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THE *BLOCH'S MULTIDIMENSIONAL DRAWING TEST*: A REVISED APPROACH TO THE ASSESSMENT OF PARANOID SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER

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ABSTRACT

Background. Paranoid schizophrenia (PS) and schizoaffective disorder (SD) are complex neurodevelopmental conditions with overlapping clinical features, making their differentiation challenging. Bloch's Multidimensional Drawing Test (MDZT), a projective psychological assessment tool, offers potential for improved differentiation between these disorders. This study aims to refine the MDZT by developing a logistic regression-based equation utilizing variables such as gender, personality shape mode (f%), and percentage of human content (M%) to enhance diagnostic accuracy.
Methods. Data were collected from 94 clinical protocols of patients diagnosed with PS or SD (mean age = 34.4 ± 9 years; 80.8% male). Statistical analyses included independent samples t-tests and logistic regression applied to create an adjusted diagnostic model (Combined Variable No. 4). Key variables included personality shape mode (f%), emotional tuning index (AML), and affective irritability indicator (s).
Results. Significant differences were observed between PS and SD patients in personality shape mode (f%), AML, and s variables. A strong correlation was identified between AML and s indices. While the original diagnostic equation demonstrated random accuracy, the revised logistic regression model achieved improved diagnostic precision, correctly classifying 78.7% of cases.
Conclusion. The adjusted MDZT represents an improvement over previous versions and can serve as a valuable addition to a comprehensive diagnostic battery, it contributes significantly to clinical decision-making by offering unique insights into the differentiation of PS and SD. Future research should focus on validating the test in broader populations and exploring its longitudinal applications for monitoring symptom progression and treatment outcomes.

key words:
paranoid schizophrenia,
schizoaffective disorder,
Bloch's Multidimensional Drawing Test,
projective testing,
differential diagnosis

INTRODUCTION

Paranoid schizophrenia (PS) and schizoaffective disorder (SD) are complex neurodevelopmental conditions that deeply affect individuals' lives. Both disorders share symptoms such as a disrupted perception of reality and challenges in maintaining a stable sense of self. These challenges often lead to reduced self-care, difficulties in work and relationships, and significant emotional distress (Cullen et al., 2020; Ebisch, 2020). What sets them apart is that SD combines symptoms of schizophrenia with

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mood swings similar to bipolar disorder, while PS lacks mood-related symptoms. SD is often seen as an intermediate condition between schizophrenia and major mood disorders. Its causes are believed to involve a combination of genetic predispositions and environmental factors. However, researchers have yet to identify a single gene or environmental trigger responsible for psychosis (Zwicker et al., 2018).

The importance of early diagnosis cannot be overstated. Identifying these conditions promptly allows for early treatment, which can alleviate symptoms, prevent complications, and improve overall quality of life for patients and their families. Timely intervention also helps patients regain control over their lives more quickly by providing access to pharmacological and psychological therapies (Dušek, 2010; Eaton et al., 2008). Without proper diagnosis, patients may experience prolonged psychotic episodes, suicidal thoughts, or other severe consequences. Moreover, early diagnosis can mitigate the impact of the disorder on social, educational, and professional functioning (Florentin et al., 2023).

Despite advances in mental health research, distinguishing between PS and SD remains a significant challenge, particularly in the early stages of the illness (APA, 2015). This difficulty arises from overlapping symptoms (Du et al., 2017; Hájková, 2020). Addressing this gap is critical to improving treatment outcomes. Projective drawing methods, such as Bloch's Multidimensional Drawing Test (MDZT), have emerged as potential tools for addressing this diagnostic challenge. Unlike traditional assessments, these tests allow patients to express themselves freely, offering insights into their mental states and more stable aspects of their personalities (Obereignerů et al., 2011).

In recent decades, projective tests have been increasingly replaced by questionnaires, which are considered more valid and easier to process. However, this transition has overshadowed the unique qualities of projective methods, which offer a deeper understanding of personality. Unlike traditional approaches, the Multidimensional Drawing Test (MDZT) focuses on structural projection, linking psychological characteristics to neurophysiological processes. This formal approach allows for both qualitative and quantitative analysis of responses, setting it apart from other projective techniques (Bloch, 2013). With advancements in methodology and the integration of neurobiological principles, the MDZT has evolved into a tool that not only enhances diagnostic practices but also opens up new applications, such as assessing stress tolerance or selecting candidates for specific professions (Bloch, 2013). The MDZT has been used to diagnose various conditions, including psychoses, schizophrenia, and mood disorders (Bloch, 1973). The test offers unique insights by focusing on cognitive and emotional patterns, such as the perception of space, use of color, and thematic content of drawings (Bloch, 1971; Gawlik & Gerzová, 1987). However, while the MDZT has shown promise in distinguishing psychotic disorders, its subjective nature and reliance on artistic expression pose limitations. Additionally, most existing studies are based on outdated treatment paradigms, making it unclear how well the test performs under modern conditions where second-generation antipsychotics are the standard of care (de Filippis et al., 2021).

MDZT are often criticized for the potential subjectivity of the evaluator, which can affect reliability. However, research comparing the quantitative assessment of 160 MDZT protocols by three pairs of evaluators shows that with adequate training and supervision, evaluator independence can be achieved. These findings support the inclusion of MDZT in diagnostic practice, emphasizing the importance of standardization and practice to ensure reliable and objective assessments (Sollár & Belovicová, 2007).

The aim of this study is to contribute to the mitigation of these problems by validating a revised version of the MDZT. The primary focus is on the modification of combined variable No. 4, which previously showed weaker psychometric properties. By focusing on this specific component, the study seeks to improve the diagnostic accuracy of the test while recognizing the broader implications that these findings may have for differential diagnosis in current clinical practice.

METHODS

Participants and procedure

This study employed a comparative design to collect data using Bloch's Multidimensional Drawing Test (MDZT). Participants were adult patients diagnosed with paranoid schizophrenia (PS) or schizoaffective disorder (SD) from three psychiatric hospitals in the Czech Republic: Brno (total hospital capacity: 800 patients), Kroměříž (capacity: 939 patients), and Havlíčkův Brod (capacity: 223 patients). Clinical psychologists who met specific criteria were invited to collaborate, ensuring that the research was conducted by experienced professionals familiar with MDZT methodology.

Initially, we contacted 15 clinical psychologists who had been using MDZT for over five years. After screening, we worked with six psychologists. Psychologists were excluded if they had limited experience with the MDZT (3 psychologists), insufficient diagnoses of PS or SD cases (2 psychologists), or declined to participate (4 psychologists). We used the snowball sampling method, which is effective for engaging specialized or hard-to-reach groups. This method involved starting with an initial set of psychologists ("seeds") who met the following criteria:

1. Completed official MDZT training.
2. Regularly used MDZT in diagnosing PS or SD.
3. Operated under professional supervision.

The initial participants referred additional eligible psychologists, creating a chain recruitment process. Ultimately, data were gathered from 113 patients (mean age = = 34.40 years, SD = 9.82, 80.8% male). Of the initial dataset, 19 cases were excluded for the following reasons: incomplete tests (11 cases) or missing demographic data (8 cases). Thus, the final sample included 94 valid MDZT tests. The diagnoses established before the study are regarded as reliable, as they were made by highly experienced clinical psychologists utilizing a comprehensive diagnostic battery. This battery included the Multidimensional Drawing Test (MDZT) alongside other validated tools, ensuring a rigorous, multimodal approach to assessment. Furthermore, to strengthen the validity of the diagnoses, we included only patients with schizophrenia who had been hospitalized at least twice, providing an additional layer of confidence in the diagnostic accuracy. These safeguards collectively support the robustness of the diagnostic assumptions underlying the study. The research was approved by the local Ethics Committee in the hospitals prior to the data collection and carried out according to the Declaration of Helsinki.

Measures

To administer the MDZT test white paper and seven color markers (red, yellow, green, black, brown, blue, and orange) are needed, along with a watch, an ordinary pencil and an envelope. After reading the test instructions, the patient draws thirty pictures, each for a minute. They choose the markers and contents of the pictures according to what comes to their minds. After an inquiry, the patient names the picture. A key advantage

of the MDZT is its ability to quantify structural projection through formal parameters, such as the number of colors used, the quality of lines, and spatial arrangement. These variables not only reflect individual personality traits but also correspond to neurophysiological processes involving older and newer brain centers (Bloch, 2013). The MDZT is straightforward to administer, requiring only minimal materials such as paper, markers, and a structured protocol. The evaluation process, while comprehensive, is well-documented in the MDZT manual and supports psychologists in deriving meaningful insights from patient drawings. By following standardized steps—such as analyzing the color curve and categorizing variables—clinicians can quickly generate diagnostic insights without requiring extensive artistic expertise (Bloch, 1971). The MDZT captures both the "how" (formal aspects) and the "what" (content) in the responses of individuals. For example, correlations between factors such as colors and shapes have been demonstrated in relation to personality traits, such as introversion and extraversion, as well as to the strength or weakness of the nervous system. This scientific foundation strengthens the MDZT's relevance in contemporary diagnostic practices (Bloch, 2013).

The researchers used the official test protocol and evaluated the test material according to the manual. First, they created a color curve, which represented the patient's mood during the MDZT. The color curve was created based on the number of markers used in each image. Second, the researchers assigned the contents of the drawings into primary variables according to the official MDZT test manual. The MDZT has more than ten primary variables, which are presented below. Being in touch with reality was measured as the frequency of the primary variable called Malfunction. This primary variable is used when the content of the picture is not functionally connected to an environment.

Variables in MDZT

The MDZT evaluation relies on a structured analysis of variables derived from patient drawings. These variables are divided into primary, secondary, and tertiary categories, each contributing to the overall assessment of the patient's cognitive, emotional, and perceptual state (Bloch, 1971).

Primary variables

Below are detailed descriptions of key variables and their significance:
Malfunction (f): This variable measures the lack of functional connection between the content of a drawing and its environment. A drawing is classified as a malfunction in cases such as isolated objects (e.g., a table without a floor), unrelated items grouped together (e.g., a blouse, bird, and lamp), or containers with contents (e.g., a trash bin). Malfunctions indicate a disconnection from reality.
Monochrome Image Change (mFw): Occurs when a patient creates consecutive monochrome drawings using different markers. For instance, a sequence of a yellow-only drawing, followed by a green-only drawing, and then a red-only drawing, would be marked with "mFw."

Special Content Categories

Human Content (M): Covers all depictions of people, including facial profiles, caricatures, and anthropomorphic figures (e.g., Centaurs).
Special Content (IS): Includes anatomical drawings, landscapes, symbols, and abstract elements like maps or ornaments.

Secondary and Tertiary Variables

These advanced metrics offer a deeper analysis of the patient's mental processes:
Dynamic Interactions: Reflect the relationship between form, structure, and emotional responses. For example, the balance between static and dynamic content may indicate levels of cognitive rigidity or adaptability.
Symbolic Representations: Evaluates the patient's use of abstract and collective symbols, offering insights into their conceptual thinking.
Color Dynamics: Analyzes fluctuations in marker usage to understand mood variations and emotional reactivity. In this context, deviation of color fluctuation (s) provides a complementary perspective by capturing the degree of variability around the average fluctuation. While the overall level of fluctuation reflects the presence and intensity of emotional shifts, the deviation index indicates whether these shifts follow a consistent pattern or occur in a more irregular and unstable manner. Low values suggest balanced and predictable color expression, whereas higher values point to greater inconsistency, potentially reflecting impulsive reactions or difficulties in maintaining emotional regulation.

Detailed explanations of these variables and their diagnostic implications can be found in the official MDZT manual (Bloch, 1971). The original combined variable, as developed in the early application of the MDZT, has become less reliable in contemporary psychological practice (Hájková, 2020). Psychologists who rely on the MDZT for diagnostic purposes have found that this variable no longer provides consistent or accurate results.

At the time of its creation, statistical methodologies were relatively limited, and calculations were performed manually. This constrained the precision of the variable and its applicability across diverse clinical contexts. However, upon re-evaluating the statistical approach behind the original equation, it became clear that logistic regression offers a more robust and accurate solution compared to the linear regression models initially employed (Dostál, 2016).

Recognizing these limitations, we developed an adjusted variable, which was rigorously tested in this research. The new variable aims to address the shortcomings of the original equation while improving its diagnostic precision and relevance in modern clinical settings. The original combined variable has not been lately functioning in psychology practice lately, and a psychologist who works with the MDZT cannot rely on it (Hájková, 2020). At the inception of the original variable, the available statistical methodologies were limited, and psychologists resorted to manual calculations. However, upon scrutinizing the statistical issue of the equation, it becomes evident that logistic regression provides a more precise solution compared to a linear equation (Dostál, 2016). For this reason, we created an adjusted variable which we tested in this research.

Statistical analysis

First, to increase the interpretability of our results, data were standardized to the secondary variables according to the manual. Second, we displayed histograms for individual variables and used the Shapiro-Wilk test to test the normality of distribution (Table 1). The research data had a normal distribution, so we used a parametric test. We used Cohen's d measures of effect as an indicator for a parametric test. Third, a paired T-test was used to test the hypothesis and compare how the symptoms of PS and SD differ and coincide in the MDZT. According to the hypothesis, the independent variables were f% (personality shape mode), AML (image series index) and s (an indicator of affective irritability), and the dependent variable was the diagnosis of

PS or SD. We used Pearson correlation between the AML and s. Fourth, researchers focused on the combined variable, which recommends the diagnosis of PS or SD. The researchers renovated the combined variable and used logistic regression, which seems more appropriate for this calculation. We created a binary logistic regression model using the same variables as the original and adjusted for gender and some of the test variables: f% (personality shape mode) and M% (percentage of human content). Each of the variables was assessed in a separate model.

In the tables, however, we present only the results of analyses with a continuous variable. The discriminatory ability of the original and adjusted models was further evaluated using Receiver Operating Characteristic (ROC) analysis, with the Area Under the Curve (AUC) as the primary indicator. All analyses were performed in the statistical software package Statistica 13.

RESULTS

Table 1 Verification of the normality of the variables (N = 94)

Variables	Shapiro-Wilk test	p-value	oblique
f%	0.98	0.08	-0.44
AML	0.98	0.20	0.18
s	0.97	0.25	-0.12

Notes: N = 94 (total number of probands), f% (personality shape mode), AML (mean value of the color index), s (deviation of color fluctuation) (Bloch, 1971).

The background characteristics of the sample are presented in Table 2.

Table 2 Descriptive characteristics of the groups of men and women in terms of age (N = 94)

Group	N	M	SD	Min	Max
Women	18	32.50	8.43	20	46
Men	76	34.85	10.11	16	64
Total	94	34.40	9.82	16	64

Notes: N = total sample size; M = mean; SD = standard deviation; Min = minimum; Max = maximum.

There is no statistical correlation between the image series index (AML) and the color variation deviation value (s). We used Pearson's correlation coefficient. The results supported the alternative hypothesis $r(92) = 0.74$; $p < 0.05$.

In addition, there is no difference between participants with PS and participants with SD in the variable personality shape mode (f%). The results confirmed the alternative hypothesis $t(92) = 3.00$; $p < 0.05$; $d = 0.65$.

There is no difference between participants with PS and participants with SD in the picture color index (AML). The result confirmed the alternative hypothesis $t(92) = -2.42$; $p < 0.05$; $d = -0.52$.

Furthermore, there is also no difference between participants with PS and participants with SD regarding the affective irritability indicator (s). The result confirmed the alternative hypothesis $t(92) = -2.60$; $p < 0.05$; $d = 0.56$.

Equation 1 Original combined variable No. 4 used for differential diagnosis between PS and SD

$$f\% \times (-0.117) + M\% \times (0.113) + 2.432 \times (1 \text{ for men}, 2 \text{ for women})$$

Notes: f% (personality shape mode), M% (percentage of human content), gender designation 1, 2 for statistical analyses, numbers -0.117; 0.113; 2.432 are coefficients b in linear regression calculated from total data of variables f%, M% and gender (Bloch, 1971).

Table 3 shows the comparison by both diagnoses.

Table 3 Comparison of test variables of patients with PS (N = 61) and patients with SD (N = 33)

	Paranoid schizophrenia		Schizoaffective disorder					
Variable	**M**	**SD**	**M**	**SD**	**t**	**df**	**p**	**Cohen_d**
f%	65.88	23.7	50.2	25.07	2.95	62.62	0.0045	0.65
AML	1.45	0.82	1.94	0.75	-2.92	70.95	0.0046	-0.62
s	0.79	0.43	1.15	0.49	-3.55	58.78	0.0008	-0.80
M	14.46	8.24	11.42	6.79	1.92	77.18	0.0587	0.39
mFw	2.11	3.3	1.76	3.45	0.48	63.25	0.6353	0.10
K	0.3	0.56	0.3	0.46	0.00	77.36	1.0000	0.00
E	30.16	15.31	19.79	15.06	3.17	66.67	0.0023	0.68
OPTMIs	30.81	9.55	35.79	10.82	-2.22	59.06	0.0304	-0.50
IS%	24.59	14.82	23.84	11.98	0.27	78.30	0.7909	0.05
O%	54.8	18.39	53.39	16.28	0.38	72.90	0.7031	0.08
P%	18.45	11.5	17.33	11.16	0.46	67.45	0.6474	0.10
T%	11.58	14.15	11.56	10.36	0.01	83.71	0.9938	0.00
M%	15.15	16.80	17.71	16.55	-0.71	66.59	0.4789	-0.15

Notes: N = 61 (total number of participants with paranoid schizophrenia), N = 33 (total number of participants with schizoaffective disorder, f% (personality shape mode), AML (mean value of the color index), s (deviation of color fluctuation), M (sum of points in the color curve), mFW (monochrome imagine change), K (indicator of mental tension), E (form of experiencing), OPTMIs (sum of all contents), IS% (special content), O% (objects), P% (plants), T% (animals), M% (human contents (Bloch, 1971).

Table 4 Results of the original equation of combined variable No. 4 on the research data (N = 94)

	Paranoid schizophrenia	Schizoaffective disorder	Total %
Positive result	28	16	46.8
Negative result	33	17	53.2
Total	61	33	100

Notes: N = 94 is the total research set. A "positive result" means that the equation recommended the same diagnosis as made by the psychiatrist. A "negative result" means that the equation did not match the psychiatrist's diagnosis. The diagnostic accuracy of the original equation was further evaluated using a Receiver Operating Characteristic (ROC) analysis, yielding an AUC of 0.49, which indicates performance no better than random chance.

It turned out that the original equation for the combined variable No. 4 would recommend a diagnosis like tossing a coin, so we decided to compile a new differential diagnostic equation from the research data. We used logistic regression, which seems more appropriate for this calculation.

Equation 2 Adjusted equation for combined variable No. 4 created by logistic regression

$$0.16 \times 1.026^{f\%} \times 0.996^{M\%} \times 3.316^{1 \text{ for men,2 for women}}$$

Notes: f% (personality shape mode), M% (percentage of human content, chances gained by logistic regression).

Table 5 Logistic regression of the adjusted new equation

	Estimate	Odds ratio	Wald's statistics	p-value
Onset	-1.826	0.160	4.681	0.030
f%	0.026	1.026	7.441	0.006
M%	-0.003	0.996	0.070	0.790
Gender	1.198	3.316	4.343	0.037

Notes: N = 94 total number of participants in the study; f% (personality shape mode), M% (percentage of human content), gender coded as 1 for men and 2 for women. $R^2 = 0.18$ (Nagelkerke). To further evaluate the discriminatory ability of the revised logistic regression model, a ROC analysis was conducted, yielding an AUC of 0.57.

The original equation was exact in 46.7% of cases. We created an adjusted equation using logistic regression that recommends diagnosis with accuracy of 78.7%, R^2 = = 0.18 (Nagelkerke). In the case of PS, the model predicted the diagnosis correctly in 51 cases and incorrectly in 10 cases. In the case of SD, the model predicted the diagnosis correctly in 23 cases and incorrectly in 10 cases. The new equation consists of calculating the chance and converting the chance to a probability. If the participant approaches the number 0.6–1, the equation recommends a diagnosis of paranoid schizophrenia. Conversely, if the participant approaches the number 0.5 or less, the equation recommends a diagnosis of schizoaffective disorder.

DISCUSSION

The results of this study demonstrate that the adjusted Bloch's Multidimensional Drawing Test (MDZT) can serve as a valuable adjunct within a comprehensive test battery, aiding the differential diagnosis of paranoid schizophrenia (PS) and schizoaffective disorder (SD). Its integration into the diagnostic process provides clinicians with an additional perspective that complements other diagnostic tools. The MDZT's unique focus on cognitive and emotional patterns complements existing assessment methods, such as structured interviews and psychometric tests (Bloch, 2013). For example, variables like personality shape mode (f%), color index (AML), and affective irritability (s) offer insights into patients' emotional intensity and perceptual styles, which can enhance understanding of their psychopathology when integrated with other diagnostic data. Significant differences were identified between participants with PS and SD in key variables, including personality shape mode (f%), color index (AML), and affective irritability (s). These variables are central to distinguishing between the two disorders (Hájková, 2020), consistent with Bloch's original manual, which highlights differences in the personality shape mode (f%) between these patient groups. Specifically, selective-isolating shape concepts and field independence are more characteristic of patients with PS (Bloch, 1971).

The personality shape mode (f%) reflects a higher proportion of non-functional drawings among patients with PS. This finding aligns with Bloch's interpretation that such non-functional drawings indicate disruptions in understanding relationships between objects and the perception of reality (Bloch, 1973; Hájková, 2020).

Additionally, the study revealed differences in the color index (AML) between the two groups. This supports Bloch's assertion that AML reflects emotional intensity

through the use of color (Bloch, 1971). Patients with SD typically exhibit more vivid emotional expression in their drawings, resulting in higher AML scores compared to those with PS. This suggests that patients with SD are more emotionally attuned than patients with PS (Orel, 2016).

Differences were also observed in the affective irritability indicator (s), which corroborates Bloch's reasoning that patients with SD tend to retain an emotional component, making them more irritable compared to those with PS (Bloch, 1971). Both the AML and s variables are closely tied to the emotional component of the disorders (Gawlik & Gerzova, 1987).

The original combined variable No. 4, however, was found to be unreliable, predicting the diagnosis of PS or SD with no greater accuracy than random chance. This limitation may be attributable to changes in treatment practices, particularly the transition from first-generation to second-generation antipsychotics. First-generation antipsychotics were associated with a higher incidence of extrapyramidal symptoms, such as dystonia, parkinsonism, and tardive dyskinesia, which were often reflected in the MDZT results (Smith et al., 2018). In contrast, second-generation antipsychotics have demonstrated greater efficacy in addressing both positive and negative symptoms of psychoses, thereby altering the presentation of the disorders in the test (de Filippis et al., 2021). This shift may have diminished the sensitivity of the original equation. The updated logistic regression-based equation achieves a diagnostic accuracy of 78.7%, significantly surpassing the original equation's accuracy of 46.7%. The revised logistic regression model demonstrated improved diagnostic accuracy compared to the original version. While the overall classification accuracy reached 78.7%, the AUC of 0.57 suggests only a modest enhancement in the model's ability to discriminate between paranoid schizophrenia and schizoaffective disorder. A closer look at diagnostic performance by group reveals that the model was more effective in identifying patients with paranoid schizophrenia (PS), where the misclassification rate dropped to 20% (10 out of 61 cases). In contrast, the model misclassified 45% of cases in the schizoaffective disorder (SD) group (10 out of 33), indicating lower sensitivity for SD. Although M% (percentage of human content) was included in the revised model due to its theoretical relevance within the MDZT framework, it was not statistically significant ($p = 0.79$). This suggests that it may not meaningfully contribute to diagnostic prediction and should be reconsidered in future refinements. Despite this imbalance, the revised equation represents a meaningful improvement over the original version (46.8% accuracy) and offers a more reliable — though still imperfect — approach to differential diagnosis. Future refinements should focus on increasing sensitivity for SD to enhance the clinical robustness of the model. This improvement makes the MDZT a valuable adjunct to traditional diagnostic tools, providing a better reliable method to distinguish between PS and SD. Additionally, the results for a specific patient can be entered into the newly developed equation presented in this study, which may assist in differentiating between the two diagnoses. However, this represents only one potential indicator within the broader diagnostic framework of the MDZT and should be interpreted accordingly. We recommend incorporating the MDZT as a supplementary tool within a comprehensive test battery to enhance the overall diagnostic process.

The test provides an opportunity to capture rich, illustrative data from patients. For instance, differences in emotional expression (e.g., vivid use of color in SD versus subdued tones in PS) can help tailor therapeutic interventions. Including specific examples in training materials or workshops can demonstrate how these insights translate into practical clinical decisions. MDZT is not merely a diagnostic tool but also

a means of evaluating individual capabilities and suitability for specific demands. Furthermore, the linkage of projective variables with psychophysiological parameters provides a unique method for understanding the interaction between personality and biological processes (Bloch, 2013).

Strengths and limitations

This study has several notable strengths. To the best of our knowledge, it is among the first in this century to explore the differential diagnostic capabilities of Bloch's Multidimensional Drawing Test (MDZT) for distinguishing between paranoid schizophrenia (PS) and schizoaffective disorder (SD). Given the limited availability of reliable psychological tools for early differential diagnosis between these conditions (Eaton et al., 2008), the MDZT demonstrates significant potential to fill this gap. However, the study is not without limitations. The diagnosis of SD, in particular, is relatively rare and required careful selection by psychologists proficient in the MDZT method. Additionally, this research focused exclusively on clinical groups and did not include a sample from the healthy population. Consequently, it remains unclear how the responses of a healthy population might differ from those observed in the clinical groups. The inclusion of a control sample could provide valuable comparative insights and should be considered in future research.

Implications

The findings highlight the significant potential of the adjusted Bloch's MDZT as a reliable tool in the differential diagnosis of paranoid schizophrenia (PS) and schizoaffective disorder (SD), two conditions often challenging to differentiate. The adjusted equation offers improved diagnostic precision compared to the previous version, addressing a critical need for effective psychological methods in early differential diagnosis. By demonstrating distinct patterns in MDZT results between PS and SD groups, this study underscores its practical application in clinical settings. Future research should focus on expanding the data set to include healthy populations for comparison, which could further validate the utility of MDZT and refine its diagnostic capabilities. Additionally, longitudinal studies could explore the test's potential in monitoring symptom progression and treatment outcomes.

CONCLUSION

The adjusted equation in the MDZT addresses a critical gap in psychological diagnostics by offering a clinically relevant tool for distinguishing between PS and SD, which can be incorporated into a comprehensive test battery. Its improved accuracy represents a foundational step towards integration into modern therapeutic paradigms. This adaptability ensures that it serves not only as a diagnostic instrument but also as a valuable therapeutic resource. When utilized appropriately, the MDZT holds the potential to enhance diagnostic precision and improve patient outcomes.

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