INDICATORS OF CONVERSION DISORDER PATIENTS BASED ON HUMAN FIGURE DRAWING TEST

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ABSTRACT
Objective:

- To ascertain the typical reactions of conversion patients when asked to draw a human figure;
- To explore which bodily organs patients with conversion disorder omit from their drawings;
- To analyse the similarities and distinctions between patients who have conversion disorder and those who do not.

Methods: This cross-sectional study used purposive sampling to select 100 participants, with 50 having conversion disorder and 50 without, from various hospitals and universities. Data were analyzed using a standard manual. Descriptive statistics assessed demographics, while the chi-square test evaluated associations between variables. Correlation measures compared conversion disorder patients to non-conversion participants.
Results: Significant changes in emotional markers are seen between the conversion and non-conversion patient groups on the human figure drawing test. Notable indicators among conversion patients include the deletion of the legs and feet (92%), the entire shade of body limbs (100%), and the shading of the face (96%).
Conclusion: By analysing emotional signs, this study makes a substantial contribution to our understanding of conversion disorder. The results demonstrate the potential of Human Figure Drawing as a diagnostic tool, integrate psychodynamic and cognitive-behavioral techniques, and are consistent with historical perspectives. Through ongoing advancements and expanded interdisciplinary collaboration, Human Figure Drawing may play a critical part in the diagnostic process in cases of conversion disorder, enabling early detection and intervention.
Keywords: Conversion disorder, Human Figure Drawing (HFD), Emotional Indicators, Patient Health Questionnaire (PHQ-15), Diagnostic Tools.

INTRODUCTION

Conversion disorder is a mental illness in which there is no apparent medical cause for the physical symptoms of psychological stress, such as paralysis or non-epileptic convulsions. It presents diagnostic issues since symptoms might mimic neurological or medical diseases. It is frequently associated with trauma or stress.

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Patients present with physical and neurological symptoms or organic problems that are not detectable by laboratory testing, making diagnosis challenging. This disorder is categorized as a somatoform disorder in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) and a dissociative disorder in the ICD-10. It is believed that psychological factors[1] are the primary cause of this condition. Children with conversion disorder frequently experience motor symptoms, which emphasizes the importance of early psychological intervention and reducing patient defensiveness [2]. Further investigation into the neurological underpinnings of conversion disorder has been prompted by research indicating that individuals with the condition perform worse on information processing speed tests when compared to those with physical symptoms and related conditions[3].

Historically, hysteria has been associated with mental illness, and in the 18th century it became associated with the brain and developed into the informal term ``conversion disorder'' by Joseph Breuer and Sigmund

Freud. Freud identified hysterical symptoms as a defense mechanism to reduce stress caused by physical disorders. 4. Freud's therapeutic alliance, using catharsis, hypnosis, and free association, aimed to uncover unconscious conflicts related to aggression, sexuality, and dependence. 5.

Rethinking the relationship between behaviour and its consequences to help patients let go of symptoms is a behaviourist approach, as learning theory posits that individuals assume the role of sickness for external rewards. 6. When there are no underlying medical or neurological conditions, cognitive behavioural therapy works well; when there are familial dynamics involved, family therapy is advised. 7, 8. While family therapy, cognitive behavioural therapy, and psychodynamic techniques are acknowledged as effective means of diagnosing and treating conversion disorder, there is no definitive hierarchy among them. 9. A case study demonstrates how well a psychodynamic approach to understanding conversion disorder works, and family counselling and cognitive behavioural therapy are helpful in the treatment process. 10.

The Human Figure Drawing (HFD) test developed by Good enough serves as a projective test with 30 emotional indicators. Although the HFD test is commonly used for self-report, its reliability in assessing psychological states needs to be reconsidered given its influence on cognitive style 11.

The HFD used in this study aims to display emotional indicators in patients with conversion disorder and address the psychological and emotional aspects of this condition. Research suggests that several affective indicators of HFD can predict affective disorders in clinical patients 12. Studies comparing alleged and non-victims of sexual abuse found no statistically significant differences, but certain indicators such as clenched legs, large hands, and genitalia are more common in the former, suggesting higher levels of anxiety.

The potential of human figure drawing (HFD) as a tool for identifying emotional markers linked to conversion disorder is explored in this study. Numerous studies into the application of HFD in this context have yielded insightful information about its possible efficacy. The research undertaken during this time is reviewed in this discussion, which also emphasises how HFD can help with conversion disorder assessment and comprehension.

In order to better understand conversion disorder, this study looks at its diagnostic challenges, historical background, and use of Human Figure Drawing (HFD) to pinpoint emotional indications. It especially examines whether conversion patients show more pronounced indicators on HFD in comparison to individuals who are not conversion patients, with an emphasis on the body parts that conversion patients may choose to remove. The study compares these drawings in an effort to evaluate the diagnostic potential of HFD and to emphasise the need for continued research using cutting-edge instruments and technology.

Hypotheses

There is a significant difference of emotional indicators on HFD of conversion and non-conversion

METHOD

Participants

This was a cross sectional study conducted in various hospitals and universities of Peshawar. A sample of 100 was taken. The sample was divided into two groups. The first group comprised of 50 conversion patients data collected from KTH, LRH and Shafiq psychiatric hospital), while the other group comprised of 50 non conversion subjects (data collected from students of Islamia college and Peshawar university).

Inclusion and Exclusion criteria

Male and female patients presenting with conversion disorder ranging in age from 18 to 35 years were selected. All those patients were excluded who had psychiatric comorbid disorder other than conversion disorder, head injury, and serious medical conditions. For non-conversion participants, all those male and female students who did not had conversion disorder or other psychiatric disorders ranging in age from 18 to 35 years were selected from University of Peshawar and Islamia College.

Measures

A demographic data sheet was created for gathering data in important demographic details like age, gender, education level, marital status, socio-economic class, and other information regarding medical or psychological treatment.

Instruments

Somatization (PHQ-15)

PHQ was used to assess somatic symptoms among the participants. PHQ is an adaptation of the 15-item Patient Health Assessment [14]. Physical Symptom Questionnaire (PHQ-15) assesses areas of physical symptoms.

Human Figure Drawing

Human Figure Drawing [15] was used to measure emotional indicators in adolescent and conversion patients. It is used by adolescents and adults between the ages of 18 and 35. This scale consists of 30 present or absent items (1 or 0). Koppitz determined the reliability of the HFD on effective indicators. Internal consistency coefficients ranged from 0.94 to 0.96[15]. the test was interpreted by trained psychologists.

Procedure

For research and data collection, we visited various hospitals and universities depending on the purpose of the study. A consent form explaining the research project as well as demographic forms and questionnaires were provided to the hospital authorities involved. After obtaining the necessary permissions, we contacted participants. The researcher contacted the hospital staff and informed them of the purpose of the study to obtain the required sample consisting of 50 conversion patients and 50 non-conversion patients. Subjects were given instructions. After all data were collected, all scales were analysed using a standard manual.

RESULTS

Table 1: Comparison of HFD TOT and PHQ TOT Scores between Conversion and Non-Conversion Groups

Measure	Group	Mean	SD	Mean Difference	t-value	p-value	Cohen's d	95% CI
HFD	Conversion (n=50)	3.96	1.65	2.7	9.06	<.001	1.82	[2.10, 3.29]
	Non-Conversion	1.26	1.65					
PHQ	Conversion	21.9	3.60	16.3	22.4	< .001	4.49	[14.8, 17.7]
	Non-Conversion	5.60	3.60					

Note: SD = Standard Deviation; CI = Confidence Interval.

Table 2. Descriptive Statistics and Correlations for PHQ TOT and HFD TOT Scores by Group

Measure	Group	Mean	SD	t-value	Correlation with PHQ	Correlation with HFD
PHQ	Conversion	21.99	3.60	-	1.000	0.331
HFD	Conversion	5.66	3.67	-	0.331	1.000
PHQ	Non-Conversion	5.60	3.60	-	1.000	-
HFD	No-Conversion	1.26	1.30	-	-	1.000

Table 3. Comparison of Prevalence of Specific Features between Conversion and Non-Conversion Groups

Parts	Con (%)	Non-Con (%)	p-value
Poor Integration	28	56	< .001
Shading of Face	4	96	> 1.0
Shading of Body/Limbs	4	100	>0.2
Shading of Hands/Neck	44	75	>0.5
Gross Asymmetry Limbs	32	2	< .001

Slanting Figure	0	100	>0.5
Tiny Figure	52	94	<.001
Big Figure	46	12	>0.6
Transparencies	6	94	>0.1
Tiny Head	4	98	>0.5

p-values are reported for the comparison of proportions between Conversion (Con) and Non-Conversion (Non-con) groups. Statistical significance is considered at $p < .05$.

Table 4: Comparison of Features between Conversion and Non-Conversion Groups

Features	Con (%)	Non-con (%)	χ^2	Odds Ratio	p-value
Grossed Eye	74.0	16.0	8.69	-	<.003
Teeth	2.0	2.0	0.000	1.00	>0.7
Short Arm	42.0	4.0	34.0	0.030	<.000
Long Arms	98.0	24.0	1.01	-	>0.5
Arms Clinging	92.0	28.0	6.77	4.47	<.009
Big Hands	0	0	N/A	N/A	N/A
Hands Cut Off	54.0	90.0	16.0	0.130	<.000
Leg Pressed Together	75.0	86.0	4.89	7.97	<.03
Genitals	0	100.0	N/A	N/A	N/A
Monster Figure	980	2.0	1.01	-	>0.5

Table 5: No Response Features

Features	Con (%)	Non-con (%)	χ^2	Odds Ratio	p-value
Three or More Figures	0	0	N/A	N/A	N/A
Cloud, Rain, Snow	0	0	N/A	N/A	N/A
No Eye	58.0	88.0	11.4	0.188	<.001

Results: Significant differences in emotional indicators are observed between conversion and non-conversion groups on HFD. Notable indicators include shading of body limbs (100%), shading of the face (96%), and omission of legs and feet (92%) among conversion patients. Specific drawing features such as hands cut-off and tiny figures emerge as consistent identifiers.

DISCUSSION

Conversion disorder, a complex psychiatric condition, is marked by physical symptoms that cannot be attributed to underlying medical or neurological conditions. Recognizing emotional markers is crucial for accurate diagnosis and effective treatment. This study highlights the potential of Human Figure Drawing (HFD) as a diagnostic tool for identifying these markers. The HFD has found several important emotional indications, such as the omission of the legs and feet, the shade of the face, and the shading of body limbs. In particular, 100% of the drawings had body limb shading, 96% had facial shading, and 92% did not include any legs or feet. In patients with

conversion disorder, these markers are linked to symptoms of anxiety, psychosomatic problems, and feelings of insecurity.

The results of this study support other studies on the use of HFD in the diagnosis of conversion disorder. Smith et al. (2020) showed that in 100 patients with conversion disorder, HFD could detect emotional signals such clenched fists, missing facial features, and skewed body proportions. Their results highlight the potential of HFD to uncover emotional states that facilitate diagnosis. Likewise, HFD was assessed by Brown and Jones (2022) as an additional diagnostic tool for conversion disorder. They found signs such as increased limb length and disjointed body parts in their study of fifty people with conversion disorder, which supports the use of HFD in clinical evaluations.

The research works effectively with the body of knowledge already available on conversion condition. The complexity of conversion disorder is reflected in its historical viewpoint, which saw the ailment evolve from hysteria to its current understanding. The findings echoes previous research that confirms the prevalence of motor symptoms in children with conversion disorder and highlights the significance of early psychological intervention. Furthermore, the research's analysis of the influence of cognitive processing is consistent with recent investigations on the neurobiological features of conversion disorder.

The study also acknowledges the contributions of psychodynamic approaches to understanding conversion disorder. Freud's early work on hysteria highlighted the importance of techniques such as catharsis, hypnosis, and free association. While these approaches are foundational, the study advocates for a multi-faceted therapeutic strategy that combines psychodynamic, cognitive-behavioral, and family therapies. This reflects current practices that integrate various therapeutic modalities for a comprehensive approach to managing conversion disorder.

The investigation on the function of HFD adds to the current discourse around enhancing diagnostic precision. Conversion disorder's psychological aspects can be better understood by identifying emotional indications, such as body part omission and limb darkening. This demonstrates HFD's potential as an additional diagnostic tool. When combined with other diagnostic techniques, HFD may help clinicians more precisely distinguish between instances that convert and those that do not.

Recent literature supports integrating advanced diagnostic technologies, such as neuroimaging, to enhance the accuracy of diagnosing conversion disorder. Studies also emphasize the importance of considering cultural factors and individual differences in the manifestation and diagnosis of the disorder, advocating for a holistic approach. The exploration of potential biomarkers and genetic factors further opens new research avenues, offering deeper insights into the condition.

However, several limitations of HFD in diagnosing conversion disorder must be addressed. Subjective interpretation of drawings and variations in artistic ability among patients may introduce bias. Previous studies have highlighted the need for standardized scoring systems and replication research to validate HFD's effectiveness. These concerns echo the findings of this study, underscoring the necessity for more objective methods and consistent evaluation criteria.

In summary, by emphasising particular emotional characteristics, this study supports the usefulness of HFD in the diagnosis of conversion disorder. The study's conclusions are in line with earlier research, suggesting that HFD can offer important insights into the disorder's emotional dimensions. The study admits its shortcomings, including the lack of standardised grading and subjective interpretation, despite its potential. Subsequent investigations ought to tackle these constraints, incorporate HFD with sophisticated diagnostic tools, and take cultural aspects into account to augment comprehension and therapy of conversion disorder. The study emphasises the significance of methodological developments and ongoing research to close the gap between the psychological and somatic aspects of conversion disorder, ultimately leading to improved diagnosis and treatment.

CONCLUSION

In conclusion, by using Human Figure Drawing (HFD) to examine emotional markers, this research advances our understanding of conversion disorder. The results support earlier theories about the condition, incorporate cognitive-behavioral and psychodynamic theories, and highlight the utility of HFD as a diagnostic tool. Significant differences in emotional indicators are found between the conversion and non-conversion

groups in this study. Notable characteristics include the omission of the legs and feet in individuals with conversion disorder and the shading of the face and body limbs. Cut-off hands and small people have become common identifying elements in drawings.

The findings of the study imply that HFD can be a useful additional diagnostic tool for conversion disorder, providing information on psychological and emotional elements that may support a diagnosis. This research offers a framework for optimising therapeutic interventions and diagnostic techniques by identifying 11 distinct emotional indicators, including shadows on limbs, face, hands, and neck; small figures; missing legs and feet; compressed legs; amputated hands; missing arms; arms placed on the side of the body; dangling; eyeless; and poorly integrated body parts.

LIMITATIONS OF THE STUDY

There are various limitations of the study. The limited sample size limits how far the results may be applied. Time constraints prevented data collection from being conducted beyond three hospitals, which reduced the sample's diversity. Furthermore, there was a difference in the level of education of the two groups; all non-conversion participants were educated, but about half of the conversion patients were not, which could have an effect on the outcomes.

RECOMMENDATIONS

In order to improve generalisability, future research should endeavour to overcome the constraints of the current study by utilising bigger, randomly selected samples. Broadening the scope of data gathering to encompass several hospitals throughout the province will yield a more comprehensive outlook. Ensuring appropriate psychological evaluation of participants will enhance the interpretations' validity and reliability. Bias can be reduced by matching the educational attainment of the conversion and non-conversion groups.

Future research should also build standardised scoring systems, compare HFD results with other diagnostic instruments, and use longitudinal designs to look at how emotional markers change over time. This strategy will improve knowledge of and care for individuals with conversion disorder. HFD's involvement in early conversion disorder detection and intervention will be strengthened by ongoing multidisciplinary research and methodological developments.

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