Relationship between malingered psychometric profiles and personality styles in prisoners

S.Mohíno Justes, J. Dolado Cuello, J. Arimany Manso, L. Ortega-Monasterio, A. Cuquerella Fuentes, J. Vilardell Molas and L. M. Planchat Teruel

Instituto de Medicina Legal of Cataluña. Barcelona. Spain

Perfiles psicométricos fingidos en relación con estilos de personalidad en reclusos

Summary

Introduction. One of the most typical clinical problems is the assessment of malingering in the field of forensic and penitentiary psychiatry.

Objective. *The purpose of this research was to find associations between different personality types and psychometric response styles.*

Material and methods. *Subjects: participants consisted of 41 imprisoned male offenders. Instruments and data collection: the psychometric tools used were the Millon Clinical Multiaxial Inventory (MCMI-II) and the Minnesota Multiphasic Personality Inventory (MMPI-2). Statistics: data were analyzed with the Statistical Package for the Social Sciences (SPSS, version 10.0). A $p < 0.05$ significance level was proposed.*

Results. *There is significant correlation between personality types and styles of responses in the inventories.*

Conclusions. *The greatest relationships were found between personality types shaping cluster B of DSM-IV-TR and validity indexes that measure malingering as response style.*

Key words: *Malingering. Inmates. MCMI-II. MMPI-2. Personality.*

Resumen

Introducción*. En el ámbito forense y penitenciario uno de los problemas es la evaluación de la simulación de síntomas psicopatológicos. El objetivo del presente estudio fue examinar la relación entre diversos patrones de personalidad y diferentes estilos de respuesta al contestar inventarios.*

Material y métodos. *Sujetos: la muestra utilizada estuvo configurada por 41 varones encarcelados. Instrumentos: los instrumentos de media fueron el Inventario Clínico Multiaxial de Millon (MCMI-II) y el* Minessota Multiphasic Personality Inventory-2 *(MMPI-2). Análisis estadístico: para el análisis de los datos se utilizaron diversos estadísticos descriptivos y correlaciones de Pearson a través del* Statistical Package for the Social Sciences *(SPSS, versión 10.0). Se propuso un nivel de significación de $p < 0,05$.*

Resultados. *Los datos pusieron de manifiesto que existen asociaciones entre diversos prototipos de personalidad y estilos de respuesta en los inventarios.*

Conclusiones. *Las mayores relaciones se encontraron entre los tipos de personalidad que configuran el clúster B del DSM-IV-TR y los índices de validez que miden simulación de patología como estilo de respuesta.*

Palabras clave: *Simulación. Encarcelados. MCMI-II. MMPI-2. Personalidad.*

INTRODUCTION

Malingering is defined in the present DSM-IV-TR nosology as an intentional production of physical or psychological symptoms, motivated by external incentives, in order to obtain compensation or avoid responsibilities. The medical-legal context and antisocial disorder of the personality are some of the combinations that the present nosology proposes as central elements of malingering[1].

Correspondence:
Susana Mohíno Justes
Instituto de Medicina Legal de Cataluña
Servicio Clínica Médico-Forense
Ronda de San Pedro, 35, bajos
08010 Barcelona (Spain)
Correo electrónico: susanamohino@teleline.es

The most frequent differential diagnoses regarding malingering are factitious, conversion and other somatoform disorders.

There are three conditions in malingering: conscious will to deceive, feigning of psychopathological disorders and utilitarian objective to obtain benefit. On the contrary, in dissimulation, the same variables operate however the imitation of feigning disease absence intervenes. Malingering and dissimulation are essential factors to be considered in the forensic and penitentiary scope. Esbec and Gomez[2] indicated guidelines in the detection of malingering in the forensic scope and, proposed psychometric indexes of reliability and validity among them.

The Minessota Multiphasic Personality Inventory (MMPI) has been one of the most investigated psychometric instruments from the point of view of outcome validity in response malingering studies.

The new MMPI-2[3] introduced new validity scales in regards to its antecessor MMPI-1. The subsequent incoherence scale (Fb) was designed to control the second part of the questionnaire since the incoherence scale (F) only controlled the response style to the inventory up to item 370 of the previous MMPI-1. The variable response inconsistency (VRIN) and true response inconsistency (TRIN) scales aim to offer an index that measures the tendency of the individual to give inconsistent and contradictory responses. The MMPI-2 validity indexes have shown adequate validity, having a common tendency with sensitive and specific instruments to detect malingering. The Story study[4] vouched for the relationships between the MMPI-2 indexes and the Structured Interview of Reported Symptoms (SIRS) in the forensic population.

Berry[5] reviewed 28 investigations with the MMPI-1 published from 1947 to 1989. The meta-analysis results concluded that the best indicators to detect malingering were the incoherence scale (F) and Gough's index (F-K). Regarding malingering, the meta-analysis results of studies published from 1948 to 1989 indicated that the most discriminative indexes were the lie (L) and correction (K) scales[6].

Wetter[7] performed a cross-sectional study with several comparison groups under different experimental conditions. The groups adopted different response styles on answering the inventories: sincere responses, random responses, responses with mildly malingering symptoms and responses that were moderately malingering. The results indicated that the incoherence (F) and posterior incoherence (Fb) scales were those that discriminated the subjects who feigned symptoms. The variable response inconsistency scale (VRIN) differentiated the subject group under experimental conditions of random responses from the subject group that answered with randomized responses.

In the forensic[8] and penitentiary[9] scope, the best indicators to detect malingerers were the incoherence scales (F) and the Gough index (F-K). Jana[10] studied the effectiveness of the MMPI-2 validity scales in the female inmate population. The subjects were grouped into four experimental conditions: coached malingerers, uncoached malingerers, controls without disease and inmates with psychotic disorder. The incoherence (F) and Gough (F-K) indexes were shown as the most significant to discriminate the four comparison groups. Lewis et al.[11], in a forensic sample of 55 subjects, concluded that the Structured Interview of Reported Symptoms (SIRS), Structured Inventory of Malingered Symptomatology (SIMS) instruments and several MMPI-2 validity indexes were valid to discriminate malingering subjects.

Other research lines consider that some personalities present a greater tendency to feign symptoms. Grillo's results[12] with the Millon Clinical Multiaxial Inventory (MCMI) vouched for the association that exists between personality disorders that shape cluster B and tendency to exaggerate the responses in the inventory.

The purpose of this present investigation was to establish associations between different personality patterns and malingering response styles. It was hypothesized that certain personality patterns, those of DSM-IV cluster B, would relate with those MMPI-2 validity scales that indicate a disease malingering response style.

MATERIAL AND METHODS

Subjects

The group was made up of 41 imprisoned males with an 18 to 25 year old age range. Subject selection was not probabilistic of consecutive cases in the Barcelona Penitentiary Youth Center. This module includes both preventive as well as condemned inmates classified in second degree of treatment. Those subjects who did not belong to the module or who had been admitted to the nursing wing due to mental disorder were excluded. In addition, those subjects who understanding level was not adequate to answer the different questionnaires were excluded.

Instruments

The psychometric tools used were the Millon Clinical Multiaxial Inventory-II (MCMI-II)[13] and Minnesota Multiphasic Personality Inventory-2 (MMPI-2)[3]. The MCMI-II is a 175-item questionnaire with dichotomic response grouped into 22 scales that assess personality styles and clinical syndromes. The MMPI-2 is a 567-item questionnaire that evaluates symptoms in addition to containing several indexes on reliability of response to the questionnaire. In the present study, the MCMI-II personality scales that agreed with the DMS nosology were included and the remaining scales were discarded. As an external malingering criterion, the MMPI-2 validity scales lie (L), incoherence (F), defensiveness (K), Gough (F-K), posterior incoherence (Fb), true response inconsistency (TRIN) and variable response inconsistency (VRIN) were included. The questionnaires were applied individually in most of the cases and semicollectively (two subjects) in other occasions. The order of the tests administered was contrabalanced.

Statistical analysis

For data analysis, different descriptive statistics and Sperman-Brown correlation analysis with the Statistical Package for the Social Sciences (SPSS), version 10.0 for Windows were used. The significance level proposed was $p < 0.05$.

RESULTS

Table 1 shows the sociodemographic characteristics of the study sample. The inmates' average age was 19.90 years (SD: 1.41). Most of the inmates (82.90 %) were in-

TABLE 1. Social characteristics

Ethnic group	
Caucasian	n = 16 (39%)
Gypsy	n = 6 (14.6%)
Merchero	n = 12 (29.3%)
Arab	n = 3 (7.3%)
Shouth american	n = 2 (4.9%)
Missing	n = 2 (4.9%)
Civil status	
Single	n = 30 (73.2%)
Married or with partner	n = 8 (19.5%)
Separated	n = 1 (2.4%)
Missing	n = 2 (4.9%)

cluded in the white, gypsy and «merchero» (mixture between gypsies and non-gypsies) ethnic group versus other ethnic groups. The most represented civil status was single (73%).

Table 2 shows different penitentiary characteristics. Approximately half of the inmates did not have any penal background (53.7%). The penal situation of most of the inmates was that of condemned (63.4%) and the most frequent crime was theft (73%). Average imprisonment time was 16.67 months (SD: 12.61) and average disciplinary faults 3.15 (SD: 3.14) (table 2).

Table 3 shows the frequencies and percentages of different health care variables. From admission to prison, most of the inmates (73.2%) had no suicide attempt episode, nor were they diagnosed of hepatitis C virus (80.5%) or HIV+ (95.1%). In regards to risk practices, half of the inmates (48.8%) had tattoos when entering the prison. Most of the inmates (78%) had no background of parenteral toxic consumption (table 3).

Table 4 shows correlation indexes between different personality types and MMPI-2 validity indexes.

The results indicated that some types of personality were associated to certain response styles to inventories, especially those that try to feign disease.

TABLE 2. Penitentiary characteristics

Penal background	
First	n = 22 (53.7%)
Persistent offender	n = 10 (24.4%)
Multiple persistent offender	n = 7 (17.1%)
Missing	n = 2 (4.9%)
Present penal situation	
Condemned	n = 26 (63.4%)
Preventive	n = 13 (31.7%)
Missing	n = 2 (4.9%)
Crime type	
Theft	n = 30 (73.3%)
Drug traffic	n = 5 (12.2%)
Homicide	n = 2 (4.8%)
Sexual abuses	n = 4 (9.6%)

TABLE 3. Health care characteristics

Self-injury episodes	
No	n = 30 (73.2%)
Yes	n = 11 (26.8%)
Hepatitis C	
No	n = 33 (80.5%)
Yes	n = 6 (14.6%)
Missing	n = 2 (4.9%)
Tattoo	
No	n = 20 (48.8%)
Yes	n = 20 (48.8%)
Missing	n = 1 (2.4%)
Parenteral route	
No	n = 32 (78%)
Yes	n = 8 (19.5%)
Missing	n = 1 (2.4%)
VIH+	
No	n = 39 (95.1%)
Yes	n = 1 (2.4%)
Missing	n = 1 (2.4%)

Personalities included in cluster B were those that had positive relationships with the MMPI-2 validity scales, which indicate disease malingering and negative associations with those scales that measure decrease in symptoms. Specifically, the antisocial, histrionic, borderline and narcissistic personality prototypes had positive relationships with the incoherence scale (F) and Gough index (F-K). In the same way, cluster B was negatively associated with the scale that measures lie (L) and defensiveness (K).

In cluster A, paranoid and schizotypal personalities were those that showed greater tendency to malingering response style. These personalities were positively associated with the incoherence scale (F) and Gough index (F-K). Personality schizotypal disorder was the only one in its group to that showed positive relationships with the subsequent incoherence scale (Fb). The same personalities of cluster A showed negative relationships with the defensiveness scale (K), which measures malingering.

The cluster C styles did not show associations with any response style except for the avoidance scale. This prototype would be differentiated from the dependent and obsessive one because it answered the items trying to feign more disease than the rest of the parts of the cluster.

Regarding response consistency, no personality part of clusters B and C had associations with the true response inconsistency scale (TRIN) or variable response inconsistency scales (VRIN). It seems that the personality prototype is independent of contradictory, randomized response styles as well as those that have a tendency to acquiescence. Schizotypal disorder was the only one of 10 personality disorders that answered the items with acquiescent tendency (TRIN).

TABLE 4. Correlation indexes

MCMI-II pesonality scales	*Escalas validez MMPI-2*						
	Lie (L)	*Incoherence (F)*	*Correction (K)*	*Gongh index (F-K)*	*Posterior incoherence (FB)*	*True response inconsistency (TRIN)*	*Variable response inconsistency (VRIN)*
Cluster A							
Paranoid	–0.390	0.562**	-0.541**	0.627**	0.379	0.313	0.242
Schizoid	0.000	0.051	-0.282	0.195	0.271	0.191	-0.134
Schizotypal	–0.329	0.539**	–0.549**	0.650**	0.672**	0.413*	0.159
Cluster B							
Antisocial	–0.531**	0.643**	–0.447*	0.617**	0.363	0.034	0.102
Boderline	–0.487*	0.603**	–0.564**	0.683**	0.689**	0.253	0.085
Histrionic	–0.422*	0.513*	–0.474*	0.588**	0.383	0.348	0.065
Narcissistic	–0.276	0.447*	–0.433*	0.487*	0.269	0.083	0.051
Cluster C							
Avoidance	–0.241	0.385	–0.410*	0.500*	0.586**	0.336	–0.008
Dependent	0.049	–0.187	–0.000	–0.088	0.127	0.351	–0.074
Compulsive	0.217	–0.240	–0.024	–0.127	–0.064	0.237	0.028

* Statistical significance level: p< 0.01. ** Statistical significance level: p < 0.001.

CONCLUSIONS

The results showed that the personalities that shape cluster B had a greater tendency towards symptom maximizing response style. These results had similarities with those of Wise[14] and Gallager[15]. Wise[14] related different personality styles by the MCMI-II and MMPI-2 validity scales in a sample of 84 subjects evaluated in the forensic scope. The author concluded that the MMPI-2 reliability scales: lie (L), incoherence (F), defensiveness (K), Gough (F-K), subsequent incoherence (Fb) and true response inconsistency (TRIN) showed significant associations with the different personalities. In a similar way, Gallager's investigations (15) vouched for the usefulness of the lie (L) and incoherence (F) scales to discriminate inmates with disorders and disease free inmates coached to malinger. Other results manifest the usefulness of the incoherence (F) scale and the Gough index (F-K) to discriminate between malingering subjects and psychiatric subjects[16,17].

Contrary to our results, in a sample of 55 inmates, Poythress et al.[18] did not find any relationship between personality psychopathic disorder and tendency to malinger. The divergence of the results could be motivated by the different sources of variance covered by the different measurement instruments used in the studies.

Regarding the inconsistent response style, the results showed association between the schizotypal prototype of the personality and inconsistent response style. These results were similar to those of Stukenberg[19] who concluded that, in a sample of psychiatric patients, the disorders with tendency to psychoticism were the only ones that were associated to the scale that measures inconsistent response style. However, other investigations[20] indicated that the inconsistent response style is related with a malingering response style. In this sense, the results supplied in the present investigation contraindicate those obtained by Fox[20] since our results showed the independence between personality style and inconsistent response style, except for personality schizotypal disorder. The differences between both results may be determined by the difference in the study objective. Fox et al.[20] used a sample made up of individuals with motivation to malinger. In the present study, the individuals evaluated did not have any motivation to feign disease. Jointly, discordance of the results helps to argue that the personalities forming a part of cluster B may have intrinsic and constitutive characteristics of the style itself of personality that leads to an involuntary exaggeration of symptoms.

Data must be supplied with different comparison groups, above all in the forensic and psychiatric scope, in order to determine different cut-offs in scales that evaluate malingering response styles. Sivec[21] provided different cut-off points in the incoherence scale (F) in a sample of patients who feign borderline personality disorder. Rothke[22] and Iverson[23] provided data on the sensitivity and specificity of the MMPI-2 validity scales in the medical-legal contexts. Bagby[24] et al. concluded that the cut-off recommended to detect the malingering with the Gough index were those scores less than 12 (F-K < 12) and the best to detect malingering were scores greater than 7 (F-K > 7).

In conclusion, the results indicated associations between response styles and personality patterns. The borderline, antisocial and schizotypal personalities were those that presented greater tendency to have malingering response styles. From psychometry, malingering and dis-

simulation have a constitutive meaning to the subject's response style to the measurement instruments.

However, the results may not be generalized since the sample size could affect the results. Jointly, neither clinical criteria nor comparison measurement instruments were used to include a greater spectrum of the variance covered by the scales that measure MMPI-2 malingering. Another one of the limitations indicates that the forensic and penitentiary scope has different extrinsic factors that may influence the results (25). From this frame of mind, studies with designs focused on increasing external validity, as the present one, are necessary although this is not in detriment to adequate internal validity.

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