

Family Chaos and Readiness to Change Problematic Alcohol Use

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Abstract

This study assesses how family interactions impact an individual's readiness to change problematic behaviors specific to alcohol use. The purpose of the study was to further understand the relationship between perceived family functioning (based on the Family Circumplex model) of people who use alcohol, and their readiness to change problematic alcohol use based on the Transtheoretical model. Using the FACES-IV instrument and the URICA scale to relate the Family Circumplex model with the Transtheoretical model, the study tested eight hypotheses about the relationship between a specific family characteristic and a person's readiness to change problematic alcohol use. The family characteristics and readiness to change scores of 140 participants were analyzed using a multiple linear model. Results indicated that the statistical model, using the FACES-IV to predict scores on the URICA's readiness to change scale, was not significant. However, when assessing each variable from the FACES-IV, Chaos was found to be a significant variable. The implications of this result and recommendations for further research are discussed.

Index terms— FACES-IV, URICA, Family Circumplex, Transtheoretical, Family Chaos, readiness to change.

1 INTRODUCTION

In the United States millions of people are diagnosed with a substance use disorder every year. The impact of substance abuse reaches beyond individuals, affecting families and communities (National Alcohol & Drug Institute, 2007a; Institute, 2007b; Institute, 2007c; Institute, 2007d). Jung (2006) stated that alcohol abuse affects the family by increasing conflict and divorce, and that child abuse, both physical and sexual, as well as neglect, are more likely to occur in families where alcoholism is prevalent. Several authors have stated that such abuse is likely a result of inadequate parenting (Jacob, Krahn, & Leonard, 1991) and behavioral and emotional maladjustments of the children due to parental alcohol use (??). Thus, the characteristics of one's family are widely seen as related to alcohol abuse and recovery.

In order to assess how both children and adults perceive family characteristics or broad traits seen in their families, Olson and his colleagues developed the Family Circumplex model (Olson, Sprenkle, & Russell, 1979). Functional interchanges between family members, specifically Family Flexibility (which can be Balanced, Rigid, or Chaotic), Family Cohesion (which can be Balanced, Disengaged, or Enmeshed), Communication, and Family Satisfaction can be assessed using a tool developed by Olson and his colleagues called the Family Adaptability and Cohesion Evaluation Scale (FACES).

The Transtheoretical model of behavior change integrates key constructs from a variety of theories in order to describe the process of recovery from patterns of harmful behavior and changes to healthier behavior patterns (McConaughy et al., 1983; McConaughy et al., 1983; Prochaska & DiClemente, 1986). It focuses on three aspects of recovery (McConaughy et al., 1983; McConaughy et al., 1983; Prochaska & DiClemente, 1986). The first aspect is the stages a person goes through when in recovery. Secondly, the processes a person uses for recovery are discussed. As conceived in the Transtheoretical model, the Precontemplation stage is one which a person has no intention to change in the near future and is either unaware or only dimly aware of their problems

(Prochaska & DiClemente, 1992). The Contemplation stage is one in which a person has become aware of their problems and the need for change, is considering taking steps to make changes, but has not yet committed to taking action (Prochaska & DiClemente, 1992). The Preparation or Determination stage is one in which the intention to change begins to be combined

2 I

3 Global

4 Journal of Human Social Science Volume XII Issue II Version I

with some changes in behavior; the person intends to commit to significant changes in behavior in the very near future and has begun to take small steps to modify their behavior, perhaps reducing his or her intake of alcohol, for instance, or cutting down on the number of cigarettes he or she smokes (Prochaska & DiClemente, 1992). The Action stage is one in which concrete, significant steps are taken to change behaviors and overcome problems, and involves "considerable commitment of time and energy" (Prochaska & DiClemente, 1992 ?? p. 1104). In the Maintenance stage, people work to continue and reinforce the gains made in the action stage, and also work to prevent relapse. Relapse involves a return to the problem behavior and is described by Prochaska and DiClemente (1992) as "the rule rather than the exception." The Transtheoretical model views these stages as cyclical, characterized by a "spiral pattern of change" in which people cycle through the stages multiple times before becoming long-term maintainers (Prochaska & DiClemente, 1992 ?? p. 1104).

Research incorporating the Transtheoretical model with the family qualities established by (Jacob, 1992).

Peoples' ability to change behaviors related to problematic alcohol use may be influenced by how they perceive their family. By creating a model using both the Family Circumplex model ??Olson, Sprenkle, & Russle, 1979) and the Transtheoretical model (McConaughy et al., 1983) an assessment of perceived family characteristics and one's readiness to change problematic behaviors of alcohol use may be conducted.

The present study is designed to assess how perceived family interactions impact an individual's readiness to change problematic alcohol use. The purpose of this study is to further understand the relationship between perceived family functioningnamely Family Flexibility, Family Cohesion, Family Communication, and Family Satisfaction-of people who use alcohol and their readiness to change the problematic behaviors related to alcohol use. Thus, the study is focused on four research questions: First, does a relationship exist between Family Flexibility and readiness to change problematic behaviors of alcohol use? Second, does a relationship exist between Family Cohesion and readiness to change problematic behaviors of alcohol use? Third, what is the relationship between both Family Communication and readiness to change problematic behaviors of alcohol use? Finally, what is the relationship between Family Satisfaction and readiness to change problematic behaviors of alcohol use? Specifically, the intention of the study is to determine the relationship between the perceived family characteristics of a person as measured by FACES-IV and the stage of change that person is in as measured by University of Rhode Island Change Assessment Scale (URICA), which is based on the Transtheoretical model. How does one's perception of one's family traits correlate to whether one is in the Precontemplation, Contemplation, Preparation/Determination, Action, Maintenance or Relapse stage? It is anticipated that the results of this study will have implications for substance use treatment using family systems methods of treatment, thus adding to both the family systems' and alcoholism literature.

5 II. RESEARCH DESIGN AND PROCEDURES

6 Assessment Tools

The Family Adaptability and Cohesion Environment Scale, 4 th ed (FACES-IV), a 62 item, fivepoint Likert-type scale, was chosen due to its measurement of various levels of (Olson & Gorall, 2006). The FACES-IV reported reliability coefficients ranging from alpha .77 to .93 and validity coefficients ranging from alpha .91 to .93 was considered sufficient for this study .

The University of Rhode Island Change Assessment Scale (URICA) was chosen due to its usefulness with various populations, including an alcohol using population. It is a psychometrically sound 32-item, five-point Likert-type scale with internal consistency reliability estimated to be between .69-.82 (DiClemente & Hughes, 1990). Support for the instrument's validity content, criterion and construct validity has been documented (DiClemente & Hughes, 1990). A strength of the URICA has been described as its ability to provide "a single, continuous measure of readiness to change" (Carey, Purnine, Maisto, & Carey, 1999, p. 252).

7 Procedures

Permission to conduct this research and IRB approval was obtained. Participants were recruited from various treatment centers in the Rocky Mountain region. Some of the participants, depending on the location, were receiving treatment as court sentences, some were on involuntary or voluntary holds in a hospital setting, and others were in outpatient programs, yet all participants volunteered to participate in the research. Each

location was given a box for participants to return their anonymously completed surveys in order to maintain confidentiality.

One hundred and forty participants completed a demographic questionnaire, the FACES-IV and the URICA. The total time to complete the surveys was between 20 and 35 minutes.

8 Demographic Data

The demographic questionnaire collected information on Individual demographic data (see Table 1) and Family demographic data (Table 2). When responding to items on the FACES-IV, participants could answer the questions in regards to their perceptions of their current family, the family they grew up in as children, or if they were adults living with the same family they lived with as children, they could acknowledge that as well. In the current sample, 49 (35%) participants answered the FACES-IV based on their recalled perceptions of the family they grew up in as children. Sixty-two participants (44.29%) answered based on how they perceived their current family. Twenty-one (15%) indicated that the family they grew up in as a child is still the family they live with as an adult, and 8 (5.71%) did not identify which family they were using to answer questionnaire.

9 Data Analysis

Data was analyzed using a simultaneous multiple regression analysis. Hair et al. (1995) describe a six-stage model building process used for the "creation, estimation, interpretation, and validation of a regression analysis" (p. 97), which was used in this data analysis. The first stage was to identify independent and dependent variables to be regressed.

In this research, eight independent variables existed: the eight scales found on the FACES-IV (Balanced Cohesion, Balanced Flexibility, Disengagement, Enmeshment, Rigidity, Family Chaos, Family Communication, and Family Satisfaction). The Balanced Cohesion scale is a measure of the level of healthy (balanced) emotional bonding that family members are perceived to have with one another. The Balanced Flexibility scale measures "the quality and expression of leadership and organization, role relationship, and relationship rules and negotiations" (Olson, 2010). For both the Balanced Cohesion scale and the Balanced Flexibility scale, higher scores indicate balance and are considered healthier (Olson, 2010).

The Disengagement, Enmeshment, Rigidity, and Family Chaos scales are measures of the extreme ends of the Cohesion and Flexibility constructs of the Circumplex model, which are considered unbalanced and unhealthy-Disengagement and Enmeshment being the extreme poles of Cohesion, and Rigidity and Chaos being the low and high extremes of Flexibility. Higher scores on these scales indicate family dysfunction (Olson, 2010). The Family Communication scale is a measure of how healthy the communication within a family is perceived to be (higher scores indicate a perception of healthy communication), while the Family Satisfaction scale is a measure of how satisfied a person is with their family (higher scores indicate higher satisfaction) (Olson, 2010). The dependent variable, readiness to change problematic behaviors, was measured using the URICA, where m is the number of independent variables (Tabachnick & Fidell, 2007). Using this method, the sample size needed to be greater than or equal to 114 participants. With eight independent variables and 114 participants, the estimated power of the test would be an acceptable 0.80.

10 III.

11 RESULTS

12 Descriptive Statistics

Results indicate a mean readiness to change score of 8.54 ($SD=2.73$), which corresponds to the Contemplation stage. Also, in Table 3 are the means and standard deviations of each independent variable (IV) as measured by the FACES-IV. These scores are reported as percentile scores.

There are four assumptions which need to be met in order to use multiple regression analysis. They are linearity of the phenomenon being measured, homogeneity, independence of the error terms, and normality of the error terms distribution. In this research, all assumptions were met.

13 Global Journal of Human Social Science Volume XII Issue II Version I 2 22

Family Chaos and Readiness to Change Problematic Alcohol Use

In order to establish a working model for a simultaneous multiple linear regression all eight independent variable (Balanced Cohesion, Balanced Flexibility, Disengagement, Enmeshment, Rigidity, Family Chaos, Family Communication and Family Satisfaction) were entered into the model and analyzed to assess for multicollinearity. As no multicollinearity was present, the R^2 was determined ($R^2 = .086$, adjusted $R^2 = .030$) and found to be very low indicating a low predictive power. The statistical model for the present research was established as : where Y is readiness to change problematic behaviors of alcohol use, was found to not be significant ($p=.148$) (see Table 4). The most predictive factor, and only one reaching statistical significance was Chaos ($p=.05$). This

research focused on four research questions. The first research question asked if a relationship exists between Family Flexibility and readiness to change problematic behaviors of alcohol use.

As shown in Table 4, Balanced Family Flexibility ($p=.75$), and Family Rigidity ($p=.70$) were not significantly related to readiness to change problematic behaviors of alcohol use in the multiple linear regression model established for this study while Family Chaos ($p=.05$) was positively related to readiness to change problematic behaviors of alcohol use in the multiple linear regression model. Thus, in response to the first research question, it can be stated that a relationship exists between having an unhealthy high level of Family Chaos (an unbalanced, extremely high level of Flexibility within a family) and a person's readiness to change problematic behaviors of alcohol use.

The second research question asked if a relationship existed between Family Cohesion and readiness to change problematic behaviors of alcohol use. As shown in Table 4, balanced Family Cohesion ($p=.77$), Family Disengagement ($p=.16$), and Family Enmeshment ($p=.61$) were not significantly related to readiness to change problematic behaviors of alcohol use in the multiple linear regression mode. Therefore, in regards to the second research question, the model does not indicate a relationship with Family Cohesion in either direction (balanced or unbalanced).

The third and fourth research questions inquired as to the relationship between both Family Communication and Family Satisfaction and readiness to change problematic behaviors of alcohol use. As shown in Table 4, neither Family Communication ($p=.74$) nor Family Satisfaction ($p=.09$) were significantly related to readiness to change problematic behaviors of alcohol use in this multiple linear regression model. Therefore, the data did not support a relationship between Family Communication or Satisfaction and one's readiness to change problematic behaviors of alcohol use.

IV.

14 DISCUSSION

The model indicates, as a whole, that the FACES-IV was not significantly related to participants' readiness to change problematic behaviors of alcohol use scores. An unbalanced level of too much Family Flexibility, Chaos, was the variable that was the most predictive, and the only one to reach statistical significance. This relationship suggests that the more chaotic the people in this research perceived their family life to be, the more ready they reported they were to change their problematic use of alcohol. This finding is relevant in two ways.

First, the relationship between Chaos and readiness to change problematic behaviors of alcohol use is in the positive direction. Previous research has found that balanced, not unbalanced, flexibility promotes change among alcohol using populations (Barnett et al., 2002; O'Farrell, 1992). However, the findings of this research suggest that as people perceive their lives to have become unmanageable (Alcoholics Anonymous, 2001) they are more likely to be motivated to change.

Secondly, the mean percentile score of Family Chaos in this research was 30.11, which is in the lower end of the Low range, 30 being the cut off score between Low and Very Low. Like the finding with Rigidity, this suggests the research population sample was not flexibly unbalanced by having too much flexibility. This finding was not unexpected as few studies have found elevated levels of Chaos among families dealing with problematic use of substances (Volk et al., 1989; Friedman et al., 1987).

One study addressing elevated levels of Chaos was conducted by Volk et al., (1989) where the individuals reporting elevated levels of Chaos were the mothers of adolescents who were using substances while the adolescents reported more Rigidity. Another study where Family Chaos was significant was when trained therapists observing family interactions used the Counselor Rating Scale to assess family types (Friedman et al., 1987). Like the Volk et al. study, Chaos was not reported by family members but by the therapists. Therefore, the finding of an overall low, although significant, level of Family Chaos in this research is not surprising given the surveys were completed by only people using alcohol in problematic ways.

Looking beyond the FACES-IV as a model and assessing each family interaction style in relation to readiness to change problematic behaviors of alcohol use did yield some interesting results. Balanced Family Flexibility did not significantly predict change in readiness scores ($p=.75$). However, since the mean percentile score of Balanced Family Flexibility for participants in this study was 53.63 (within the "Flexible" range), it was much higher than expected, as previous research findings indicated their samples were in the Extreme range of Adaptability for both alcohol and drug using populations (Friedman et al., 1987; Kang, Kleinman, Todd, Kemp, & Lipton, 1991; Smart et al., 1990; Volk et al., 1989). Results of this research also indicated that the unbalanced levels of too little Flexibility, Family Rigidity, was not a significant variable in predicting readiness to change problematic behaviors of alcohol use ($p=.70$). The mean percentile score of this sample on the Rigid scale was 41.61, which is in the Low range, suggesting that this sample population was not unbalanced in regards to rigidity. Again, this observation was surprising f Global Journal of Human Social Science Volume XII Issue II Version I

15 24

Family Chaos and Readiness to Change Problematic Alcohol Use in that prior research found their sample populations to be significantly more rigid among the substance abusing populations than the general population (Friedman et al, 1987; Volk et al., 1989; Kang et al., 1991).

Balanced Family Cohesion did not significantly predict readiness to change problematic behaviors of alcohol use ($p=.77$). This finding was surprising due to the majority of research studying substance use with a FACES measure indicated Family Cohesion was significantly related. Specific to this research, it was observed that the mean percentile score of Balanced Family Cohesion was 53.49, which is in the "Connected" range, suggesting the sample as a whole was well balanced in regards to family connectivity.

The present research also differed from previous studies (Friedman et al., 1987; Volk et al., 1989; Kang et al., 1991; Rotunda et al., 1995) in regard to Family Disengagement. Results from the sample population of the present research found that Family Disengagement was not significantly related to readiness to change problematic behaviors of alcohol use ($p=.16$). The mean percentile score of Family Disengagement for this sample was 32.82, which is in the Low range of Disengagement. This observation suggests that this sample reported low levels of disengagement in their families.

This research further indicated Enmeshment was not significantly related to readiness to change problematic behaviors of alcohol use ($p=.61$). This finding was not surprising in that only one research article using a Family Circumplex model instrument (Friedman et al., 1987) found Enmeshment to be a significant family characteristic among substance using populations. Indeed, the levels of Enmeshment reported in this sample were in the Very Low range (mean percentile score was 25.37).

The last two variables, Family Communication and Family Satisfaction, are new scales specific to the FACES-IV and therefore have no direct comparisons available. The results of this research indicated no significant relationship exists in this sample between either Family Satisfaction ($p=0.91$) or Family Communication ($p=.74$) and readiness to change problematic behaviors of alcohol use. The mean percentile score of Family Satisfaction was in the Low range, 37.61 (39.9 being the cutoff to a Moderate classification) suggesting that although the average participant indicated a low level of Family Satisfaction, it was not related to the participants' readiness to change problematic behaviors of alcohol use scores.

The mean percentile score of Family Communication was in the Moderate range (51.11). This finding suggests that the average participant reported communication within their family to be in the mid range and did not correlate significantly with readiness to change problematic behaviors of alcohol use. These results appear to contradict previous research which found that people's readiness to change problematic V.

16 IMPLICATIONS

17 Theoretical implications

The purpose of the current research was to bridge two theoretical models, the Family Circumplex model and the Transtheoretical model. The FACES-IV and the URICA were used to assess a relationship between the family styles and a person's readiness to change, thereby establishing a model linking the family variables assessed by the eight subscales on the FACES-IV to one's readiness to change. This model did not reach statistical significance. The implication then is that using the Family Circumplex model to assess a person's family life and his or her readiness to change alcohol use may not be theoretically sound with populations who perceive normal ranges of balanced family characteristics and low levels of unbalanced characteristics. These findings do not imply family characteristics are not important when assessing readiness change, only that there may not be a strong relationship when family characteristics are perceived to be within the average range.

The variable Chaos did reach statistical significance although the model itself did not. As a person's perceived level of Family Chaos increased, so did that person's readiness to change scores. The theoretical implication between Chaos and readiness to change may be that loss of family order or direction is such a negative experience that people become motivated to change problematic alcohol use to remedy the unbalanced in their family pattern.

18 Clinical implications

Recognizing the connection between Chaos and readiness to change problematic behaviors of alcohol use provides possible treatment indications. By increasing the awareness of family chaos, the results of the current study suggest an increased readiness to change problematic behaviors of alcohol use. Increasing awareness of familial chaos then can help a person move through the earlier stages of change (Prochaska, DiClemente, & Norcross, 1992). With increased readiness to change, the client then is more capable of entering into the Action stage of change and successfully engaging in more of the process of change (Prochaska & DiClemente, 1986).

Previous research indicated Behavioral Marital Therapy (BMT), and other forms of family therapy, have been "associated with better alcoholism treatment outcome" (O'Farrell, 1992; p. 30). It is recommended that family systems be included in treatments whenever

19 Global Journal of Human Social Science Volume XII Issue II Version I 25

Family Chaos and Readiness to Change Problematic Alcohol Use possible. Having the family in treatment as opposed to only the person using alcohol problematically allows family members to help demonstrate the chaos as a means to help motivate change. Additionally, when working with individual clients whose family members

are unable to attend sessions, using a systemic view to help clients raise their awareness of chaos' effect within the family system may prove effective.

The specific tool to use in therapy with families to motivate change in alcohol use depends on the present stage of change of the client. Prochaska & DiClemente (1986) indicated that when people are in the Precontemplation stage of change there are no specific processes of change that are more frequently used than others. This research implies using a process of change, such as increasing awareness, focused on family chaos would better help a person move through early stages of change. In the Contemplation stage, Prochaska and DiClemente (1986) suggested processes such as consciousnessraising techniques-observations, confrontations, interpretations, bibliotherapy, and psychoeducational tools. Integrating Prochaska and DiClemente's suggestions with the current research findings implies using more focused consciousness-raising techniques in which the observations, confrontations, etc., are specific to how life for the individual and the family has become more chaotic with increased alcohol use. Prochaska and DiClemente (1986) do not have specific processes of change for the Preparation stage as it overlaps with Precontemplation and Action stages (Prochaska et al., 1992). In the Action stage though, the processes of self-efficacy; "the belief that one's own efforts play a critical role in succeeding in the face of effective to evoke change. Integrating these processes of change with the focus on chaos and family therapy implies a need to help the client and family learn to maintain healthy levels of flexibility to alleviate chaos and to countercondition the family's response to chaos, as well as to control the stimuli that lead to chaos.

20 Limitations

A limitation of this research is that it was conducted in north central Colorado. Therefore, the results of this study may not be generalizable to other geographic locations. Most previous research addressing family relations and substance use have a target population, such as adolescents or couples. The sample population used for this research did not limit participants to a specific family role and even allowed for past reporting of how they remembered their family growing up. About half of the sample chose to report on how they recall perceiving their family of origin's characteristics VI.

21 FUTURE DIRECTIONS

22 Summary

Results of the current study indicate that a model based on using the FACES-IV to predict a person's readiness to change problematic behaviors of alcohol use was not a statistically significant model. When assessing each variable within the model, Family Chaos was a significant factor in predicting readiness to change problematic behaviors of alcohol use. This finding indicates the importance of developing an awareness of family chaos in treatment to facilitate progress through the stages of change. Future research could expand the generalizability of these findings by assessing a more diverse sample, as well as by clarifying how other family characteristics influence participants' levels of readiness to change their problematic behaviors.



Figure 1:

1

Demographics	N	%	Demographics	N	%
Gender			Age		
Female	52	37.1	21-25	37	26.43
Male	63	44.5	26-30	20	14.29
Unidentified	25	17.8	31-35	7	5
		6			

Figure 2: Table 1 :

2

Demographics	N	%	Demographics	N	%
Current Relational Status	Current	Living Arrangements			
Single/Never Married	52	37.14	Alone	33	23.57
Single/Divorced	24	17.14	With Parents	10	7.14
Single/Widowed	5	3.57	With Partner	19	13.57
Married/First Marriage	16	11.43	With Others	34	24.29
Married/Not First Marriage	14	10	With Children	13	9.29
	With Partner & Children	25	17.86		
Life-Partnership	4	2.86	Unidentified	6	4.29
Living-Together	15	10.71			
Separated	7	5	Family of Reference		
Unidentified	3	2.14	Family grew up in as a child	49	35
	Current family	62	44.29		
	Current family is the family grew up in as a child	21	15		
	Unidentified	8	5.71		

N=140

Sample size was determined in stage two. To determine sample size this research used the formula

$$N = \frac{Z^2 \cdot p \cdot q}{e^2} + 8$$

Figure 3: Table 2 :

3

	Mean percentile	SD	Classification
Balanced Cohesion	53.49	30.76	Connected
Balanced Flexibility	53.62	24.93	Flexible
Disengaged	32.82	18.43	Low
Enmeshed	25.37	11.95	Very low
Rigid	41.61	17.17	Low
Chaotic	30.11	17.08	Low
Family Communication	51.10	29.13	Moderate
Family Satisfaction	37.61	29.30	Low

Figure 4: Table 3 :

4

Model	(Constant)	Unstandardized	Standardized	T	5.91	Sig.	23
x 1 x	Balanced Cohesion	Coefficients B Std.	Coeffi-	.30	.000		Human
2 x 3	Balanced Flexibility	Error 8.53 1.44 .00	cients	-.32	.77 .75		Social
x 4 x	Disengaged	.01 -.01 .02 -.03 .02	Beta	.05	-1.41	.16 .61	Science
5 x 6	Enmeshed Rigid	.01 .02 .01 .02 .03	-.05	-.18	.52 .39	.70 .05	Volume
x 7 x	Chaotic Family	.02 .01 .02 -.02 .01	.05 .04 .21	2.03	.74 .09		XII Issue
8	Communication		.06 -.24	.33			II Version
	Family Satisfaction			-1.70			I
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Figure 5: Table 4 :

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