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The Association of Maladaptive Coping Strategies with Adverse Parenting Styles and Symptoms of Mood Swings, Stress, Anxiety, and Depression in Patients with Conversion Disorder: A Cross-Sectional Study

Sana Khan and Muhammad Aqeel

Abstract

Background: Conversion disorder is a socially and psychologically shaped change and loss of somatic functioning evocative of a physiological illness. Functional neurological disorder signs are always superimposed on physiological and mental health problems as well as being ignorable. There is a scarcity of investigations related to the association between conversion disorder, social stressors, and mental health in Pakistan, which could be helpful in preparing management plans and techniques. The purpose of the study was to examine the association between parenting styles, coping strategies, and mental health issues in patients with functional neurological disorders**.**

Methods: Two hundred diagnosed conversion disorder patients (male, n =80; female, n =120) were recruited at the Department of Psychiatric and Neurological**,** the Combined Military Hospital Rawalpindi, the Pakistan Institute of Medical Sciences (PIMS), and the Military Hospital Rawalpindi, Pakistan from January 2018 to August 2018. Three psychological scales were used to examine parenting styles, coping mechanism, psychological problems in in patients with functional neurological disorders.

Results: A comparative investigation between the male and female patients with CD revealed statistically significant difference in negative affect and religious coping strategy. Correlation analysis findings found that permissive parenting was significantly associated with depression, anxiety, stress, positive affect. The moderation to mediation analysis revealed that coping strategies act as a moderator between pathway parenting styles and psychological symptoms.

Conclusions: Functional neurological disorders are a vital problem for affected people, their relatives, and the Pakistan healthcare system, with the lowest estimated occurrence of 1.7 cases per 10,000 people. Healthcare experts should be aware of the potential for conversion disorder and its negative mental health consequences as well as work to address and manage the problems of evolving effective intervention plans, mostly in the cross-cultural setting. This study recommended that psychological problems such as stress, anxiety, depressive and positive and negative mood swing symptoms are common in patients with CD. Moreover, psychopathology, parenting styles, and coping strategies may potentially be helpful for targeted prevention and screening for CD patients with anxiety, depression, and mood swings.

Keywords: Conversion Disorder, parenting styles, coping strategies, psychological problems

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Background

Functional/Psychogenic non-epileptic seizures (PNS) are convulsive episodes that appear to be neurological epileptic seizures (Brown & Reuber, 2016; Goetzmann, Siegel, & Ruettner, 2019; Lafrance, Reuber, & Goldstein, 2013; Reuber, Fernández, Bauer, Helmstaedter, & Elger, 2002; Williams et al., 2018) PNS is a clinically diverse cluster, many patients with PNS execute the diagnostic criteria of a psychogenic neurological disorder (Diagnostic and Statistical Manual for Psychiatric Disorders-5) or of dissociative identity disorder (International Classification of Diseases-10th revision) (de Barros, Furlan, Marques, & de Araújo Filho, 2018;World Health Organization, 1993) Furthermore, those patients often present with psychiatric features like stress, anxiety, depression, and mood disorders. 20 or 30% of patients referred and recommended with superficially antiepileptic drug-refractory epilepsy get a diagnosis of functional/psychogenic non-epileptic seizures after evaluation by the hospital (Brown & Reuber, 2016; Goetzmann et al., 2019; Green, Norman, & Reuber, 2017; Lafrance et al., 2013; Plesa, 2019). Previous research has reported a 20 or 40% occurrence of conversion symptoms in medical patients. Mood disorders were the most commonly diagnosed CDs (24-74%), followed by psychoses (2-9%), anxiety disorders (10-25%), disorders (1-2%), and personality (Mula & Schmitz, 2009; Oto, Conway, McGonigal, Russell, & Duncan, 2005;Schmitz, Moriarty, Costa, Ring, Ell, Trimble, 1997).

Functional/Psychogenic Neurological Disorder (FND) is well known as Conversion Disorder (CD)which is a very common condition linked to imperative morbidity as well as public health cost (Sharpe et al., 2010). Although the prevalence of CD in clinical population, previous studies have wrapped with other neuropsychiatric problems such as anxiety, depression, stress, mood swings functional movement disorders, and psychogenic non-epileptic seizures. The neurobio-psycho-social model to CD highlights prompting vulnerabilities, perpetuating and acute precipitants factors (Brown & Reuber, 2016; de Barros et al., 2018; Pathak, Dhairyawan, & Tariq, 2019). Prompting features for the growth of psychogenic symptoms, the purpose of this study is not only examined adverse life events of conversion patients, but it also investigates the influence of family factors (parenting styles) as well as internal factor (maladaptive copings), and psychiatric co morbidities as depression, anxiety and mood swings (Brown & Reuber, 2016; Lafrance et al., 2013; Perez et al., 2017). So far, few researches have investigated the neurobiology of maladaptive coping or parenting styles and attachment in clinical settings(Vrtička & Vuilleumier, 2012), there was lack of empirical studies on above subject matter. This current study aim is to examine the association between coping strategies, parenting styles and psychiatric features in conversion patients. Moreover, to investigate the moderating role of coping strategies the pathway among parenting styles, depression, anxiety, stress, mood swings.

Attachment theory explains early adverse childhood experiences with caregiver sway social-emotional growth, which influences the development of later-life psychopathology or internalize approaches of interpersonal interactions in adults (Bowlby, 1988; Fricchione, 2011). Insecure attachment, authoritative and permissive parenting styles are a very general in CD (Brown & Reuber, 2016; Green et al., 2017; Reuber et al., 2002; Waller, Scheidt, & Hartmann, 2004; Wiseman & Reuber, 2015) , prospectively causal factor to reduced quality of life as well as enhanced stress, anxiety, depression and mood swings (Green et al., 2017). A previous research conducted of pediatric patients with CD employing qualitative study through structured interviews related to psychological features, finding of the study cleared and highlighted different attachment and parenting styles were associated with specific functional/psychogenic neurological sign profile (Kozlowska et al., 2017). Additionally, interpersonal difficulties and elevated expressed emotion issues that may endorse insecure attachment and negative parenting styles, are reported in relatives of some CD patients (Stanhope, Goldstein, & Kuipers, 2003).

Additionally, Base on Young (1990) and Beck's (1976) cognitive model of psychopathology, models that explained psychopathology is instigated by adverse parenting styles in childhood that escort to growth of early maladaptive coping strategies that act like a toxic blueprint for later insights of the humans. These psychological issues were anticipated to come up from negative an interaction of the child's adverse experiences with their caregivers or parents (Beck, 1976; Lovibond & Lovibond, 1995; Myers, Trobliger, Bortnik, & Lancman, 2018; Shute, Maud, & McLachlan, 2019; Taylor & Stanton, 2007; Young, 1999; Young, Klosko, & Weishaar, 2003), and lead to development of psychopathology as mood swings, stress, anxiety and depression (Young, 1999).

A large of CD patients demonstrated precursor stressors as well as approximately half of patients have been diagnosed with psychiatric features in infant, adolescence, and old age(Kozlowska et al., 2017; Pehlivantürk & Unal, 2002) Though there is a available limited data on the relationship between CD and psychological problems in clinical sample, adverse social situations related as a deleterious factor for the growth of CD in different sample (Ruddy and House 2005). Many previous researches have revealed that anxiety and major depression disorders are an important common psychiatric features associated with CD globally (Khan, Ahmad, Arshad, Ullah, & Maqsood, 2005; Mökleby et al., 2002; Pehlivantürk & Unal, 2002; Şar, Akyüz, Kundakçi, Kiziltan, & Doğan, 2004), that factors have also been linked to higher levels of depression and anxiety symptoms in different adolescents or adult studies (Katoch, Jhingan, & Saxena, 1994; Mökleby et al., 2002). In spite of the establishment of relations of depression and anxiety symptoms with CD patients, the pathways throughout how their influences appear are inadequately implicit. Certainly, CD could increase secondary to depression or anxiety, and environmental and individual factors may consider as source of all psychological disorders. It is thus valuable to examine the association between CD and the comparatively stable psychopathological factors related to mood symptoms, depression and anxiety to expose the relationship.

Though many studies have already conducted to examine in-depth knowledge about gender differences in behavioral aspects, psychological, socio-demographic, and clinical among patients with CD (De Araújo Filho et al.,

2012; Heise & García-Moreno, 2012; Swansea, 2010), there is a limited of studies related to possible gender disparity in clinical population, particularly in patients with twofold diagnoses. Furthermore, there is a significant differences exist in male and female on CD, major depression disorder, and PTSD in clinical population. Previous study was intend to investigate or confirm gender differences on psychological features in different clinical patient (De Araújo Filho et al., 2012; de Barros et al., 2018; Del Bene et al., 2017; Myers et al., 2018; Oto et al., 2005; Perez et al., 2017; Thomas, Preston, Scott, & Bujarski, 2013) To our best knowledge, this study is first research that evaluate gender differences on mood disorder, depression and anxiety in patient with CD. The primary aim of the current study was to examine moderating role of coping strategies the pathway among parenting styles, depression, anxiety, stress, positive and negative affect in patient with conversion disorder. Furthermore, to find out the possible gender differences on mood disorder, depression and anxiety in patient with CD. Moreover, this study also hypothesized that maladaptive coping strategies and permissive or authoritarian parenting styles would associated with psychopathology such as depression, anxiety, stress, positive and negative affect.

Method

Research design

Purposive sampling technique was used based on cross-sectional design.

Objectives

1. To investigate the relationship between parenting styles, coping strategies, depression, anxiety, stress, positive and negative affect, and conversion disorder in patients.
2. To investigate the role of coping strategies in the pathway between parenting styles, depression, anxiety, stress, and positive and negative affect in conversion disorder patients.

Hypotheses

1. Permissive and authoritarian parenting styles will be associated with depression, anxiety, stress and negative affect, but authoritative parenting styles will be negatively linked to depression, anxiety, stress and negative affect in patients with conversion disorder.
2. Problem-focused coping and positive coping would be negatively associated with depression, anxiety, and stress, but active avoidance coping and religious coping would be positively associated with depression, anxiety, and stress in patients with conversion disorder.
3. Maladaptive coping strategies and permissive or authoritarian parenting styles will associated with psychopathology such as depression, anxiety, stress, and positive and negative affect.
4. Female patients with conversion disorder will be more inclined towards depression, anxiety, stress, and positive and negative emotions than male patients with conversion disorder.

Participants

Purposive sampling technique was used based on cross sectional design in current study. This study was conducted at the Department of Psychiatric and Neurological**,** the Combined Military Hospital Rawalpindi, the Pakistan Institute of Medical Sciences (PIMS), the Military Hospital Rawalpindi, Pakistan from January 2018 to August 2018. Two hundred diagnosed conversion disorder patients (Male, n=80; Female, n=120) with age ranged from 18 to 35 years (M= 23.64, SD= 6.12) recruited last a six-month time who were fulfilled the criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM–5). They were underwent evaluation of psychological scales using the Parental Authority Questionnaire (PAQ), Coping Orientation to Problems Experienced Brief version (COPE- Brief), Depression Anxiety Stress scale (DASS), Positive and Negative Affect schedule(PANAS). The eligibility criteria included:

Inclusion criteria. Patients, who were 18 to 35 years of age and discharged between August 2017 and July 2018, were eligible for inclusion. The researcher chose the age limit of 18-35 years because Conversion Disorder are usually diagnosed at aforementioned age limit and it is the most common underlying psychiatric disorder among adults The patients who developed symptoms of Conversion Disorder for about minimum three months and maximum six months were included in the study. Furthermore, the patients who were undergone through Electroencephalography EEG were involved to differentiate between conversion disorder and epilepsy. Patients attending the Outpatient Department and, or admitted in the Psychiatric Department during the study period were included in the study. Conversion disorder is defined according to Diagnostic and Statistical Manual of Mental Disorder (DSM 5).

Exclusion criteria. To prevent potential confounding, researcher excluded records with diagnoses codes for conditions that may predispose patients to epilepsy, neurological diseases, somatic symptoms disorder, factitious disorder and malingering, dissociative disorders, body dysmorphic disorder. Similarly, Depressive disorder, Panic disorder, cardiovascular disease, severe intellectual disability, trauma and suicide attempts were also excluded from the study. Moreover, patients admitted once with epilepsy symptoms were excluded as well.

Instruments

Parental Authority Questionnaire. The Parental Authority Questionnaire is used to measure for both father and mother parenting styles (Buri, 1991). It was designed to measure adolescent's perception of parental authority or disciplinary practices. It consists of three subscales: permissive, authoritarian and authoritative parenting styles. The permissive parenting style measure adolescent's perception about low level of demanding and responsiveness exerted by parents and its items are 1,6,10,13,14,17,19,21,24 and 28. The authoritarian parenting style depicts adolescent's perception about high parental control, expected conformity and obedience and its items are 2, 3,7,9,12,16,18,25,26 and 29. The authoritative parenting style assesses high level of both demandingness and responsiveness and its items are 4, 5, 8,11,15,20,22,23,27 and 30. Responses to each of these items are made on a 5 point Likert scale (*1- strongly disagree; 2- disagree; 3- neither*

agree nor disagree; 4- agree; 5- strongly agree). Scores on each subscale range from 10 minimum to 50 maximum, the higher the score, the greater the participant's alleged presence of the parental epitome measured. In the present investigation, the cronbach alpha was 0.74 for permissive parenting style of mother and 0.76 for permissive parenting style of father,0 .77 for authoritarian parenting style of mother and 0.73 for authoritarian parenting style of father, 0.81 for authoritative parenting style of mother and 0.75 for authoritative parenting style of father(Buri, 1991).

Coping orientation to problems experienced brief version. Coping orientation to problems experienced brief version scale(Carver, 1997). The COPE brief version is a 28 item scale used to assess a number of different coping behaviors and thoughts a person may have in response to a specific situation. It consist of four subscales, which is evaluated in terms of problem focused coping (items; 12,15,17,18,20,24 and 28),religious coping (items 3, 8, 22, 23, 27), positive coping (items 2,7,5,10,15,14 and 25) and active avoidance coping (items 1,4,6,9,11,13,16,19,21 and 26). Participants are asked to rank each statement on a 4 point Likert scale (1- I usually don't do this at all; 2- I usually do this a little bit; 3- I usually do this a medium amount; 4- I usually do this a lot). Total scores on each scale range from 2 minimum to 8 maximum, higher scores indicate increased utilization of that specific coping strategy. The cronbach alpha of brief cope scales were 0.69 for problem focused coping, 0.50 for religious coping, 0.68 for positive coping and 0.65 for active avoidance coping.

Positive and negative affect schedule scale. The positive and negative affect schedule (PANAS) contains two self-report scales consisting of ten words describing emotions which have been selected as pure markers of positive and negative affect (Clark, Watson, & Leeka, 1989; Tellegen, Watson, science, & 1999). Positive affect refers to feelings of arousal and pleasantness. Negative affect is an indicator of subjective distress, anger, fear, guilt and nervousness. It consists of two subscales: positive affect (items; 3, 5, 7, 8 and 10) and negative affect (items; 1, 2, 4, 6 and 9). Participants made a global rating of the extent to which they generally felt each emotion on a five point Likert scale ranging from (1- very slightly or not at all; 2- a little; 3- moderately; 4- quite a bit; 5- extremely) Scores can range from 5 to 25, with higher scores representing higher levels of positive affect and lower scores representing lower levels of negative affect. The PANAS has been reported to have sound psychometric properties. The cronbach alpha was0.62 for positive affect and 0.78 for negative affect.

Depression Anxiety Stress Scale. It was used to measure the stress, anxiety and depression(Lovibond & Lovibond, 1995). The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia and inertia, its items are (3, 5, 10, 13, 16, 17, 21, 24, 26, 31, 34, 37, 38, and 42). The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety and subjective experience on anxious effects, its items are (2, 4, 7, 9, 15, 19, 20, 23, 25, 28, 30, 36, 40 and 41). The stress scale is sensitive to levels of chronic non-specific arousal; its items are (1, 6, 8, 11, 12, 14, 18, 22, 27, 29, 32, 33, 35 and 39). Responses are made on a 4-point Likert scale to rate the extent to which the respondents have experienced each state (0- it is not suitable for me; 1- it is a little bit suitable for me; 2- it is usually suitable for me; 3- it is completely suitable for me). Total scores on each subscale ranges from 0 minimum to 42 maximum. The scale assesses difficulty relaxing, nervous arousal and being easily upset or agitated, irritability or over-reaction and impatience. The cronbach alpha was0.91 for depression, 0.87 for anxiety and 0.87 for stress.

Procedure

This study was carried out in accordance with the recommendations of the Foundation University Rawalpindi Campus department of psychology with written consent from all participants. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institution research committee. Standardized questionnaire, which are used in psychological worldwide research, were exclusively used in the research procedure, with permission of their authors. This type of research is based on guidelines and procedures in accordance with applicable law and ethics. Consent to the study was approved by the authorities of the psychiatry departments and the patients themselves. It was carried out in psychiatry departments by psychologists working permanently with patients. Before starting to fill in the questionnaire, they were asked to sign an informed consent form which specified all their rights and tasks. The study was carried out among 200 conversion disorder patients from different psychiatry departments of private and government hospitals in Rawalpindi and Islamabad, Pakistan from August 2017 to October 2018. The total number of study participants amounted to 200 persons, including 120 women (60% of participants) and 80 men (40% of participants). The participants aged from 18 to 35. The participants gone through neurological and psychological assessments, including Electro Encephalography EEG and assessments using standardized psychological instruments. The screening was done by Neuro physician, psychiatrist and a psychologist.

Analysis plan

First, missing values of the all study variables were dealt through an imputation technique on Spss-23 (Field, 2017). Second, Product moment correlation analysis was used to check association among parenting styles, coping strategies, depression, anxiety, stress, positive and negative affect in patients with conversion disorder (Field, 2017). Third, moderation analysis was performed to analyze potential mediation pathways in parenting styles, coping strategies, depression, anxiety, stress, positive and negative affect (Baron & Kenny, 1986). The moderating role of coping strategies the pathway among parenting styles, depression, anxiety, stress, positive and negative affect in patient with conversion disorder (SEM)-23(Byrne, 2013; Park & Qiu, 2019).

Table 1

Mean standard deviation, correlation matrix and alpha coefficient among parenting styles, coping strategies, depression, anxiety, stress, positive and negative affect in patients with conversion disorder (N=200)

variables	M	SD	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.OAPAQM	79.97	13.57	.73	-	.71**	.15*	.83**	.64**	.46**	.12	.54*	-.01	-.09	-.01	-.13	.19**	-.07	-.20*	.08	.18*	.21**	.15*	.16*
2.PP	33.27	7.67	.74		-	-.39*	.55**	.38**	.49**	-.08	.27**	.04	-.07	.07	.02	.12	-.09	-.15*	.00	.07	.06	.01	.13
3.AP	20.11	6.78	.77			-	-.20**	.31**	.04	.37**	.15*	-.07	.05	-.17*	-.06	-.07	-.04	.04	-.09	-.03	.00	-.03	-.08
4.FP	26.59	8.48	.81				-	.44**	.26**	-.02	.51**	.00	-.12	.06	-.17*	.26**	.00	-.22**	.19**	.27**	.28**	.26**	.21**
5.OAPAQP	82.44	14.42	.72					-	.66**	.25**	.85**	-.15*	-.21**	-.09	-.22**	.07	-.12	-.16*	-.03	.28**	.29**	.25**	.26**
6.PPS	34.34	7.78	.76						-	.39**	.54**	-.03	-.15*	-.06	-.03	.10	-.11	-.13	-.04	.23**	.19**	.15*	.30**
7.APS	20.04	7.43	.73							-	-.08	-.14	.01	-.11	-.11	-.17*	-.09	-.04	-.10	-.13	-.09	-.09	-.20**
8.FPS	28.07	8.67	.75								-	-.10	-.22**	-.02	-.23**	.18*	-.03	-.12	.06	.38**	.38**	.37**	.34**
9.OACB	73.71	10.52	.81									-	.75**	.71*	.75*	.71**	.21**	.11	.19**	.24**	.14	.23*	.38**
10.PFC	17.69	3.79	.69										-	.41**	.61**	.22**	.00	.11	-.09	-.05	-.11	-.04	.03
11.RC	11.12	2.24	.50											-	.36**	.49**	.22**	.10	.22**	.17*	.08	.17*	.23**
12.PC	18.86	3.71	.68												-	.24**	.12	.21**	-.02	.04	-.08	.03	.16*
13.AAC	25.96	4.76	.65													-	.26**	-.09	.44**	.51**	.47**	.46**	.51**
14.OAPANAS	34.25	5.89	.68														-	.71**	.78**	.32**	.22**	.37**	.33**
15.PA	16..37	3.68	.62															-	.11	-.00	-.10	.06	.04
16.NA	17.89	4.20	.78																-	.46**	.40**	.47**	.43**
17.OADASS	67.47	24.33	.95																	-	.95**	.95**	.93**
18.DEP	22.02	9.11	.91																		-	.86**	.81**
19.ANX	20.84	8.56	.87																			-	.84**
20. STR	24.61	8.08	.87																				-

Note: : Significant results are reported in this table , OAPAQM= Parental authority questionnaire maternal, PP=Permissive parenting style subscale of parental authority questionnaire maternal, AP=Authoritarian parenting style subscale of parental authority questionnaire maternal, FP=Authoritative/ flexible parenting style subscale of parental authority questionnaire maternal, OAPAQP=Parental authority questionnaire paternal, PPS=Permissive parenting style subscale of parental authority questionnaire paternal, APS=Authoritarian parenting style subscale of parental authority questionnaire paternal FPS=Authoritative/ flexible parenting style subscale of parental authority questionnaire paternal, OACB =Coping orientation to problems experienced brief , PFC =Problem focused coping subscale of coping orientation to problems experienced brief , RC= Religious coping subscale of coping orientation to problems experienced brief, PC = Positive coping subscale of coping orientation to problems experienced brief, AAC= Active avoidance coping subscale of coping orientation to problems experienced brief ; OAPANAS=Positive and negative affect scale, PA=Positive affect subscale of positive and negative affect scale, NA=Negative affect subscale of positive and negative affect scale, OADASS=Depression anxiety stress scale, DEP= Depression subscale of depression anxiety stress scale, ANX= Anxiety subscale of depression anxiety stress scale, STR=Stress subscale of depression anxiety stress scale.

Table 2

Mean difference between male and female conversion disorder patients on parenting styles, coping strategies, stress, anxiety, depression , positive and negative affect in conversion patients (N=200)

	Male Conversion Patient(n=80)		Female Conversion Patient(n=120)				95%CI		
variables	M	SD	M	SD	t(df)	P	LL	UL	Cohen's
OAPAQM	78.43	13.56	80.72	13.57	1.07(117.23)	.28	-6.50	1.92	-
PP	31.96	7.72	33.90	7.59	1.61(115.33)	.10	-4.30	.43	-
AP	21.33	6.12	19.51	7.02	1.71(132.59)	.08	-.27	3.91	-
FP	25.13	8.37	27.30	8.46	1.63(118.36)	.10	-4.79	.44	-
OAPAQP	84.00	10.22	81.67	16.05	1.02(168.44)	.30	-2.15	6.80	-
PPS	35.88	7.04	33.58	8.04	1.88(132.00)	.06	-.10	4.70	-
APS	19.96	5.92	20.07	8.08	.09(153.63)	.92	-2.42	2.20	-
FPS	28.15	6.97	28.01	9.42	0.09(152.37)	.92	-2.56	2.83	-
OACB	72.85	7.93	74.13	11.57	.77(161.13)	.43	-4.55	1.98	-
PFC	18.08	2.57	17.51	4.25	.95(172.51)	.34	-.60	1.74	-
RC	10.51	2.21	11.41	2.20	2.58(116.79)	.01	-1.58	-.21	-0.40
PC	18.68	3.39	18.94	3.86	.44(131.64)	.65	-1.41	.89	-
AAC	25.55	3.81	26.16	5.16	.81(152.50)	.41	-2.09	.86	-
OAPANAS	32.60	5.83	35.06	5.77	2.70(116.03)	.00	-4.26	-.66	-0.42
PA	15.93	3.29	16.56	3.85	1.09(134.97)	.27	-1.77	.50	-
NA	16.66	4.31	18.49	4.02	2.81(110.09)	.00	-3.11	-.54	-0.43
OADASS	65.38	22.16	68.48	25.33	.81(132.24)	.41	-10.67	4.46	-
DEP	20.93	8.36	22.55	9.44	1.12(130.74)	.26	-4.44	1.21	-
ANX	19.85	8.60	21.32	8.52	1.09(116.17)	.27	-4.13	1.18	-
STR	24.60	6.75	24.60	8.67	.00(146.38)	.99	-2.52	2.50	-

Table 3

The moderating role of coping strategies among parenting styles, depression, anxiety, stress and positive and negative affect in patients with conversion disorder (N=200).

variables	DEP			ANX			STR			PA			NA		
	B	*SE*	*β*	*B*	*SE*	*B*	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
PFC	-.35	.14	-.14**	-.33	.14	-.15**	-.26	.13	-.12*				-.22	.06	-.20**
PC				.33	.10	.14**	.50	.10	.22***	.19	.07	.19**			
AAC	.87	.11	.45***	.76	.10	.43***	.75	.10	.44***				.47	.05	.53***
PPS							.19	.04	.18***						
FPS	.28	.06	.27***	.32	.05	.33***	.20	.05	.22***						
Int_pp_pfc	-2.07	.58	-.25***	-1.99	.59	-.25***	-1.39	.49	-.18**						
int_pp_rc	1.86	.55	.24***	2.24	.55	.31***	1.89	.48	.27***				1.13	.28	.31***
int_ap_rc							.82	.27	.13**						
Int_fp_pfc				.89	.41	.09*									
int_fp_rc				-1.55	.40	-.17***							-.92	.33	-.21**
int_fp_pc										.55	.23	.16**			
Int_fp_aac				.87	.30	.10**	.66	.30	.08**						
Int_fps_rc							-1.11	.35	-.14**						

Note: PFC=Problem focused coping, PC=Positive coping, AAC=Active avoidance coping, PPS=Permissive parenting style of father, FPS=Flexible/ Authoritative parenting style of father, pp_pfc=permissive parenting style of mother*problem focused coping, pp_rc= permissive parenting style of mother*religious coping, ap_rc=authoritatrian parenting style of mother*religious coping, fp_pfc=flexible/ authoritative parenting style of mother*problem focused coping, fp_rc= flexible/ authoritative parenting style of mother*religious coping, fp_pc= flexible/ authoritative parenting style of mother*positive coping, fp_aac= flexible/ authoritative parenting style of mother*active avoidance coping, fps_rc= flexible/ authoritative parenting style of father*religious coping.

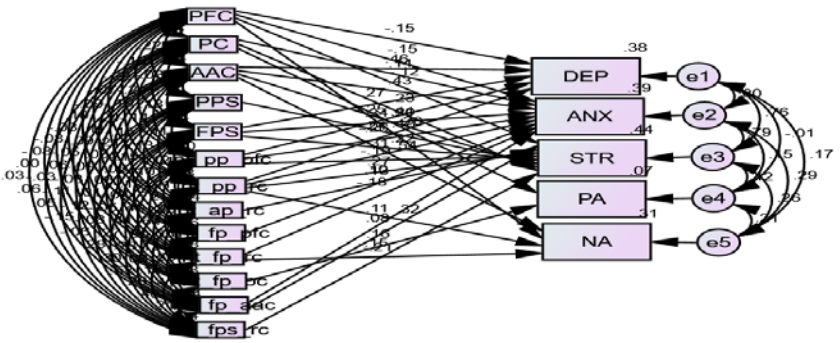

Figure. 1 The moderating role of coping strategies the pathway among parenting styles, depression, anxiety, stress, positive and negative affect in patient with conversion disorder

Results

In the Table 1, the Finding of study found that permissive parenting style was non-significant associated with negative affect, problem focused coping, religious coping, positive coping and active avoidance coping in patients with conversation disorders. Moreover, the results also demonstrated that permissive parenting was significant associated with depression, anxiety, stress, positive affect in patients with conversation disorders. Finding of study revealed that authoritarian and flexible/authoritative parenting styles were non-significant associated with depression, anxiety, stress, negative affect, problem focused coping, positive coping and active avoidance coping in patients with conversation. Moreover, the results also demonstrated that authoritarian and flexible/authoritative parenting styles were significant associated with religious coping in patients with conversation disorders. Finding of study revealed that religious and active problem strategies were positively significant associated with depression, anxiety and stress in patients with conversation. Moreover, the results also demonstrated that active problem strategy was positively significant associated with depression, anxiety, stress, negative and positive affect in patients with conversation disorders (Field, 2017).

Table 2 reveals that there is found significant differences on religious coping strategy and negative affect in male and female conversion patients. Results in table 2 of independent sample *t*-test revealed that there is significant difference on religious coping strategy (t =2 .58, p > .01) in female (n = 120, M = 11.41, SD = 2.20) and male (n = 80, M = 10.51, SD = 2.21). Results of the current study explained that female were more predisposed religious coping strategy in patients with conversion disorders. Moreover, Results of independent sample *t*-test revealed that there is significant difference on negative affect (t =2 .81, p > .000) in female (n = 120, M = 18.49, SD = 4.02) and male (n = 16.66, M = 10.51, SD = 4.31). Results of the current study revealed that female were also more inclined toward religious coping strategy in patients with conversion disorders.

The performed analysis on the model related to the moderating role of coping strategies between parenting styles, depression, anxiety, stress and positive and negative affect (Figure 1) revealed that the tested model was statistically having, $\chi^{2=}$ 35.28, p=.45 , χ^2/df = 1.00, RMSEA= .01, CFI= 1.00, TLI= .99, IFI= 1.00, RFI= .89, NFI= .97 (Park & Qiu, 2019).

In table 3, this model predictor variables accounted for 6% of the variance in positive affect, 31% in negative affect, 44% in stress, 38% in anxiety and 38% in depression. Results revealed that problem focused coping was negatively significant predicting to depression (β=-.14, p<.01), anxiety (β=-.15, p<.01), stress (β=-.12, p<.05) and negative affect (β=-.20, p<.01). It also revealed that positive coping was positively significant predicting to anxiety (β=.14, p<.01), stress (β=.22, p<.000) and positive affect (β=.19, p<.01). It further shown that active avoidance coping was positively significant predicting to depression (β=.45, p<.000), anxiety (β=.43, p<.000), stress (β=.44, p<.000) and negative affect (β=.53, p<.000). Whereas permissive parenting style of father was positively significant predicting to stress (β=.18, p<.000). On the other hand flexible/ authoritative parenting style of father was positively significant predicting to depression (β=.27, p<.000), anxiety (β=.33, p<.000) and stress (β=.22, p<.000). It further shown that interaction between permissive parenting style of mother and problem focused coping was negatively significant predicting to depression (β=-.25, p<.000), anxiety (β=-.25, p<.000) and stress (β=-.18, p<.01). It also demonstrate that interaction between permissive parenting style of mother and religious coping was positively significant predicting to depression (β=.24, p<.000), anxiety (β=.31, p<.000), stress (β=.27, p<.000) and negative affect (β=.31, p<.000). It also displayed that interaction between authoritarian parenting style of mother and religious coping was positively significant predicting to stress (β=.13, p<.01). Furthermore the interaction between flexible/ authoritative parenting style of mother and problem focused coping was positively significant predicting to anxiety (β=.09, p<.05). The table also revealed that the interaction between flexible/ authoritative parenting and religious coping was negatively significant predicting to anxiety (β=-.17, p<.000) and negative affect (β=-.21, p<.05). It further explored that interaction between flexible/ authoritative parenting of style mother and positive coping was positively significant predicting to positive affect (β=.16, p<.01). It also shown that interaction between flexible/ authoritative parenting style of mother and active avoidance coping was positively significant predicting to anxiety (β=.10, p<.01) and stress (β=.08, p<.01). Lastly it revealed the interaction between flexible/ authoritative parenting style of father and religious coping was negatively significant predicting to stress (β=-.14, p<.01) (Baron & Kenny, 1986).

Discussion

The purpose of the study was to verify the assumptions related to the association among parenting styles, coping strategies, depression, anxiety, stress, and positive and negative affect in patient with conversion disorder. Additionally, to investigate the moderating role of coping strategies the pathway among parenting styles, depression, anxiety, stress, positive and negative affect in patient with conversion disorder. Furthermore, to find out the differences between male and female conversion patients on study variables.

The first aim of the study was to investigate the assumption related to the association among parenting styles, coping strategies, depression, anxiety, stress, and positive and negative affect in patient with conversion disorder. Finding of study revealed that permissive parenting was significant associated with depression, anxiety, stress, positive affect in patients with conversation disorders. Moreover, the results also demonstrated that authoritarian and authoritative parenting styles were significant associated with religious coping in patients with conversation disorders. Finding also revealed that religious and active problem strategies were positively significant associated with psychopathology including depression, anxiety and stress. Moreover, the results also demonstrated that active problem strategy was associated with high level of depression, anxiety, stress, negative and positive affect

in patients with conversation disorders. Results of current study are consistent with previous researches findings (Brown & Reuber, 2016; Goetzmann et al., 2019; Green et al., 2017; Lafrance et al., 2013; Plesa, 2019).

The second aim of the study was to investigate the assumption related to the moderating role of coping strategies the pathway among parenting styles, depression, anxiety, stress, positive and negative affect in patient with conversion disorder. Moderation to meditational analysis found that permissive parenting style of mother is indirectly associated with lower level of depression, anxiety and stress because it favors lower level of problem focused coping in patient with conversion disorder. Results also demonstrated that permissive parenting style of mother is indirectly associated with higher level of depression, anxiety, stress and negative affect since it favors higher level of religious coping in patient with conversion disorder. Authoritarian parenting style of mother is indirectly associated with higher level of stress because it favors higher level of religious coping. Additionally. Authoritative parenting style of mother is indirectly associated with higher level of anxiety since it favors higher level of problem focused coping. Moreover, finding also found that authoritative parenting style of mother is indirectly associated with lower level of anxiety and negative affect because it favors lower level of religious coping strategy. Results of present study found that authoritative parenting style of mother is indirectly associated with higher level of positive affect because it favors higher level of positive coping. Authoritative parenting style of mother is indirectly associated with higher level of anxiety and stress since it favors higher level of active avoidance coping. Furthermore, finding of the present investigation authoritative parenting style of father is indirectly associated with lower level of stress since it favors lower level of religious coping in patient with conversion disorder (Mula & Schmitz, 2009; Oto, Conway, McGonigal, Russell, & Duncan, 2005;Schmitz, Moriarty, Costa, Ring, Ell, Trimble, 1997).

Numerous many prior study findings exposed that approach coping has generally been adaptive, meanwhile avoidance coping strategy was experienced maladaptive coping strategy global. For example, those individuals who has high level of approach coping strategy, there were less predisposed vulnerabilities toward psychopathology like stress, anxiety, depression, positive and negative mood swings (Duangdao & Roesch, 2008), but they had higher level of mental health (Holland & Holahan, 2003). Meanwhile, those patients who has higher level of avoidance coping strategy, they were more inclined vulnerabilities toward higher level of depression (Dyson & Renk, 2006; Miralles et al., 2014). However, Taylor and Stanton (2007) reported that approach coping strategy were less beneficial to decrease psychopathology than avoidance coping strategy. Above diverse results of different findings may be occurred because of single dimensional approach that is explained one side of coping strategy but it does not clear complex causal mechanisms that's why this topic is remained open for further discussion on different clinical settings(Taylor & Stanton, 2007). Moreover, Holland and Holahan (2003) model helped to figure out the role of emotion-focused and problem-focused coping strategies to enhance and decrease psychopathology in clinical and non-clinical population. Their study findings explained that problem-focused coping is an ability of individual to comprehend and emotional handle psychopathology. It helps the person to develop mindfulness or positive approach to tackle psychopathology. In contrast, emotion-focused coping is an ability of individuals to balance and control emotional reaction against high demanding situation that enhance psychopathology. It involves self-distraction by trying to avoid to the trouble through positive viewpoint (Holland & Holahan, 2003)

The first hypothesis of the study was to investigate the assumption related to the association among permissive, authoritarian parenting styles, depression, anxiety, stress and negative affect in patient with conversion disorder. Findings of current study are not consistent with previous findings (Bowlby, 1988; Fricchione, 2011).Attachment theory were supported above hypothesis and elaborated early adverse childhood experiences with caregiver sway social-emotional growth, which influences the development of later-life psychopathology or internalize approaches of interpersonal interactions in adults (Bowlby, 1988; Fricchione, 2011). Insecure attachment, authoritative and permissive parenting styles are a very general in CD (Brown & Reuber, 2016; Green et al., 2017; Reuber et al., 2002; Waller, Scheidt, & Hartmann, 2004; Wiseman & Reuber, 2015).

The second hypothesis of the study was to investigate the assumption related to the association among authoritative parenting style, depression, anxiety, stress and negative affect in patient with conversion disorder. Finding of current study are not consistent with previous studies (Brown & Reuber, 2016; Green et al., 2017; Reuber et al., 2002; Waller et al., 2004; Wiseman & Reuber, 2015). Attachment theory explains early adverse childhood experiences with caregiver sway social-emotional growth, which influences the development of later-life psychopathology or internalize approaches of interpersonal interactions in adults (Bowlby, 1988; Fricchione, 2011). Insecure attachment, authoritative and permissive parenting styles are a very general in CD (Brown & Reuber, 2016; Green et al., 2017; Reuber et al., 2002; Waller et al., 2004; Wiseman & Reuber, 2015) , prospectively causal factor to reduced quality of life as well as enhanced stress, anxiety, depression and mood swings (Green et al., 2017). A previous research conducted of pediatric patients with CD employing qualitative study through structured interviews related to psychological features, finding of the study cleared and highlighted different attachment and parenting styles were associated with specific functional/psychogenic neurological sign profile (Kozlowska et al., 2017). Additionally, interpersonal difficulties and elevated expressed emotion issues that may endorse insecure attachment and negative parenting styles, are reported in relatives of some CD patients (Stanhope et al., 2003)

The third hypothesis of the study was to investigate the assumption related to the association among problem focused coping, positive coping,

depression, anxiety and stress in patient with conversion disorder. Finding of current study are not consistent with previous researches(Brown & Reuber, 2016; de Barros et al., 2018; Pathak et al., 2019). Additionally, Base on Young (1990) and Beck's (1976) cognitive model of psychopathology, models that explained psychopathology is instigated by adverse parenting styles in childhood that escort to growth of early maladaptive coping strategies that act like a toxic blueprint for later insights of the humans. These psychological issues were anticipated to come up from negative an interaction of the child's adverse experiences with their caregivers or parents (Beck, 1976; Lovibond & Lovibond, 1995; Myers, Trobliger, Bortnik, & Lancman, 2018; Shute, Maud, & McLachlan, 2019; Taylor & Stanton, 2007; Young, 1999; Young, Klosko, & Weishaar, 2003).

The last hypothesis of the study was to investigate the assumption related to the gender differences in patients with conversion disorder on depression, anxiety, stress, positive and negative affect. Results in table number 2 reveals that there is found significant differences on religious coping strategy and negative affect in male and female conversion patients Findings of current study are consistent with previous researches. Many similar studies found that there is a significant differences exist in male and female on CD, major depression disorder , and PTSD in clinical population (De Araújo Filho et al., 2012; de Barros et al., 2018; Del Bene et al., 2017; Myers et al., 2018; Oto et al., 2005; Perez et al., 2017; Thomas, Preston, Scott, & Bujarski, 2013).

Limitations

This present research was cross-sectional design, limited to CD patients from twin's cities Rawalpindi and Islamabad, Pakistan, As well as had a hold of female patients.

Conclusion

Functional neurological disorders are a vital problem for affected people, their relatives, and the Pakistan healthcare system, with the lowest estimated occurrence of 1.7 cases per 10,000 people. Healthcare experts should be aware of the potential for conversion disorder and its negative mental health consequences as well as work to address and manage the problems of evolving effective intervention plans, mostly in the cross-cultural setting. This study recommended that psychological problems such as stress, anxiety, depressive and positive and negative mood swing symptoms are common in patients with CD. Moreover, psychopathology, parenting styles, and coping strategies may potentially be helpful for targeted prevention and screening for CD patients with anxiety, depression, and mood swings. The current investigation also observed association among parenting styles, coping strategies, conversion disorder, depression, anxiety, stress and positive and negative affect. Moreover, this study revealed permissive parenting style of mother is indirectly associated with higher level of depression, anxiety, stress and negative affect since it favors higher level of religious coping in patient with conversion disorder. Authoritarian parenting style of mother is indirectly associated with higher level of stress because it favors higher level of religious coping

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Ethical Consideration

The study was approved by the Department of Psychology, Foundation University Islamabad, Pakistan. Consent Form was taken before taking data and participants were asked to take voluntary participation

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Availability of data and materials

The data sets used and analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions/Author details

Sana Khan performed and wrote the article. Muhammad Aqeel supervised this study.

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Ethics declarations

Ethics approval and consent to participate

This study was approved by the Institutional Review Board (*Department of Psychology, Foundation University Islamabad, Pakistan*). A written informed consent was obtained from all participants.

Consent for publication

Not applicable.

Competing interests

The authors declare to have no competing interests.

Additional Information

Not applicable.

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