

Perceived Harmful Criticism in Family Interactional Patterns and Relapse Risk among Recovering Inpatients with Alcohol Use Disorder in Kiambu County, Kenya

Githae, Eunice Njango, Ph.D., Kenyatta University, Kenya.

Abstract

The family environment in which recovery is nurtured can become a potent trigger of relapse for an individual undergoing treatment of alcohol use disorder (AUD). A growing body of evidence suggests that families characterized by high expressed emotion (EE), particularly those described to have high criticism, play a major role in determining whether or not a recovering alcoholic will maintain abstinence from substance use and hence not return to heavy drinking after treatment. This study examined the perceptions of harmful and non-harmful criticisms as predictors of relapse after treatment of the individual suffering AUD. The study also examined goals of treatment for 119 alcoholics admitted in inpatient rehabilitation centers in Kiambu County in Kenya. A Self-Rated Questionnaire, including, demographics and goals of treatment was administered to the participants. Relapse risk was measured using the Alcohol Relapse Situation Appraisal Questionnaire (A-RSAQ), while indicators of perceived criticism were measured using Attributions of Criticism Scale (ACS) and the Perceived Criticism Measure-Type (PCM-T). All the 119 participants were screened for alcohol use disorder using the Alcohol Use Disorders Identification Test (AUDIT). The study hypothesized that there was a relationship between perceived harmful criticism of close family members and relapse of the recovering individuals from alcohol use disorder. Pearson correlations and regression analyses supported the study hypothesis by demonstrating that perceived harmful criticism was statistically significant ($p=0.000<0.05$) and had a high predictive value ($r^2=.285$) to relapse risk. It is recommended that stakeholders involved in alcohol treatment should target family interactional patterns and relational dynamics into their programs in order to enable sustainable recovery for individuals suffering AUDs.

Key Words: harmful criticism, expressed emotion, treatment goal, patient, abstinence, relapse, rehabilitation

Introduction and Background

Criticism is one of the three components of the concept identified as expressed emotion (EE), which measures the quality of interactional patterns within a family that has a patient suffering from chronic illness. The interactional pattern within families with a member suffering chronic illness such as substance use disorders (SUDs) is a complex phenomenon that has been the focus of considerable research attention. Debilitating interactional patterns such as high EE are believed to significantly influence progression of a number of longstanding illnesses. Robust studies of clients with schizophrenia have indicated that there is evidence of a strong relationship between EE and treatment outcomes of the psychopathology (e.g. Carlson, 2011; Ikram et al., 2011). Among studies of families with a client suffering depression, findings have found that relatives with higher EE feel the burden of their family member and express these burdens in their conversations relating to the patient (Klaus & Fristad, 2005; Kwon et al., 2006; Simmons et al., 2008). Studies on the role of expressed emotion and obsessive compulsive disorder (Wearden, Terrier, & Barrowclough, 2000) and agoraphobia (e.g. Simmons, Chambless, & Gordon, 2008) indicated resonance in the effect of EE and progression of the disorders. For studies in alcohol use disorders, there is evidence indicating that EE influences relapse but some studies are at odds with this association, hence not conclusive (e.g. Mittal et al., 2015). Some other literature supports the view that social environmental cues including family interactions are associated with vulnerability to drug use and dependency, and often undermine the individual's efforts in recovery from alcohol addiction (Janak & Chaudire, 2010; Leach & Kranzler, 2013; Mathew, Regmi, & Lama, 2018). Relapse in alcohol addiction is therefore, a complex and dynamic phenomenon that appears to be partly determined by social factors, among other environmental cues.

The degree of social support offered by close relatives is the best predictor of reducing drinking and strongly predicts abstinence (Ellis et al., 2004; Menon & Kandasamy, 2018). This claim is sustained in much literature (Copello, Velleman, & Templeton, 2005; Saatcioglu, Erim, & Cakmak, 2006; Shaw, 2002), which have recognized the significant role of family interactions in maintaining abstinence after treatment of substance use disorders (SUDs). Support for the role of family in the progression of SUDs has contributed to a high impetus in increasing the efficacy of

treatment by including close family members to the rehabilitation program (Copello et al., 2005). Supportive family relationships have been known to play a major role throughout the drug dependent recovery continuum. Yet, there are disparate findings on the extent to which such support can influence recovery or what role it can play in long-term recovery.

The family is mostly associated with the greatest social support for the members among all contextual relationships (Beattie, 2001) and hence, related with better prognosis during SUDs treatment (Leonard & Eiden, 2007). The Family Systems theory (Minuchin, 1974) gives the strongest support for the role of family interactional patterns in the progression and maintenance of psychopathology (L'Abate, 1998; West, 2006). The Systems Theory depicts the family as a system with various interactional parts, which have considerable degree of circularity of influence on each other (Lander, Howsare, & Byrne, 2013; Nichols & Schwartz, 2006). Therefore, family interactions are likely to affect the course of alcoholism and hence influence the recovery outcome for an individual undergoing treatment in alcohol use disorder. While family members can play a significant role in prompting substance dependent persons to seek treatment, some family interactional dynamics tend to hurt the same goal and instead hamper recovery efforts.

Literature suggests that intervention efforts designed to reduce high EE levels in relatives also result in decline in the patient's relapse rates (Hooley & Gotlib, 2000). Relatives' emotional responses, especially, their expressions of criticism to the patient with alcohol addiction, has a link to how they interpret the drinking behaviour. Relatives with expressed emotion (EE) view patients with substance use disorders as responsible for their problems and difficulties (Hooley, 2007). Family members characterized by high criticism tend to be more conflictual with patients and show less warmth in their relationships with the patient. Criticism is often demonstrated by explicit or implicit remarks reflecting dislike or disapproval of the patient's behaviour (Renshaw, Blais, & Caska, 2010). When such remarks are extreme, they are interpreted as expressing hostility either voluntarily or involuntarily and seem to criticize the patient for who he or she is, rather than the behaviour. Relatives high in criticism have also been associated with more self-criticism than the ones with low criticism (Docherty, Cutting, & Bers, 1998). When examining families that have an individual that is addicted to alcohol, behaviour such as excessive drinking

is rated as socially unacceptable. In such families where taking alcohol is a vice, relatives with high criticism see the individual addicted to alcohol as violating family norms and appropriate social behaviour (Hooley, 2007). Criticism in family interactions is linked to poorer relationship quality (Rogge et al., 2006) and higher conflict (Blais & Renshaw, 2012). Anger and resentment, which are likely to be triggered by frustrated attempts to help the individual to stop the drinking habit are characteristic of expressed criticism. The individual with alcohol use disorder may resist treatment, sneer at well-intended advice, or repeatedly break promises to reduce or stop drinking (Menon & Kandasamy, 2018). This repetitive destructive behaviour eventually wears down the tolerance of even the most resilient close relative. Reduced resiliency on the other hand results in increasing manifestations of more criticism, which eventually becomes a cyclical occurrence.

While extensive studies in the field of treatment of SUDs have supported the association between criticism and relapse, some sources have given contradicting information. For instance, Fichter et al. (1997) demonstrated that among the components of expressed emotion (EE), criticism had the highest significance in alcoholic relapse after 6-month follow-up, and that emotional over-involvement (EOI) did not support relapse of a recovering alcoholic. However, Githae, Sirera, and Wasanga (2016) found EOI to be most deleterious predictor of relapse compared to criticism and hostility (hostility was found to have an inverse relationship with relapse). Moreover, most of the studies done describe criticism as a one-dimensional and negative construct. Literature clearly stipulates the role of constructive criticism to be essential in goal attainment (Renshaw, Blais, & Caska, 2010). However, there is a dearth of literature on EE to indicate whether or not expressions of non-harmful criticism would lead to the achievement of the abstinence goal for an individual recovering from alcohol use disorder. In explaining how we react to feedback, the social learning theory by Bandura (1986) claims that both positive and negative emotional appraisals influence the individual's reactions. That is, how we perceive and attribute other people's responses toward us determines our behaviour (Alfred et al., 2018). Hence, an individual's appraisal of whether criticism is positive or negative, influences how they react to such feedback. Few studies have focused on the association between perceptions of non-harmful criticism with alcohol addiction, and of these, there is very scanty information on non-Western populations. Moreover, it is not known whether varying goals of treatment have a significant

relationship to relapse of individuals during recovery and how this interacts with the family emotional climate. The question remains whether or not there is a significant relationship between perceptions of harmful and non-harmful criticism with relapse of an individual recovering from alcohol use disorder.

While a considerable amount of data proposes that family criticism is predictive of relapse in individuals suffering substance addiction, it is not clear what happens if the victim does not perceive or internalize these negative interactional patterns. Family EE is inconsequential unless perceived by the individual suffering alcohol addiction (Rotunda & O'Farrell, 1998). Furthermore, there is need to clarify the significance of perceived non-harmful criticism on relapse of an individual recovering from alcohol use disorder. The aim of this study was to assess the perceptions of harmful and non-harmful criticism of individuals recovering from alcohol use disorders and the association of such perception to their relapse after treatment.

Methodology

Inpatient individuals suffering from alcohol use disorder were purposively selected from eleven inpatient rehabilitation centers in Kiambu County, Kenya. Kiambu County was selected due to reports (by the national body mandated by the Kenyan government to manage alcohol abuse) that indicated that this area was leading in alcohol use nationwide. (NACADA, 2012). A complete census of 137 inpatients was originally targeted for this study. However, 11 had been discharged by the time of the study while 7 declined to participate. A total of 119 participants were eligible for study after diagnosis for alcohol use disorder (AUD) and hence, were included for analysis purposes. Participants were included if they were on the 3rd month of treatment after admission into inpatient rehabilitation centers selected for the study.

Questionnaire administration occurred during psychoeducational group sessions scheduled as part of the rehabilitation program. The research assistants were rehabilitation counselors within the selected centers. To minimize response bias, an explanatory letter accompanying informed consent form was issued to the participants. The purpose of the study was explained with assurance of complete anonymity, and confidentiality measures included instructing participants

not to put any kind of identifying information on the answer sheets. Prior to analysis, the data was examined for response distortions and completion errors.

A structured questionnaire was used to collect demographic characteristics of gender, age, and marital status of the participants to find out if these were correlated to relapse of the participant. The Alcohol Use Disorders Identification Test (AUDIT; WHO, 2001) was used to screen all the study participants for alcohol addiction. An earlier study (Githae, Sirera, & Wasanga, 2016) with a similar population had yielded a reliability of $r=.79$, hence the tool was used without further analysis of reliability. Participants responded to a question targeting their goal for seeking treatment. Three categories of answers were provided: “controlled drinking”; “conditional abstinence”; or “complete abstinence”. Selection of any of the choices indicated the treatment goal for the study participant upon entry into the rehabilitation center.

Attributions of Criticism Scale (ACS; Alfred & Chambless, 2016) was used. This is a 21-item scale measuring attributions of constructive and destructive criticism on a 5-point Likert scale. This measure offered the highest reliability among the measures used in this study ($r=.81$) and hence was adapted for this current study. The criticism variables were also explored using the perceived criticism measure (PMC-T). In addition, perceived criticism measure-Type (*PCM-T*; Renshaw et al., 2010) was also administered. This is a two-item scale used to assess perceptions of constructive criticism, that is (“How much do you think your relatives’ criticism is helpful?”) and harmful criticism (“How much do you think your relatives’ criticism is harmful?”). The test-retest reliability of the PCM-T over two weeks in a sub-sample of 10 participants was acceptable ($r=.72$) for harmful and $r=.74$ for non-harmful criticism). The PCM-T has been found to be relatively independent of psychopathology and is stable across time hence will be important in rating families as having harmful or non-harmful criticism over time (Hooley & Parker, 2006).

Finally, the Alcohol Relapse Situation Appraisal Questionnaire (A-RSAQ; Martin et al., 2011) was also used. The A-RSAQ is a 26 self-report instrument consisting of two hypothetical alcohol relapse risk situations (one eliciting negative affect and one eliciting positive affect in a social situation). Participants were presented with two vignettes depicting a family interaction characterized with harmful and non-harmful criticism. The choice of the situations was derived

by in-depth analysis of family situations depicting the EE component of criticism and was guided by descriptions in robust literature in this area (e.g. Hooley, 2007; Hooley & Gotlib, 2000; Rotunda & O Farrell, 1998). The vignettes were offered one-week apart and the 26 appraisal items were identical for both situations presented by the vignettes. Test retest reliability for the Q-RSAQ was adequate ($r=.69$). After reading the vignette, participants were asked to rate the likelihood of going back to drinking under the circumstances provided in the social situation, using a 5-point Likert scale ranging from “very likely” (1) to “very unlikely” (5).

For triangulation purposes, focus groups were assembled following questionnaire administration. All participants within the rehabilitation centers were involved in the FDGs, whose group attendance varied from one center to another. Moreover, Hypothesis testing was conducted using bivariate correlations to assess the magnitude and direction of associations among the study variables. Data was examined for multicollinearity and possible outliers and no such problems were shown hence there were no violations of assumptions of linear regressions. Pearson correlations and regressions were used to test the study hypothesis: “*There exists a relationship between perceived harmful-criticism of close family members and relapse of the recovering individual with alcohol use disorder*”.

Results

According to the findings of the study, there were no significant differences regarding the demographic characteristics of age, occupation and level of education in relation to the risk of relapse. However a significant difference emerged in gender differences of the participants with respect to relapse ($p<.05$). Analysis revealed a statistically significant relationship ($p<.001$) between the treatment goal and risk of relapse for individuals recovering from alcohol use disorder. There was a statistical significance between harmful criticism and goal of treatment ($p<.046$). Demographic characteristics of individuals are presented in Table 1.

Table 1: Demographic Characteristics of Respondents

Characteristics	Frequency	Percentage
Gender of Respondents		
Female	11	9
Male	108	91
Total	119	100
Age of Respondents		
18 to 25 years	24	20
25 to 35 years	51	43
35 to 45 years	29	24
Above 45 years	15	13
Total	119	100
Marital Status		
Single	59	49.6
Married	35	29.4
Separated/Divorced	19	16
Widowed	6	5
Total	119	100.0
Treatment Goal		
Controlled drinking	21	17.6
Conditional abstinence	27	22.7
Complete abstinence	71	59.7
Total	119	100.0

As presented on Table 1, study participants varied with respect to their goals for alcohol treatment. Among the respondents, the majority (59.7%; N=71) wanted complete abstinence after treatment, 22.7% (N=27) were seeking conditional abstinence, and only 17.6% (N=21) sought treatment in order to attain controlled drinking.

Concerning Perceived Harmful and Non-Harmful Criticism, the PMC-T had significant overlap with the ACS, providing a high reliability ($r=.761$), which is an indication that both of the measures were consistent in assessing the criticism variable. As presented in Table 2, Pearson's correlation coefficients indicated a positive relationship among variables of the study.

Table 2: Correlations of Perceptions of Harmful Criticism (PC-H), Perceptions of Non-Harmful criticism (PC-NH) and risk of Relapse

		Relapse Risk	PC-NH	PC-H
Relapse Risk	Pearson Correlation	1	.209**	.411**
	Sig. (2-tailed)		.061	.000
	N	116	118	117
PC-NH	Pearson Correlation	.209**	1	.538**
	Sig. (2-tailed)	.061		.000
	N	118	119	117
PC-H	Pearson Correlation	.411**	.538**	1
	Sig. (2-tailed)	.000	.000	
	N	119	118	117

***.* Correlation is significant at the 0.01 level (2-tailed).

There was a stronger correlation between relapse and perception of harmful criticism (PC-H; $r=.411$) compared to perception of non-harmful criticism (PC-NH; $r=.209$). Both harmful perceptions and non-harmful perceptions had a positive relationship that was statistically significant ($r=.538$; $p=.000$). This is an indication that an increase in one meant that there would an increase in the other. Consistent with the hypothesis (see Table 2), there was a significant relationship between perceived harmful-criticism and relapse risk ($p<.000$). $p<.061$. There was significance ($p<.061$) between non-harmful criticism on relapse risk of the individuals recovering from alcohol use disorder.

The results from the questionnaires were further confirmed by findings emanating from themes developed from the content analysis of focus group discussions (FGDs). These showed a positive relationship between expression of criticism of family members and the relapse of the individual in recovery. From the FGDs, it appeared that feelings of rejection from close family members

were apparent and contributed to negative feelings of the participants. The group discussions also yielded the desire for acceptance of the participants by close family members and a need for trust to work out recovery after treatment.

As presented in Table 3, the regression model used in the study had an overall model strength ($r^2 = .285$), an indication that 28.5% of the variations in relapse were adequately explained by expressions of perceived harmful-criticism of individuals in recovery from alcohol use disorder.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.590 ^a	.326	.285	12.41170

a. Predictors: (Constant), PC-H

Discussion

The purpose of the present investigation was to assess the association of constructive and destructive criticism to the risk to relapse of recovering individuals with alcohol use disorder (AUD). Consistent with the hypotheses, when people perceived greater harmful criticism from their close family members, they had a higher likelihood to relapse. In contrast, those that experienced helpful criticism had more positive attributions and less risk of relapse after treatment. Negative criticism in contrast undermines people's confidence in their ability to pursue their goals and their expectations of success. This indicates that in the presence of harmful criticism, individuals with AUD would be more committed to pursue the goal to remain abstinence after treatment of alcohol addiction.

The findings of this study are in concordance with extensive research over the last few decades has demonstrated that high expressed emotion (EE), a construct described by criticism, hostility and emotional over-involvement, is damaging to the recovery of patients suffering from psychopathologies such as schizophrenia, depression and bipolar disorder. Results reported by Fals-Stewart, O'Farrell, and Hooley (2010) indicated that alcohol dependent individuals with spouses characterized by high criticism were more likely to relapse as opposed to their counterparts with low expression of criticism.

This study investigated if the presence of harmful criticism from a close family member was related to the commitment to pursue the goal to remain abstinence of individuals with AUD after treatment of alcohol addiction treatment center. This study found out that the goals for treatment for individuals with alcohol use disorder is not always abstinence. The study found out 59.7% of the study participants wanted complete abstinence after treatment, 22.7% were seeking conditional abstinence, and only 17.6% sought treatment in order to attain controlled drinking. Analysis revealed a statistically significant relationship ($p < .001$) between the treatment goal and risk of relapse for individuals recovering from alcohol use disorder. There was a statistical significance between harmful criticism and goal of treatment ($p < .046$). These findings are important in assessing the association between goals of treatment with the motivation to seek recovery programs. Though family members may push an individual into a treatment program, sometimes this may become counterproductive if it is not in line with the patient's intrinsic motivation (Raitasalo & Holmila, 2005) and if the family members continue to criticize the efforts made by the patient. A common source of criticism is disapproval from family members when they view the individual with SUD to be resisting treatment hence returning back to heavy drinking after rehabilitation (Rotunda & O'Farrell, 1998). This may often lead to increased criticism where the family may believe that abstinence, hence recovery, should occur after rehabilitation. However, this may not be the goal for the individual with AUD and may lead to a vicious cycle of more criticism, and a higher likelihood of relapse. This is consistent with research indicating that positive criticism is effective in encouraging individuals to internalize and integrate new goals with their self-concepts, hence commitment to pursuing goals (Ryan & Deci, 2000; Witkiewitzn, & Marlatt, 2004).

This study found that criticism is not a unilateral concept but that it comprises of both harmful and non-harmful components. The study also found out that there was a positive and stronger correlation between relapse and perception of harmful criticism (PC-H; $r = .411$) compared to perception of non-harmful criticism (PC-NH; $r = .209$). Prior research in family interactional patterns has usually combined the effect of EE indicators of criticism, over-involvement and hostility as unilateral component that yield a single rating of high or low EE (Patterson, et al., 2005). The majority of these studies have also presented criticism as a one-dimensional, uniformly negative construct, which has been strongly linked to relapse in recovery for mental

illnesses, including substance addiction. However, this study has established that criticism itself has distinct parts that have varying significance in their effect on relapse in AUDs. In the current study, there was a significant relationship between perceived harmful-criticism and relapse risk ($p < .000$), while that of non-harmful criticism was lower ($p < .061 > .05$). This has been supported by many investigations that found that hostile criticism as significant in predicting clinical relapse (Hooley, 2007; Pourmand, Kavanagh, & Vaughan, 2005; Santos, 2007).

Regression analysis of the current study gave an overall model strength ($r^2 = .285$), an indication that 28.5% of the variations in relapse are adequately explained by expressions of perceived harmful-criticism of individuals in recovery from alcohol use disorder. This finding confirms earlier studies in this area that indicate the predictive value of criticism in causing relapse. Criticism as an expression of disapproval for another person that may be inclusive of rejecting remarks. When such disapproval occurs in a family with an individual with alcohol dependence, family members find fault and often express disagreement particularly in the addicted individual's way of handling the prolonged drinking problem (Hooley & Gotlib, 2000; Simmons et al, 2008). Family members expressing criticism to the patient mainly attribute the drinking behaviour to inability to control an existing internal fault in personality and hence blame the individual for the condition. This expression of disapproval by family members is meant to provoke the patient into a better level of functioning and make him handle his drinking better (Hooley, 2007). However, the alcoholics interpret this to mean that their family member's disapproval mean rejection (Sripada, et al., 2011). Empirical evidence supports the view that alcohol attenuate the discomfort of social threat and rejection, which becomes a negative reinforcement to more drinking behavior (Leach & Kranzler, 2013).

Interestingly, this study found that both harmful perceptions and non-harmful perceptions of criticism had a positive relationship that was statistically significant ($r = .538$; $p = .000$). This is an indication that an increase in one meant that there would an increase in the other. Perhaps that is the reason earlier studies looked at criticism as a unilateral concept and more studies would help illuminate this relationship. (1998), Hooley, Fals-Stewart, & Cutter (1998); O'Farrell et al. (1998) had earlier argued that if the emotion such as criticism was not perceived by the recipient, then it was not significant and would not influence their behavior. That is, if the family members

expressed criticism to the patient, but did not perceive such criticism then this would not be a factor influencing their recovery. Perhaps this would explain the relationship between both harmful and non-harmful criticism explaining what would happen if the patient was not able to perceive the emotion. Studies that have been done on criticism portray it as negative as it focuses on the negative habits and socially embarrassing behaviour (Ng et al., 2001). However, negative criticism becomes a factor in relapse of it is perceived by the individual recovering from addiction treatment. According to Blais and Renshaw (2012) hostile criticism is predictive of poorer treatment response and higher relapse rates. However, non-hostile criticism is associated with better treatment response.

In summary, the current study supports other studies indicating an association between criticism and relapse of individuals with AUD after treatment. This is in agreement with Carson (2011) who demonstrated that for patients with psychological problems, high sensitivity to criticism was a trigger of stress reaction that undermined treatment and recovery. Such sensitivity may trigger a specific emotional reaction to the perception that one is being rejected, causing low self-esteem, which is a well-known precipitant of maladaptive drug and alcohol use. According to the diathesis-stress conceptualization of expressed emotion and its clinical outcome, perceived criticism is likely to provoke a stress reaction that worsens the drinking behaviour (Hooley & Gotlib, 2000). There is evidence that rejection causes interpersonal stress and this is a positive predictor that contributes to substance use and abuse (Leach & Kranzler, 2013). Interpersonal stress is one of the factors responsible for drug-seeking behaviour among many substance users. Research has demonstrated that expressing disapproval of the patient had a predictive value to relapse in a large number of psychiatric illnesses, including alcoholism (e.g. Bullock, Bank, & Buraston, 2002; Hooley, 2007). Earlier studies by Witkiewitz and Marlatt (2004) had observed that stress was one of the high risk factors for relapse in alcoholism and hence suggested that all relapse prevention programs must include stress prevention as a coping strategy in recovery of substance abuse. In addition, Nescic and Duka (2008) found out that stress was related to increased negative affect and craving to drink larger amounts of alcohol. Individuals with alcohol use dependency and living in highly threatening and chronic stressing environments brought about by interpersonal criticism were more likely to relapse than abstaining individuals who may not be experiencing such stress. In fact experiments done on the brain responses to stress showed

an increased susceptibility to relapse (Fox et al., 2007). Hence a stressful home setting is a fragile environment causing vulnerability to relapse.

Conclusion

Results from this study are consistent with previous findings that posit a positive association between criticism in family interactions and the risk of relapse in psychopathology. Specifically the study confirmed that perceived harmful-criticism from a close family member is a strong predictor of relapse among individuals recovering from alcohol use disorder (AUD). Contrary to expectation, there was a positive relationship, albeit weak, between perceptions of helpful criticism and relapse. The study demonstrated that there was a higher risk of relapse even if the goal for the individual suffering AUD was complete abstinence in an environment where family members were characterized by high negative criticism. Relapse in alcohol dependence is an interaction of many factors, and multiple layers of assessment may be required to predict relapse. However, this study provided further evidence in support of the importance of family emotional factors in relapse in alcohol dependence. It provides the basis for investigating correlates of relapse in a wide range of interactional patterns, family dynamics and substance use problems.

The current study has limitations that must be considered for future studies. First, the population consisted of recovering individuals with alcohol use disorder who were admitted in rehabilitation centers and who were almost discharged from the centers. Future research needs to be more extensive to cover individuals with AUD after being discharged from the centers. Secondly, the majority of the individuals with substance dependency have cross-addictions and comorbidities hence more studies would be required to examine the significance of the study variables reflecting the impact of such comorbidities. Thirdly, the study examined attributions of harmful and non-harmful criticism using vignettes and not real family members. Future research could elucidate more significant associations using environmental cues from a naturalistic setting. Notwithstanding these limitations, the study demonstrates that harmful criticism is detrimental to efforts in recovery of individuals suffering alcohol use disorder.

References

- Alfred, K., & Chambless, D. L., Porter, E., Brier, M. J., & Schwartz, R. A. (2018). Attributions and perceptions of criticism: An examination of patients with anxiety and normal control participants. *Journal of Family Psychology, 32*(7), 947-956.
- Beattie, M. C. (2001). Meta-analysis of social relationships and post treatment drinking outcomes: Comparison of relationship structure, function and quality. *Journal of Studies in Alcohol, 62*(4), 518-527.
- Blais, R. K., & Renshaw, K. D. (2012). The role of perceived hostile and non-hostile criticism in friendships. *The New School of Psychology Bulletin, 9*(2), 17-23.
- Bullock, B. M., Bank, L., & Buraston, B. (2002). Adult sibling expressed emotion and fellow sibling deviance: A new piece of family process puzzle. *Journal of Family Psychology, 16*(3), 307-317.
- Carlson, R. G. (2011). Communication deviance, expressed emotion, and family cohesion in schizophrenia. *Open Access Dissertations*, Paper 615.
- Copello, A. G., Velleman, R. D., & Templeton, L. J. (2005). Family interventions in the of alcohol and drug problems. *Drug Alcohol Review, 24*(4), 369–385.
- Ellis, B., Bernichon, T., Yu, P., Roberts, R., & Herrell, J. M. (2004). Effect of social support on substance abuse relapse in residential treatment setting for women. *Evaluation and Program Planning, 27*(2), 213-221.
- Fals-Stewart, W., O'Farrell, T. J., & Hooley, J. (2010). Relapse among married and cohabiting substance use patients: the role of perceived criticism. *Behaviour Therapy, 41*(2) 388-400.
- Fichter, M. M., Glynn, S. M., Weyerer, S., Lieberman, R. P., & Frick, U. (1997). Family climate and expressed emotion in the course of alcoholism. *Family Process, 36*(2), 203-221.
- Fox, H. C., Bergquist, K. L., Hong, K., & Sinha, R. (2007). Stress-induced and alcohol cue-induced craving in recently abstinent alcohol-dependent individuals. *Alcoholism: Clinical and Experimental Research, 31*(3), 395–403.
- Githae, E. N., Sirera, M., & Wasanga, C. (2016). Family over-involvement and relapse among inpatient alcoholics in Nairobi, Kenya. *International Organization of Scientific Research, Journal of Humanities and Social Sciences (IOSR-JHSS), 21*(7), 44-50).
- Hooley J. M. (2007). Expressed emotion and relapse of psychopathology. *Annual Review of Clinical Psychology, 3*, 329–352.

- Hooley, J. M., & Gotlib, I. H. (2000). A diathesis-stress conceptualization of expressed emotion and clinical outcome. *Applied and Preventive Psychology, 9*(3), 135-151.
- Hooley, J. M., & Parker, H. A. (2006). Measuring expressed emotion: An evaluation of the shortcuts. *Journal of Family Psychology, 20*(3), 386-396.
- Ikram, A., Suhail, K., Jeffery, S. Z., & Singh, S. (2011). Rates of expressed emotion in Pakistan relatives of patients with schizophrenia. *Israel Journal of Psychiatry and Related Sciences, 48*(2), 74-81.
- Janak, P. H., & Chaunhri, N. (2010). The potent effect of environmental context on relapse to alcohol seeking after extinction. *The Open Addiction Journal, 3*, 76-87.
- Klaus, N., & Fristad, M. A. (2005). Family psycho-education: An adjunctive intervention for children with bipolar disorder. *Directions in Psychiatry, 25*(3), 217-229.
- Kwon, J., Lee, Y., Lee, M. & Bifulco, A. (2006). Perceived criticism, marital interaction and relapse in unipolar depression: Findings from a Korean sample. *Clinical Psychology and Psychotherapy, 13*, 306-312.
- L'Abate, L. (Ed.). (1998). *Family psychopathology: The relational roots of dysfunctional behaviour*. New York: Guilford Press.
- Lander, L., Howsare, J., & Byrne, M. (2013). The impact of substance use disorders on families and children: From theory to practice. *Social Work Public Health, 28*, 194-205.
- Leach, D, & Kranzler, H. R. (2013). An interpersonal model of addiction relapse: NIH public access. *Addictive Disorders and Their Treatment, 12*(4), 183-192.
- Leonard, K. E., & Eiden, R. D. (2007). Marital and family processes in the context of alcohol use and alcohol disorders. *Annual Review of Clinical Psychology, 3*, 385-310.
- Marlatt, G. A., Parks, G. A., & Witkiewitz, K. (2002). Clinical guidelines for implementing relapse prevention therapy. *Alcoholism and Substance Abuse, 12*, 1-49.
- Menon, J., & Kandasamy, A. (2018). Relapse prevention. *Indian Journal of Psychiatry, 60*(4), 473-478.
- Mathew, K. J., Regmi, B., & Lama, L. D. (2018). Role of family in addictive disorders. *International Journal of Psychosocial Rehabilitation, 22*(1), 65-75.
- Mittal, S., Koganti, C. T., Yadiyal, A., Rao, P., & Chandini, D. (2015). *International Journal of Scientific and Research Publications, 5*(4), 1-5.
- Minuchin, S. (1974). *Families and family therapy*. Cambridge, Massachusetts: Harvard University Press.

- National Authority for the Campaign against Alcohol and Drug Abuse (NACADA, 2012). Rapid assessment of the status of drug and substance abuse in Kenya. *Annual Report, 2012*.
- Ng, R. M. K., Mui, J., Cheung, H. K., & Leung, S. P. (2001). Expressed emotion and relapse of schizophrenia in Hong Kong. *Hong Kong Journal of Psychiatry, 11*(1), 4-11.
- Nesic, J., & Duka, T. (2008). Effects of stress on emotional reactivity in hostile heavy social drinkers following dietary tryptophan enhancement. *Alcohol & Alcoholism, 40*(2), 151-162.
- Nichols, M. P., & Schwartz, R. C. (2006). *Family therapy: Concepts and methods*. New York: Pearson.
- O'Farrell, T. J., Hooley, J., Fals-Stewart, W., & Cutter, H. (1998). Expressed emotion and relapse in alcoholic patients. *Journal of Consulting and Clinical Psychology, 66*(5), 744-754.
- Patterson, P., Birchwood, M., & Cochrane, R. (2005). Expressed emotion as an adaptation to loss: prospective study in first episode psychosis. *British Journal of Psychiatry, 187*(48), 59-64.
- Pourmand, D., Kavanagh, D. J., & Vaughan, K. (2005). Expressed emotion as predictor of relapse in patients with comorbid psychoses and substance use disorder. *Australian and New Zealand Journal of Psychiatry, 39*(6), 473-478.
- Raitasalo, K., & Holmila, M. (2005). The role of the spouse in regulating one's drinking. *Addiction Research and Theory, 13*(2), 137-144.
- Rotunda, R. J., & O'Farrell, T. J. (1998). Understanding and managing expressed emotion in the couples' treatment of alcoholism. *Psychotherapy in Practice, 4*(3), 55-71.
- Renshaw, K. D., Blais, R. K., & Caska, C. M. (2010). Distinctions between hostile and non-hostile forms of perceived criticism from others. *Behaviour Therapy, 41*(3), 364-374.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and wellbeing. *American Psychologist, 55*, 68-78.
- Saatcioglu, O., Erim, R., & Cakmak, D. (2006). Role of family in alcohol and substance abuse. Review Article, *Psychiatry and Neurosciences, 60*(2), 125-132.
- Santos, J. (2007). *Parasuicide, what families say: the expressed emotion*. Coimbra, Portugal: Formasau.

- Simmons, R. A., Chambless, D. L., & Gordon, P. C. (2008). How do hostile and emotionally over-involved relatives view relationships? What relatives' pronoun use tell us. *Family Process, 47*(3), 405-419.
- Shaw, V. N. (2002). *Substance use and abuse: Sociological perspectives*. Praeger, Connecticut London Publisher
- Sripada C. S., Angstadt, M., McNamara, P., King, A. C., & Phan, K. L. (2011). Effects of alcohol on brain responses to social signals of threat in humans. *Neuroimage, 55*(1), 371-380.
- Wearden, A. J., Terrier, N., Barrowclough, C., Zastowny, T. R., & Rahill, A. A. (2000). A review of expressed emotion research in healthcare. *Clinical Psychology Review, 20*(5), 633-666.
- Witkiewitz, K., & Marlatt, G. A. (2004). Relapse prevention for alcohol and drug problems. *American Psychologist, 59*(4), 224-235
- .