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## **Can mock battered women malingering psychological evidence in a recognition task?**

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### **Abstract**

Under the Spanish judicial system, the psychological evidence of domestic violence - i.e., Post-Traumatic Stress Disorder (PTSD) - provides vital evidence in trial proceedings involving battered women. Nevertheless, a diagnosis of PTSD does not constitute sufficient evidence alone, given that in legal terms malingering or false testimony must be detected and eliminated before an expert testimony can be admissible (i.e., Rogers, 1997). To assess the aptitudes and strategies for faking psychological injuries associated with domestic violence, 101 women were asked to malingering psychological injuries using the MMPI-2. The results showed that most women were capable of feigning these injuries. The validity scales and configurations of the MMPI-2 were effective for the detection of faking, though a wide margin of error was observed. Accumulatively, only 90.1% of faking was detected. An analysis of the strategies employed for malingering on the MMPI-2 reveals two main types: i.e., the severity of symptoms, and the combination of symptoms. Finally, the results for the assessment of psychological injury are discussed, and guidelines are recommended for detecting faking.

**Key words:** faking, ill-treatment, domestic violence, post-traumatic stress disorder (PTSD), battered women, MMPI-2.

Title: Can women pretending to be battered malingering psychological evidence in a recognition task?

### Introduction.

In Spain, the number of cases of battered women has increased from 29,405 reports in 1999 to 64,047 in 2003 - i.e., an estimated increase of 117,81% (source: Reina Sofía Centre for the Study of Violence). Of the total number of cases reported during this period, 56,131 (26.45%) involved grievous bodily harm (GBH), and 156,059 (73.55%) entailed minor physical assault (75.98%). Under Spanish law, GBH is defined as physical or mental injury requiring medical or psychological assistance, whereas the term minor assault refers to physical or mental assault that does not require medical or psychological assistance. The data suggest that most cases involve minor acts of assault, or that sufficient evidence to secure a conviction for GBH is not gathered and presented in judicial proceedings involving domestic violence. The latter may be due to: the improper gathering of evidence; the fact that only physical injury is assessed (as can be seen from the data obtained by the Reina Sofía Center itself, which classifies and records evidence according to the need for medical or surgical assistance, with no evaluation of psychological injury); and victims of GBH in domestic violence are usually subjected to continuous assault by an aggressor who is in total control, and is continuously intimidating and prohibiting the victim from reporting the assault. The rise in the number of reports, protection orders and sentences against offenders has witnessed a parallel rise in the number of false accusations of domestic violence.

Under these circumstances, forensic psychology can play an essential role in assessing and introducing relevant evidence of psychological trauma as proof of domestic violence. In this context, the key question is to discriminate actual psychological injury from malingering in domestic violence settings. According to the DSM-IV-TR (American Psychiatric Association, 2002), the psychological injury associated with domestic violence is that described as posttraumatic stress disorder. Thus, posttraumatic stress disorder and its indirect measures - i.e., hypochondriasis, hysteria, depression and anxiety, as well as social introversion (e.g., Bryant and Harvey,

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1995; Echeburúa and Corral, 1995; Taylor and Koch, 1995; Vallejo-Pareja, 1998) - are the parameters to be assessed in determining psychological injury resulting from domestic violence. Moreover, victims of domestic violence exhibit other symptoms associated with social alienation and maladjustment (Echeburúa and Corral, 1998). Consequently, the goal of forensic psychology is to detect psychological trauma in reports of domestic violence, quantify it, and control malingering. Given that standard clinical assessment never diagnoses simulation (i.e., Rogers, 1997), forensic psychology should design a new measurement procedure to discriminate malingering from real trauma (American Psychiatric Association, 2002).

Bearing in mind the need for a procedure to control malingering in judicial contexts, this study aims to assess the ability of women to simulate psychological trauma associated with domestic violence, as well as to evaluate the effectiveness of simulation control scales - i.e., the validity scales of the most frequently used clinical measurement instrument, the MMPI-2 (Rogers, 1997). Briefly, we hypothesise that the responses to items on the MMPI-2, which involves a symptom recognition task, will facilitate simulation of psychological trauma; the validity control scales of the instrument itself will detect simulation, on the whole, but will not be totally effective (Arce, Pampillón and Fariña, 2002).

## Method

### Subjects.

The sample was composed of a total of 101 women over 18. Age ranged from 19 to 61 with a mean age of 32.4 ( $S_x=12.5$ ). As for the marital status of subjects, 3% were widows, 41.6% married, and 55.4% single women who had had a previous stable relationship. In terms of education, 14.9% had finished primary education, 57.4% secondary, and 27.7% university studies.

### Procedure and design.

Initially, subjects were asked to complete a MMPI-2 questionnaire (Hataway and McKinley, 1999), following the “standard instructions” described in the MMPI-2 for contrasting their actual mental condition. All subjects freely volunteered for the experiment, were informed that they would undergo clinical evaluation and, if they wished, would be given a report on their clinical condition. Questionnaires were administered individually or in small groups. Once they had completed the MMPI-2, subjects were told they would be re-evaluated a week later. For the second evaluation, subjects were provided with “malingering instructions”, which consisted of asking subjects to imagine (in order to obtain child custody, revenge or financial gain) that they were women who feigned to be victims of domestic violence, and should falsely report psychological injuries for which they were going to be evaluated. In order to enhance subject involvement in the study, the feigning of domestic violence was encouraged through an economic incentive consisting of 150 Euros for the four best simulations. Subjects were allowed a one-week period to train themselves in feigning before being re-evaluated using the MMPI-2.

## Results

### Clinical evaluation of simulation on the MMPI-2.

Multivariate differences were observed on the basic clinical scale of the MMPI-2, mediated by the “instructions” factor (standard vs. malingering),  $F_{\text{multivariate}}(10,91)=52.466$ ;  $p<.001$ ;  $\eta^2=0.852$ , explaining 85% of the variance.

The univariate effects (see Table 1) show significant differences in all of the clinical variables, with the exception of the masculinity-femininity dimension. As for the directionality of the effects, these occurred in the expected direction; i.e., higher scores of mental disorder under malingering instructions in comparison to the standard instructions - i.e., subjects have a general ability to fake. Moreover, this ability is effective in the indirect measurements of psychological trauma - i.e. hypochondriasis, depression and hysteria - resulting from domestic violence (Bryant and Harvey, 1995; Echeburúa, 1998; Echeburúa and Corral, 1995; Taylor and Koch, 1995; Vallejo-Pareja, 1998), and social introversion, which characterises victims of domestic violence.

As for the psychotic triad - i.e., paranoia, schizophrenia, and psychasthenia, - under malingering instructions, subjects tended to report more psychological disorder in contrast to when they were given standard instructions. A similar pattern was observed for psychopathic deviation. As these pathologies are not directly linked to psychological trauma associated with domestic violence, subjects did not properly perform the malingering task. Finally, a significant difference mediated by the instructions was observed in hypomania in line with simulation predictions - i.e., higher scores under malingering instructions than under standard instructions. In other words, subjects failed to discriminate effectively between expected neurotic symptoms and social introversion for domestic violence and unexpected psychotic symptoms, psychopathic disorders and hypomania.

Moreover, the scores obtained for malingering instructions are in line with severe pathology in the indirect measurements of the psychological trauma of domestic violence, social introversion, psychopathic deviation and the psychotic triad ( $T_{socrs} > 70$ ).

Table 1. Univariate effects on the clinical scales of the MMPI-2 by the “instructions” factor. Within effects.

Scales	MS	F	p	Eta <sup>2</sup>	M <sub>si</sub>	M <sub>mi</sub>	1-B
Hypochondriasis	35769.03	242.47	.000	.708	54.46	81.08	1.000
Depression	37302.14	248.41	.000	.713	50.03	77.21	1.000
Hysteria	23075.65	207.13	.000	.674	52.61	73.99	1.000
Psychopathic deviation	28372.46	348.96	.000	.777	49.3	73.00	1.000
Masculinity-femininity	163.98	1.98	.162	.019	51.92	50.12	.286
Psychasthenia	27595.65	214.25	.000	.682	51.38	74.75	1.000
Paranoia	61862.50	260.9	.000	.723	50.09	85.09	1.000
Schizophrenia	79406.06	443.45	.000	.816	49.15	88.8	1.000
Hypomania	7710.42	132.38	.000	.570	51.26	63.61	1.000
Social introversion	22459.9	202.16	.000	.669	50.48	71.56	1.000

Note: D.F.(1,100). M<sub>si</sub>= Mean of standard instructions. M<sub>mi</sub>= Mean of Malingering instructions.

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As for the specific scales that measure posttraumatic stress disorder - the Keane's and Schlenger's Scales of PTSD, which define the main diagnostic features of domestic violence (Vallejo-Pareja, 1998) - a significant difference (see Table 2) between the conditions under standard and malingering instructions was observed with the scores for the former being within the range of normality (T around 50), and the latter in line with pathology (T>70). In short, subjects, who did not suffer from this disorder were able to simulate it as well as link it to domestic violence.

Table 2. Within effects on the PSTD scales by the “instructions” factor.

Scale	MS	F	p	Eta <sup>2</sup>	M <sub>si</sub>	M <sub>mi</sub>	1-B
PTSD, Keane Scale	46901.41	614.45	.000	.860	49.91	80.39	1.000
PTSD, Schlenger Scale	41146.98	530.21	.000	.841	50.09	78.63	1.000

Note: D.F.(1,100). M<sub>si</sub>= Mean of standard instructions. M<sub>mi</sub>= Mean of Malingering instructions.

#### Evaluation of simulation using the MMPI-2 validity scales.

The criminological model (Bagby et al., 1997; Lewis and Saarni, 1993; Rogers, 1992) and the American Psychiatric Association (2002) in the DSM-IV-TR describe uncooperative behaviour during evaluation as a key simulation strategy. Likewise, the MMPI-2 “no answers” scale records evasive responses to items and establishes a score of 30 or more no-answers as the cut-off point for invalidating the protocol. None of the subjects under study reached this cut-off point either in the standard or simulation instructions. Thus, these classification criteria of simulators are totally ineffective.

Multivariate contrast analysis showed a significant effect in the validity control scales mediated by the “instructions” factor (standard vs. malingering instructions),  $F_{\text{multivariate}}(3,98)=96.324$ ;  $p<.001$ ;  $\eta^2=.747$ . This factor was responsible for 74.7% of the variance.

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Univariate effects (see Table 3) reveal significant effects on the L, F and K scales modulated by the “instructions” factor. Briefly, in the frequency scale (F) that evaluates incoherent responses, a significant increase in the T score was observed in malingering in contrast to the standard instructions, ranging from “acceptable registers” in the standard condition to an “invalidated profile” ( $T > 80$ ) in the malingering condition (Roig-Fusté, 1993; Graham, 1992). A case study revealed that the F scale correctly classified 81.2% of the simulators and underlines that it is a reliable indicator  $X^2(1)=39.29$ ;  $p < .001$ . As for the K factor, the defensiveness scale, the findings reveal a significantly lower T score in malingering (T score  $< 50$ ) as compared to standard instructions (T score  $> 50$ ). This implies that the malingering protocols were invalidated by this scale due to a possible simulation or exaggeration of symptoms (see, Arce, Fariña and Pampillón, 2002; Graham, 1992; Roig-Fusté, 1993), whereas the standard instructions protocols are classified as valid. The case study revealed that 89.1% of simulators were identified correctly by this scale (That is, T score  $< 50$ ), indicating it is a reliable indicator  $X^2(1)=61.79$ ;  $p < .001$ .

With reference to the lie scale (L) that measures social desirability, a significant change in T scores between standard and malingering instructions was observed. The tendency of the change for malingers was, as expected, in the direction of unsociable desirability. The case study revealed that among the effective simulators of psychological trauma (PTSD, hypochondria, depression, hysteria and/or social introversion), none of the subjects in the malingering condition obtained an invalid score ( $T > 70$ ) (Graham, 1992; Roig-Fusté, 1993). Hence, a score in accordance with or in the direction of social desirability appears to be a reasonable indicator of the absence of simulation.

Table 3. Univariate effects in the MMPI-2 control scale mediated by the “instructions” factor. Within-subjects effects.

Variables	MS	F	p	eta <sup>2</sup>	M <sub>si</sub>	M <sub>mi</sub>	1-B
Lie scale (L)	399.29	5.2	.025	.049	53.03	50.22	.617
K Factor	3543.15	56.75	.000	.362	50.42	41.04	1.000
Frequency scale (F)	97416.32	294.5	.000	.747	50.26	94.18	1.000

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Note: D.F.(1,100).  $\underline{M}_{si}$ = Mean of standard instructions.  $\underline{M}_{mi}$ = Mean of Malingering instructions.

The additional validity scales of the MMPI-2, the Back F ( $F_b$ ), TRIN, and VRIN were sensitive to the instructions factor (see Table 4). In particular, the Back F scale - similar to the original F scale - set the standard instructions protocols into the category of acceptable registers ( $\underline{M}$ =50.14), and invalidated the protocols on the malingering condition on the basis of exaggerated maladjustment or the feigning of mental disorders ( $T > 80$ ) (Graham, 1992; Roig-Fusté, 1993). This index correctly classified 70.5% of malingerers, which means that this scale is reliable,  $X^2(1)=19.29$ ;  $p < .001$ . Nevertheless, the case study illustrates that the malingerers detected by the Back F scale were the same as those invalidated by the original F scale. In fact, the Back F scale fails not only to improve the efficacy of the original F scale, but even performs worse. The TRIN and VRIN scales were also sensitive to the instructions factor, but did not invalidate the protocols ( $T < 70$ ). Contrary to the expected predictions, the means for the malingering ( $\underline{M}_s=51.76$  and 46.34 for TRIN and VRIN, respectively) were lower (that is, the data was more reliable) than in the standard condition ( $\underline{M}_s=55.17$  and 50.48 for the TRIN and VRIN, respectively).

Table 4. Univariate effects in the MMPI-2 control scale mediated by the instructions factor. Within-subjects effects.

Variables	MS	F	p	eta <sup>2</sup>	$\underline{M}_{si}$	$\underline{M}_{mi}$	1-B
Fb Posterior/Back F	109962.22	376.12	.000	.790	50.14	96.8	1.000
TRIN	585.82	8.52	.004	.079	55.17	51.76	.824
VRIN	864.97	13.83	.000	.122	50.48	46.34	.958

Note: D.F.(1,100).  $\underline{M}_{si}$ = Mean of standard instructions.  $\underline{M}_{mi}$ = Mean of Malingering instructions.

#### Configurations of the validity scales.

Two combinations of validity scales have been described in the literature on the evaluation of malingering (Duckworth and Anderson, 1995): the F-K index, known as the Gough index, and the “inverted V” profile.



The Gough index reveals attempts to give a bad impression, if the difference of F-K is positive and greater or equal to 30 (Rogers, 1997). The malingering condition obtained a mean score greater than 30 ( $M=53.14$ ;  $Sx=30.32$ ); that is, the F-K index shows that subjects in this condition had attempted to feign psychological trauma by correctly detecting 79.2% of malingerers, meaning it is a reliable simulation detecting index,  $X^2(1)=34.46$ ;  $p<.001$ .

The “inverted V” profile, with L and K below 50 and F above 80, is indicative of symptom exaggeration (Roig-Fusté, 1993). Thus, 43 simulators (42.5%) were detected using this index, meaning that it is not robust for the detection of malingering in domestic violence,  $X^2(1)=2.22$ ; ns.

#### Accumulative efficacy of the validity indices.

Table 5. Validity indices and the number of malingerers detected.

<u>Number of indices</u>	<u>malingerers detected</u>
0	4
1	10
2	9
3	78

Note: Only indicators of the validity scales and the combinations that were shown to be effective for the detection of malingering were considered (i.e., F, K, F-K).

A further assessment of the validity of the protocols involves the analysis of the accumulative effects of the effective indices. Thus, the L, VRIN, TRIN, and “inverted V” profile scales were discarded, as was the Back F, on the grounds that it overlapped with the original F. In fact, consistency in the detection of malingering should be taken as a reliable estimator of malingering, whereas the lack of inter-index consistency undermines its diagnostic value (Wicker, 1975). The results (see Table 5) reveal that the three indices agree in the classification of malingerers in 78 cases (77.23%), which gives it a significant predictive value for the detection of simulation  $X^2(1)=29.95$ ;

$p < .001$ . Nevertheless, 4 malingerers were not detected by any of the indicators, 10 were detected by only one indicator, and 9 by two. In other words, the lack of inter-index agreement throws into doubt the classification as malingerers of 22.77% of feigners.

## Discussion

Prior to drawing any conclusions from the results obtained in this study, it would be convenient to bear in mind the following considerations. First, subjects were asked to carry out a simulation task, and consequently the degree of involvement in the task is presumably less than in real-life cases. Second, the results cannot be generalized to apply to other measurement instruments. Third, results cannot be generalised to apply to other case-types that lead to different psychological injuries. Fourth, besides identifying feigning, the indicators are also open to other hypothetical interpretations (Graham, 1992).

Bearing in mind the limitations concerning the findings of this study, the following conclusions may be drawn:

- a) The subjects were capable of modifying their performance on the MMPI-2 in line with correct feigning of psychological injury associated with domestic violence, both in direct measurements (PSTD scales) and indirect measurements (hysteria, depression and hypochondriasis). We ascribe the subjects' relative ease to simulate by the fact that the MMPI-2 limits the task to symptom recognition (Arce, Pampillón and Fariña, 2002).
- b) The F, K and F-K indices were robust for the detection of malingerers, as well as being highly consistent in their correct detection, at 77.23%. Nonetheless, these effective indicators failed to detect all of the malingerers; hence, they are not fully effective. This underlines the need for a multimethod approach (Rogers, 1997).
- c) These indicators may be affected by the possibility that women battered in real life were identified as malingerers - i.e. false positives - which emphasises the need for complementary approaches, such as the Clinical Decision Model (Cunnien, 1997).

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Finally, the data revealed that potential malingerers resorted to a double strategy (Rogers, and Mitchell, 1991) of reporting a *severity of symptoms* and a *combination of symptoms*. The severity symptoms strategy highlights the frequent error made by most feigners, who believe that all symptoms reported must be extreme, which is rarely the case. Another common strategy was to combine symptoms - i.e., to report a wide range of psychological symptoms, which rarely appear together. This implies that the analysis of these strategies should also be included in the assessment of malingering.

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