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Effects of Parental Alcoholism, Sense of Belonging, and Resilience on Depressive Symptoms: A Path Model

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Abstract

This paper explored the relationships between parental alcoholism, sense of belonging, resilience, and depressive symptoms in Koreans in the U.S. Data from 206 Koreans (Mean age = 28.4 years; 59.8% females) living in a Midwestern state were collected in 2009, using a web-based survey, which included Children of Alcoholic Screening Test, Sense of Belonging Instrument, Connor–Davidson Resilience Scale, and Beck Depression Inventory-II. Path analysis results revealed sense of belonging as the most powerful, and resilience as the second important factor, resisting depressive symptoms associated with parental alcoholism. Implications for practice and research and study limitations are discussed.

Keywords

Adult Children of Alcoholics; Sense of Belonging; Resilience; Depressive Symptoms; Koreans

Introduction

Resilience has been one of the popular subjects of interest in mental health areas. Resilience refers to a capacity to cope successfully with significant adversity or trauma (Agaibi & Wilson, 2005). Although adult children of alcoholics (ACOA) are a risk group for substance abuse, post-traumatic stress disorder (PTSD), or multiple emotional problems, resilient ACOAs may grow up striving to adapt, survive and succeed under these stressful conditions (Johnson, Gryczynski, & Moe, 2011; Kim & Lee, 2011; Vitaro, Assaad, & Carbonneau, 2005). One of the key factors associated with resilience has been reported to be sense of belonging, which also protects individuals from depressive symptoms (Chassin et al., 2004).

The relationships among depressive symptoms, sense of belonging, and resilience have rarely been studied, and studies with Asian, especially Korean ACOAs are scarce. Korea has the 13th highest alcohol consumption in the world in both adults and teenagers. The lifetime rate of alcoholism has been reported from 14 to 20% in adults (Kim & Lee, 2011; Korean Ministry of Health and Welfare [KMHW], 2011a). There are some distinctive cultural or

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sociological factors which increase alcoholism among Korean people, including a very common, yet unhealthy choice of drinking as a coping mechanism at times of stress, and the irresistible, oftentimes authoritative, social pressure to make people drink even against their own will (KMHW, 2011b). Such a society, where these factors are rife, may inhibit ACOAs from seeking any outside help for the problems related to growing up in alcoholic families.

Early research on ACOAs focused on risk factors, and generally concluded that growing up with alcoholic parents increases ACOAs' risk for developing negative consequences, including alcohol or other substance abuse, or conduct disorders, as well as emotional problems like depression (E.g., Bartek, Lindeman, & Hawks, 1999; Sher, Walitzer, Wood, & Brent, 1991). Many studies reported that ACOAs exhibit symptoms of depression significantly more than those from non-alcoholic families (Hall & Webster, 2002; Lease, 2002). ACOAs may use substances to cope with their stresses related to having grown up in alcoholic families (Hussong & Chassin, 2004) and that ACOAs' risk for depression may be traced to a stressful childhood or dysfunctional family dynamics (Lease, 2002; Werner & Johnson, 2004). However, such stereotyping of ACOAs may limit their potentials to develop without adverse outcomes and demonstrate positive adjustment.

Resilient ACOAs are more likely to overcome adverse life consequences and achieve successful adjustment, even after having been exposed to cumulative stressful situations in their families (Chassin et al., 2004; Haase, 2004). ACOAs' resilience may moderate or mediate depressive symptoms, despite adversity due to parental alcoholism. Studies showed that a lack of, or decreased sense of belonging is highly correlated with depressive symptoms (Choenarom, Williams, & Hagerty, 2005; McLaren, Gomez, Bailey, & Van Der Horst, 2007); Examination of sense of belonging and resilience together in ACOAs can provide useful insights into how these protective factors may work against depressive symptoms.

This study explored relationships among parental alcoholism, sense of belonging, resilience, and depressive symptoms along with other important factors, using path analysis. We particularly focused on examining whether resilience and sense of belonging mediate negative effects of parental alcoholism on depressive symptoms in a group of Korean people. A framework first was formulated for path analysis on the basis of literature of ACOAs' depressive symptoms and important influencing factors, including family-related components (Figure 1). The following premises or hypotheses were considered: (1) ACOAs' resilience is their acquired capacity to translate the life adversities associated with parental alcoholism into desirable outcomes (Agaibi & Wilson, 2005; Lee & Cranford, 2008); (2) ACOAs' desirable outcomes in this study refer to experiencing no or few depressive symptoms (Carle & Chassin, 2004); (3) ACOAs' resilience may moderate or mediate depressive symptoms, despite adversity due to parental alcoholism (Haeffel & Grigorenko, 2007; Southwick, Vythilingam, & Charney, 2005); (4) familial and individual level factors can either reduce or enhance resilience to resist depressive symptoms in ACOAs (Haase, 2004; Tusaie & Dyer, 2004); (5) familial factors include family functioning, parental mental health problems, domestic violence experiences, and parenting (Chassin et al., 2004; Vitaro et al., 2005); (6) individual factors include attachment and sense of belonging (McLaren et al., 2007; Mylant, Ide, Cuevas, & Meehan, 2002).

Methods

Participants

Voluntary community participants in Midwestern cities, who were self-identified Korean males or females, responded to an anonymous web-based survey in the study. All were aged 18 or older and the sample consisted of undergraduate or graduate students and immigrants in the United States. A total of 219 responded to the web survey either in English or in Korean. The data from 206 respondents (94.1%) were selected because 13 respondents (5.9%) did not complete the majority of questionnaires in the survey. More than half were female with a mean age of 28.4 years (S.D. = 6.9, ranged from 18 to 76 years). As shown in Table 1, three-fourths were either undergraduate or graduate students, and half were employed in either full-time or part-time positions. More than half lived in the United States for five years or less.

Measures

Beck Depression Inventory-II (BDI-II)—Depressive symptoms were assessed using the BDI-II (Beck, Steer, & Brown, 1996) which measures the severity of depression, focusing on several major symptoms, among normal and psychiatrically hospitalized samples (E.g., Segal, Coolidge, Cahill, & O'Riley, 2008; Wilcox, Field, Prodromidis, & Scafidi, 1998). The BDI-II is a 21-item self-report inventory which asks respondents about their feelings for the past two weeks. Each item is scored from 0 to 3 ("symptom is not present" to "symptom is severe"), with higher scores indicating more depressive symptoms. Cronbach's α in this study was .90.

A short version of the Children of Alcoholics Screening Test (CAST-6)—The CAST-6 (Hodgins, Maticka-Tyndale, el-Guebaly, & West, 1993) is a shortened version of the 30-item CAST, which was originally developed by Jones (1983). The items are in a true or false response-scale and ask about adult children's feelings, attitudes, perceptions, and experiences as they relate to their parents' drinking behavior. Havey and Dodd (1995) concluded that the CAST-6 has an almost identical diagnostic function as the 30-item CAST with 93% to 98% stability of classifying COAs. In addition, the CAST mean score was used as a continuous variable to address variation of the effect of parental alcoholism on outcome variables (Vail, Protinsky, & Prouty, 2000). In this study, Cronbach's α was 0.89.

Sense of Belonging Instrument-Psychological (SOBI-P)—The SOBI-P is an 18item self-report measure assessing an individual's experience of feeling valued and the perception of fit or connectedness within a system or environment (e.g., "In general, I don't feel a part of the mainstream of society," "I feel like a piece of a jigsaw puzzle that doesn't fit into the puzzle") (Hagerty & Patusky, 1995, p. 11). Respondents were asked to reflect on the past month, and to give ratings on a 4-point Likert-type scale (1=strongly disagree; 4=strongly agree), with higher scores indicating a greater sense of belonging. Cronbach's α with the study sample was .93.

Connor-Davidson Resilience Scale (CD-RISC)—The CD-RISC was developed with a wider range of respondents, including community samples, primary care outpatients, and

clinical trials of PTSD (Connor & Davidson, 2003). The CD-RISC is a 25-item self-report scale with a 5-point Likert-type response format (0=rarely true and 4=true nearly all the time). The CD-RISC was validated by factor analysis, but its original five-factor solution (i.e., personal competence and tenacity, positive affects against stress, positive acceptance and secure relationships with others, control, and spiritual influence) has been found unstable in different cultural groups (Campbell-Sills & Stein, 2007; Jørgensen & Seedat, 2008); thus, the overall CD-RISC score has been used in analysis. Cronbach's α in this study was .92.

Social Support Questionnaire (SSQ-6)—The SSQ-6 (Sarason, Sarason, Shearin, & Pierce, 1987) was used to measure social support for comparing the effects of sense of belonging and social support. The SSQ-6 consists of the items to identify persons in the respondents' environment that can help in the situation described by the item. The respondents were also asked to evaluate on a 6-point scale their level of satisfaction with the support they perceived (1=very unsatisfied; 6=very satisfied). The SSQ-6 measured quantities and qualities of actual support that the Korean respondents received in the given situations, whereas the SOBI-P focused on more comprehensive aspects of the individual's connections or perceived fit to families, friends, and environment. Cronbach's α in this study was 0.93.

Family Adaptability and Cohesion Evaluation Scale-III (FACES-III)—Family functioning was measured using FACES-III (Olson, Portner, & Lavee, 1985), which is composed of two subscales—family adaptability and family cohesion. Family adaptability means the changeable range of a family system, and family cohesion means the emotional intimacy in a family. Both parts include ten items each scaled from 1 to 4. Cronbach's α for family cohesion subscale was .86; for family adaptability subscale .79.

Family-Related and Other Variables—The survey included items to ask whether respondents had any experience being exposed to domestic violence during childhood (i.e., being either a victim or witness of physical, emotional, verbal, and sexual violence in the family). Also, all respondents were asked if they thought that their parents (including alcoholic parents) had mental health problems other than alcohol abuse. Identifying these additional risk factors was important to distinguish certain individuals who may not be explained by the factors in the formulated framework of the current study. Also, these risk factors were considered when analyzing and discussing the study results. Respondents' age, sex, education, and occupation were also asked along with the families' socio-economic status in the demographic questionnaire.

Procedure

Participants completed quantitative questionnaires in a web-based survey. The Web was employed, as it has been considered efficient and maximizing study respondents' privacy and anonymity for respondents who may worry about exposing experiences related to having alcoholic parents (Dillman, 2007). The web also provides potential respondents easier access to the survey. After approval was obtained from the Institutional Review Board (IRB) at the University of Michigan, advertising flyers were posted in the community boards

(paper version) in Midwestern cities as well as web boards (web version) when available, upon official permissions. The advertising flyer in both English and Korean included a web address (URL) to the survey and on-line consent form. Both language versions of the consent form and the questionnaires were available, so each voluntary participant was able to choose the language by clicking either version. The individuals were asked to read and sign the on-line consent form and agreed to participate by clicking the "CONTINUE" button. The consent form addressed the following: introduction and purpose of the study; IRB approval; anonymity and privacy of the data collected; risks and benefits of participation; available community mental health resources; and investigator and IRB contact information. In addition, the consent form indicated that data collection was in blind assessment, in which names or emails were automatically not associated with any data (anonymity), that they may leave any question blank if they were unable or did not wish to answer it, and that they could stop answering at any time if they felt uncomfortable or upset. The entire survey took 30 minutes or less. Upon completion, each participant was asked to email the investigator with a request for a \$10 gift card which was given to participants as a token of appreciation for their participation time. Data was collected over a five week period.

Data Analysis

The data collected in the study was entered into the Statistical Package for the Social Sciences (SPSS) Windows Version 17.0. Path analysis was conducted with the help of analysis of a moment structures (AMOS version 8.0). Prior to path analysis, initial descriptive analyses were conducted to explore their socio-demographic and background characteristics. Multivariate analyses, including multiple regression analyses and series of path analyses, were conducted to explore the relationships of depressive symptoms with resilience, family functioning, parents' mental health problems, and a sense of belonging.

Results

Relationships among Major Study Variables

Table 2 reports the Pearson product-moment correlation coefficients among the study variables as well as their descriptive statistics. There were moderate to strong negative correlations in the relationships of depressive symptoms with resilience and sense of belonging. Sense of belonging was more strongly correlated with levels of depressive symptoms than social support. Domestic violence experience and parental alcoholism were very weakly or rarely correlated with depressive symptoms; instead they showed correlations to sense of belonging. Parental alcoholism was moderately correlated with numbers of parental mental health problems and respondents' domestic violence experiences.

With important correlates found in the previous bivariate analyses, several series of multiple regression analyses were performed. Only those variables showing statistically significant association with the major variables were entered into final regression models (Table 3). The overall model of depressive symptoms explained 37.3% of the variance, with only sense of belonging (b = -0.45, p < 0.001) and resilience (b = -0.26, p < 0.001) appearing to be

Direct and Mediation Effects of Major Study Variables in the Path Model

model of resilience explained 20% of the variance.

Significant influencing and mediating factors found from the previous analyses were entered into the path analysis model to examine the hypothesized relationships among all the variables (Tomarken & Waller, 2005). In the initial model explaining depressive symptoms, exogenous variables were parental alcoholism, family cohesion, family adaptability, the numbers of parental mental health problems and domestic violence experiences. The mediating variables in the model were sense of belonging, resilience, and social support. After several series of path analyses, the best model was found, as shown in Figure 2. The standardized path coefficients calculated by AMOS is shown in the figure.

0.01) and family cohesion (b = 0.27, p < 0.01) were significant predictors. The overall

A good fit of the model was obtained: $\chi^2 = 7.33$, df = 8, p = .50, CFI = 1.00, NFI = .97, RFI = .91, RMSEA = .00. All beta weights were statistically significant at a significant level of . 05. Consistent with the results from the hierarchical multiple regression analyses, depressive symptoms were predicted by sense of belonging (b = -.53, p < .001) and resilience (b = -.24, p < .001). Considering a significant indirect (mediated) effect of resilience (b = -.18), the standardized total (direct and indirect) effect of resilience on depressive symptoms was -.53. The number of parental mental health problems (p < .05) and family cohesion (p < .05) also had direct, yet relatively small, effects on depressive symptoms. Parental alcoholism only showed a small indirect effect on depressive symptoms were found from social support (b = -. 27), family cohesion (b = -.21) and parental alcoholism (b = .04). Interestingly, there was a positive direct effects of family cohesion to depressive symptoms; however, when both direct and indirect effects all together explained 43.5% of the variance of depressive symptoms.

Looking at the three sub-models, 29.1% variance of sense of belonging was explained by the four predictors. Resilience (p < .001) and social support (p < .001) had direct effects, and social support (p < .001) also showed an indirect effect through resilience. The summed, standardized effect of social support on sense of belonging was .40. There were two more indirect effects from family cohesion (b = .22) and parental alcoholism (b = .06). For the resilience sub-model, family cohesion (p < .001) and social support (p < .001) significantly explained resilience. Accounting its indirect effect as well, the total effect of family cohesion on resilience (b = .04). The model of resilience explained 19.4% of the variance. Lastly, social support was significantly predicted by family cohesion (p < .001) and parental alcoholism (p < .05). The model of social support explained 12.7% of the variance.

Discussion

The path analysis demonstrated that sense of belonging was the most powerful and proximal predictor of depressive symptoms in relation to parental alcoholism. This sense of belonging, along with social support and resilience, significantly mediated the negative effect of parental alcoholism. Other direct but small effects on depressive symptoms were found from family cohesion and the number of parental mental health problems. Parental alcoholism did not have a significant direct effect on depressive symptoms; instead, its negative effects were completely mediated by social support, resilience and sense of belonging. This finding suggests that ACOAs merit preventive intervention approaches that take protective factors into account, such as supportive interpersonal relationships, perceptions of the value of such relationships, and individual strengths or capacity to withstand stressors.

This study added more evidence that a higher level of sense of belonging has been reported to be associated with a less severe depression (Choenarom et al., 2005; Sangon, 2004; Turner & McLaren, 2011). The path model developed in the study clearly illustrated that the lack of sense of belonging is a major vulnerability factor for depressive symptoms. Stronger sense of belonging may help individuals to recognize more positive aspects of their relationships. Such perception of positivity from human relationships can help the individual to perceive rather positive aspects in their life and reduce potential deleterious effects of any sustained stress. It is important to note the difference between sense of belonging and social support to explain depressive symptoms in the path model. Although studies have used social support and sense of belonging interchangeably without clear distinction (Constantino, Kim, & Crane, 2005; Hale, Hannum, & Espelage, 2005), our results show that individual sense of belonging plays a different, much more significant role than that of social support, although both of them impact depressive symptoms.

Resilience, the second most significant factor in our model, focuses on an individual's gain and possibility in the face of adversities. As optimism, plasticity, and cognitive flexibility (e.g., positive appraisal and acceptance) have been commonly found in resilient people (Connor & Davidson, 2003; Southwick et al., 2005; Tusaie & Dyer, 2004), these people are more likely to have tolerance of negative affect by developing better problem-solving or coping skills or positive acceptance of change. Lately, in an effort to clarify more observable or measurable effects of resilience on health, an increasing number of studies have been focused on physical and even genetic biomarkers, including dehydroepiandrostrone (DHEA), neuropeptide Y, galanin, serotonin, the alpha-2 adrenergic gene and the dopamine gene (Carli et al., 2011; Das, Cherbuin, Tan, Anstey, & Easteal, 2011; Hunsberger, Austin, Chen, & Manji, 2009). The concept of resilience also has been integrated into clinical practice. A clinical trial with PTSD patients showed a significant association between venlafaxine extended release effect and individual resilience (Davidson et al., 2008).

Although family-related variables, including domestic violence experiences, showed some associations with sense of belonging and resilience in preliminary analyses, only family cohesion appeared significant in the path model. Interestingly, family cohesion has negative indirect impact as well as positive direct effect on depressive symptoms, although the total

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effect was negative. This finding can be difficult to interpret, yet, when considering the major aspect of family cohesion (i.e., the emotional intimacy in a family), it is possible to see two sides of family cohesion, especially within the alcoholic families. The closed system of alcoholic families can increase the risk of depressive symptoms by exacerbating effects of familial stressors and hindering possible support from outside, but within that intimate system, ACOAs may also find support to build up their resilience from both of their parents. Such a direct positive relationship between family cohesion and resilience was found in the path model.

Parental mental health problems affected the respondents' depressive symptoms, yet its effect was mediated by other familial exogenous variables in the path model. This may indicate that mental health problems within a family are transferred to next generation significantly via the shared environment in addition to genetic routes, as a twin study confirmed both family environmental and genetic factors accounting for an association between parental and juvenile depression (Silberg, Maes, & Eaves, 2010). Nevertheless and most importantly, the effect from parental mental health problems was much weaker than the effects of resilience and sense of belonging. Resilience and social support also mediated negative effects of parental alcoholism on the adult children's depressive symptoms. Therefore, clinical approaches to treatments of respondents at risk for depression should take sense of belonging, resilience, and social support into account.

Limitations

In this cross-sectional study, no data were collected about whether each respondent had been exposed to any clinical treatments, such as psychotherapy or pharmacological therapy. Such a history would help to tease out more accurate effects of the major variables. This study may have been influenced by the web-based method, which limits recruiting potential respondents with no or limited access to the Internet or a computer. Although most of the respondents might suffer from difficulty in adjusting to the new Western culture, any related issues, such as the level of acculturation, were not measured in this study. Acculturation may distinguish the stress experiences of the Koreans participants. Such effects could further contribute to their depressive symptoms. Also, only childhood maltreatment or trauma were assessed in this study; thus there was no way to determine whether they had a history of other types of trauma, which might influence their depressive symptoms, sense of belonging, resilience, and other major variables. Lastly, the sample of this study may not represent the general population.

Regardless of such limitations, this study has meaningful findings to develop better clinical approaches to ACOAs. Since the 1970s, most of the studies with alcoholic families have focused on the pathological and etiological processes of how parental alcoholism negatively influences the children. This study, however, had its focus on exploring buffering effects of sense of belonging and resilience. Our finding leads implications for the development of preventive intervention programs to enhance effective strategies for the respondents who report emotional problems.

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Glossary

Sense of	the experience of personal involvement in a system or environment so that
belonging	persons feel themselves to be valued and an integral part of that system or
	environment (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier,
	1992, p. 173).
Resilience	an individual's competent performance under adverse conditions (Carle &
	Chassin, 2004). For adult children of alcoholics, their resilience can help
	them to experience no or few depressive symptoms even with several life
	adversities associated with alcoholism of their parents.



Figure 1.

A Framework for Path Analysis: Sense of Belonging, Resilience and Depressive Symptoms in Adult Children of Alcoholics.



Note. R^2 for depressive symptoms = 0.44; R^2 for sense of belonging = 0.29; R^2 for resilience =

0.19; R^2 for social support = 0.13.

$$p < 0.05, p < 0.01, p < 0.01, p < 0.001.$$

Figure 2. Results of the Path Model for Depressive Symptoms among Korean Respondents (N = 206)

Variable	Category	Frequency (%)
Country of birth	USA	22 (11.0)
	Korea	178 (89.0)
Sex	Male	80 (40.2)
	Female	119 (59.8)
Marital status	Never married	120 (61.2)
	Married	76 (38.8)
Employment status	Student, not employed	78 (39.0)
	Student, employed as part time	39 (19.5)
	Student, employed as full time	31 (15.5)
	Not a student, not employed	25 (12.5)
	Not a student, employed as part time	6 (3.0)
	Not a student, employed as full time	17 (8.5)
	Other	4 (2.0)
Length of stay in the US	Less than 1 year	42 (21.0)
	1-2 years	48 (24.0)
	3-5 years	46 (23.0)
	6-10 years	30 (15.0)
	More than 10 years	34 (17.0)
Loss of parent(s) at an early age	Yes	8 (4.0)
	No	190 (96.0)
Parents' marital status	Separated or divorced	7 (3.8)
	Never separated or divorced	176 (96.2)

Table 1Demographic Characteristics of Korean Respondents (N = 206)

Note. () indicates valid percentages. No significant difference was found at p < 0.05.

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Variable (Measurement)	i-	5	Э	4	<i>ъ</i> .	5-a)	5-b)	6.	×.	6
1. Depressive Symptoms (BDI-II)	1.00									
2. Sense of Belonging (SOBI-P)	42	1.00								
3. Resilience (CD-RISC)	60 ^{***}	.43***	1.00							
4. Social Support (SSQ-6)	28***	.42***	.33***	1.00						
5. Family Functioning (FACES-III)										
5-a) Family Cohesion	13	.32***	.37***	.32***		1.00				
5-b) Family Adaptability	06	.18**	.26***	.21**	•	66 ^{***}	1.00			
6. Number of Parental Mental Health Problem	.18*	12	02	-00		.19**	20**	1.00		
8. Number of Experiences with Domestic Violence	.12	19**	08	16*	•	.38***	33***	.49***	1.00	
9. Parental alcoholism (CAST-6)	.17*	22**	10	21		18*	14	.39***	.44	1.00
Mean	8.89	58.65	70.61	28.35		35.92	30.84	0.83	0.78	0.82
S.D.	8.05	9.38	14.04	7.51		7.14	6.38	1.10	1.55	1.64
Range	0-42	21-72	6-100	4-36		10-50	14-50	0-5	0-7	9-0
Note.										
* p < 0.05,										
$^{**}_{p < 0.01}$										
*** n < 0.001										

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Table 3

Predictors of Depressive Symptoms, Sense of Belonging, and Resilience in Korean Respondents (Controlling for Demographic and Background Variables) (N = 206)

		Depres	sive Sym	ptoms	Sense (of Belon	ıging*	Ŗ	esilienc	e
лисереписи v аглавися	Uependent Variables	В	β	d	В	β	d	В	β	d
Sense of Belonging		39	45	00.						
Resilience		16	26	00.	.20	.29	00.			
Social Support		.02	01	.84	.31	.26	00.	.41	.24	00.
Family Cohesion		.10	.10	.29	.12	.10	.29	.49	.27	00.
Family Adaptability		.05	.04	.64	04	03	.70	H.	.05	.55
Parental Alcoholism		.14	.03	.68	64	12	.10	24	03	69.
Number of Parental Mer	ntal Health Problems	.30	.04	.75	1.24	.15	.13	.18	.02	.84
Number of Domestic Vid	olence Experiences	21	04	.70	2.53	.45	.05	.55	.07	.42
Complete Model	R		.61			.64			44.	
	R^2		.37			.41			.20	
	d		00.			00.			00.	