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SPECIAL ARTICLE

Perception of non-imputability in schizophrenia in adolescents of Mexico City☆

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KEYWORDS
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Abstract
Introduction: Public perception of the not guilty by reason of insanity verdict is influenced the stigma of violence surrounding schizophrenia. Anti-stigma programmes in adolescents can improve attitudes towards patients.
Material and methods: A total of 515 adolescents completed the Public Concept of Aggressiveness Questionnaire (CAQ), which is made up of a brief clinical vignette and specific questions that assess subjective perceptions about aggressiveness and dangerousness as well as the perception of the subject having a mental illness and behaving unpredictably.
Results: More than 50.0% of the sample considered that the patient with schizophrenia was guilty. The unpredictable behaviour was the most important variable associated with not guilty by reason of insanity, followed by the perception of aggressiveness and mental illness.
Conclusions: Fortunately, most adolescents associated not guilty by reason of insanity with the presence of a mental illness. Health promotion programmes in schools might be appropriate to reduce stigma.

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PALABRAS CLAVE
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Inimputabilidad

Percepción de inimputabilidad en esquizofrenia en adolescentes de la Ciudad de México

Resumen
Introducción: La percepción pública de inimputabilidad está influida por el estigma de la violencia que rodea a la esquizofrenia. Los programas antiestigma en adolescentes pueden mejorar las actitudes hacia los pacientes.
Material y métodos: Un total de 515 adolescentes completaron el Cuestionario de Concepción Pública de Agresividad (CPA) compuesto por una viñeta clínica de un paciente con esquizofrenia y preguntas específicas para evaluar la percepción de inimputabilidad, agresividad, peligrosidad, enfermedad mental y comportamiento impredecible.
Resultados: Más del 50% de la muestra consideró que el paciente con esquizofrenia era culpable. El comportamiento impredecible fue la principal variable asociada a la valoración de inimputabilidad, seguida por la percepción de agresividad y enfermedad mental.
Conclusiones: Afortunadamente, la mayoría de los adolescentes asociaron la inimputabilidad con la presencia de una enfermedad mental. Los programas de promoción de la salud en las escuelas podrían ser apropiados para reducir el estigma.

Introduction

The concept of non-imputability has been controversial in the area of psychiatry and law for a long time. Non-imputability is considered when a person accused of a crime is suffering from a mental disorder that interferes with the intention of the act and its desired consequence at the time it was committed. Schizophrenia is one of the principal diagnoses associated with non-imputability,[1] and even when there is no automatic exemption from criminal responsibility exclusively due to a diagnosis, the public perception of non-imputability is influenced by false beliefs that encourage stigma of the disease.

Despite the many advances in the assessment, treatment and information given to the general public, schizophrenia is currently the psychiatric diagnosis most frequently associated with aggression and dangerousness. Thus, pre-existing beliefs about the disease can affect legal proceedings when they are held by juries.[2] In Mexico, a patient's non-imputability is determined by a process of clinical assessments that include the association of psychiatric symptoms with the crime, and the conditions surrounding the illegal act. However, it is possible to believe that, notwithstanding the psychiatrists in charge of assessment, the attitudes of the other participants in the legal proceedings (judges, lawyers, etc.) towards schizophrenia could be affected by connecting a mental illness with the crime, and its perceived relationship with aggression and dangerousness.

Negative beliefs and attitudes towards schizophrenia appear from young ages, and there is evidence that initiatives to combat stigma in schools can improve attitudes towards patients with the condition.[3] Despite the importance of this subject, there is a lack of studies that focus on adolescents, which are essential to condense efforts towards reducing stigma[4] and, in the legal area, ensuring that the management of non-imputability is not affected by erroneous perceptions, entrenched from a young age.

The aim of this study, therefore, was to assess the perception of non-imputability, and its association with the recognition of a mental disease, the perception of aggressiveness, dangerousness and unpredictable behaviour in describing of a person with schizophrenia of adolescents in Mexico City.

Material and methods

This study was approved by the Research Ethics Committees of the Ramón de la Fuente National Institute of Psychiatry, and by the educational authorities of Mexico City where the study was undertaken.

Subjects

A non probabilistic sampling of convenience was undertaken in different state secondary schools in Mexico City, which only included students willing to participate. All the students agreed to participate voluntarily, and anonymously when the aims of the study were explained to them.

Five hundred and fifteen students were included in the study, of whom 51.5% (n = 265) were female, and 48.5% (n = 250) male, between the ages of 12 and 15 years (average age: 13.7 years; SD = 1.05).

Instrument

The Public Conception of Aggressiveness Questionnaire (CAQ)[5] was used for the study, comprising the respondents' identification sheet, a vignette describing a patient with schizophrenia with 5 questions to assess aggressive behaviour. In the end questions were included to assess the perception of non-imputabiity, aggressiveness and dangerousness, and the perception of the subject having a mental illness and behaving unpredictably.

Table 1 Demographic characteristics, aggressiveness, dangerousness and behaving unpredictably according to the perception of non-imputability.

	Total $n = 515$	Guilty $n = 300$	Non-imputable $n = 215$	Statistics
Gender, n (%)				
Male	250 (48.5)	143 (47.7)	107 (49.8)	$\chi^2 = .22$, $p = .63$
Female	265 (51.5)	157 (52.3)	108 (50.2)	
Gender of the person in the vignette, n (%)				
Male	381 (74.0)	222 (74.0)	159 (74.0)	$\chi^2 = 0$, $p = .99$
Female	134 (26.0)	78 (26.0)	56 (26.0)	
Aggressiveness, n (%)				
Not perceived	139 (27.0)	100 (33.3)	39 (18.1)	$\chi^2 = 14.6$, $p < .001$
Perceived	379 (73.0)	200 (66.7)	176 (81.9)	
Dangerousness, n (%)				
Not perceived	259 (50.3)	170 (56.7)	89 (41.4)	$\chi^2 = 11.6$, $p = .001$
Perceived	256 (49.7)	130 (43.3)	126 (58.6)	
Mental illness, n (%)				
Not perceived	180 (35.0)	128 (42.7)	52 (24.2)	$\chi^2 = 18.8$, $p < .001$
Perceived	335 (65.0)	172 (57.3)	163 (75.8)	
Behaving unpredictably, n (%)				
Not perceived	187 (36.3)	141 (47.0)	46 (21.4)	$\chi^2 = 35.5$, $p < .001$
Perceived	328 (63.7)	159 (53.0)	169 (78.6)	

The questions were scored on a Likert-type scale (disagreement–agreement).

The perception of non-imputability was investigated using the following vignette and question:

> ''A person aged 25 started to experience changes in their life a year ago. They thought that the people around them were talking badly about them. This person was also convinced that people were spying on them, and that they could hear what they were thinking. Eventually they were unable to work because of these thoughts, and they spent most of the day shut up in their bedroom. They heard voices even when nobody was there. These voices told them what they had to do, and what they had to think. This person has been living like this for six months''.

> ''If this person were to commit a crime, I would consider them to be a non-imputable person (not guilty of the crime due to their mental faculties''.

Statistical analysis

Descriptive statistics were used for the study variables. The sample was divided into the students that considered the described patient non-imputable, and those who did not consider them non-imputable. The Chi-squared test (χ^2) was used to compare between these groups. A logistical regression analysis was performed with the comparison variables and the consideration of non-imputability as the dependent variable. The level of statistical significance was set at $p < .05$.

Results

According to the item of the CAQ that evaluates the perception of non-imputability, less than 50% of the students (41.7%, $n = 215$) considered that the person described in the vignette was non-imputable, i.e., that they would not be guilty of committing a crime due to their mental faculties.

The perception of non-imputability was similar between the males (49.8%, $n = 107$) and the females (50.2%, $n = 108$) included in the study ($\chi^2 = .2$, df 1, $p = .63$), and almost a third of those who perceived (74%, $n = 159$) and did not perceive non-imputability (74%, $n = 222$) considered that the person described in the vignette was male. The comparisons of the perception of aggressiveness, dangerousness, unpredictable behaviour, and mental disease are shown in Table 1, which were present with less frequency in the group of subjects who perceived non-imputability for the person described in the vignette.

The final logistical regression model included 3 variables as the principal predictors of the prediction of non-imputability. Unpredictable behaviour was the most important variable, it is twice as likely that an adolescent would consider a person who behaves unpredictably, and has the characteristics described in the vignette, would not be guilty if they committed a crime. The second predictive variable was the perception of aggressiveness, followed by the perception of a mental disease (Table 2). The perception of dangerousness was not a predictive variable of non-imputability in the study sample.

Discussion

The findings of this study confirm that patients with schizophrenia frequently suffer social stigmatisation due to

Table 2 Predictors of the perception of non-imputability for schizophrenia in Mexican adolescents.

Perceived variable	β	DE β	Odds ratio	95% CI	p
Behaving unpredictably	89	21	2.44	1.59–3.74	<001
Aggressiveness	59	22	1.81	1.16–2.82	009
Mental illness	56	21	1.76	1.16–2.67	007

SD: standard deviation; CI: confidence intervals.

their potential dangerousness, in that more than half the adolescents considered the person described in the vignette guilty of committing a crime, and that they were an aggressive, dangerous man, who behaved unpredictably and had a mental illness. These perceptions presented despite the fact that violent behaviours were not mentioned in the vignette, and neither was the sex of the person.

The adolescents in this study, like public opinion, link schizophrenia with violence. However, less than 10% of social violence is attributable to schizophrenia, and much of the stigma is due to the continuous exposure of adolescents to digital media that add to the stigmatisation of schizophrenia with their overexposure of isolated cases of patients, generally male, with schizophrenia and who commit a crime.[6] Violence is often inflicted on a close relative or caregiver, but not on strangers, and drug abuse, personality disorders, a history of violence, positive symptoms, disadvantaged backgrounds, a lack of access to services, and discontinuing treatment can increase violent behaviours.[7]

A favourable point of this study is that most of the adolescents associated non-imputability with the recognition of mental illness, acknowledging the rights of patients to be integrated in the community receiving appropriate treatment.[8]

The principal variables associated with non-imputability were behaving unpredictably and aggressiveness, considered a central part of the stereotype formed around schizophrenia. Dangerousness was not associated with non-imputability, reinforcing the stigma towards schizophrenia.

No differences were found in the perception of non-imputabiity between the males and the females. A third of those who perceived and did not perceive non-imputability highlighted that the case in the vignette was a male. This finding indicates an association with the male sex and violent behaviour. It has been reported that males are often charged with homicide, and show more of a predisposition towards violence.[9] In future studies a vignette with the case of a female would help to clarify whether there are differences in the perception of aggressiveness and non-imputability, considering sex a factor that might increase stigma.

The study has certain limitations in that it uses a vignette, which is the best approach for this type of study, but lacks all the clinical information to make an appropriate judgement on non-imputability. The non-probabilistic design enables the data to be generalised, therefore we suggest that a comparative group of adolescents should be included who are participating in an anti-stigma programme, and that other dimensions of stigma should be evaluated, such as negative attitudes towards mental illness.

Considering the limitations, the study provides relevant information to plan a better strategy to combat the stigma of schizophrenia in adolescents with specific health promotion programmes in schools that have shown favourable changes.[10] If the negative attitudes towards schizophrenia among adolescents can be reduced, they could be prevented from becoming adults with stereotypical beliefs about people with mental illness that promote stigma.

Conflict of interests

The authors have no conflicts of interest to declare.

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