

**Public Attitudes towards Offenders with Mental Illness scale (PATOMI): Establishing a valid tool to  
measure public perceptions**

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**Public Attitudes towards Offenders with Mental Illness scale (PATOMI): Establishing a valid tool to measure public perceptions**

*Abstract*

**Purpose:** This paper focuses on investigating public attitudes towards mentally disordered offenders (MDOs), by considering if the Police and Community Attitudes towards Offenders with Mental Illness (PACAMI-O; Glendinning and O’Keeffe, 2015) is a valid tool.

**Design/Methodology:** An opportunity sample of the general public (N=504) read a fictional vignette depicting an individual with schizophrenia, then answered the PACAMI-O.

**Findings:** An exploratory factor analysis revealed a 4 factor solution: Social distance & location of Services, Mental Health Spending, Attitudes towards Psychiatric Facilities and Community Acceptance. The results suggested that 12 items in the PACAMI-O did not contribute towards measuring public attitudes.

**Practical implications:** Therefore 28 items were retained for the new, more concise, valid scale; Public Attitudes towards Offenders with Mental Illness (PATOMI).

**Originality/Value:** PATOMI can be used in future research to effectively assess public attitudes. Application, limitations and suggestions for future research are discussed.

*Keywords: Mental Health, Illness, Offenders, PACAMI-O, Attitudes*

*Paper Type: Brief Report*

***Introduction***

One must remember that not all mentally ill persons are dangerous and not all dangerous persons are mentally ill (Prins, 1986). The idea that individuals who are mentally ill are potentially dangerous has been noted in writings throughout history, leading to the casual development of stigma and negative public attitudes (Blackburn, 1995; Angermeyer & Matschinger, 2003; Corrigan & Shapiro, 2010). This association between mental illness and dangerous behaviour, is possibly the number one concern of the public (Hinshaw, 2007; Ewins, 1976). Research has found that the public often overestimate the risk posed by offenders with mental illness and attribute a higher level of dangerousness and greater likelihood of violent to this population (Angermeyer & Dietrich, 2006; Stier & Hinshaw, 2007). It is predicted that around 5% of violent offences annually, are committed by offenders with mental illness (Fazel, Gulati, Linsell, Geddes & Grann, 2009). The publics overestimation of risk and dangerousness can lead to a greater need for social distance and desire to exclude forensic mental health services from the community (Laing, 1999; Prins, 2005; Ayazi, Lien, Eide, Shadar, & Hauff, 2014).

It is, therefore, important to consider how researchers can accurately measure perceptions and attitudes towards mentally ill offenders. Due to a lack of previous research, the current research aims to identify a valid tool, which can be used to assess the public's perceptions towards offenders with mental illness. This includes considering factors that influence attitudes such as social distance and community acceptance.

### ***Mental illness and criminal behaviour***

Mental disorders have been defined by a variety of concepts (e.g. disability, irrationality, distress), each concept being a good indicator of the development of mental disorder (American Psychiatric Association (APA), 2013). One must also consider how the current manifestation of mental disorder in an individual could be caused by contributing factors including biological, psychological and social dysfunction. But most importantly to this paper, consider how the condition contributes towards their criminality and what impact this has on public perceptions.

The term Mentally Disordered Offender (MDO), refers to an individual whose mental health problem contributes to their criminality (Spruin, 2012). Whilst deviant behaviour, is not itself a mental disorder, links can be drawn between developmental and social functioning and the individual's mental process possibly contributing to criminal action (APA, 2013).

It is difficult to accurately estimate what percentage of offenders have mental illness, due to issues with underreporting and the assessment process within the criminal justice system. However, research has identified that prevalence rates for mental illness is much higher within the prison (and probation) population, compared to the community (Soderstrom, 2007). Offenders in contact with the probation service diagnosed with anxiety was around 25% (12.7% community sample), and almost half of the probation sample had symptoms of personality disorder (13.7% community sample) (Brooker, Sirdifield, Blizard, Denney & Pluck, 2012). In addition to this, the Revolving Door Agency (2012), found that around 72% of the male prison population had symptoms of mental illness (15% general population).

Considering the offender population has greater prevalence of mental illness compared to the community population, it is important to consider public perceptions of MDOs and how this might impact their recovery and rehabilitation.

### ***Public attitudes towards mentally disordered offenders***

As discussed, past research has suggested that mental disorder can be a contributing factor in criminal action (Mason & Mercer, 1999) but it is unclear, to what extent this influences the perceptions of MDOs by the public. It appears that the perception of dangerousness is a great concern of the public (Markowitz, 2011). Research has

found that the lifetime arrest rates of individuals with mental illness is around 42-50% which is similar when compared to general community samples (Draine & Solomon, 1992). If the public consider MDOs as dangerous, it is understandable that the public would desire greater social distance.

Public perceptions of unpredictability and dangerousness has been unfairly attributed to those with serious mental illness, which can in turn, lead to greater desire for social distance and influence social stigma (Angermeyer & Dietrich, 2006). Smith & Cashwell (2011) found that non-mental health professionals (public) desired greater social distance than mental health professionals, whilst Scott and Moffatt (2012) found that social distancing reduces the wider community support for MDOs. It is therefore very important to be able to measure and identify the link between social distance and attitudes towards mentally disordered offenders.

### ***Measuring attitudes towards mental illness and offenders (CAMI and PACAMI-O)***

One of the first tools developed to measure public attitudes towards mental illness was the Community attitudes towards mental illness scale (CAMI) (Taylor and Dear, 1981). The 40 item questionnaire was created with the specific purpose of investigating community/neighbourhood attitudes, towards individuals with mental illness. The items included statements associated with community acceptance, social inclusion and ideology relating to mental illness. The use of CAMI highlighted that training and education for nurses can decrease negative attitudes towards mental illness (Morrison, 2011).

However, growing research in this field indicated the original CAMI was outdated, it was suggested that it needed to be adapted to suit a more modern society (Glendinning and O'keefe, 2015). The main rationale for the amendments considered the wording used for some of the items. The researchers believed that by adapting some of the phrases (e.g. 'adult' to 'offender') the tool could be used on both a police and community sample and would specifically measure attitudes towards offenders with mental illness. This amended 40 item psychometric measure was named the Police and Community Attitudes towards Offenders with Mental Illness (PACAMI-O). To test the new scale a sample of community (N=73) and police (N=105) completed the questionnaire (Glendinning & O'keefe, 2015). For the combined sample, there was high internal reliability ( $\alpha=.929$ ). An Exploratory Factor Analysis (EFA) identified four new factors that were not previously identified using the CAMI.

However, there were several limitations to this research which must be considered. Comrey and Lee (1992) suggested that in order to conduct an adequate test using factor analysis a minimum of 500 participants is desirable. The sample (N=178) used would only be considered 'fair', suggesting the researchers should be cautious with such a small data set (Pearson & Mundfrom, 2010). Glendinning and O'keefe (2015) report that

the Kaiser-Meyer-Olkin value was .87 (above the .6 cut off) and therefore the sampling was adequate (Kaiser, 1974; Cerny & Kaiser, 1977).

Principle Component Analysis (PCA) which is considered a direct analysis (Child, 1970) was selected by the researchers. However, PCA is a simple version of dimension reduction and computes the analysis without regard for the underlying latent structure of the variables (Osborne, 2014). PCA doesn't specifically consider the shared variance and correlation of items in each factor, therefore, it may have been the simplest method, but not the most appropriate. In addition to this, the rotation used in the analysis was orthogonal, this is the simplest type of rotation. There is a common misconception that orthogonal means factor scores are only uncorrelated, but orthogonal types can produce factors that are correlated (Nunnally & Bernstein, 1994). However, oblique rotation is desirable over orthogonal when considering correlated items. All that considered, the PACAMI-O measures stigma, so one would expect items to share variance and the use of oblique rotation should be considered.

Another rather worrying issue with the original research was the interpretation of the findings. There are no strict guidelines with EFA or the suppression of coefficients in the structure. However, general practice recommends coefficients below .3 are suppressed and coefficients up to .4 are considered with caution (Comrey & Lee, 1992). However, Glendinning and O'keefe (2015) retained items with as low as .206 with large shared variance, which is not good practice (Costello & Osborne, 2005). Several items were observed to have cross loading (.3 on several factors), the researcher made subjective decisions to select items onto one factor, with no support for doing so (e.g. 39 cross loading on all 4 factors, selected for factor 3), a worrying interpretation. The current version PACAMI-O cannot be confidently used in research as the researchers failed to adequately establish validity nor explain the administration and effective use of the scale.

The current research aims to address these issues and conduct appropriate analysis on an adequate community sample, to provide a greater insight into attitudes towards MDOs and establish a valid quantitative measure. The research will build on previous research which investigated community attitudes towards mental illness (Taylor & Dear, 1981; Glendinning & O'keefe, 2015).

#### ***Project aims:***

The proposed study aimed to establish if the PACAMI-O is a valid tool for measuring public perceptions, towards offenders with mental illness. Previous research testing this scale is limited, therefore the current study aimed to conduct more powerful analysis, in order to examine the psychometric properties of the tool.

#### ***Method***

### ***Participants***

An opportunity sample of 504 (Female=371, Male=130, Other=2, Prefer not to say=1) participated in the study, age range 18-75 years (M=30.72, S.D=11.92). The researchers acknowledge that the sample has over twice as many female to male participants, however this is not uncommon in psychological research. The survey was advertised internationally and the two countries with the highest response rates were United Kingdom (N=402, 79.8%) and United States of America (N=53, 10.5%). Participants were asked to indicate their highest level of education with the majority indicating a completed undergraduate degree (N=155) and the minority being incomplete college education (N=12). Demographics concerning mental health; 320 participants identified as personally experiencing mental health problems, 114 stated they currently work with individuals who have mental health problems and 129 said they had previously worked with individuals who had mental health problems. No other demographics were recorded.

### ***Ethical Considerations***

The current research was granted ethical approval from the University of Huddersfield ethics board before commencing data collection. Regarding ethical guidelines and considering the sensitive nature of mental health and offending behaviour, a standardised briefing sheet was used. Participants were also required to give written consent, but no identifying factors were taken to maintain anonymity. Participants were made fully aware of the aims and purpose of the study and their right to withdraw.

### ***Materials***

As per ethical guidelines a standardised briefing sheet, consent form and debriefing sheet were developed, to explain the aims of the research, participants requirements and the right to withdraw. A demographic questionnaire was used, to gather information about the participants. A vignette was developed by the researcher, with the aim of providing participants with information about a fictional event. It was appropriate to present a vignette, in an attempt to ensure all participants had a similar exposure to an individual with symptoms of schizophrenia. The vignette was developed based on signs and symptoms of schizophrenia discussed in the DSM-IV and also considered the vignette used by Clayfield, Fletcher & Grundzinskas (2011)

*“Mr Smith, 30, had been walking along a busy city high street when he assaulted a woman, pushing her to the floor. The woman said she heard Mr Smith say “No, stop it, I won’t let you” before the assault.*

*When questioned by the police, Mr Smith reported that he heard voices telling him his life was in danger. Mr Smith claimed that he had to ‘do it’ to protect himself.*

*Around 5 years ago, Mr Smith's family reported a change in his behaviour. Mr Smith started saying that he thought people around him were making disapproving comments and talking behind his back. He became convinced that people were spying on him and that they could hear what he was thinking. Mr Smith became less motivated to take part in daily activities and reduced his contact with family and friends. Mr Smith's sleep routine became increasingly poor, he would spend the night pacing the hallway. He regularly skipped meals and did not attend to his personal hygiene.*

*In the months before the assault, Mr Smith had been observed by friends and neighbours, talking to himself and shaking his head saying "no", when no-body was there."*

The PACAMI-O was used to assess the public's attitudes towards offenders with mental illness. The scale consists of 40 statements, with a likert scale response (1-strongly agree, 5-strongly disagree).

### ***Procedure***

The researchers used the online survey platform Qualtrics. Participants were recruited via social media and research site 'survey circle', an anonymous survey link was also distributed via email to researchers' colleagues and associates. As the link was anonymous and shared widely on multiple social media, the overall response rate cannot be determined. Before taking part in the research, the participants were fully briefed and completed the consent sheet. Participants read the vignette, completed the demographics questionnaire and then the PACAMI-O.

Participants were informed before submitting that they would no longer have the right to withdraw once they had exited the final page. Due to the nature of Qualtrics it was not possible to see how many participants withdrew during the survey, however only 10 participants asked to withdraw their data on the final submission page. After submitting their responses, the debriefing sheet was presented to participants.

### ***Results***

Before performing the analysis, it was considered appropriate to recode a number of variables, in line with the original research (Glendenning & O'Keefe, 2015). The likert scale for the questionnaire ranged from 1-strongly agree to 5-strongly disagree. For 20 items, the higher the item is rated (5) the less stigma is present (e.g. As soon as an offender shows signs of mental disturbance, he should be hospitalised). For the other 20 items a lower rating (1) would indicate less stigma (e.g. More tax money should be spent on the care and treatment of offenders with mental illness). Therefore the items with low stigma ratings were reverse scored and recoded into new variables; 2, 4, 5, 7, 10, 12, 13, 15, 18, 20, 21, 23, 26, 28, 29, 31, 34, 36, 37, 39. In the original report, item 27 "Offenders with a history of mental illness should be excluded from taking public office" was suggested to be a reversely coded item, however the current researcher identified that a high rating (5) would indicate less

stigma and therefore this item should not be recoded. However, Glendinning and O'keefe (2015) did not identify that item 37 "Virtually anyone can become mentally ill" should be reverse coded as a low score (1) on this scale would indicate low stigma. This mistake in the coding list was potentially human error, entering 27 instead of 37, which has now been rectified.

### ***Reliability analysis***

In order to ensure the data met the assumptions to satisfy a factor analysis, reliability and validity tests were conducted. Cronbach's alpha revealed very good internal reliability of the scale overall ( $\alpha=.92$ ), which satisfies recommendations (Tavakol & Dennick, 2011). Within factor validity was checked using Cronbach's alpha; Factor 1  $\alpha=.88$ , Factor 2  $\alpha=.80$ , Factor 3  $\alpha=.53$  and Factor 4  $\alpha=.71$ . Although Factor 3 did not meet the desired .6 recommendation, it was still considered relevant to the overall structure (Cronbach, 1951).

### ***Exploratory Factor Analysis***

Exploratory Factor Analysis (EFA) is a statistical tool originally developed for the purpose of determining whether intelligence was a unitary or multidimensional construct (Spearman, 1904). Since the development, it has served as a dimension reduction tool. In the social sciences, it is used to explore the psychometric properties of a scale (Osborne, 2014). In order to assess the properties of the PACAMI-O this was considered the most appropriate form of analysis.

The researcher was aware that the PACAMI-O was previously subject to EFA and therefore the common practice would be to conduct Confirmatory Factor Analysis (CFA), however considering the limitations previously discussed, EFA was used.

Principle Axis Factoring was used as the extraction, as it considers parsimonious representation of observed correlations between variables by latent factors, it is also best used for not normally distributed data (Comrey & Lee, 1992). Direct Oblimin (oblique) was considered the most appropriate rotation method as this allows for variables to correlate with each other, which one would expect when considering items measuring stigma (Osborne, 2014).

The 40 PACAMI-O items were assessed for their suitability for FA. Overall the correlation matrix revealed coefficients above .2, indicating strong positive correlation between the items in the scale. In addition, the KMO and Bartlett's test for sphericity was significant ( $X^2(378)=4659.81, p<.001$ ) (Bartlett, 1950).

When running the EFA the researcher suppressed coefficients of  $<.3$  and manually removed variables during the process that did not load cleanly onto a single factor. Although there is no absolute agreed cut off when using EFA, it is best practice to suppress coefficients below .3 and remove any cross loading of more than

.3 (Costello & Osborne, 2005). Although some researchers argue that loadings below .4 should be viewed with caution, it is acceptable with large samples to accept .3 (Stevens, 2002). The process was repeated 4 times until a final 4 factor solution was revealed including 28 items. The EFA revealed a 4 factor solution, similar to that of the original study (Glendinning & O'keefe, 2015). The 4 factor model had a total of 47.41% explained variance.

The first and strongest factor, Social Distance and Location of Forensic Mental Health Services, consisted of 12 items and accounted for 28.29% variance. The second factor, Mental health spending consisted of six items and accounted for 7.54% of the variance (35.83% cumulative). The third factor, Attitudes towards psychiatric facilities was the weakest factor, consisting of three items and accounting for 5.90% of the variance (41.73% cumulative). Finally factor four, Community Acceptance consisted of seven items, accounting for 5.69% of the variance (47.41% cumulative).

#### ***Implications for the PACAMI-O***

Subsequently, the current researchers decided that changes should be made to the existing tool. There was sufficient evidence to suggest 12 items did not contribute to the overall questionnaire. The items that did not load onto the final pattern matrix were removed from the questionnaire. Also, considering the name of the tool included the label 'police' the researcher felt this may appear misleading and was not necessary. The tool measures attitudes towards MDOs across a large community sample which can include the police and health care professionals, as well as the public.

#### ***The Public attitudes towards offenders with mental illness (PATOMI) scale***

The new tool was established with the retained 28 item and was named The Public attitudes towards offenders with mental illness scale (PATOMI) (Appendix 1). The current researchers could be confident that the new scale only includes items that were relevant and contributing towards the overall measure. The reliability of the 28 item scale revealed high internal reliability  $\alpha=.90$ . The administration of the tool is simple and does not require any training for practitioners to use. It should be noted that 13 of the items are reverse scored and should be recoded before analysis can take place (2, 4, 6, 9, 11, 14, 16, 18, 19, 20, 24, 26, 27). A higher overall PATOMI score will indicate less stigma.

#### ***Discussion***

The aim of the current research was to investigate public perceptions of MDOs by considering if the PACAMI-O was a valid tool. The findings of the current EFA indicated that the PACAMI-O was, to an extent, a valid tool to measure public perceptions. However, changes should be made to the tool to ensure it is functioning adequately and only includes relevant and meaningful questions that contribute towards measuring public

attitudes. As 28 items were revealed with very high validity, amendments have been made to ensure the scale is accurate and valid, therefore, the PATOMI has been established as a new psychometric tool.

There were similar themes revealed in the current research when compared to the findings from Glendinning and O'keefe (2015). One observation is that the strongest factor Social Distance and Location of Mental Health Services shares similarities (9 items) to the factor named Self-Preservation in the original research (Glendinning & O'keefe, 2015). This provides strong support for the items in this factor being a good indication of public attitudes towards offenders with mental illness.

The factors revealed in the current research offer support for previous findings, that the public do still hold negative attitudes towards MDOs (Hinshaw, 2007). It is unclear how much the label of 'offender' or the label of 'mentally ill' impact on the public's attitudes, but this research does provide further evidence to suggest the public desire social distance from these individuals (Fazel et al, 2009; Laing, 1999).

There are, ultimately some limitations of the current research. It relies on self reports from the participants, so it is unavoidable that some participants may give dishonest answers. Likert style responses require participants to select from one of 5 options on a scale, it is possible that participants may not agree with any options and therefore selected the 'closest match'. There is a certain lack of ecological validity as the questions are hypothetical and there are no outcomes to the responses, however this is currently the best method used to measure perceptions.

By conducting research online and via social media, the opportunity sample may be somewhat limited. This method does inevitably exclude individuals who may not have reliable access to the internet, such as the older population. However, the age range of the sample was 18-75 years, which appears to be a good representation of the general population.

A suggestion for future research, is to develop more detailed narratives containing information about different mental illnesses and varying levels of detail about criminal actions. Previous research has already established that perceptions do differ based on information presented about mental illnesses (Angermeyer & Matschinger, 2003; Wahl, 1987). For example, schizophrenia is perceived more negatively than depression and anxiety. However, future research could consider manipulating the type of offence the MDO committed (e.g. violent, non-violent or no crime), to see if this influences attitudes towards them.

The treatment of MDOs in the community is increasing in regard to reintegration and rehabilitation, more so now than ever. Considering that the findings of the current research indicate four specific themes for attitudes towards offenders, future research would be beneficial in studying the themes closer. This may provide

a deeper understanding of stigma towards MDOs and measures can be suggested to reduce the stigma and increase awareness such as education programmes and improving social inclusion.

Another practical application of the PATOMI is that it could be used as a recruitment tool. Explicitly, the questionnaire can be used during the application process for individuals who will be working with MDOs. Ideally companies would want staff who have minimal stigma (high scores) on the scale, in order to work with MDOs. Individuals who have less stigmatising attitudes towards MDOs should be able to provide the best patient centred care and work without judgement to help the MDOs reduce their risks and be prepared to reintegrate into society.

### ***Conclusion***

As discussed, it is important for researchers to accurately measure and identify the public attitudes towards MDOs. Following this, action can be taken to reduce stigma and educate the public, encouraging a more inclusive sociality with minimal desire for social distance. Each year the CJS and psychiatric services will attempt to rehabilitate MDOs into the community, so it is important to not only consider the support they will need from professionals but also the attitudes from the general public.

To summarise, the current study was conducted to establish a valid scale for measuring the public's perceptions of offenders with mental illness. As a result of this research, a clearer, more concise tool the PATOMI, can be used in future research. The scale can be used to assess a cross section of public and professionals in regard to their attitudes towards offenders with mental illness.

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**Appendix 1- Public attitudes towards offenders with mental illness scale (PATOMI)**

1	2	3	4	5
Strongly agree	Somewhat agree	Neither agree or disagree	Somewhat disagree	Strongly disagree

**Public attitudes towards offenders with mental illness scale (PATOMI)**

1. As soon as an offender shows signs of mental disturbance, he should be hospitalised
2. More tax money should be spent on the care and treatment of offenders with mental illness
3. An offender with mental illness should be isolated from the rest of the community
4. The best therapy for many offenders with mental illness is to be part of a normal community
5. Offenders with mental illness are a burden on society
6. Offenders with a mental illness are far less of a danger than most people suppose
7. Locating forensic mental health facilities in a residential area downgrades the neighbourhood
8. A woman would be foolish to marry an offender who suffered from a mental illness, even though he seems fully recovered
9. Less emphasis should be placed on protecting the public from offenders with mental illness
10. Increased spending on forensic mental health services is a waste of tax money
11. No one has the right to exclude offenders with mental illness from their neighbourhood
12. Offenders with mental illness need the same kind of control and discipline as a young child
13. I would not want to live next door to an offender who has been mentally ill
14. Residents should accept the location of forensic mental health facilities in their neighbourhood to service the needs of the community
15. There are sufficient existing services for offenders with mental illness
16. Offenders with mental illness should be encouraged to assume the responsibilities of normal life
17. Local residents have good reason to resist the location of forensic mental health services in their neighbourhood
18. Our forensic mental health hospitals seem more like prisons than places where offenders can be cared for
19. Locating forensic mental health services in residential neighbourhoods does not endanger local residents
20. Forensic mental hospitals are an outdated means of treating offenders with mental illness
21. Offenders with mental illness do not deserve our sympathy
22. Forensic mental health facilities should be kept out of residential neighbourhoods
23. One of the main causes of offender mental illness is a lack of self-discipline and will power
24. We have the responsibility to provide the best possible care for offenders with mental illness
25. Offenders with mental illness should not be given any responsibility
26. Residents have nothing to fear from offenders coming into their neighbourhood to obtain forensic mental health services
27. Most women who were once patients in a forensic mental hospital can be trusted as baby sitters
28. It is frightening to think of offenders with mental illness living in residential neighbourhoods