

Forensic Evaluations for Offenders With Dementia in Taiwan's Criminal Courts

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Dementia is an increasing world-wide health problem, and the association between dementia and adjudication of crimes has rarely been studied. The data in this study are described and analyzed by gender, psychiatric diagnosis, type of crime, and the acceptance rate by the courts of opinions tendered by forensic psychiatric examiners. The source data are derived from the databank of the Judicial Yuan (Judicial Department) of the Republic of China Law and Regulations Retrieval System. There was a male predominance of 85.1 percent. Larceny (42.6%) was the most frequent crime. There was also a high judicial acceptance rate of 91.5 percent of the professional opinions received from forensic psychiatric evaluators who examined defendants at the request of the courts. Psychiatrists play an important role in providing their professional opinions for the Taiwanese courts with regard to adjudication of evaluatees with dementia. Most courts accepted psychiatrists' professional opinions about offenders with dementia, and the rate of acceptance was reflected in the judicial rulings of criminal responsibility.

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Dementia is an increasing worldwide public health problem with a current prevalence that ranges from 5 to 10 percent in Europe and the United States in

people older than 65 years. In Taiwan, the prevalence rate of dementia in elderly people ranges from 1.7 to 5.1 percent.^{1–5} A study in 2013 showed that the prevalence of all causes of dementia in Taiwanese aged >65 was 5.40 percent^{2–5}; the lower incidence in previous studies may be caused by under-reported mild dementia.⁴ Furthermore, the lower prevalence rate may be caused by a higher mortality rate in Taiwanese patients with dementia^{6,7} and a low prevalence of the apolipoprotein E (APO)-E4 allele in Taiwanese.^{4,8} Even in those treated with cognitive enhancers, such as acetylcholinesterase inhibitors or an *N*-methyl-D-aspartate (NMDA) receptor antagonist, cognitive declines, and behavioral and psychological symptoms remained a heavy burden for patients with dementia and their caregivers.^{4,9,10} Some studies have shown that the behavioral disturbances

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of dementia are related to criminal behavior in this population.^{11–13} However, there are few studies of forensic evaluations of persons with dementia, and most of those studies are concerned with the testamentary capacities of geriatric offenders with dementia,^{14–16} risk of violence or development of other criminal behaviors,^{17–19} failure to comply with standards of ethical behavior,²⁰ competency to stand trial,^{21,22} or those who are victims of criminal behavior, such as abuse and neglect.^{23–25} Studies of criminal responsibility exclusively in offenders with dementia are limited.^{16,26}

Elderly individuals are less likely to be arrested for charges of petty crimes or felonies than their younger counterparts.^{18,27,28} However, the number of elderly who have been arrested and incarcerated has risen over the past 20 years.^{18,29} At least half of these elderly prisoners and forensic evaluatees have been diagnosed with a mental disorder. Other studies have shown that up to 80 percent have had psychiatric hospitalizations, and dementia is a common diagnosis.^{18,30} There is also growing attention to the violent tendencies of offenders, the need for psychiatric care in institutions, and the difficulty in restoring elderly offenders with dementia to competency.^{18,21} Furthermore, as mentioned, several studies have found that offenders with dementia are at risk to become victims of criminal acts,^{23–25} and in some cases, they become victims of homicides committed by their exhausted caregivers.³¹ Very few studies of forensic evaluations are directly related to evaluatees with dementia who are also victims of crimes.

Unlike forensic evaluations in common law, forensic psychiatric evaluations that occur in Taiwan's legal system are requested by court-appointed judges or prosecuting attorneys after the trial begins.³² Offenders, their guardians, or lawyers for defendants, can make a request for a forensic psychiatric evaluation, based on any suspicion of previously documented cognitive impairments or psychopathology, present with or without insanity pleas.^{11,32} A forensic psychiatrist, a team of at least two board-certified forensic psychiatrists, or a third- or fourth-year psychiatry resident supervised by a senior board-certified psychiatrist can be appointed by the court to perform the evaluations.^{33–35} These assessments may be conducted on an inpatient or an outpatient basis. A full psychiatric examination may include a psychiatric interview, physical examination, neurologic examination, mental status evaluation, psychological

evaluation, and electroencephalographic or neuroimaging tests. The report is then sent to the court as an official document.³⁶ This procedure is similar to other forensic psychiatric evaluations in Taiwan, and the courts frequently request that forensic psychiatrists provide professional opinions regarding an offender's criminal responsibility. However, judges have the final authority to accept or reject forensic psychiatrists' professional opinions when ruling on offenders' criminal responsibility.^{33,35,36} After 2003, the cross-examination of court appointed psychiatrists was adopted from the Taiwanese adversarial system. Nevertheless, forensic evaluations are still court-appointed in most criminal cases, and the judge decides whether the attorneys of either side may cross-examine the psychiatrist as an expert witness.³⁷ Notwithstanding several published studies related to capacity to stand trial of offenders with dementia,^{11,12,17,18,21,22} court-appointed forensic evaluations in Taiwan are generally performed to determine the offender's responsibility, but very few are performed to determine the mental condition of the victim, or the offender's ability to stand trial or other mental capabilities, even if an incapacity could be related to a dementing or nondementing mental disorder.^{26,32,34,35,38}

According to the Criminal Code of the Republic of China, the legal definition of insanity is that an offense is "committed by a person who has a mental disorder or defect and, as a result, is unable or less able to judge his act or lacks the ability to act according to his judgment." Similar to other countries,^{39–43} the term of diminished responsibility or partial criminal responsibility is the definition of an offense committed "as a result of an obvious reduction in the ability of judgment" (Ref. 44, p 46). If there is a finding of legal insanity, the offense is not punishable, and with a finding of diminished responsibility, the punishment may be reduced.⁴⁴ As mentioned earlier, the courts frequently request forensic psychiatrists to provide professional opinions about the offender's criminal responsibility, even though the judges have the final authority to accept or reject the forensic psychiatrists' professional opinions on the matter of criminal responsibility.^{33,35,36}

There are limited published reports and studies on gender, types of crimes, types of dementia, and the acceptance rates of the forensic evaluations in other jurisdictions. We therefore performed this study to determine the gender of the offender, types of crimes,

and types of dementia presenting in Taiwan's criminal courts. Furthermore, we hoped to learn whether the courts generally accept the forensic psychiatric opinions in forensic reports.

Methods

Settings and Study Design

We obtained and reviewed cases from the Judicial Yuan (Judicial Department) of the Republic of China Law and Regulations Retrieval System, an open-access, web-based government database storing all levels of court verdicts beginning at the year 2000.⁴⁵ We then analyzed those offenders diagnosed with dementia, for their gender, dementia types, and the types of crimes committed. The Judicial Yuan is one of the five departments of the central government of the Republic of China (Taiwan) and serves as the highest judicial organ that supervises all levels of the courts.^{46,47} A computerized screening was used to search for criminal verdicts with the search terms "dementia" and "forensic psychiatric evaluation" from December 2000 through November 2009. There were 47 offenders who had a diagnosis of dementia mentioned in their verdicts. These evaluations were provided by fully trained and licensed clinical psychiatrists, whose names were found within the texts of the criminal court verdicts.

All legal texts were reviewed, and the specific causes of dementia were classified accordingly. The gender of the patient was mostly determined by a mentions in the text that the patient had a husband or a wife, or through other descriptions in the text. However, in some cases, it was not possible to determine gender.

Statistical Methods

Descriptive results of the subtypes of dementia and the types of crime or criminal responsibilities were expressed as frequency (percentage of total dementia cases). The characteristics of differences between the subtypes of dementia and the types of crime or criminal responsibilities were compared and tested for significant differences with either the Chi-square test or Fisher's exact test, as appropriate. The Statistical Package for Social Sciences version 19.0 (SPSS, Inc., Chicago, IL, USA) was used for all analyses. Differences reaching $p < .05$ were considered statistically significant.

Table 1 Offenders and Types of Dementia

Offenders	<i>n</i> (%)
Gender	
Male	40 (85.1)
Female	4 (8.5)
Unknown	3 (6.4)
Dementia type	
Senile	15 (31.9)
Organic (traumatic)	11 (23.4)
Organic (nontraumatic)	9 (19.1)
Vascular	9 (19.1)
Unknown	3 (6.4)

N = 47.

Ethics

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 the study (No. 2-102-05-044).

Results

Of 4,484 verdicts that had forensic psychiatric evaluations documented, only 47 (1.04%) offenders with dementia also received psychiatric evaluations in criminal courts from 2000 through 2009. The demographic data and clinical characteristics are displayed in Table 1. The reasons for evaluation were mostly for criminal responsibility (defendant's mental status during the criminal event), with only six defendants referred for determination of competency to stand trial. The offenses involved were classified as offenses against persons, property, and society (Table 2), and larceny (42.6%) was the most mentioned. There were no statistically significant differences between the subtypes of dementia and the types of crime ($p = .324$).

Regarding criminal responsibility (Table 3), 91.5 percent were sentenced with the consideration of diminished responsibility or lack of responsibility (legal insanity). The professional opinions taken from the psychiatric evaluations were accepted by the courts in most cases. Only three defendants were found to have diminished responsibility in the professional opinions of the forensic examiners, and they were sentenced by the judges as having full responsibility. There were no statistically significant differences between the subtypes of dementia and criminal responsibility ($p = .614$).

Upon sentencing, six offenders (17.9%) with court verdicts of lack of or diminished responsibility

Court-Ordered Evaluations of Offenders With Dementia in Taiwan

Table 2 Types of Offenses Committed by Offenders With Dementia

Subtypes of Dementia Type of Offenses	<i>n</i> (%)	A (<i>n</i> = 9)	B (<i>n</i> = 11)	C (<i>n</i> = 9)	D (<i>n</i> = 3)	Q (<i>n</i> = 15)	<i>p</i>
Offenses against the persons	17 (36.2)	2 (22.22)	3 (27.27)	4 (44.44)	0 (0)	8 (53.33)	
Homicide/manslaughter	4/2 (12.8)						
Attempted homicide	4 (8.5)						
Assault or battery (sexual)	3 (6.4)						
Intimidation	2 (4.3)						
Malicious prosecution	1 (2.1)						
Violation of protection order	1 (2.1)						
Offenses against property	25 (53.2)	6 (66.67)	6 (54.55)	3 (33.33)	3 (100)	7 (46.67)	
Larceny	20 (42.6)						
Robbery	3 (6.4)						
Fraud	2 (4.3)						
Offenses against society	5 (10.6)	1 (11.11)	2 (18.18)	2 (22.22)	0 (0)	0 (0)	
Possession of a firearm/concealed weapon	2 (4.3)						
Offenses against public safety	1 (2.1)						
Forgery	1 (2.1)						
Corruption	1 (2.1)						

N = 47. Data are number of incidents (percentage of total incidents). A, vascular; B, organic (traumatic); C, organic (nontraumatic); D, unknown; Q, senile.

were committed to court-ordered mandatory psychiatric treatment. Judges ruled in this manner because they believed that the circumstances of their offenses were sufficient to raise concerns of recidivism which would place the public at risk. There were an additional two evaluatees already in rehabilitation facilities. However, the follow-up data from the outcomes of the six offenders who were committed to mandatory treatment were not available.

Discussion

This study may be the first to focus solely on psychiatric forensic evaluations of the elderly with dementia in the criminal courts in Taiwan. However, the sample size is small. In Taiwan, several studies have reported on criminal offenders who have had forensic psychiatric evaluations. Those with dementia or organic brain syndromes accounted for 4 to 11.3 percent.^{32–38} The present study revealed that 1.04 percent (47 of 4,484) of all psychiatric evaluatees had dementia. A Swedish study of court-ordered evaluations for criminal offenders showed that only

0.3 percent had dementia.⁴⁸ Higher rates of dementia were found in evaluations of the elderly: 7.1 percent for those aged >60 and 8.7 percent for those aged >65.⁴⁸ In a U.S. study,¹⁸ 44.4 percent of those >60 years of age had dementia, whereas the rate was 30 percent for a similar aged cohort in Israel.⁷ These findings may be related to the increased life span in Western society and thus to the increased population with dementia, as well. The offender group was larger than the victim group in this study.

There was a male predominance in our group, with a male-to-female ratio of 10. Other reports from Taiwan showed male-to-female ratios of 4.17:4.68⁴⁹ and 66.3 percent,⁵⁰ 80.7 percent,⁴⁹ and 82.4 percent³⁸ were male evaluatees for all psychiatric evaluations of criminal offenders, despite the small sample sizes. An increase in the male proportion of the evaluatees over the years was mentioned in one Taiwanese study.³⁸ Research performed in other countries has found a high rate of male predominance in elderly evaluatees with dementia who engaged in criminal behavior: 87.9 percent¹⁸ and 63.1 percent¹² respec-

Table 3 Criminal Responsibility in Offenders With Dementia

Criminal Responsibility	Forensic Psychiatrists' Professional Opinions <i>n</i> (%)	Court Verdicts <i>n</i> (%)	<i>p</i>	Acceptance Rate <i>n</i> (%)
Full responsibility	4 (8.5)	7 (14.9)	0.614	43/47 (91.5%)
Partial responsibility	30 (63.8)	27 (57.5)		
Lack of responsibility	13 (27.7)	13 (27.6)		

N = 47. Data are the number of opinions (percentage of the entire group).

tively. A possible explanation for the preponderance of males is that more elderly males are arrested for violent offenses,⁵¹ and thus they may be referred for forensic evaluations. Unfortunately, the age of those evaluated from the public databank in this study were not revealed for reasons of confidentiality. Nonetheless, one study showed that the average age for traumatic or other nonsenile dementia is older (mixed type, 77.1 ± 5.6 years; vascular type, 74.2 ± 5.7 years; and other types, 73.7 ± 5.0 years).¹

The subtype of dementia in previous reports is predominantly degenerative, which varies somewhat from an Israeli study of 17 criminal offenders with dementia that showed variable types: 9 unspecified, 5 senile, 2 alcoholic, and 1 arteriosclerotic.¹¹

Criminal behavior varied among different dementia types. For example, offenders with a behavioral variant of frontotemporal dementia, committed more thefts, traffic violations, sexual advances, trespassing, and public urination, in contrast to those with Alzheimer dementia, who commonly committed traffic violations that were often related to cognitive impairment.¹² Assaultive behavior is one of the most disturbing behaviors to the caregivers of patients with dementia,⁵² and previous studies of crimes committed by offenders with dementia showed that the risk of developing violent criminal behavior is influenced by environmental factors,⁵³ possession of firearms,⁵⁴ and the variation among types of dementia. As stated, the criminal offense most frequently noted in this present study is larceny. Offenses against property accounted for 50.9 percent versus 54.2 percent in other studies.³² In Sweden, the most frequent offense is assault, accounting for 30 percent of cases.⁴⁸ Few studies have focused on the reasons for these forensic psychiatric evaluations. Criminal courts in Taiwan have the authority to decide whether to refer for forensic psychiatric assessment and whether to accept the opinion of the expert, and they hand down the final sentence. Few studies in Taiwan have focused on the offenses of larceny or theft. One U.S. study of frontotemporal dementia (FTD) found that 14.62 percent of offenders with FTD had been charged with theft.¹²

In Taiwan's Court Justice system, Chen and Chien³² found that, in the years of 1998–1999, only 297 of 168,287 in the offender population were referred for forensic psychiatric evaluation. Furthermore, most of the goals of forensic psychiatric evaluations in Taiwan are for the assessments of the

offenders' criminal responsibility, rather than for competency to stand trial. Few cases were reported involving the competency to stand trial of offenders with or without suspected dementia.^{34,55} Cognitive impairments from dementia in offenders raise the question of their ability to understand what they were accused of, their knowledge of court procedures, and their ability to cooperate with their attorneys. Therefore, it is important that offenders with dementia, or suspected cognitive impairment, be referred for psychiatric evaluation.

Few reports on the ethics of court procedures for dementia were found, but Fazel *et al.*²⁰ concluded that offenders imprisoned with dementia should be considered by the courts for rehabilitation. Moreover, incapacitation could be an alternative for the protection of society in some offenders, but attempts at deterrence of recidivism may not be applicable for offenders with dementia because of their limited cognitive function. The symbolic purpose of imprisonment and retribution in the criminal justice system is to alleviate fears of the general public about offender recidivism rather than for the benefit of the offender. A careful balance in these concerns is not easy, but its pursuit is very important.

The high acceptance rate of forensic psychiatric opinions by the courts (91.5%) is consistent with other Taiwanese studies that noted that 93.94 to 93.9 percent of psychiatric recommendations have been accepted by the court.^{32,49} There were inconsistencies in the court's acceptance of psychiatric opinions that the evaluatees had diminished responsibility for the offenses after a psychiatric evaluation, but some of these cases were later sentenced by the court with full responsibility for an offense. All of them were charged with a felony. These findings suggest that judges are more cautious, or even skeptical, about the professional opinions of psychiatrists regarding responsibility of offenders who commit more severe crimes.⁴⁹ Furthermore, such a high acceptance could also mean that, in our court system, the recommendations in the forensic psychiatric reports are too conservative.

The high acceptance in cases in which defendants are adjudicated not guilty by reason of insanity (NGRI) are consistent with those in other Taiwanese studies.^{32,38,50} This fact may have been because, in the Taiwanese inquisitorial system, even while the case was in progress at the adversarial level, the judges relied greatly on professional opinions. Also during

the appeals process in the continental legal system, the same judicial reliance was observed: that is, the expert's conclusions had a strong medicolegal impact in criminal court.⁵⁶ A discordancy of the court verdict with the results of the psychiatric evaluation occurred in three cases of homicide or manslaughter and one case of larceny. Previous reports suggested that serious criminal offenses, even with prior felony arrests or requiring a court trial, often lead to the court's disagreeing with expert opinions.^{49,57}

Court-ordered mandatory treatments for offenders with court verdicts of lack of responsibility or diminished responsibility could be performed in either a hospital or in a local outpatient mental health clinic. We could not find follow-up data about these treatments, if they occurred. One study found that most court-ordered mandatory treatments occur in outpatient clinics with the offender visiting monthly.³⁸ Therefore, in our opinion, further studies about the outcome of these court-ordered mandatory treatments should be conducted.

This study has limitations. Some basic data were lacking because a public databank was used. Gender, exact age (although senility was relatively obvious when reviewing the verdicts), level of education, and occupation, were unavailable for reasons of confidentiality or were not recorded in the electronic version of the verdicts, according to the web-based databank's policy. In the database of the Republic of China Law and Regulations Retrieval System, the gender, types of dementia and types of crimes of the offenders were included, but the formal severity of the behavioral and psychological symptoms or stages of dementia were not included, even though almost all of the forensic psychiatric evaluations included psychological assessments.^{26,35,37} The population in this study may not represent all the psychiatric criminal cases, since most insanity determinations were made by judges and only 33.75 percent of defendants are referred for psychiatric evaluation, according to a previous report.³²

Conclusion

Our major findings in this study are the following: for criminal offenders with dementia, psychiatrists played an important role in providing professional opinions to the courts. Male gender and offenses such as larceny predominated in offenders who underwent psychiatric evaluations. Types of dementia were not related to offense charged or to judgments

of criminal responsibility. Courts accept most of the psychiatrists' professional opinions in their rulings regarding criminal responsibility. The rulings were predominately for legal insanity or diminished responsibility. Further outcome studies about court-ordered mandatory treatments for dementia evaluatees are needed.

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