

Emotion Regulation, Family Functioning and Quality of Life in Drug Addicts

Hameeda Batool

MS Student, GC University, Lahore

Saadia Dildar

Assistant Professor, GC University Lahore

Abstract

The present study investigated the emotion regulation as a moderator of the relationship between family functioning and quality of life in drug addicts. A sample of 150 drug addicts which further included 50 heroin, 50 cannabis and 50 multiple substance users. Their age range was 19-65 years and they were recruited from different drug rehabilitation centers of Lahore. Different measures included Demographic Questionnaire, Drug related Information Sheet, Family Assessment Device (FAD) (Epstein, Baldwin & Bishop, 1982), Emotion Regulation Questionnaire (ERQ) (Gross & John, 2003) and WHOQOL-BRIEF (WHOQOL Group, 1999). Urdu versions of the scales were used. The results of inter correlation showed that communication, role, affective responsiveness, affective involvement, behavioral control were significantly negatively related with different dimensions of quality of life. The use of cognitive reappraisal resulted in better psychological health whereas use of expressive suppression resulted in poor psychological health, physical health, environmental health and overall quality of life. Moderation analysis showed significant interaction effect of general functioning and cognitive reappraisal on the psychological health of the drug addicts. Findings are implicated in rehabilitation of the drug addicts.

Keywords: Emotion regulation, family functioning, cognitive appraisal, drug addicts, quality of life, psychological health

Introduction

Substance use has been characterized by inability to organize, integrate thoughts and feelings in dealing with stress (Wong, Silva, Kecojevic, Schrage, Bloom, Iverson, & Lankenau, 2013). Addiction is a curse and much work has been done to understand this psychiatric problem. Although a number of treatments are available to such people, yet the number of relapses as well as increase in the number of drug addicts has been reported in different national and international surveys (UNODC, 2011). Results of a survey on drug abuse in Pakistan revealed that mostly people of age ranged 15 to 64 are involved in substance use (UNODC, 2013). Asad reported that 6.7 million adults in Pakistan use drugs annually (Asad, 2014). In Pakistan, prevalence of substance use is 11% which makes it the third most prevailing psychiatric problem after depression which is 45% and schizophrenia 17% common among patients seeking treatment (Gadit, 2004). Despite of the different pharmacological and psychological treatments available like insight building, motivation building, cognitive behavior therapies, and craving management etc. the growing rate of this problem requires the need of better understanding of this problem. Drug addiction is a continuous growing social problem, needs for different approaches both pharmacological and psychological are required for effective treatments (Shorter & Thomas, 2011). Much of the focus in the treatment is on individual level. Relapses that might have been

due to emotional and interpersonal problems have not been yet explored in Pakistan. Majority of these people start using drugs as a mean to resolve their cognitive and emotional problems. As emotion plays an important role and their proper expression is vital for the proper functioning of human. Family plays an immense role in the positive wellbeing of an individual. If the family is successful in providing the basic along with the other psychological and emotional needs, it may promote positive health. However, family has also been seen as associated with commencing substance use and misuse (Velleman, Templeton, & Coprello, 2005). Parenting today, is a challenging task since the parents of this modern era are so busy with the hectic, progressive routine life that they are unable to provide due attention and time to the children and this make today's youth vulnerable to the harmful things like drugs. Once they are into such activities, it is almost very difficult for the families to resolve the problem which affects the quality of life of the addict. It is assumed that addicts are unable to solve their issues and they keep on repressing their emotions consequently as a result they become dependent on drugs.

Agha, Zia, and Irfan (2008) found significant difference in anger control problem, emotional distress and family communication between addicts and non-addicts, whereas non-significant difference found in affective expression and control of family. It means that clear and direct way of communication resulted in less psychological issues.

Sillis, Badow, Brown, and Hofmann (2006) experimentally demonstrated that suppression as an emotion regulation strategy gives rise to negative effects and distress. Similarly, the evidence that suppression produces negative effect has been confirmed by Goldin, McRae, Ramel, and Gross (2008) who found that suppression and reappraisal produced different effects. Reappraisal resulted in reduced sympathetic physiological responses while suppression increases cardiovascular activation and results in generating negative appraisal.

Aldao, Hoeksema, and Schweizer (2010) synthesized 114 studies on emotion regulation strategies and identified rumination, avoidance and suppression were associated with increased psychopathology, while acceptance, reappraisal and problem solving with least psychopathology because these strategies were more constructive, solution focused and healthy which is associated with low stress and positive mood. Butler, Egloff, Smith, Erickson and Gross (2003) found that the greater use of expressive suppression in social situations resulted in poorly developed rapport and inhibits the formation of the relationship. It has a negative impact on the emotional experience of the regulator using it and also increases the blood pressure. The communication resulted under such circumstances can throw a person into more confusion.

Yen, Wang, Wang, and Chen (2010) investigated quality of life among heroin users. The research was conducted in Taiwan. A comparison was done on the basis of quality of life among heroin users and non-users. QOL was also examined with different socio-demographic characteristics like family support and level of depression. For the purpose of the study 123 heroin users and 106 subjects who never smoked were taken. Poor quality of life was observed in the domain of physical, psychological and social relationship was found for heroin users. No differences were seen among the groups on environmental domain. So it is concluded quality of life is not a single dimensional or homogeneous. The type of drug use has varying impact on the different dimensions of quality of life.

Ventegodt and Merrick (2003) investigated the use of psychoactive drugs and their impact on quality of life. Although cannabis is the most commonly used drug, however, its effect on QOL was not significant. Cocaine, psilocybin and amphetamine have moderate effect on QOL. Methadone, heroin, mixture of alcohol, tranquilizers and morphine led towards very low quality

of life. It means that the type of drug a person use, the synthesis and components of the drugs has varying affect on the psychological, physical and overall functioning of the individual.

Rationale of the study

Previous researches have separately explored the importance of family functioning and emotion regulation in quality of life among drug addicts. However, the current study explores the different dimensions of family functioning along with the relationship of emotion regulation strategies separately with diverse kinds of quality of life in drug addicts. This research narrows down the understanding of the nature of the problem of addicts not only on individual level but also how the patient view the role of the family and its impact on their lives. This gives us a better picture to solve their issues from the core. Hence the role of the families will be of more help to the patient. This may in detail identify as how the influence of emotion regulation in combination with the significant family functioning aspects predict the different quality of life measures such as physical, psychological, social and environmental in drug addicts.

Objectives

- To find out relationship between different dimensions of family functioning, emotion regulation strategies and quality of life.
- To investigate emotion regulation strategies (cognitive reappraisal and expressive suppression) moderate the relationship between family functioning (communication, behavioral control, general family functioning) and quality of life (physical health, psychological, social relationship) in drug addicts.

Hypotheses

1. There is likely to be a negative relationship between family functioning (problem solving, communication, roles, affective responsiveness, affective involvement, behavioral control, general family functioning) and quality of life (physical health, psychological, social, environment, overall quality of life)
2. There is likely to be a positive relationship between cognitive reappraisal and quality of life (physical health, psychological, social, environment, overall quality of life).
3. There is likely to be a negative relationship between expressive suppression and quality of life (physical health, psychological, social, environment, overall quality of life).
4. Cognitive reappraisal and expressive suppression are likely to moderate the relationship between family functioning (communication, behavioral control, general family functioning) and quality of life (physical health, psychological, social relationship).

Methodology

Sample

The sample consisted of three equal groups of addicts which included heroin addicts, cannabis addicts and multiple substance users. The sample consisted of 150 male addicts with age range 19 to 65 years. The technique used for drawing the sample was purposive convenient sampling technique. The data was collected from different drug rehabilitation centers in Lahore namely Fountain House, Mayo hospital. Punjab Institute of Mental Health (PIMH), Pak Clinic and Pannah Foundation. The characteristics of the sample are as follows:

Table 1.1

Characteristics of the Sample (N=150)

Variables	<i>M(SD)</i>	<i>f (%)</i>
Age	21.85(2.80)	
Gender		
Men		150(100%)
Occupation		
Unemployed		13(9%)
Employed		137(91%)
Education		
Uneducated		21(14%)
Primary		15(10%)
Middle		25(17%)
Secondary		37(25%)
Intermediate		16(11%)
Bachelors		20(13%)
Masters		16(11%)
Marital Status		
Married		88(59%)
Single		62(41%)
Weeks of treatment	111.51(208.89)	
<hr/>		
Variables	<i>M(SD)</i>	<i>f (%)</i>
Family Monthly income	80460(90065)	
Less than 29000		21(14%)
30000-59000		
60000-89000		80(53%)
90000 and above		
Family System		17(11%)
Joint		32(21%)
Nuclear		118(79%)
Residence		32(21%)
Urban		131(87%)
Rural		19(13%)
Mother Alive		
Yes		127(85%)
No		23(15%)
Father Alive		
Yes		90(60%)
No		60(40%)
Type of Drug use		
Heroin		50(33%)
Cannabis		50(33%)
Multiple substance use		50(33%)

Variable	<i>M(SD)</i>	<i>f (%)</i>
Mode of Administration		68(43%)
Smoke		20(13%)
Sniff		18(12%)
Inject		44(29%)
Other		
Previous drug use		
No pervious drug use		59(39%)
Heroin		4(3%)
Cannabis		25(17%)
Cigarette		46(31%)
Alcohol		8(5%)
Multiple substance		8(5%)
Reason of drug use		
Friends		71(47%)
Family stressors		28(19%)
Relationship issues		28(19%)
Enjoyment		17(11%)
Business issues		1(.7%)
Physical injury		2(1%)
Family influence		3(2)
Variable	<i>M(SD)</i>	<i>f (%)</i>
Treatment		
First time treatment		75(50%)
Multiple time treatment		75(50%)
Other Drug using Family members		
Yes		28(19%)
No		122(81%)

Table 1.1 shows mean, standard deviation and frequencies of the study demographic variables. The mean and standard of age was 21.85 and 2.80 respectively. The sample characteristics include equal representation of three type of drug use i.e. heroin, cannabis, and multiple substance use; all males with average age of 22 years, average income was 80460, mostly belonged to joint family system and lived in urban areas. Most the participants were educated till matric or middle, and they had been in treatment for average of total weeks 112. The frequent mode of administration commonly used by addicts was smoking and cigarette was mostly used previous drug. The source for the initiation of the drug use was friends in most of the participants. Family stressors and relationship issues were second most identified source. Half of the participants were taking treatment for the first time and half had been in treatment for multiple times.

Measures

For the research purpose following assessment devices was used.

Socio-demographic form. Information gathered with the help of demographic form were age, education, occupation, individual monthly income, marital status, number of dependents, no of

children, family income, type of drug use, residence, parents alive or dead and presence of any psychiatric or medical illness. Apart from that drug related information was also taken from the participants which included information regarding the type of drug use, mode of administration of drug, duration of drug use, number of times treatment and reason for starting drug was asked from the participants.

McMaster Family Assessment Device (Epstein, Baldwin & Bishop, 1982).

The scale was developed by Epstein, Baldwin and Bishop (1982) and translated by Zia and Shafique (2014) in Urdu and was used as a measuring device of family functioning. It is a 4 point Likert scale response ranging from “strongly agree” to “strongly disagree”. It consisted of 60 items. The internal consistency of the scale is .72 to .92. It comprised of 6 subscales like problem solving, communication, roles, affective responsiveness, affective involvement and behavior control. The higher scores on scale indicated unhealthy family functioning.

Emotion regulation questionnaire (Gross & John, 2003).

The scale originally developed by Gross & John (2003) and translated by Butt, Malik and Kaleem (2012) in Urdu, was used. It was a 7 point Likert type scale responses ranged from “strongly disagree” to “strongly agree”. It consisting of 10 items. Subscales included cognitive reappraisal and expressive suppression. Internal consistency of the scale ($\alpha=.77$) and test retest reliability ($r=.69$).

WHO QOL-BRIEF (WHOQOL group, 1999).

The quality of life in drug addicts was assessed with the help of WHO QOL-BRIEF: Urdu version. Likert scale ranges from “very bad” to “very good”. It consisted of 26 items. The scale had following 4 subscales i.e. Physical health, psychological, social and environmental. The Chronbach alpha reliability of this scale is .84.

Procedure

The data was collected after taking the required permissions both from the authors of the scales used and the head of the rehabilitations centers. Drug addicts were selected through purposive sampling technique. Participants fulfilling the required criteria were part of the study and written informed consent was sought from the participants. Patients diagnosed by both the psychiatrist and the psychologist were taken a sample. The measures were administered by the researcher individually on each addict. Almost 250 participants were approached and further 150 were screened considering the inclusion criteria. Data collection was completed in 3 months.

Results

The data collected was analyzed with the help of SPSS 20 Statistical package for social sciences. Pearson Product Moment Correlation was computed to assess the relationship between family functioning, emotion regulation and quality of life. Moderation analysis was carried out through *PROCESS* by Hays, (2013) to assess the moderating role of of the variables. The moderation effect of cognitive reappraisal and expressive suppression with family functioning (communication, behavioral control, general family functioning) and quality of life (physical health, psychological, social) was assessed.

Table 1.2

Intercorrelation between Family Functioning, Emotional Regulation and Quality of Life (N =150)

* $p < .05$, ** $p < .01$, *** $p < .001$; PS=Problem Solving; C=Communication, R=Role, AR=Affective

Var	2	3	4	5	6	7	8	9	10	11	12	13	14
1 PS	-.02	.26**	.40***	-.02	.24**	.11	.03	-.06	.11	.07	.03	-.05	-.08
2 C	-	.25**	.25**	.170*	.15	.57***	-	.21**	-.18*	-.21**	-.15*	-.17*	-.13
3 R		-	.24**	.39***	-.04	.30***	.06	.08	-.17*	-.15*	-.18*	-.27**	-.20*
4 AR			-	.31***	.32***	.46***	-.15	.01	-.06	-.20*	-.16*	-.23**	-.11
5 AI				-	.19*	.34***	.11	.01	-.13	-.01	-.01	-.16*	-.04
6 BC					-	.17*	.01	.16*	-.20*	-.07	-.04	-.07	.01
7 GF						-	-	.11	-.14	-.23**	-.27**	-.31***	-.17*
8 CR							-.17*	-	-.05	.06	.28***	.05	.14
9 ES								-	-.29***	-.21**	-.16	-.17*	-.20*
10 PH									-	.50***	.34***	.54***	.40***
11 PSY										-	.48***	.52***	.50***
12 SR											-	.46***	.29***
13 E												-	.48***
14 OQL													-

Responsiveness, BC=Behavioral Control, GF=General Functioning, CR=Cognitive Reappraisal,

ES=Expressive Submission, PH=Physical Health, PSY=Psychological Health, SR=Social Relationship,

E=Environment, OQL=Overall Quality of Life.

The results indicated that communication was significantly positively related with expressive suppression($r=.21, p < .01$) whereas significantly negatively related with cognitive reappraisal($r=-.19, p < .05$), physical health($r=-.18, p < .05$), psychological health($r=-.21, p < .01$) social relationship($r=-.15, p < .05$) and environment($r=-.17, p < .05$) while non-significantly related with overall quality of life ($r=-.13, p=.09$). Roles was found to be significantly negatively related with physical health($r=-.17, p < .05$), psychological health($r=-.15, p < .05$), social relationship($r=-.18, p < .05$), environment ($r=-.27, p < .01$) and overall quality of life ($r=-.20, p < .05$) while non-significantly related with cognitive reappraisal ($r=.06, p=.08$) and expressive suppression($r=.08, p=.29$). Similarly affective responsiveness was found to be significantly negatively psychological health($r=-.20, p < .05$), social relationship($r=-.16, p < .05$), and environment ($r=-.23, p < .01$) while non-significantly related with cognitive reappraisal($r=.01, p=.06$), expressive suppression($r=-.06, p=.95$) and overall quality of life($r=-.11, p=.17$). Moreover, affective involvement was found to be significantly negatively related only with environment ($r=-$

.16, $p < .05$) while non-significantly related with cognitive reappraisal ($r = .11$, $p = .17$), expressive suppression ($r = .01$, $p = .89$), physical health ($r = -.13$, $p = .09$), psychological health ($r = -.01$, $p = .93$), social relationship ($r = -.01$, $p = .94$) and overall quality of life ($r = -.04$, $p = .58$). Furthermore, behavioral control was found to be significantly positively related with expressive suppression ($r = .16$, $p < .05$) and significantly negatively related with physical health ($r = -.20$, $p < .05$) while non-significantly related with cognitive reappraisal ($r = .01$, $p = .9$), psychological health ($r = -.07$, $p = .35$), social relationship ($r = -.04$, $p = .61$), environment ($r = -.07$, $p = .34$) and overall quality of life ($r = .01$, $p = .86$). And general functioning was found to be significantly negatively related with cognitive reappraisal ($r = -.17$, $p < .05$), psychological health ($r = -.23$, $p < .01$), social relationship ($r = -.27$, $p < .01$), environment ($r = -.31$, $p < .001$) and overall quality of life ($r = -.17$, $p < .05$) while non-significantly related with expressive suppression ($r = .11$, $p = .16$) and physical health ($r = -.14$, $p = .07$).

Cognitive reappraisal was found to be significantly positively related with psychological health ($r = .28$, $p < .001$) while non-significantly related with physical health ($r = -.06$, $p = .40$), social relationship ($r = .05$, $p = .48$), environment ($r = .14$, $p = .08$) and overall quality of life ($r = .14$, $p = .07$). Whereas expressive suppression was found to be significantly negatively related with psychological health ($r = -.21$, $p < .01$), physical health ($r = -.29$, $p < .001$) environment ($r = -.17$, $p < .05$) and overall quality of life ($r = -.20$, $p < .05$) and was not significantly related with social relationship ($r = -.16$, $p = .05$).

Table 1.3

Regression Analysis Examining the Interaction Effect of Communication and Cognitive Reappraisal on Physical Health, Psychological Health and Social Health (N=150)

Variables	Physical Health		Psychological Health		Social Health	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Constant	35.25***	4.55	28.41***	4.46	16.35***	3.05
Communication	-.05	.13	-.02	.14	.08	.09
Cognitive Reappraisal	.04	.06	.13*	.05	-.01	.03
Communication X Cognitive Reappraisal	-.02	.02	.02	.02	.01	.01
Covariates						
Problem Solving	.41*	.17	.38	.20	.20	.13
Role	-.26*	.12	-.23	.12	-.14	.08
Affective Responsiveness	-.02	.19	-.34	.19	-.14	.12
Affective Involvement	.03	.22	.28	.17	.22*	.11
Behavioral Control	-.29*	.13	-.09	.10	.03	.08
General Functioning	-.02	.13	-.11	.11	-.20	.10
Expressive Suppression	-.11	.05	-.08	.04	-.04	.03
<i>R</i> ²	.19		.22		.15	
<i>F</i>	3.66***		4.14***		2.37**	

p*<.05, *p*<.01, ****p*<.001

The results revealed that communication was found to be a non-significant predictor of physical, psychological and social health while cognitive reappraisal was found to be significant positive predictor of psychological health ($\beta=.13, p<.05$) and nonsignificant predictor of physical and social health, Moreover the interaction effect of communication and cognitive reappraisal was also found non significant for physical($\beta=-.02, 95\%CI[-.06, .02], t=-.91, p=.36$), psychological ($\beta=-.02, 95\%CI[-.05,0.02], t=-.98, p=.33$) and social health ($\beta=.01, 95\%CI[-.01,.03], t=.92, p=.36$).

Table 1.4

Regression Analysis Examining the Interaction Effect of Communication and Expressive Suppression on Physical Health, Psychological Health and Social Health (N=150)

Variables	Physical Health		Psychological Health		Social Health	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Constant	31.62***	4.72	22.38***	4.13	15.71***	3.51
Communication	-.01	.12	.03	.13	.07	.09
Expressive Suppression	-.13*	.05	-.09*	.04	-.04	.03
Communication X Expressive Suppression	-.02	.02	-.02	.02	.00	.01
Covariates						
Problem Solving	.43*	.15	.40*	.19	.21	.13
Role	-.24*	.12	-.21	.11	-.15	.08
Affective Responsiveness	-.01	.18	-.34	.19	-.14	.12
Affective Involvement	.01	.22	.26	.17	.23*	.11
Behavioral Control	-.27*	.13	-.06	.11	-.03	.08
General Functioning	-.02	.13	-.11	.11	-.20	.10
Cognitive Reappraisal	.04	.06	.13*	.05	-.01	.03
<i>R</i> ²	.19		.23		.15	
<i>F</i>	4.96***		5.70***		2.38**	

p*<.05, *p*<.01, ****p*<.001

The results revealed that communication was found to non-significant predictor of physical, psychological and social health while expressive suppression was found to be significant negative predictor of psychological health ($\beta=-.09$, $p<.05$) and nonsignificant predictor of physical and social health, Moreover, the interaction effect of communication and expressive suppression was also found non-significant for physical($\beta=-.02$, 95%CI[-.05,.01], $t=-.1.13$, $p=.26$), psychological ($\beta=-.02$, 95%CI[-.06,.01], $t=-1.45$, $p=.15$) and social health ($\beta=.00$, 95%CI[-.02,.01], $t=-.44$, $p=.66$).

Table 1.5

Regression Analysis Examining the Interaction Effect of Behavioral Control and Cognitive Reappraisal on Physical Health, Psychological Health and Social Health (N=150)

Variables	Physical Health		Psychological Health		Social Health	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Constant	29.50***	4.84	26.78***	4.60	14.08***	2.96
Behavioral Control	-.29*	.13	-.07	.10	-.04	.08
Cognitive Reappraisal	.04	.06	.12*	.05	.00	.03
Behavioral Control X Cognitive Reappraisal	-.01	.02	.01	.02	-.01	.01
Covariates						
Problem Solving	.39*	.17	.39*	.20	.19	.12
Role	-.03	.12	.02	.13	.06	.08
Affective Responsiveness	-.25	.12	-.23	.12	-.14	.07
Affective Involvement	.00	.19	-.34	.19	-.13	.12
Behavioral Control	.02	.22	.25	.17	.24	.11
General Functioning	-.03	.13	-.12	.11	-.20	.10
Expressive Suppression	-.12*	.05	-.08	.04	-.04	.03
<i>R</i> ²	.18		.21		.16	
<i>F</i>	3.84***		4.22***		2.39*	

p*<.05, *p*<.01, ****p*<.001

The results revealed that behavioral control was found to be significant negative predictor of physical health while non significant predictor of psychological and social health whereas cognitive reappraisal was found to be significant positive predictor of psychological health ($\beta=.12$, $p<.05$) and non significant predictor of physical and social health, Moreover the interaction effect of behavioral control and cognitive reappraisal was also found non-significant for physical ($\beta=-.01$, 95%CI[-.06,.04], $t=-.40$, $p=.69$), psychological ($\beta=.01$, 95%CI[-.02,.05], $t=.82$, $p=.41$) and social health ($\beta=-.01$, 95%CI[-.04,.01], $t=-1.01$, $p=.31$).

Table 1.6

Regression Analysis Examining the Interaction Effect of Behavioral Control and Expressive Suppression on Physical Health, Psychological Health and Social Health (N=150)

Variables	Physical Health		Psychological Health		Social Health	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Constant	26.95***	4.70	21.44***	4.50	13.77***	3.11
Behavioral Control	-.26*	.13	-.07	.10	-.03	.08
Expressive Suppression	-.11*	.05	-.08	.04	-.04	.03
Behavioral Control X Expressive Suppression	.03	.01	.01	.01	.01	.01
Covariates						
Problem Solving	.42*	.18	.38	.21	.21	.13
Role	-.06	.12	.01	.13	.07	.09
Affective Responsiveness	-.27*	.12	-.23	.12	-.15	.08
Affective Involvement	-.02	.20	-.33	.19	-.14	.12
Behavioral Control	-.02	.22	.26	.17	.23*	.11
General Functioning	.01	.14	-.10	.11	-.20*	.10
Cognitive Reappraisal	.04	.06	.13*	.05	-.01	.03
<i>R</i> ²	.20	4.70	.21		.15	
<i>F</i>	4.42***		4.16***		2.38**	

p*<.05, *p*<.01, ****p*<.001

The results revealed that behavioral control was found to be significant negative predictor of physical health while non-significant predictor of psychological and social health whereas expressive suppression was found to be significant negative predictor of physical health ($\beta=-.11$, $p<.05$) and nonsignificant predictor of psychological and social health. Moreover, the interaction effect of behavioral control and expressive suppression was also found non-significant for physical ($\beta=.03$, 95% CI[.00,.06], $t = 1.91$, $p=.06$), psychological ($\beta=.01$, 95% CI[-.02,.04], $t = .63$, $p=.53$) and social health ($\beta=.00$, 95% CI[-.02,.02], $t = -.06$, $p=.95$).

Table 1.7

Regression Analysis Examining the Interaction Effect of General Functioning and Cognitive Reappraisal on Physical Health, Psychological Health and Social Health (N=150)

Variables	Physical Health		Psychological Health		Social Health	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Constant	35.70***	4.99	25.76***	4.57	9.60***	2.93
General Functioning	.01	.13	-.09	.12	-.19	.10
Cognitive Reappraisal	.06	.06	.15***	.05	.01	.03
General Functioning X Cognitive Reappraisal	-.03	.02	-.03*	.01	.01	.01
Low Cognitive Reappraisal	-	-	.11	.16	-	-
Moderate Cognitive Reappraisal	-	-	-.09	.12	-	-
High Cognitive Reappraisal	-	-	-.28*	.15	-	-
Covariates						
Problem Solving	.39*	.17	.37	.20	.20	.13
Role	-.05	.13	-.01	.13	.06	.09
Affective Responsiveness	-.25*	.12	-.22	.12	-.15	.08
Affective Involvement	-.03	.18	-.35	.18	-.15	.12
Behavioral Control	.02	.20	.27	.17	.23*	.11
General Functioning	-.28	.13	-.07	.11	-.03	.08
Expressive Suppression	-.12*	.05	-.08	.04	-.04	.03
<i>R</i> ²	.21		.24		.15	
<i>F</i>	4.08***		5.37***		2.32**	

p*<.05, *p*<.01, ****p*<.001

The results revealed that general functioning was found to be non-significant predictor of physical, psychological and social health whereas cognitive reappraisal was found to be significant positive predictor of psychological health and non-significant predictor of physical and social health. Moreover, the interaction effect of general functioning and cognitive reappraisal was found non-significant for physical ($\beta=-.03$, 95%CI[-.07,.00], $t=-1.78$, $p=.08$) and social health($\beta=.00$, 95%CI[-.03,.02], $t=-.41$, $p=.68$) while it was found to be significant for psychological health($\beta=-.03$, 95%CI[-.06,.00], $t=-2.04$, $p=<.05$). With low cognitive reappraisal, there is a nonsignificant relationship between general functioning and psychological health ($\beta=.11$, 95%CI[-.20,.41], $t=.67$, $p=.50$). With average cognitive reappraisal, there is a nonsignificant relationship between general functioning and psychological health ($\beta=-.09$, 95%CI[-.32,.14], $t=-.76$, $p=.45$). With high cognitive reappraisal, there is a significant negative relationship between general functioning and psychological health ($\beta=-.28$, 95%CI[-.57,.00], $t=-1.95$, $p=<.05$).

Figure # 1

Interaction Effect of General Functioning and Cognitive Reappraisal on Psychological Health.

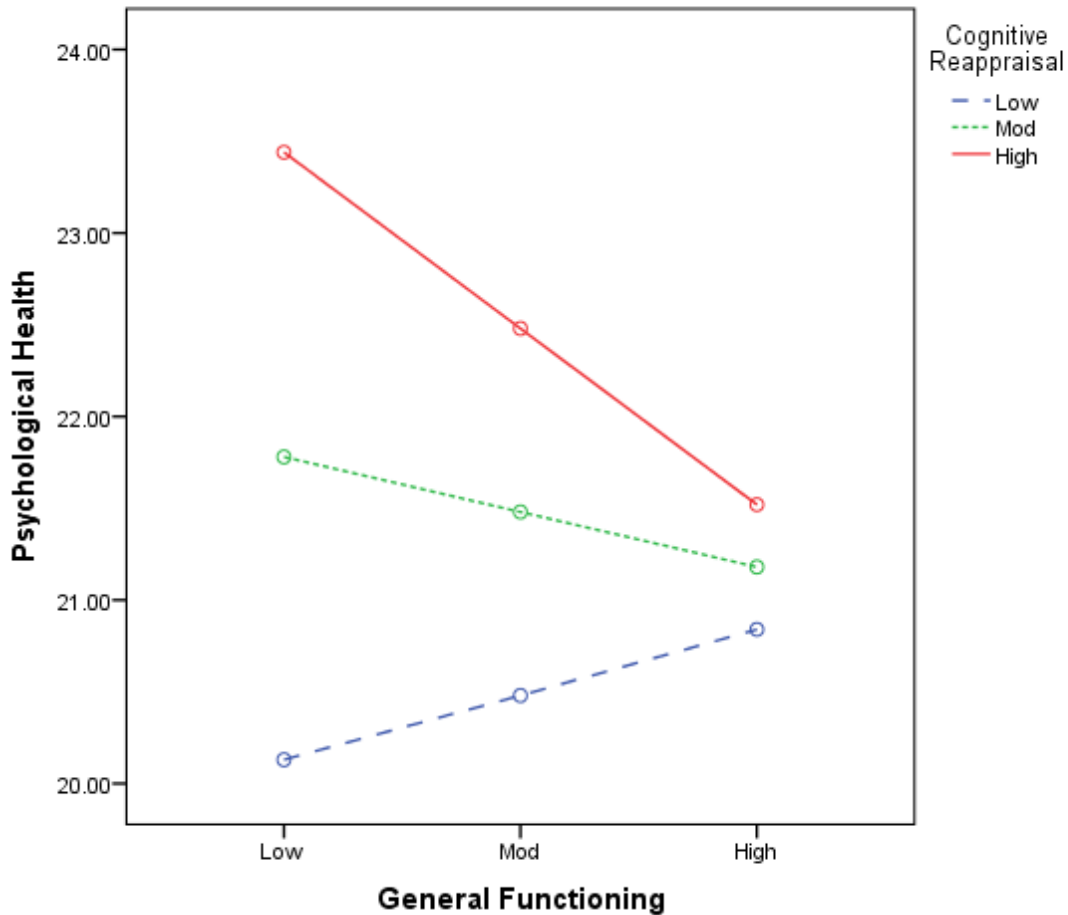


Figure 1 illustrates that despite of high level of general functioning i.e. unhealthy/unpleasant family functioning, the high use of cognitive reappraisal would result in high psychological health i.e. better psychological health in drug addicts. Similarly despite of low level of general family functioning i.e. healthy/pleasant home environment, low use of cognitive reappraisal would result in low psychological health. Whereas high use of cognitive reappraisal on low level of general functioning would result in high psychological health.

It indicates that high use of cognitive reappraisal on both levels of general family functioning (low and high i.e. either healthy or unhealthy family functioning), it would improve psychological health.

Table 1.8

Regression Analysis Examining the Interaction Effect of General Functioning and Expressive Suppression on Physical Health, Psychological Health and Social Health (N=150)

Variables	Physical Health		Psychological Health		Social Health	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Constant	31.92***	4.95	19.81***	4.42	9.11***	2.89
General Functioning	-.02	.14	-.11	.12	-.20	.10
Expressive Suppression	-.12	.05	-.08	.04	-.04	.03
General Functioning X Expressive Suppression	-.01	.01	-.01	.01	.01	.01
Covariates						
Problem Solving	.43**	.16	.41*	.20	.18	.13
Role	-.02	.12	.01	.13	.06	.09
Affective Responsiveness	-.25*	.12	-.23	.11	-.15	.07
Affective Involvement	-.01	.19	-.34	.19	-.14	.12
Behavioral Control	.02	.22	.28	.17	.22*	.11
General Functioning	-.29*	.13	-.09	.11	-.02	.08
Cognitive Reappraisal	.03	.06	.12*	.05	.01	.03
<i>R</i> ²	.18		.22		.16	
<i>F</i>	4.07***		5.04***		2.15**	

p*<.05, *p*<.01, ****p*<.001

The results revealed that general functioning and expressive suppression were found to be non significant predictor of physical, psychological and social health whereas the interaction effect of general functioning and expressive suppression was also found non-significant for physical ($\beta=-.01$, 95% CI[-.04,.02], *t*=-.53, *p*=.60), psychological ($\beta=-.01$, 95% CI[-.04,.01], *t*=-.89, *p*=.37) and social health($\beta=.01$, 95% CI[-.01,.03], *t*=.80, *p*=.43).

Discussion

The present study explored family functioning, emotion regulation and quality of life in drug addicts. The moderation effect of emotion regulation strategies on different dimensions of both family functioning and quality of life were examined.

First hypothesis was that there is likely to be a negative relationship between different dimensions of family functioning and quality of life. The hypothesis was partially approved. The results of the inter correlation between the subscales of the study variables revealed that problem solving was non-significantly related with the quality of life. Communication was significantly negatively related with physical health, psychological health, social relationship, and environment health. Agha, Zia and Irfan also identified that the greater use of unhealthy communication patterns in the addict’s family negatively affects the physical, psychological and social health (Agha, Zia, &Irfan, 2008). Role was found to be significantly negatively related with physical health, psychological health, social relationship, environment and overall quality of life. Chau, Kabuth, Bauman and Michele (2011) findings supported the current results that unhealthy roles in the family results in poor quality of life in all the dimensions. Similarly affective responsiveness was found to be significantly negatively related to psychological health, social relationship, and environment. Moreover, affective involvement was found to be significantly negatively related only with environment of the addicts. Franks, Campbell, and Shields (1992) supported the idea that unhealthy affective involvement resulted in poor environmental and other aspects of quality

of life. In the current study behavioral control was found to be significantly negatively related with physical health. These findings are consistent with the results of the study i.e. there was significant relationship between unhealthy behavioral control and poor physical, psychological, environmental and social health (Chau, Kabuth, Bauman, & Michele, 2011). Likewise, general functioning was found to be significantly negatively related with psychological health, social relationship, environment and overall quality of life while non-significantly related with physical health. Hence the negative effect of unhealthy family functioning on the many areas of quality of life is proved and the findings were also supported by the previous researches.

Secondly, it was hypothesized that there is likely to be a positive relationship between cognitive reappraisal and different dimensions of quality of life. Cognitive reappraisal was found to be only significantly positively related with only psychological health. The result of the current study was similar to the findings of the previous researches. Soto also founded that reappraisal was associated with better psychological functioning (Soto et al, 2012).

Third hypothesis was that there is likely to be a negative relationship between expressive suppression and quality of life (physical health, psychological, social, environment, overall quality of life). The hypothesis was accepted as expressive suppression was found to be significantly negatively related with psychological health, physical health, environment and overall quality of life. Similar findings have been reported in number of studies that more use of suppression resulted increased physiological arousal. Resultantly it poorly effects the psychological and physical functioning (Gross & Levenson, 1993, 1997; Gross, 2002; Mauss et al., 2005; Hayes et al., 2010; Brans et al., 2013; Vrticka et al., 2013).

Fourthly, it was hypothesized that cognitive reappraisal and expressive suppression will moderate the relationship between family functioning (communication, behavioral control, general family functioning) and quality of life (physical health, psychological, social). Total numbers of 18 moderation analyses were done and non-significant moderations were found between all the variables expect for the interaction effect of general family functioning and cognitive reappraisal on psychological health which was found significantly negative. It reflects that the higher the use of cognitive reappraisal negatively changes the relationship between general family functioning and psychological health. This means that despite of unhealthy family functioning those addicts who use cognitive reappraisal have better psychological health. It has also been supported by other studies that greater use of reappraisal leads to better psychological health. It indicates that the reframing negative life events or stressor into positive enhance the psychological dimension of the well-being in addicts (Garnefski et al., 2001; John & Gross, 2004, Aldao, Hoeksema & Schewizer, 2010; Cutuli, 2014).

Conclusion

Overall results identified that distorted communication among the family members poorly affects the psychological, physical, social and environmental health of the addicts. It was found that a detrimental role in the family negatively affects the overall quality of life. Unhealthy affective responsiveness also resulted in negative psychological, social and environmental health. The lack of involvement was negatively related to environmental health. Detrimental behavioral control also negatively affected the psychological, environmental, social and overall quality of life. The use of cognitive reappraisal resulted in better psychological health whereas use of expressive suppression resulted in poor psychological health, physical health, environmental health and overall quality of life. Moderation analysis showed significant interaction effect of general

functioning and cognitive reappraisal on the psychological health of the drug addicts. It illustrates that the cognitive appraisal, communication, affective responsiveness as well as involvement are important in enhancing different dimensions of quality of life and it might be better utilized in rehabilitation of drug addicts.

Implication

The findings can be implicated on identifying better emotion regulation strategy and familial factors that can be used to enhance the quality of life and decreased cases of relapse in drug addicts. The research will shed light on adaptive emotion regulation strategies for emotion focused therapy for better quality of life in addicts. The findings from the study will help in identifying suitable family interventions and therapy for dysfunctional familial patterns of drug addicts. The research will help in identifying which problems in our culture on the part of the family are still acting as hindrance in the management of the drug addict. Moreover, the rehabilitation plans may be modified considering the adaptive emotion regulation and healthy family functioning.

Advantages

- i) Findings of the current study may be helpful for the clinical psychologists/counselors in better management and rehabilitation of drug addicts.
- ii) It will be an addition to the previous literature for the management of interpersonal issues on different dimensions of quality of life. The current study comprehensively assessed the different dimensions of quality of life i.e. psychical, psychological, social, environmental and overall quality of life.

References

- Agha, S., Zia, H., & Irfan, S. (2008). Psychological problems and family functioning as risk factors in addiction. *Journal of Ayub Medical College Abbottabad*. 20(3), 88-91.
- Aldao, A., Hoeksma, S.N., & Schweizer, A. (2010). Specificity of cognitive emotion regulation strategies: A transdiagnostic examination. *Behaviour Research and Therapy*. 48(10), 974–983. doi: 10.1016/j.brat.2010.06.002
- Asad, R. (2014). ***Drug Use in Pakistan 2013 Survey reveals high levels of drug use and dependency***. Retrieved from <http://www.unodc.org/pakistan/en/drug-use-in-pakistan-2013-survey-reveals-high-levels-of-drug-use-and-dependency.html>
- Brans, K., Koval, P., Verduyn, P., Lim, Y. L., & Kuppens, P. (2013). The regulation of negative and positive affect in daily life. *Emotion*. 13, 926–939. doi.10.1037/a0032400.
- Butler, E.A., Egloff, B., Wilhelm, F.H., Smith, N.C., Erickson, E.A., & Gross, J.J. (2003). The social consequences of expressive suppression. *Emotion*. 3(1), 48-67. doi.org/10.1037/1528-3542.3.1.48
- Chau, K., Kabuth, B., Bauman, Michele. (2011). Quality of life social disparities and role of family and unhealthy behaviors among adolescents. *Psychology and Health*. 20(2), 146. doi 10.1080/08870446.2011.617185
- Cutuli, D. (2014). Cognitive reappraisal and expressive suppression strategies role in the emotion regulation: an overview on their modulatory effects and neural correlates. *Frontiers in Systems Neuroscience*, 8, 175. <http://doi.org/10.3389/fnsys.2014.00175>
- Epstein, N., Bishop, D. and Baldwin, L. (1982) The McMaster Model of Family Functioning: a view of the normal family. In F. Walsh (ed.) Normal Family Processes (pp. 15–141). New York: Guilford Press.
- Gadit, A.A. (2004). Economic Burden of Depression in Pakistan. *Journal of Pakistan Medical Association*, 54(2). Retrieved from <http://www.jpma.org.pk/index.php?act=issue&issueid=27>
- Garnefski N., Kraaij V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Pers. Individ. Dif.* 30, 1311–1327 10.1016/s0191-8869(00)00113-6
- Goldin, P. R., McRae, K., Ramel, W., & Gross, J. J. (2008). The neural bases of emotion regulation: reappraisal and suppression of negative emotion. *Biological Psychiatry*, 63(6), 577–586.
- Gross, J.J. (2002). Emotion Regulation: Affective, Cognitive and Social consequences. *Psychophysiology*, 39, 281-291. doi: 10.1017.S0048577201393198
- Gross J. J., & Levenson, R. W. (1993). Emotional suppression: physiology, self-report and expressive behavior. *J. Pers. Soc. Psychol.* 64, 970–986 doi.10.1037//0022-3514.64.6.970
- Gross J. J., & Levenson, R. W. (1997). Hiding feelings: the acute effects of inhibiting positive and negative emotions. *Journal Abnormal Psychology*. 106, 95–103 doi.10.1037//0021-843x.106.1.95

- Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.
- Hawkins, J.D., Catalano, R.F. & Miller, J.Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112 (1), 64-105.
- Hayes J. P., Morey R. A., Petty C. M., Seth S., Smoski M. J., McCarthy G., et al. (2010). Staying cool when things get hot: emotion regulation modulates neural mechanisms of memory encoding. *Neuroscience*, 4, 230-235. Doi.10.3389/fnhum.2010.00230
- John O. P., & Gross J. J. (2004). Healthy and unhealthy emotion regulation: personality processes, individual differences and life span development. *J. Pers.*72, 1301–1333 10.1111/j.1467-6494.2004.00298.x
- Mauss I. B., Levenson R. W., McCarter L., Wilhelm F. H., &Gross J. J. (2005). The tie that binds? Coherence among emotion experience, behavior and physiology. *Emotion*, 5, 175–190. Doi:10.1037/1528-3542.5.2.175
- Shorter, D., & Thomas, R.K. (2011). Novel pharmacotherapeutic treatments for cocaine addiction. *BMC Med*, 9.119.
- Soto, J., Perez, A.R., Taylor, A, J., Schwartz, S,J., Huynh, Q, L., & Le, T,N.(2012)Strength in Numbers? Cognitive Reappraisal Tendencies and Psychological Functioning Among Latinos in the Context of Oppression.*American Psychological Association*, 18(4), 384–394.
- UNODC (2011). National Drug Use Survey. *United Nation Office on Drug and Crime* (UNODC). UNODC (2013). Treatment Protocol for Drug use in Pakistan. *United Nation Office on Drug and Crime* (UNODC). Ventegodt, S., & Merrick, J. (2003). Psychoactive Drugs and Quality of Life. *The Scientific World*, 3, 694-706. doi:10.1100/tsw.2003.57
- Vrticka, P., Simioni, S., Fornari, E., Schlupe, M. Vuilleumier, P. & Sander, D. (2013) Neural Substrates of Social Emotion Regulation: A fMRI Study on Imitation and Expressive Suppression to Dynamic Facial Signals. *Frontiers in Psychology*, 4, 1-95. doi: 10.3389/fpsyg.2013.00095
- Velleman, R.D.B., Templeton, L.J., & Copello, A.G. (2005). The role of the family in preventing and intervening with substance use and misuse: a comprehensive review of family interventions, with a focus on young people. *Drug and Alcohol Review*, 24, 93–109.

WHO-QOL Group. (1999). Psychometric Properties of Quality Of Life Scale : A Brief Report. *Indian Journal of Psychiatry*, 42(4), 415-420. doi:10.1016/j.drugalcdep.2013.01.024.

Wong, C. F., Silva, K., Kecojevic, A., Schrage, S. M., Bloom, J. J., Iverson, E., & Lankenau, S. E. (2013). Coping and emotion regulation profiles as predictors of nonmedical prescription drug and illicit drug use among high-risk young adults. *Drug and Alcohol Dependence*, 132(0), 165–171.

Yen, C.N., Wang, C.S., Wang, T.Y., Chen, H.F., & Chang, H.C. (2010). Quality of life and its correlates among heroin users in Taiwan. Department of Psychiatry, Tainan Hospital, Department of Health, Executive Yuan, Tainan City, Taiwan.