



Court-Ordered Forensic Psychiatric Evaluations for Offenders with Schizophrenia with Homicide Charges in Taiwan

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Background: Homicidal offenders with schizophrenia who went through psychiatric evaluations are a small but significant group during a criminal appeal. **Aim:** Our aims are to explore whether the types of crime, such as homicide or not, would be related to the verdicts for the alleged offenders with schizophrenia in Taiwan. Our hypothesis was that homicide cases, rather than other alleged offenses, would be more likely to be regarded as no responsibility (legal insanity) or diminished responsibility for those defendants in the forensic psychiatric evaluation opinions or the court verdicts. **Methods:** A retrospective comparison of the homicide offenders with the nonhomicide offenders with schizophrenia, registered between December 2000 and November 2009, was conducted in the web-based, national, open-access court verdict databank. **Results:** There were 33 (3.4%) in 9691 criminal homicide offenders that had a diagnosis of schizophrenia. There were 33 in the homicide group and 22 in the nonhomicide group. Among these defendants in the homicide group, 3 (9.1%) were regarded as legal insanity, and 21 (63.6%) were regarded as diminished responsibility in comparison to the zero (0%) as legal insanity and nine (40.9%) as diminished responsibility in the nonhomicide group ($P = 0.029$). In addition, the group with multiple evaluations tended to receive forensic psychiatric opinions as legal insanity ($N = 3$; 33.3%), and the group with single evaluation tended to receive forensic psychiatric opinions as diminished responsibility ($N = 16$; 66.67%) ($P = 0.017$). The group with multiple evaluations tended to be ruled as legal insanity in the court ($P = 0.001$). **Conclusion:** Homicide cases would be more likely to be regarded as legal insanity or diminished responsibility for the defendants with schizophrenia in the forensic psychiatric evaluation opinions or the court verdicts.

Key words: Forensic psychiatric evaluation, schizophrenia, insanity defense, homicide charges, Taiwan, criminal court, felony

INTRODUCTION

Homicides are one of the more serious crimes that are frequently referred for psychiatric evaluations and treatments.¹ Only 5%–6.5% of all homicides were committed by people with schizophrenia.^{2–4} However, homicide charges have predominated in the schizophrenic criminal offenders: 53.3% of them were charged with homicide in Taiwan.⁵ In addition, previous studies showed a 6.5–8-fold increase⁶ and 5–18-fold

for homicides in men and women with schizophrenia, respectively.⁷ Nielssen *et al.* found that earlier treatment of first-episode psychosis might prevent some homicides: during the first-episode psychosis, there was an annual rate of 1.59 homicides/1000 (95% confidence interval [CI] = 1.06–2.40), and the annual rate of homicide after treatment for psychosis was 0.11 homicides/1000 patients (95% CI = 0.07–0.16).⁸

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Patients with schizophrenia who were charged with homicides were more likely to be associated with substance use disorders, auditory hallucinations, delusional beliefs, previous history of violence, and family history of crimes in comparison to those with nonhomicide charges,⁹ and they tended to be under the direct influence of substances at the time of the offense,^{4,6} in comparison to offenders without schizophrenia. One study in Australia suggested that the risk of committing a homicide was nearly 28 times more in patients with schizophrenia comorbid with substance use disorder than the general population.¹⁰ Most of the time, the victims were the families from private residences.¹¹ The recidivism rate was high,¹² which was up to 44% of the schizophrenic homicide offenders who were determined legally insane.¹³

Taiwan's criminal court system is an inquisitorial system, in which the judges or prosecuting attorneys could request psychiatric evaluations.^{14,15} Forensic psychiatric evaluations in Taiwan's inquisitorial legal system are court appointed by the judges or the prosecuting attorneys by the criminal offenders before the court proceedings, either with or without the "insanity pleas." The judge or prosecutor could appoint a psychiatrist or a psychiatric team to perform the evaluations.¹⁶ According to the Criminal Code of the Republic of China, the definition of legal insanity is that an offense is "committed by a person who has mental disorder or defects and, as a result, is unable or less able to judge their acts or lack the ability to act according to his judgment." Similar to some other countries,¹⁷⁻²¹ the term of diminished responsibility, or partial criminal responsibility, the definition is an offense committed "as a result of obvious reduction in the ability of judgment."²² For the offender with legal insanity, the court would rule that the offense is not punishable, but for the diminished responsibility, the punishment might be reduced.²²⁻²⁵

In Taiwan, the court would ask the psychiatrists for reporting their opinions on the criminal responsibilities for the offenders. The time between the offense and the requests for the forensic evaluations by the court or prosecuting attorney would be 2–3 months.²⁶ A team composed of two board-certified psychiatrists, or sometimes a senior psychiatric resident under the supervision of a board-certified psychiatrist, often teamed by one clinical psychologist, is appointed by the courts to perform psychiatric diagnostic interviews, mental and physical examinations, psychological assessments, routine laboratory work-ups, and sometimes, brain imaging studies.¹⁶ The forensic psychiatric evaluations would also include the need for the mandatory treatment of those defendants, and in the final verdicts, the judges would rule these treatments with the references from the opinions of the psychiatrists.^{5,23-25,27-30}

Studies regarding the criminal responsibilities of homicide offenders with specific psychiatric diagnosis such as schizophrenia were rare. We hypothesize that homicide cases, rather than other alleged offenses, would be more likely to be regarded as no responsibility or diminished responsibility for the defendants with schizophrenia in the forensic psychiatric evaluation opinions or the court verdicts. Therefore, this study aims to compare the criminal responsibilities, as well as further clinical management, between the homicide and nonhomicide schizophrenic offenders.

MATERIALS AND METHODS

Study design

This retrospective study was conducted to test the hypothesis as to whether the homicide cases, rather than other alleged offenses, would be more likely to be regarded as no responsibility or diminished responsibility for the defendants with schizophrenia in the forensic psychiatric evaluation opinions or the court verdicts.

Data sources

Full copies of the court verdicts were obtained by reviewing the publicly available judicial decision documents retrieved from the document bank setup and maintained by the Judicial Yuan in Taiwan from 2000 to 2009.³¹ A computerized screening was used to search for the criminal verdicts with the keywords "schizophrenia plus forensic psychiatric evaluation," with or without homicides. The reviewing of each verdict was conducted by two forensic psychiatrists, one neurologist, and one clinical psychologist from the author team. The purpose was to look for criminals with schizophrenia and also those with the results of the forensic evaluations mentioned in the verdict. There were 55 defendants with schizophrenia confirmed by the researchers, who had received the psychiatric evaluations, from the 4484 verdicts with forensic evaluations in the database. The same case that went through multiple evaluations during the appeal process or mentioned in different verdicts could easily be noted through the system and calculated as one single data. A computerized screening was used to search for the criminal verdicts with the keyword "homicides" from December 2000 to November 2009, and 9691 hits were recorded.

Definitions of terms

In Taiwan, the misdemeanor, or nonfelony crimes, are those with a sentence of <3 years, including burglary, injury, and chemical abuse, and the felony are crimes with a sentence of more than 3 years, including murder, serious harm, robbery, rape, and aggravated assaults.³²

Furthermore, forensic experts are free to express their opinions about the ultimate issue, the criminal responsibility at the offense, according to their expertise, as aforementioned. However, judges hold the final decision on the ultimate issue. The court accepts the forensic psychiatric opinions, while the judge's final decision is concord with the forensic psychiatric opinions.^{5,29,33,34}

Ethical approval

This study was conducted in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki). The Institute Review Board of the Tri-Service General Hospital approved this study (No. 2-102-05-044).

Measurements

All individuals included in the study were identified as patients with schizophrenia, using the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR) criteria, as well as other comorbid psychiatric disorders on the written sentence databank.³⁵ A full forensic psychiatric examination in Taiwan often includes psychiatric interviews, physical and neurologic examinations, mental status and psychological evaluations, electroencephalography, and, if indicated, neuroimaging tests.

Statistical analysis

All the schizophrenic criminal offenders were categorized according to type of offences as those with homicide charges and those with nonhomicide ones [Table 1]. Among those with homicide charges, there were people committed and those who attempted homicide as well as those who went through repeated evaluations and those who had single evaluation. We further categorized them [Tables 2 and 3]. There were no significant differences in gender, diagnosis, forensic psychiatric opinions, the court decision on legal responsibility, hospitals for the forensic psychiatric evaluations, the judges' acceptance of the forensic psychiatrists' opinions on legal responsibility, and further treatment or correction after the penalty between two groups. Furthermore, during the analysis, we divided our cases by the times of evaluation, with the statistical significance set at $P < 0.05$.

RESULTS

In the study period, there were 2,108,434 criminal court sentences in the databank. In all these criminal cases, there were 5136 (0.2%) defendants with schizophrenia. In addition, there were 44,490 criminal court cases of homicides. In all these homicide cases, there were only 689 (1.5%) homicide defendants that had been diagnosed with schizophrenia. Among the 9691 homicide evaluatees, there were 3.4% that had a diagnosis of schizophrenia.

In the homicide group, nine were charged as attempted homicide. Demographic data as well as other characteristics during the legal appeal are listed in Table 1. Males were predominant in both groups. The crimes committed were mostly felony, for example, robbery, in the nonhomicide groups. Among all the subjects, about 30% were recorded with comorbidities, which were substance use disorder (18.2% for both groups), organic mental disorder, or a history of traumatic brain injury (6.1% and 4.6% for the homicide and nonhomicide groups). Two were comorbid with antisocial personality disorder in the homicide groups. Three cases were evaluated not only for their insanity plea but also for their competency to stand trial.

Among these defendants, 27.3% in the homicide group and 59.1% in the nonhomicide group were ruled as being criminally responsible, while 63.6% in the homicide group and 40.9% in the nonhomicide group were sentenced with diminished responsibility. In the homicide group, only 9.1% was regarded as legal insanity in the forensic psychiatric opinions. In the present study, the judges accepted most of the expert's opinions: 93.9% in the homicide group and 86.4% in the nonhomicide group. In addition, 27.3% in the homicide group and 9.1% in the nonhomicide group received multiple (≥ 2) evaluations. Most of the forensic psychiatric evaluations were performed in regional hospitals. In the forensic psychiatric expert opinions, 9.1% of the homicide group was considered as no responsibility (legal insanity) and 63.6% of the homicide group was considered as diminished responsibility. Nonetheless, none of the nonhomicide group was regarded as no responsibility and 40.9% was considered as diminished responsibility. The difference between these groups is significant ($P = 0.029$). In the court verdicts, 48.5% in the homicide group and 4% of the nonhomicide group were sentenced to receive the mandatory treatment, and the difference is statistically significant ($P = 0.014$) [Table 1]. For those who committed and attempted homicide, there were no significances found for all the characteristics mentioned above [Table 2].

Those who received multiple evaluations (9 out of 33 schizophrenic homicide defendants) showed distinct characters: more cases with psychiatric opinions as no responsibility or diminished responsibility were noted ($P < 0.001$), and there was a trend toward receiving a sentence of no responsibility for their crime for the group that went through repeated examinations ($P = 0.017$) [Table 3]. Table 4 demonstrates the time between the crime committed and the forensic evaluation as 349.84 (standard deviation [SD] ± 271.87) days.

DISCUSSION

There are several noteworthy findings in the study: first, this study is the first to analyze the characters of the

Table 1: Characteristics between offenders with schizophrenia in homicide and nonhomicide groups

	Homicides (<i>n</i> =33), <i>n</i> (%)	Nonhomicide (<i>n</i> =22), <i>n</i> (%)	<i>P</i> ^a
Sex			
Male	31 (93.9)	20 (90.9)	1.000
Female	2 (6.1)	2 (9.1)	
Types of offense			
Homicide	24 (72.7)	-	-
Attempted homicide	9 (27.3)	-	
Felony	-	20 (90.9)	2 (9.1)
Not felony	-	2 (9.1)	
Comorbidity			
N/A	21 (63.6)	17 (77.3)	0.900
Substance use disorder	6 (18.2)	4 (18.2)	
Organic mental disorder	2 (6.1)	1 (4.6)	
Personality disorder	2 (6.1)	0	
Substance use disorder + organic mental disorder	1 (3.0)	0	
Substance use disorder + personality disorder	1 (3.0)	0	
Responsibility			
No responsibility (legal insanity)	3 (9.1)	0	0.029*
Diminished responsibility	21 (63.6)	9 (40.91)	
Full responsibility	9 (27.3)	13 (59.09)	
Concordance [†]			
No responsibility (legal insanity)	3 (9.1)	1 (4.6)	0.197
Diminished responsibility	20 (60.6)	11 (50.0)	
Full responsibility	7 (21.2)	10 (45.5)	
Not concordant	3 (9.1)	0	0.379
Concordance rate [‡]	31 (93.9)	19 (86.4)	
Times of evaluation			
Single	24 (72.7)	20 (90.9)	0.168
Multiple (≥2 evaluations)	9 (27.3)	2 (9.1)	
Mandatory treatment			
No	15 (45.5)	18 (81.2)	0.014*
Yes	16 (48.5)	4 (18.2)	
Not mentioned	2 (6.1)	0	
Organization [‡]			
Medical center	15 (32.1)	5 (20.8)	0.576
Regional hospital	28 (60.9)	18 (75.0)	
Local hospital	3 (6.5)	1 (4.2)	

^aChi-square test or Fisher's exact test; **P*<0.05; [†]concordance between psychiatric opinions and the court verdicts; [‡]some cases receive multiple evaluations in different levels of hospitals. N/A=Not available

forensic psychiatric evaluated defendants with a diagnosis of schizophrenia in Taiwan from a web-based, open-accessed court sentence databank. Similar to several previous reports documenting the concordance between the insanity defenses and the professional opinions,^{5,29,33} the present study also found

a high concordance rate between the forensic psychiatric opinions and the court verdicts. In the present study, 60% of the schizophrenic criminal offenders were charged with the major crimes of homicide, which is consistent with previous report.⁵ In addition, 33 (3.4%) evaluatees in 9691

Table 2: Difference between homicide and attempted homicide groups

	Homicides (<i>n</i> =24), <i>n</i> (%)	Attempted homicides (<i>n</i> =10), <i>n</i> (%)	<i>P</i> ^a
Sex			
Male	23 (95.8)	8 (88.9)	0.477
Female	1 (4.2)	1 (11.1)	
Comorbidity			
N/A	15 (62.5)	6 (66.7)	0.798
Substance use disorder	5 (20.8)	1 (11.1)	
Organicity mental disorder	1 (4.2)	1 (11.1)	
Personality disorder	1 (4.2)	1 (11.1)	
Substance use disorder + organic mental disorder	1 (4.2)	1 (11.1)	
Substance use disorder + personality disorder	1 (4.2)	0	
Responsibility			
No responsibility (legal insanity)	2 (8.33)	1 (11.1)	0.065
Diminished responsibility	18 (75.0)	3 (33.3)	
Full responsibility	4 (16.7)	5 (55.6)	
Concordance [†]			
No responsibility (legal insanity)	2 (8.3)	1 (11.1)	0.734
Diminished responsibility	15 (62.5)	5 (55.6)	
Full responsibility	4 (16.7)	3 (33.3)	
Not concordant	3 (12.5)	0	
Concordance rate [†]	24 (100.0)	7 (77.8)	0.068
Times of evaluation			
Single	16 (66.7)	8 (88.9)	0.384
≥Multiple (≥2 evaluations)	8 (33.3)	1 (11.1)	
Mandatory treatment			
No	9 (37.5)	6 (66.7)	0.290
Yes	13 (54.7)	3 (33.3)	
Not mentioned	2 (8.3)	0	
Organizations [‡]	<i>n</i> =36	<i>n</i> =10	
Medical center	14 (38.9)	1 (10.0)	0.228
Regional hospital	20 (55.6)	8 (80.0)	
Local hospital	2 (5.6)	1 (10.0)	

^aChi-square test or Fisher's exact test; **P*<0.05; [†]concordance between psychiatric opinions and the court verdicts; [‡]some cases receive multiple evaluations in different levels of hospitals. N/A=Not available

criminal homicide evaluatees had a diagnosis of schizophrenia, which is close to the findings in the previous reports being 5%–6.5%.²⁻⁴

Second, in the present study, the time between the crime committed and the forensic evaluations would be 349.84 (SD ± 271.87) days, which is far more than one previous study has had reported that at the court would request the psychiatric evaluations least 2–3 months, or even more after the criminal offenses.²⁶ This might well be the first study regarding the time between the crime committed and the forensic evaluations. Furthermore, there were three cases that

had received different professional opinions during the repeated evaluations, and all were charged with homicides. Limited reports were found about the consistency of professional opinions. One study in Poland found that 68 out of 117 criminal defendants had more than one forensic psychiatric evaluation. In addition, the initial criminal responsibility assessment was changed after a subsequent forensic evaluation in 47% of the cases containing more than one assessment.³⁶ There is a clear need for further research into the reliability of repeated forensic psychiatric evaluations in the criminal responsibility assessments.

Table 3: Difference between offenders with homicides who received one or more than one evaluation

	Single evaluations (<i>n</i> =24), <i>n</i> (%)	Multiple evaluations (<i>n</i> =9), <i>n</i> (%)	<i>P</i> ^a
Sex			
Male	23 (95.8)	8 (88.9)	0.477
Female	1 (4.2)	1 (11.1)	
Comorbidity			
N/A	16 (66.7)	5 (55.6)	0.246
Substance	5 (20.8)	1 (11.1)	
Organicity mental disorder	1 (4.2)	1 (11.1)	
Personality disorder	2 (8.3)	0	
Substance use disorder + organic mental disorder	0	1 (11.1)	
Substance use disorder + personality disorder	0	1 (11.1)	
Responsibility			
No responsibility (legal insanity)	0	3 (33.3)	0.017*
Diminished responsibility	16 (66.7)	5 (55.6)	
Full responsibility	8 (33.3)	1 (11.1)	
Concordance [†]			
No responsibility (legal insanity)	0	3 (33.3)	<0.001***
Diminished responsibility	18 (75.0)	2 (22.2)	
Full responsibility	6 (25.0)	1 (11.1)	
Not concordant	0	3 (33.3)	
Concordance rate [‡]	22 (91.7)	9 (100.0)	1.000
Types of offenses			
Homicide	18 (69.2)	8 (88.9)	0.391
Attempted homicide	8 (30.8)	1 (11.1)	
Mandatory treatment			
No	11 (45.8)	4 (44.4)	1.000
Yes	11 (45.8)	5 (55.6)	
No but mentioned	2 (8.3)	0	
Organizations [§]			
Medical center	5 (20.8)	10 (45.5)	0.232
Regional hospital	17 (70.8)	11 (50.0)	
Local hospital	2 (8.3)	1 (4.6)	

^aChi-square test or Fisher's exact test; **P*<0.05; ****P*<0.001; [†]concordance between psychiatric opinions and the court verdicts; [‡]some cases receive multiple evaluations in different levels of hospitals. N/A=Not available

Table 4: Time between the crime committed and the forensic evaluation (*n*=44)

	Minimum	Middle	Maximum	Mean±SD
Days	97	256	1435	349.84±271.87

Missing data: 11. SD=Standard deviation

Third, about 40% of the subjects were sentenced to receive mandatory treatment. To the best of our knowledge, this is the first study about the rates of the ruling of mandatory treatment for the evaluatees with schizophrenia with homicide charge.

One previous study in Taiwan has reported that 57.1% of all of the offenders and 24.6% of the legal insanity and diminished responsibility offenders were sentenced to receive mandatory psychiatric treatment, for all of the psychiatric disorders.³⁷ Most of the mandatory treatments are provided by the general hospitals with psychiatric services, mental hospitals, and psychiatric clinics; in addition, these facilities are contracted to provide scheduled visits or hospitalizations to the offenders, with the court or prosecutors' office rulings,^{24,38,39} instead of government-sponsored, professional forensic mental hospitals.

Fourth, the schizophrenic offenders with homicide charge were associated with substance use disorder, organic mental disorder, or a history of traumatic brain injury. Previous reports have shown that psychotic disorders are associated with criminal acts such as violence or homicides.^{6,7,40,41} In addition, evolving diagnostic criteria, comorbid substance use, or antisocial personality trait, and being charged with illegal weapon possession, might also greatly influence the processes and results of an insanity plea and forensic evaluations.⁶ Further studies are needed to investigate the association between comorbidity and other factors and the homicide charged in offenders with schizophrenia.

Fifth, there is no significant relationship between the charges and the psychiatric diagnosis in the forensic evaluation opinion, even though we have found three cases with sentences as legal insanity. The reports varied regarding the relationship between the criminal charges and the professional opinions on insanity defense or competency to stand trial.⁴²⁻⁴⁵ Several reports have found that the graveness of criminal charges is correlated with criminal responsibility,^{1,46,47} and one study about pretrial evaluations stated that the psychiatric diagnoses, rather than the severity of the criminal charges, influenced more on the clinical judgments of responsibility.¹ Warren *et al.* also agreed that the defendants' types of diagnosis override the types of offenses in predicting an opinion of insanity. For example, a more serious mental disorder, absence of Axis II diagnosis or substance use, previous psychiatric hospitalizations, and not being influenced by drugs at the time of the offense, might have had a more positive relationship with opinions of insanity.⁴⁶ Further research is needed to investigate the relationship among the defendants' psychiatric diagnosis, types of offenses, and criminal responsibility in Taiwan.

Sixth, there were 33 (3.4%) homicide evaluatees with schizophrenia from a total of 9691 homicide evaluatees. This seems to be an over-representation when compared to the prevalence of schizophrenia. However, there were only 689 (1.5%) homicide defendants that had been diagnosed with schizophrenia, with or without forensic psychiatric evaluations. This finding depicts that the rate of patients with schizophrenia in all the homicide population is slightly higher or similar to the prevalence of schizophrenia in Taiwan's population as 0.3%–0.6%.⁴⁸ In addition, the rate of schizophrenia in the homicide offenders is lower than the rates of homicides offenders with schizophrenia as 5%–6.5% of all homicides.²⁻⁴

There are several limitations in this study. First, some demographic information was not included in the public databank, such as gender, exact age, level of education, and occupation, according to the web-based databank's policy on the protection of privacy. Second, some verdict documents were not released due to the administrative omission or

concerns for protection of privacy or vulnerable groups. Third, the population in this study may not represent all the psychiatric criminal cases, since most insanity determinations were made by the judges and only 33.8% were accorded with psychiatric evaluations, according to a previous report.⁴⁹ Fourth, the number of nonhomicide group that had a diagnosis of schizophrenia ($N=22$) was less than the number of homicide offenders that had the same diagnosis ($N=33$) in the databank. The reasons for this discrepancy are yet to be clarified. We speculated that some of the attorney might deter the prosecutions for the minor crimes. Fifth, the text of the Article 19 of the Criminal Code of the Republic of China (Taiwan) has been revised on February 2, 2005, and enacted on July 1, 2006, from the former text as "An act committed by a person who is insane is not punishable" and "Punishment may be reduced for an act committed by a person who is feeble-minded,"⁵⁰ to the current one as aforementioned. We have not analyzed the difference before and after the revision since the analysis of the total numbers of all the subjects ($N=55$) might be impractical. In addition, one previous article has found that there were no differences on the ruling of mandate treatment for the offenders with substance abuse before and after the revision of the article for the legal responsibility.²⁴

Furthermore, the present study contained only homicides by people with schizophrenia between December 2000 and November 2009. This limitation is not used for the fact that the study was conducted between 2002 and 2003. Therefore, a further study is needed to investigate the forensic evaluations for homicides in the patients with schizophrenia after 2003 by using the recent data.

CONCLUSION

Of all the homicide offenders, those who were diagnosed with schizophrenia consisted of a small but significant part. The schizophrenic offenders with homicide charge tend to be ruled legal insanity more than those with other charges. Homicide cases would be more likely to be regarded as legal insanity or diminished responsibility for the defendants with schizophrenia in the forensic psychiatric evaluation opinions or the court verdicts.

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Availability of data and material

The datasets used and/or analyzed during the current study are available on reasonable request (<https://law.judicial.gov.tw/FJUD/default.aspx>).

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Conflicts of interest

There are no conflicts of interest.

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