1 | 15.1992 | 0.32 | 0.5704 |
| Age | 1 | 10.8669 | 0.23 | 0.6314 |
| Marital | 3 | 1040.8454 | 7.36 | *0.0001 |
| Race/Ethnic | 1 | 56.8338 | 1.21 | 0.2727 |
| Tenure | 1 | 323.7751 | 6.87 | *0.0090 |
| Work Type | 2 | 67.2373 | 0.71 | 0.4906 |

*p< .05

Table 2

Regression Coefficients and T-Values for the Model to Test the Main Effects with CES-D as the Dependent Variable

| Input Variables | Estimate | t value |
|---|---|---|
| Group | | |
| Clergy | -0.3736 | -0.47 |
| Counselors | 0.0000 | 0.00 |
| DAS | 0.1401 | *10.41 |
| Gender | | |
| Female | -0.4125 | -0.57 |
| Male | 0.0000 | 0.00 |
| Age | 0.0184 | 0.48 |
| Marital Status | | |
| Divorced | -1.3195 | -1.01 |
| Married | -2.7258 | *-2.98 |
| Other | 4.0334 | *2.15 |
| Single | 0.0000 | 0.00 |
| Race/Ethnicity | | |
| Minority | 1.5420 | 1.10 |
| White | 0.0000 | 0.00 |
| Tenure | -0.1145 | *-2.62 |
| Work Type | | |
| Direct | -1.2231 | -0.60 |
| Indirect | -0.3336 | -0.15 |

Table 2 Continued

| Model to Test Main Effects | CES-D-Dependent Variable | |
|---|---|---|
| Input Variables | Estimate | t value |
| Other | 0.0000 | 0.00 |
| Intercept | -1.4707 | -0.47 |

*p < .05

Table 3

Source Table for the Model to Test the Main Effects with DAS as the Dependent Variable

| Source | DF | Type IIISS | F value | p value |
|---|---|---|---|---|
| Group | 1 | 10603.7076 | 20.02 | *0.0001 |
| Gender | 1 | 1463.5061 | 2.76 | 0.0971 |
| Age | 1 | 11510.1716 | 21.73 | *0.0001 |
| Marital | 3 | 735.8544 | 0.46 | 0.7081 |
| Race/Ethnic | 1 | 36.3219 | 0.07 | 0.7935 |
| Tenure | 1 | 2961.0355 | 5.59 | *0.0184 |
| Work Type | 2 | 462.3464 | 0.44 | 0.6465 |

*p < .05

Table 4

Regression Coefficients and T Values for the Model to Test the Main Effects with DAS as the Dependent Variable

| Input Variable | Estimate | t value |
|---|---|---|
| Group | | |
| Clergy | 10.8048 | *4.47 |
| Counselors | 0.0000 | 0.00 |
| Gender | | |
| Female | -4.0354 | -1.66 |
| Male | 0.0000 | 0.00 |
| Age | -0.5861 | *-4.66 |
| Marital Status | | |
| Divorced | -2.2084 | -0.50 |
| Married | .4926 | 0.16 |
| Other | -5.2232 | -0.83 |
| Race/Ethnicity | | |
| Race/Ethnic | -1.2326 | -0.26 |
| White | 0.0000 | 0.00 |
| Tenure | 0.3442 | * 2.36 |
| Work Type | | |
| Direct | 0.4112 | 0.06 |
| Indirect | 2.9766 | 0.41 |
| Intercept | 116.4303 | *12.71 |

*p <.05