The usefulness of the Draw-a-Person (DAP) test in the diagnosis and assessment of domestic violence

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Abstract: Projective tests focused on drawings are well-known and frequently used tools in psychological assessments. Among them, the Draw-a-Person (DAP) test has the advantages of higher acceptability, low cost and facilitation of emotional unlocking, which can be significant advantages in traumatic circumstances. Although literature data point out the importance of DAP test in detecting aggressive tendencies and violent behavior, its use in Forensic Medicine is less documented.

The aim of this paper was to assess the potential of the DAP test in detecting victims of domestic violence (DV). 37 women, victims of DV, who referred to the National Institute of Forensic Medicine and 23 matched controls participated in the study. The mean age of participants was 45.35 and most of them were married. All were administered the DAP test and comparisons between the two groups were subsequently run, on four category of markers potentially associated to DV. The number of identified indicators and / or the number of women displaying them stood at the basis of statistical analysis (t tests, Pearson and Spearman correlations, linear regression).

The results indicate that the victims of DV are characterized, compared to the control group, by smaller dimension of drawings (t = 4.228, p < 0.001) (predictive value Rsq. = 0.243, p = 0.001), the association between aggression and uncertainty/lack of autonomy markers (Spearman rho = 0.368, p = 0.025) and markers specific for repression of sexuality (Spearman rho=0.276, p = 0.022) (predictive value Rsq.= 0.123, p = 0.001). The victims of DV focus much more on drawing the whole person (t = 2.358, p = 0.022), this potentially reflecting a higher preoccupation for bodily integrity.

These findings suggest specific DAP indicators to be monitored at victims of DV, and more generally, the potential of the DAP test to be used as an additional tool in the diagnosis and assessment of this condition.

Key Words: drawing, projective tests, domestic violence, victim, assessment.

Domestic violence is a main social issue but implies also legal medicine connections. A welcoming support for victims, a sustainable environment and a useful source of legal information might be a needed legal medicine framework.

A register which hold together victims and aggressors might be an interesting and useful tool: to bring information regarding both victims and aggressors as much as common protocols for all implied institutions (police, legal medicine institutes, shelters, etc.) bring the hope for a better approach and supervision of interpersonal violence states.

A psychological assessment is a must: projective tests focused on drawings are well-known and frequently used tools.

Domestic violence (DV) is defined as “any incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional)
between adults who are or have been intimate partners or family members” [1, 2]. In most cases DV is experienced by women, with global prevalence estimates of lifetime experiences among them ranging from 15%–71% [3-5]. DV comprises also important medical and mental healthcare costs [6, 7].

One important aggravating circumstance brought by DV is that in certain socio-cultural environments it represents a taboo topic, being underreported and/or not addressed. Although this kind of attitude seems deeply rooted in certain rigid cultural norms [2, 9], one could still try to identify those warning signs that could provide to the community enough information to detect the abuse. For this purpose, projective instruments, like the Draw-a-Person (DAP) test have the advantage of being easily accepted and understood, in the same time not being focused on the recall of traumatizing facts or circumstances. DAP test has undoubtedly proved its value in the assessment of individuals in crisis situations and notably in those experiencing major stress [10], from oncological [11], psychiatric [12] and nutrition diseases [13]. In terms of its use in justice, the DAP test was found to be able to differentiate between violent offenders (domestic and general) and nonviolent offenders, and has been so far suggested as an effective tool for detecting violent behaviour among male prisoners [14].

The underlying premise of DAP is the idea that the drawing symbolically represents the subject, while the paper represents the subject’s environment [15]. This is valid both in normal and abnormal circumstances, allowing, in the latter case, the identification of particularities associated to certain pathological conditions. For example, in abused persons, such markers are related to the page layout, the body outline, or details related to womanhood, that tend to reflect an inner conflict among abused individuals [10, 14]. In the particular case of DV, the usefulness of DAP could stem from its ability to identify several personality traits (such as aggression or low self-confidence) that could predispose certain individuals to be exposed to DV [8, 9, 16].

AIM

The purpose of this paper was to evaluate the potential usefulness of the DAP projective test in detecting the victims of DV. Our hypothesis was that a certain number of items within the drawings of women who were subject of DV could be specific enough to be used for an early identification of these cases, or for preventing the occurrence of DV.

METHOD

Participants in the study included two groups: (1) the study group comprised n = 37 women [mean age = 45.35 (min. = 26, max. = 66, SD = 11.247)] victims of domestic violence, who attended the emergency unit of the National Institute of Forensic Medicine (NIFM), and (2) the control group comprised n = 23 women, recruited conveniently from the community, and self-declared without a history of domestic violence [mean age = 45.35 (min. = 25, max. = 66, SD = 10.886)]. The participants were selected from the urban environment, for reasons of accessibility to the NIFM, but also given the increased prevalence of family violence in this area.

The two groups were matched, in terms of age, educational levels and marital status. All participants had normal vision and hearing for their age, as indicated by self-reports and by their ability to report standard stimuli presented to them visually and in an auditory manner. Individuals with major psychiatric diseases (e.g. psychoses, dementia, those associating disorientation) were not selected.

Informed consent was obtained from all participants and the privacy and confidentiality of participants were ensured.

The analysis was focused on the identification of several general and specific markers which were reported in the literature [17, 18] to be associated with abuse. These included:

(A) general markers: the position within the page, the dimensions of the drawing, the presence/absence of all body parts, clothing details, the drawing’s outline;

(B) specific markers:

(B1) aggression (presence of teeth; clawed hand; strongly shaded hair; big and sharp nose, or a nose represented as two dots; predominance of sharp lines);

(B2) uncertainty, lack of autonomy (drawing realized at the bottom side of the page; hidden hands (or their absence); strong outline; fragile, short or thin feet);

(B3) desire of expansion and status (drawing realized at the upper side of the page; raised arms; long, large or thick feet; filling of the page);

(B4) problems regarding the gender role, especially repression of sexuality (feet covered by long skirts; pointing out of accessories, such as belts, ties, hats; the masculine tone of the drawing).

(C) representation of a profile, instead of a person. Regarding this marker, a preliminary analysis of data showed a significant difference between the two groups, which suggested that this could also contribute in identifying the subjects at risk of DV. Although the full body – profile confusion is reported [15] as an indicator of abnormality, in the current study it was interpreted rather as an indicator of a lower or higher preoccupation for bodily integrity.
Statistical analysis

A descriptive analysis and a statistic analysis, taking into consideration the number of the markers described above and consisting of parametric tests (t tests, Pearson correlations, linear regression) and non-parametric tests (Spearman correlations) were run (SPSS 17.0). The victim's education, age, and the history of abuse were considered as independent variables, whereas the presence of individual traits (measured by the number of aforementioned graphic elements) as the dependent variable.

RESULTS

A. The analysis of the general markers

The analysis of all general markers resulted in the dimension of the drawings being statistically smaller in the study group, compared to the control group (t = 4.228, df = 43.533, p (2-tailed) = 0.001). The average dimension of the drawings in the control group was 19.83 cm (SD = 6.286), whereas in the study group it was only 13.00 cm (SD = 5.735) (Fig. 1). The analysis shows furthermore that the small dimensions of drawings can be considered a predictive factor for the DV in approximately ¼ of cases (Linear Regression: RSquare = 0.243, p = 0.001).

B. The analysis of the specific markers

In the study group the number of aggression markers correlated statistically to the number of markers reflecting uncertainty and lack of autonomy (Spearman's ρ = 0.368, p = 0.025). This result was not found in the control group, where aggression markers, when met, are characterized by exclusivity. This points out to the conclusion that victims of DV associate a specific pattern of aggression and uncertainty / lack of autonomy.

The markers assessed for describing the gender role / repression of sexuality were positively correlated to DV (Spearman's ρ = 0.276, p = 0.022). Their estimated contribution to DV was 12.3% (Linear Regression: RSquare = 0.123, p = 0.001).

The desire of expansion and status was not statistically different in the study group and in the control group (t (183) = 0.240, p = 0.811).

C. Confusion between drawing the full body and the profile

One could notice the tendency of the participants in the control group to represent more often the portrait, than the whole person (Fig. 2) [t-test (58) = 2.358, p = 0.022]. This was not interpreted as a sign of abnormality (according to [15]), because the inclusion/ exclusion criteria precluded the presence, in the control group, of individuals with schizophrenia and other major psychiatric diseases. Instead, this result can be rather explained by the lack of preoccupation of individuals in the control group for bodily integrity, an element which was much more important for the study group.

DISCUSSION

Our results suggest that a simple projective test, as the DAP, could potentially have a utility in detecting victims of DV, suggesting its potential use as a screening instrument. In our sample, the study group (comprising exclusively women having consulted the National Institute of Forensic Medicine, for having been the victims of domestic violence), was characterized by:

- a cluster of both uncertainty / lack of autonomy
markers, which contrasted with the occasional single presence of these markers in the control group; dimension of the drawing (significantly smaller than in the control group); the tendency to draw the whole body (much more frequent than in the control group); changes in those markers reflecting the gender role, in the sense of heightened repression of sexuality.

Among the above mentioned markers, those illustrating uncertainty/lack of autonomy markers seem to be key elements associated to DV, as they occur extremely rarely in the control group, and almost never associated to aggression markers. Still, only the longitudinal assessment of drawings realized by victims of DV could offer further information about the specificity of this element and about its association to the changes in victim's life.

Within the graphical markers which we hypothesized initially to be correlated to DV, those labeled as B3 ("the desire of expansion and status") were the only ones not associated in any way with DV and with its history. This result could reflect a genuine lack of association, but it could equally stem from the low size of the study sample or from the preference for portraits (in the control group), which restrained even more the number of items from the B3 category that could be statistically analyzed.

**Implications for practice**
This study suggests that DAP test can play the role of a useful simple and easily accepted testing instrument, in (a) detecting victims of DV or in (b) assessing their evolution in time.

In terms of (a) diagnosing DV, this tool has all the advantages of most projective tests, such as spontaneity of answers and the minimization of the risks for giving false answers. This is especially important, as many victims of DV tend not to report it [19] or have difficulties in answering detailed questions regarding the circumstances of DV [20].

In terms of (b) monitoring the evolution of DV victims, if properly applied and interpreted, and if most error factors are controlled, DAP test can be a convenient tool for diagnosing individuals, but also larger samples of DV victims, allowing intra- and inter-personal comparisons. In the latter case, DAP test can be used in the screening strategies for DV, eventually leading to a more accurate understanding of the DV phenomenon at the population level. The DAP test's high accessibility, low cost and small potential to create resistances are among those advantages which can be easily used in expanding research on DV, from victims addressing Forensic Medicine services to the community.

**Study limits**
The main limitations of this study are related to the small sample, the transversal design and also to the self-selection of the study sample (only women who attended the emergency unit of the NIFM were included). Their main complaints were physical, so several categories of DV, such as the verbal or emotional abuse in the familial context, were not typically addressed. The conclusions of our study apply to average and high DV and do not take into account the more subtle forms of DV, such as the repeated small violence in the familial context.

Still, despite these limits, our results seem encouraging for reevaluating the role of projective tests and especially of the DAP test in detecting and assessing victims of DV, with the scope of providing a better management of these cases.

Legal medicine and forensic science may bring not just support to domestic violence victims but also a better understanding of the phenomenon in its complexity.

**Conflict of interest.** The authors declare that they have no conflict of interest concerning this article.

**References**