RESEARCH ARTICLE

Causal beliefs of conversion disorder: A cross-sectional study

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Abstract

Objective: To investigate causal beliefs pertaining to conversion disorder among clinical sample, caregivers and the general public.

Method: The cross-sectional, quantitative, mixed-sample study was conducted from January to December 2023 after approval from ethics review board of the University of the Punjab, Lahore, Pakistan, and comprised patients diagnosed with conversion disorder in group A, their caregivers in group B, and members from the general community at large in group C. Data was collected using self-designed demographic information questionnaire and the Conversion Disorder Causal Belief Questionnaire. Data was analysed using SPSS 24.

Results: Of the 300 subjects, 100(33.3%) were in group A with mean age 25.76±7.7 years, 100(33.3%) were in group B with mean age 43.22±11.4 years, and 100(33.3%) were in group C with mean age 32.42±12.02 years. Majority of the participants were females 215(72%), educated 276(92%) and working 281(94%). There were significant differences across all the groups in psychogenic, somatogenic, sociocultural, interpersonal and paranormal beliefs regarding conversion disorder. Group A had significantly higher levels of agreement on all domains ($p<0.05$) except for somatogenic myths compared to group B ($p>0.05$), and psychogenic facts compared to group C ($p>0.05$). Comparisons between groups B and C revealed significant differences in psychogenic facts, sociocultural facts and interpersonal myths ($p<0.05$).

Conclusion: Causal beliefs about conversion disorder varied across clinical sample, their caregivers and the general public, where the clinical sample agreed more with both myths and facts about the cause of conversion disorder.

Keywords: Conversion disorder, Causal beliefs, Aetiological factors.

(JPMA 75: 1072; 2025) **DOI: https://doi.org/10.47391/JPMA.20605**

Introduction

Causal beliefs are the perceived aetiological factors thought to cause or contribute to the development of an illness.[1] It represents the various reasons that patients, caregivers and the general public attribute to the illness. Unlike other fields of clinical medicine, knowledge pertaining to the causal beliefs of psychiatric disorders remains somewhat limited.[2] Additionally, most of the within-culture and cross-cultural studies have focussed on beliefs some commonly occurring psychiatric disorders, such as schizophrenia, depression and bipolar disorder.[3-6] Despite the high prevalence of conversion disorder (CD) in South Asia, particularly in Pakistan,[7,8] there remains an extreme dearth of knowledge, and poor causal beliefs persist.[9,10]

Causal beliefs are generally shaped by individual's personal knowledge, interactions with someone having psychological issues, and cultural stereotypes.[1] There are only a few published studies available that have identified these beliefs (myths vs facts). For instance, a study in Pakistan on the family members of patients diagnosed with CD reflected that they believed spiritual and other supernatural forces were potential causes behind the development of the disorder.[11] Other findings indicated beliefs related to psychological factors, such as traumatic or stressful experiences, unpleasant childhood events, and overthinking;[12,13] biomedical or genetic causes, such as past history of medical illness, hereditary illness, brain damage, hormonal imbalance, smoking and bad habits, imbalanced and poor diet, and anaemia;[14,15] and environmental or social causes, such as work stress, unemployment, financial problems,[16] as causal factors of CD. A few studies also identified interpersonal beliefs, like problems with interpersonal relationships, such as quarrels and unexpressed emotions,[9] relationship problems, the death of loved ones, separation from relatives or friends, etc.[17]

Belief systems are important to study, as they impact the attitude and behaviour of patients, their caregivers and the community.[18] Among the general public, the causal beliefs influence the inclination to create social distance from those with mentally challenged individuals and contribute to stigmatisation against them.[19] In the clinical population, causal beliefs related to the nature and causes of psychiatric disorders play a role in determining the likelihood of help-seeking behaviour from professionals,

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Submission complete: 09-07-2024 **1st Revision received:** 03-09-2024

Acceptance: 03-05-2025 **Last Revision received:** 02-05-2025

adherence to treatment, and satisfaction with treatment outcomes. Likewise, myths and misconception about psychiatric illnesses may, in turn, direct them to seek help from inappropriate sources or even refrain from seeking professional assistance altogether. For instance, individuals who attribute symptoms of mental illness to paranormal beliefs are less likely to view professional mental health services as effective, and are more likely to seek traditional or religious forms of healing.[20]

The current study was planned to bridge the gap in the existing literature by investigating causal beliefs pertaining to CD among clinical sample, caregivers and the general public.

Subjects and Methods

The cross-sectional, quantitative, mixed-sample study was conducted from January to December 2023 after approval from ethics review board of the University of the Punjab, Lahore, Pakistan. The sample size was calculated using G-Power calculator, keeping medium effect size 0.25, alpha level 0.05, power 0.80, and selecting the number of groups to three.[21] The sample of patients and caregivers were raised from hospitals using non-probability purposive sampling strategy, while members from the community were enrolled using probability random sampling strategy. Data was collected from six towns of Lahore. Those included were patients aged 13-45 years diagnosed by mental health professionals and at an early stage of treatment. Patients with any comorbidity were excluded. CD was defined as a condition where psychological stress or trauma resulted in physical symptoms that were not attributable to any medical or neurological cause. These symptoms could include paralysis, blindness, seizures, or other neurological impairments.[7,8] Only those who had not yet undergone intervention targetting the underlying causal beliefs were included.

The caregivers included a close family member or first degree relative who must have been living continuously for the preceding one year with the patient. Those diagnosed with any psychiatric illness or severe general medical condition were excluded. The general public included adults aged >19 years. Those already diagnosed with any psychiatric illness or having a severe general medical condition were excluded. The patients were placed in group A, their caregivers in group B, and members from the general community in group C.

Groups A and B were raised after seeking permission from the respective head of the Psychiatry Department of public and private hospitals recognised by the Higher Education Commission (HEC). Group C was raised after seeking permission from Pakistan Bureau of Statistics (PBS) and the Election Commission of Pakistan (ECP) with regard to residential details of the six towns and to quantify the households. Thus, every 10th house of each town was approached.

After taking informed consent from all the subjects, data was collected using a self-designed demographic information questionnaire. Also used was a self-devised Conversion Disorder Causal Belief Questionnaire in the light of a thorough, systematic and progressive scientific-based literature review.[6-11,13,15,17] The items were pooled and a CD causal belief list was finalised. It was then forwarded to mental health professionals for their suggestions, and to rate each statement on the scale of appropriateness and clarity. The feedback was incorporated and the questionnaire was finalised. The final questionnaire had 55 items scored on a Likert scale ranging from 0=not at all to 4=to a great extent/It had 5 domains: Psychogenic, Somatogenic, Sociocultural, Interpersonal and Paranormal Beliefs. The psychometric properties were established based on face and construct validity, and reliability analysis. Face validity was confirmed through expert evaluations, leading to the removal of low-rated items and revisions based on feedback. Construct validity was established by expert review, ensuring the tool measured the intended constructs related to CD. The overall Cronbach alpha reliability of the subscales was high; 0.84, 0.81, 0.83, 0.83 and 0.84, respectively.

Data was analysed using SPSS 24. Data normality and homogeneity of variance was checked using Kolmogorov-Smirnov test and Levene's test, respectively. Data was expressed as mean±standard deviation, or as frequencies and percentages, as appropriate. Inferential statistics included one-way analysis of variance (ANOVA_ and post-hoc test to investigate the differences between facts and myths on the 5 subscales across the 3 groups. $P<0.05$ was considered significant.

Results

Of the 300 subjects, 100(33.3%) were in group A with mean age 25.76±7.7 years, 100(33.3%) were in group B with mean age 43.22±11.4 years, and 100(33.3%) were in group C with mean age 32.42±12.02 years. Majority of the participants were females 215(72%), educated 276(92%) and working 281(94%) (Table 1).

There were significant differences across all the groups in psychogenic, somatogenic, sociocultural, interpersonal and paranormal beliefs regarding CD (Table 2).

Group A had significantly higher levels of agreement on all domains ($p<0.05$) except for somatogenic myths compared to group B ($p>0.05$), and psychogenic facts compared to

Table-1: Demographic characteristics (n=300).

Characteristics	Clinical Sample (n=100) n (%)	Caregivers (n=100) n (%)	General Public (n=100) n (%)
Mean Age (years)	25.76 ±7.7	43.22±11.4	32.42±12.02
Gender			
Male	23 (23)	29 (29)	33 (33)
Female	77 (77)	71 (71)	67 (67)
Education			
Illiterate	06 (6)	15 (15)	3 (3)
Middle	17 (17)	23 (23)	-
Matric	36 (36)	26 (26)	29 (29)
Intermediate	23 (23)	20 (20)	13 (13)
Masters & above	27 (27)	16 (16)	55 (55)
Occupation			
Students	30 (30)	02 (02)	21 (21)
House wives	31 (31)	63 (63)	23 (23)
Self-employed/ business man	29 (29)	08 (08)	06 (06)
Govt./ private job	09 (09)	23 (23)	39 (39)
Unemployed	04 (04)	04 (04)	11 (11)

SD: Standard deviation

Table-2: Intergroup comparison with respect to causal beliefs regarding conversion disorder (CD) [n=2,294].

Measures	Clinical Sample Mean±SD	Caregivers Mean±SD	General public Mean±SD	*p*-value
Psycho				
Facts	26.3±5.00	21.62±5.08	25.72±8.93	15.04***
Soma				
Facts	7.69±2.38	7.02±2.18	6.57±2.75	12.00***
Myths	35.33±9.11	30.36±9.10	28.91±10.83	5.27***
Socio				
Facts	25.11±5.981	20.36±6.06	22.55±5.91	15.73***
Myths	5.40±1.798	3.93±1.89	4.41±1.97	15.77***
IP				
Facts	14.41±4.12	11.97±3.41	11.99±4.24	26.69***
Myths	4.77±2.16	2.60±2.06	3.53±2.09	12.62***
Para	17.89±8.52	15.13±8.04	12.78±8.16	9.62***

Psych: Psychogenic, Soma: Somatogenic, Socio: Sociocultural, IP: Interpersonal, Para: Paranormal beliefs, SD: Standard deviation, F: Analysis of variance (ANOVA) statistics; ***$p<0.01$.

group C ($p>0.05$). Comparisons between groups B and C revealed significant differences in psychogenic facts, sociocultural facts and interpersonal myths ($p<0.05$) (Table 3).

Discussion

The exploration of causal beliefs about CD is vital for understanding the diverse perspectives held by different groups within a society. The current findings highlighted highly significant differences across all groups in all domains. The clinical sample reported significantly higher levels of agreement on facts and myths across all domains, except for somatogenic myths when compared to caregivers, and psychogenic facts when compared to the general public. Literature also supports current findings.[22]

Table-3: Post-hoc intergroup comparison.

Vars.	Groups		MD	*p*-vlaue	95% CI	
					LL	UL
Psych	CS	CG	4.71	<0.001	3.02	6.40
		GP	0.61	0.823	-1.81	3.03
	CG	GP	-4.1	<0.001	-6.53	-1.67
Soma Facts	CS	CG	0.67	0.099	-0.17	1.51
		GP	1.12	0.007	0.28	1.96
	CG	GP	0.45	0.408	-0.39	1.29
Soma Myths	CS	CG	4.97	0.001	1.66	8.28
		GP	6.42	<0.001	3.11	9.73
	CG	GP	1.45	0.876	-1.86	4.76
Socio Facts	CS	CG	4.75	<0.001	2.71	6.79
		GP	2.56	0.008	0.52	4.60
	CG	GP	-2.1	0.030	-4.23	-0.15
Socio Myths	CS	CG	1.47	<0.001	0.83	2.11
		GP	0.99	0.001	0.35	1.63
	CG	GP	-0.48	0.221	-1.12	0.16
Inter Facts	CS	CG	2.44	<0.001	1.10	3.78
		GP	2.42	<0.001	1.08	3.76
	CG	GP	-0.02	0.999	-1.36	1.32
Inter Myths	CS	CG	2.17	<0.001	1.45	2.89
		GP	1.24	<0.001	0.52	1.96
	CG	GP	-0.93	0.006	-1.65	-0.21
Paranormal	CS	CG	2.76	0.056	-0.05	5.57
		GP	5.11	<.001	2.30	7.92
	CG	GP	2.35	0.134	-0.46	5.16

CS: Clinical sample, CG: Caregivers, GP: General population, Psych: Psychogenic, Soma: Somatogenic, Socio: Sociocultural, Inter: Interpersonal, Para: Paranormal beliefs, MD: Mean difference, CI: Confidence interval, LL: Lower limit, UL: Upper limit. ***$p<0.001$ (2-tailed), **$p<0.01$, *$p<0.05$.

Another study affirmed that psycho-social stressors related to family, such as quarrels and unexpressed emotions, were perceived as significant contributing factors in CD development.[17] A study about the beliefs of the caregivers noted that the majority believed in physical/biological and psychological causes.[23] A qualitative study explored patients' beliefs, and reported that most of the patients attributed their illness to biological, psychological and social factors. Some of them were even unable to mention any specific cause of their illness.[24] Somatogenic and organic factors were also considered as the causal factors in another study.[25] Another study found that the members of the general public attributed their illness to psychosocial stress and brain disease, chemical imbalances and hereditary issues.[26]

The current study also revealed significant differences in psychogenic facts, sociocultural facts and interpersonal myths between caregivers and the general public, where the general public showed higher endorsement. Evidence also suggests that the past two decades have witnessed a notable surge in knowledge, marked by intriguing findings that challenge preconceived notions about the causes of mental illness. Individuals endorse beliefs in psychogenic facts over supernatural explanations.[27] A study concluded that young adults attributed mental illnesses to psychosocial factors.[12] Day-to-day problems and work-related stress have also been reported as probable causes.[28,29] In contrast, a study found that childhood traumatic experiences received a low score, with participants believing that adverse early experiences were not important causal factors.[30] Similar findings were observed in another study which found that 'early experiences' were not perceived as an important causal factor among female patients. Instead, they believed that current stressors, such as 'loss of a loved one', had more influence.[2]

The current study has limitations. A massive majority of the sample was educated and drawn from hospital and clinical settings, where the patients had already sought treatment following visits to various kinds of healers. These individuals possessed some insight into the causal beliefs of CD. Future research should target uneducated individuals, and the sample should be equally drawn from healers to identify their misconceptions and myths, and to bolster their beliefs in fact-based biological and psychological domains.

Notwithstanding these limitations, the current findings provide useful insights into causal beliefs that will help mental health professionals to employ CD belief questionnaire, and to identify the beliefs and myths of their patients and their families, and to better address them via psycho-education and replacing myths with scientific explanation. The policy-makers need to devise policies for awareness-raising campaigns among the general public, as well as in health and educational settings.

Conclusion

The clinical sample tended to believe in both myths and facts about CD, suggesting the subjects may have been exposed to a mixture of accurate information and misconceptions. Caregivers, whose beliefs differed from the clinical sample, could have been influenced by personal experiences and second-hand information from clinical environments. The general public's beliefs were likely shaped by societal views and media portrayals due to which they endorsed psychogenic facts, sociocultural facts, and interpersonal myths. Overall, there was a gap in understanding among the groups, potentially impacting the support and treatment those with CD receive.

Acknowledgement: We are grateful to the mental health professionals who reviewed the questionnaire and provided their feedback, to those who allowed data collection from their hospitals and clinics, and to the participants for their cooperation.

Disclaimer: The text is based on a PhD thesis.

Conflict of Interest: None.

Source of Funding: None.

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Author Contribution:

SL: Concept, design, data analysis, interpretation, drafting, revision, final approval and agreement to be accountable for all aspects of the work.

AS: Concept, design, data analysis, interpretation, reviewing, final approval and agreement to be accountable for all as00000000000pects of the work.