Knowledge of conversion disorder in children by pediatricians in a developing country

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Abstract

Introduction: Conversion disorder (CD) in children presents the clinician with a diagnostic and treatment dilemma. Mistaking a physical condition for CD carries serious consequences for the child while continued investigation in line with physical disease in a child with CD also may expose the child to serious harm.

Materials and Methods: One hundred and seventy-four consenting doctors who attended a national conference of pediatricians were administered a 10 item questionnaire developed by the researchers.

Results: Only 5 (2.9%) of participants had good knowledge (scored above the mean plus one standard deviation of the score obtained by the psychiatry residents. Gender, rank, years of experience, availability of psychiatric service in center and duration of the psychiatry posting as the medical student could not differentiate those with good/fair knowledge from those without. However, those who have referred children for psychiatric assessment (P = 0.015), those who believe that children can have CD (P = 0.000) and those who are fairly confident that they could diagnose CD in children (P = 0.000) had better knowledge of CD.

Conclusion: Pediatricians have poor knowledge of CDs in children. Those that know that children could have the condition have confidence that they can identify children with the condition and have referred with mental health problems to psychiatrists have better knowledge than those who did not.

Key words: Conversion disorder, knowledge, pediatricians

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Introduction

Conversion disorder (CD) was categorized within the group of disorders known as "somatoform disorders" in the Diagnostic and Statistical Manual (DSM-IV).[1] As a group, these disorders were characterized by the presence of symptoms of a medical illness, which on further history, examination and investigation cannot be explained in terms of known pathology and pathophysiology. The DSM-V, however, has effected some changes in the conceptualization of the disorder. Most of the somatoform disorders now are subsumed into the "somatic symptom disorders" and the CD which has had several terminologies in the past now goes by "functional neurological symptom disorder."[2] There is minimal change from DSM-IV TR criteria and requires a clear evidence of incompatibility of symptoms with neurological diseases and reduced emphasis on the psychological basis of the symptoms.[2]

Pediatric CD has been predominantly reported in pubertal and postpubertal children, although systematic prospective surveillance has identified cases as young as 3 years; however, cases under 5 years old appear to be rare.[3] A German study has estimated a 12 months prevalence of 0.2% while an Australian study, which represents the most accurate estimation of the prevalence to date found an annual incidence rate of 2.3–4.2 per 100,000

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children.[3,4] Affected children and adolescents are often severely impaired and at risk of serious long-term physical and psychosocial complications, including educational failure, social isolation, physical disability, and psychiatric morbidity.[5]

The condition in childhood and adolescence is typically associated with extensive use of pediatric and allied health resources. Even though misdiagnosis may not be limited to psychiatric conditions and has been estimated to approach 30% in some medical conditions,[6,7] failure to accurately diagnose CD in children and adolescents carries the risk of exposing the children to unnecessary and sometimes prolonged invasive investigations and procedures and inadvertently reinforcing the sick role.[8]

Early identification and intervention is, therefore, very crucial to reducing the morbidity that follows CD in children and adolescents. For the early identification to take place, knowledge about the condition and the index of suspicion among those that attend to children and adolescents has to be very high. Given that pediatricians are consulted quite early when children become ill, it is imperative to assess their knowledge of this condition. In addition to the scarce literature on the prevalence of CD among Nigerian children, literature on the knowledge of pediatricians about the condition is almost nonexistent. This study was designed to contribute in this respect. The study aims to determine the knowledge of pediatricians about CD in children and the factors that are associated with good knowledge in them. It is hoped that this study would contribute in bridging this gap in knowledge and form the basis for changes in curriculum for pediatricians in training within the sub-region to heighten the level of awareness about this condition.

Materials and Methods

Participants

One hundred and seventy-four consenting doctors who attended a national conference of pediatricians consisting of 15 medical officers working with children and adolescents, 89 pediatric resident doctors, and 70 consultants pediatricians were the participants in this study.

Instrument

The instrument used in this study is a 10-item questionnaire developed by the researchers to tap the knowledge of pediatricians and doctors working with children and adolescents about CD in children. Three consultant psychiatrists were requested to generate questions that could tap the knowledge of CD in children from medically qualified health personnel working with children and adolescents. Ten most common items from them were selected to be included in the questionnaire. Six of the questions ask questions about the clinical features of the disorder while the remaining four asks questions about the treatment. Twenty six resident doctors who have spent a minimum of 2 years in psychiatry training were then given the 10-item questionnaire to answer. Their mean score was 5.3 ± 2.4. Information concerning gender, rank, subspecialty, setting of practice, duration of working with children and adolescents, duration of a psychiatry posting during medical school, availability of psychiatric services in the center, ever referring a child or adolescent for psychiatric evaluation, perceived confidence in identifying a child or adolescent with mental health problems and belief in children having CD were also obtained.

Procedure

All consenting participants were given a questionnaire at the point of registering for the conference. All completed questionnaire were collected at the close of the day's activities. Efforts were made to retrieve the questionnaires before the end of the conferences from those who could not complete it on the 1st day. All participants in the conference who were not doctors were excluded from the study as well as those who declined from participating.

Interpretation and data analysis

Based on the assumption that a psychiatry resident who had spent up to 2 years in training should have acquired a fair knowledge of the disorder, the mean score of the psychiatry residents and standard deviation was used as a basis for the interpretation of the scores of the participants. Thus, those scoring 3 and below were assessed as having poor knowledge, those who scored between 4 and 7 had a fair knowledge, whereas those who scored above 7 had good knowledge. Data obtained were fed into the computer and analyzed using the SPSS Inc. Statistical Package for Social Sciences (SPSS) for Windows: Version 16. Chicago, IL: SPSS Inc., 2008. Simple frequency tables were generated for the characteristics of the participants. Their knowledge was categorized into good/fair and poor based on their scores and Chi-square test was used to determine the association of the various factors with the level of knowledge and a *P* value of 0.05 was the basis for decision.

Results

General characteristics of the participants

Fifty-four percent of the participants are females and majority (51.1%) of the participants are pediatric resident doctors. Most (86.8%) of them are practicing at the tertiary level of healthcare system, and the majority (86.2%) of them were trained within the country. Only 4 (2.3%) of them feel very confident that they could diagnose CD in children and 64 (36.2%) were fairly confident while 106 (60.9%) of them were not confident that they could diagnose the disorder in children. Table 1 shows the general characteristics of the participants.

Table 1: Characteristics of the participants

Characteristic	Frequency (*n*)	Percentage
Gender		
Male	80	46.0
Female	94	54.0
Years of practice		
<10	67	38.5
10-19	65	37.4
20 and above	42	24.1
Rank		
Medical officer	15	8.6
Resident doctor	89	51.2
Consultant	70	40.2
Setting of practice		
Private hospital	3	1.7
Primary care	3	1.7
Secondary care	16	9.2
Tertiary care	151	86.8
Others (ministries, NGOs)	1	0.6
Training outside the country		
Yes	24	13.8
No	150	86.2
Duration of psychiatry posting		
Short (<6 weeks)	164	94.3
Long (>6 weeks)	10	5.7
Psychiatry services in centre		
Yes	133	76.4
No	41	23.6

NGO=Nongovernmental organization

Table 2: Proportions of the items correctly answered

Item	Frequency *n* (%)
Usually presents with neurological symptoms	35 (20.1)
Symptoms consciously produced	44 (25.3)
Children below 10 do not have the disorder	79 (45.1)
Abreaction is useful in treatment	27 (15.5)
Avoidance of reinforcement important in treatment	74 (42.5)
Sodium valproate is drug of choice if presenting with seizures	38 (21.8)
Electroconvulsive therapy is the mainstay of treatment	40 (23.0)
La belle indifference could be a feature	17 (9.8)
There could be a secondary gain	54 (31.0)
Primary gain refers to the relief from anxiety	40 (23.0)

Knowledge about the disorder

Table 2 shows that none of the items was correctly answered by at least half of the participants. They scored poorly both the questions about the features and those concerning the treatment. One hundred and twenty-seven (73.0%) of the participants scored 3 and below and thus adjudged to have poor knowledge of the condition while 42 (24.1%) had a fair knowledge and 5 (2.9%) scored 7 and above and were assessed to have very good knowledge of the condition. As shown in Table 3, there was no significant difference in gender ($P = 0.835$), years of practice ($P = 0.195$), rank ($P = 0.722$), setting of practice ($P = 0.578$), duration of psychiatry posting during training ($P = 0.092$), and availability of psychiatry services in the center ($P = 0.267$) of those who had good knowledge and those who did not. However, 42 (31.6%) of those who have referred children for psychiatric assessment compared with 5 (12.2%) of those who have not ($P = 0.015$) have good knowledge. Similarly, 36 (39.6%) of those who believe that children can have CD compared with 11 (13.3%) have good knowledge ($P = 0.000$), and 32 (47.1%) of those who are confident that they could diagnose CD in children compared with 14.2% of those who are not confident ($P = 0.000$) have good knowledge.

Table 3: Association of variables with the level of knowledge of conversion disorder in children

Variable	Poor knowledge *n* (%)	Good/fair knowledge *n* (%)	*P*
Gender			
Male	59 (73.8)	21 (26.2)	0.835
Female	68 (72.3)	26 (27.3)	
Years of practice			
<10	48 (71.6)	19 (28.4)	0.195
10-19	44 (67.7)	21 (32.3)	
20 and above	35 (83.3)	7 (16.7)	
Rank			
Medical officer	12 (80.0)	3 (20.0)	0.722
Resident doctor	63 (70.8)	26 (29.2)	
Consultant	52 (74.3)	18 (25.7)	
Setting of practice			
Teaching hospital/federal medical centres	111 (73.0)	41 (27.0)	0.578
Others (private, NGO, etc.)	16 (72.7)	6 (27.3)	
Duration of psychiatric posting			
Short (<6 weeks)	122 (74.4)	42 (25.6)	0.092
Long (>6 weeks)	5 (50.0)	5 (50.0)	
Availability of psychiatric services in centre			
Yes	95 (71.4)	38 (28.6)	0.267
No	32 (78.0)	9 (22.0)	
Ever referred a child to psychiatry			
Yes	91 (68.4)	42 (31.6)	0.015
No	36 (87.8)	5 (12.2)	
Believes children can have CD			
Yes	56 (60.4)	36 (39.6)	0.000
No	72 (86.7)	11 (13.3)	
Confidence in diagnosing CD in children			
Not confident	91 (85.8)	15 (14.2)	0.000
Confident (fairly and very confident)	36 (52.9)	32 (47.1)	

CD=Conversion disorder; NGO=Nongovernmental organization

Discussion

Despite many of the participants acknowledging that there were psychiatry departments in their facilities, only a few of

them have an impressive knowledge of CD in children. This is consistent with the poor knowledge of mental disorders in the general public, students, clergy, the media and even health personnel in Nigeria as reported in several other studies.[9-16]

As has been observed, poor knowledge of mental disorders not only leads to stigmatization of people with mental illnesses and their relatives, but could also lead to failure to utilize mental health services where they are available.[12]

The consequences of this could also extend to exposing a child to more invasive investigations and treatment options and incurring higher health care costs.

The finding that factors like gender, years of practice, rank, and setting of practice, as well as availability of psychiatric services in the centers, could not differentiate those with good knowledge from those without may suggest that the curriculum for training pediatricians in this country may be deficient in exposing trainees to mental health.

Duration of psychiatry posting during training in this study though not significantly different in those with good/fair knowledge of the condition and those without, it demonstrated a clear trend of those who had longer duration of psychiatry posting having better knowledge of CD when compared with those with shorter duration of posting. It is likely, therefore, that an elongation of psychiatry posting of medical students and allowing pediatric residents to pass through psychiatry during their training could improve their knowledge of CD and other mental health problems in children.

It is an important finding of this study that those who were confident that they could identify a child with the condition had better knowledge than those who were not. It is also important that those who have ever referred a child for mental health evaluation had better knowledge than those who have not. These practitioners are more likely to call for the input of other relevant disciplines early in the management of a child with CD and thus reduce the negative impact of these mental health problems on the children.

These findings have implications for the pathway to care and the quality of care given to children with mental health problems.

Recommendation

There is a need to re-evaluate the content of the curriculum of residency training in pediatrics in order to increase their knowledge of psychiatric disorders, especially CD in children that can lead to avoidable exposure to undue invasive investigations and treatment and thus reduce cost and morbidity.

Limitations

Research is still very scarce on this topic in the country and this study represents a major contribution to the literature. Evaluating the perspective from across many centers in the country is a major strength of this study. It is, however, limited by the small sample size occasioned by the low response rate expected in a study like this. Many of the respondents could not return the completed questionnaire. Carrying out a study in their respective centers may yield higher response rate.

This study is further limited by the fact that the instrument used to access their knowledge is not yet standardized and thus could negatively affect the quality of data obtained.

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