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PHD THESIS ABSTRACT

Personality dimensional interference in breast cancer pathology

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1. INTRODUCTION

Psychiatric pathology is of particular diversity also due to the somatic comorbid conditions that are often associated. These interfere with the dynamics of psychiatric episodes and illness and also with personality traits and dimensions. Thus, the onset, course, prognosis and therapeutic responsiveness of psychopathological diversities may also have somatic conditioning. The prevalence and frequency of breast cancer in general pathology is well known, with Romania ranking first in the world in this respect. As with any disabling disease, breast cancer affects a person's overall psyche and personality traits. This is because a chronic evolution is always confirmed, various complications arise and the self-image and self-esteem are always affected - to varying degrees - which is associated with a decline in the level of involvement and impairment in all roles in life and in interpersonal relationships.

2. OBJECTIVES

Through our study we aim to highlight more accurately the complex interferences between psychological, somatic and personological normality.

The aim of the work is to confirm or disprove the direct relationships between the clinical and developmental particularities of breast cancer, individual personality traits and various psychopathologic episodes as well as to assess the degree of subsequent physical and psychological disability. All this with the aim of developing individual psychopathological vulnerability and resilience in order to diversify and increase the complexity and effectiveness of therapeutic strategies.

The results of the study will lead to an increase in the level of psychosocial rehabilitation and quality of life of the patients through the possibility of diversifying the psychotherapeutic techniques that can be used and also through the message conveyed to the caregivers who will become more supportive.

3. GENERAL METHODOLOGY

According to the proposed objectives, the present study is both descriptive and analytic. In terms of the intended results, it falls into the category of observational clinical trials.

It was conducted with the approval of the Ethics Committee of the University of Medicine, Pharmacy, Science and Technology of Târgu Mureș "G.E. Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș "G.E. Palade" by decision no. 1853/13.09.2022.

The first prospective observational study aimed to analyze the relationship between personality traits of patients assessed using the DECAS questionnaire in the presence of breast cancer diagnosis.

The second study was a prospective observational study in which the degree of disability and individual psychopathological vulnerability according to the severity of the breast cancer diagnosis (non-invasive, invasive, metastatic) were assessed using the World Health Organization WHODAS 2.0 Inventory and the Level 1 Test.

The third prospective observational study included a review of the literature on psychopathological involvement in oncologic pathology and a correlation between the results of the tests used in the first two studies.

4. STUDY 1: PERSONOLOGICAL INTERFERENCES IN BREAST CANCER PATHOLOGY

Starting from the premise that personality traits and dimensions are the main factor of the terrain on which any pathological process takes place, it is necessary to evaluate them also in pathologies such as breast cancer, whose clinical and evolutionary particularities always have a major impact on the person.

The study sample comprised 121 patients from the Mureș County Clinical Hospital diagnosed with breast cancer, who completed the DECAS Personality Inventory on personality dimensions (D - Openness, E - Extroversion, C - Conscientiousness, A - Agreeableness, SE - Emotional Stability).

The descriptive statistics show that the mean T-rates for D (38.88 ± 5.05), E (40.17 ± 7.82) and SE (41.26 ± 3.55) were at the low end (between 35 and 44.99), while the scores for C (46.64 ± 6.85) and A (46.74 ± 5.12) were at the lower limit of the mean level (between 45 and 55), according to the DECAS manual.



We correlated each DECAS personality inventory score with each other. There were significant correlations between D and E ($r=0.242$, $p=0.007$ - weak positive correlation), D and SE ($r=0.550$, $p<0.0001$ - moderate positive correlation). E is correlated with C ($r=-0.469$, $p<0.0001$ - moderate negative correlation) and SE ($r=0.446$, $p<0.001$ - moderate positive correlation). C is correlated with A ($r=-0.315$, $p<0.001$ - weak negative correlation).

The low levels of D revealed by the mean of this score are maladaptive through attitude, rigidity, volitional and motivational deficits and lack of imagination. These dimensional attributes are disadvantageous in relation to the disease state, worsen subjective experiences, and disrupt the compliance of therapeutic relationships.

The majority of patients in our study presented low E values which, corresponding to passivity and affective detachment, as well as low needs for expression and socialization, make them vulnerable to suffering and favor anxious and ambivalent ideo-affective experiences.

In the group studied, we found a weakly negative correlation in terms of A and C, the values found could become protective factors of resilience capacities as well as S in therapeutic relationships. These two dimensions may also have an adaptive role through the progressive development of coping mechanisms based on a territory laden with suffering and deep existential meanings.

5. STUDY 2: QUALITY OF LIFE AMONG BREAST CANCER PATIENTS

The main aim of this study is to confirm or disprove the occurrence of psychiatric symptomatology in cancer patients and also to determine the degree of disability of post-diagnosis patients.

To assess the 120 patients, we applied the World Health Organization's WHODAS 2.0 Disability Assessment Inventory and the Assessment Tool - Level 1 (Level 1 of the cross-sectional symptom measures that assess mental health domains relevant to all psychiatric diagnoses).

These two tests were used to assess patients' quality of life after the impact of the breast cancer diagnosis, to assess individual vulnerability from a psychopathological perspective, and to assess resilience to diversify and increase the complexity and effectiveness of therapeutic strategies.

We obtained the following results by grouping subjects according to their scores on the domains corresponding to the Level 1 test:

All patients had depressive symptoms: 71 ($n = 59.16\%$) patients had moderate depression, followed by severe depression, 49 ($n = 40.83\%$) patients. They presented anxiety symptomatology as follows: 35 (29.16%) mild anxiety, 50 (41.66%) moderate anxiety, and 35 patients (29.16%) presented severe anxiety. All patients associated the clinical picture with somatic symptoms, but none of them presented severe complaints. A total of 22 (18.33%) patients developed minor somatic symptoms, 54 (45%) mild symptoms, and 44 (36.66%) moderate somatic symptoms. Suicidal ideation was reported in 79 (65.83%) patients out of which 50 (41.66%) patients stated that suicidal ideation occurred less than 1 or 2 days and 29 (24.16%) more than 1 or 2 days in a row, while 41 (34.16%) patients did not have suicidal ideation. Sleep disturbances affected more than half of the patients. 65 (54.16%) of them had transient sleep disturbances, 46 (38.33%) had moderate disturbances and 9 (7.50%) had severe insomnia.

Then, the group of patients was divided into three groups according to their cancer type (invasive, non-invasive, metastatic), calculating descriptive statistics for each DSM Level 1 domain score and WHODAS 2 instrument score, and the following results were obtained:

There was a statistically significant difference in Domain IV (anxiety) scores between the three groups ($p = 0.009$), particularly between the non-invasive and invasive groups ($p = 0.031$) and between the non-invasive and metastatic groups ($p = 0.031$). Subjects with non-invasive cancer were less likely to experience anxiety than those with invasive or metastatic cancer. Subjects with invasive cancer have the same degree of anxiety as those with metastatic.

Between domain V (somatic symptoms) scores, there is a significant difference between the groups ($p < 0.0001$), specifically between the non-invasive and metastatic groups and between the invasive and metastatic groups. Somatic symptoms are less pronounced in subjects diagnosed with non-invasive and invasive cancer than in those with metastases, whereas there is no difference between the non-invasive and invasive groups.

Domain VI (suicidal ideation) scores differed statistically significantly between patient groups ($p = 0.001$), especially between the non-invasive and invasive groups, and between the non-invasive and metastatic groups. Suicidal ideation is comparable in the invasive and metastatic groups, without going through the stages of a suicidal process.



Assessing disability using the WHODAS 2.0 Inventory, there was a significant difference between the groups ($p < 0.001$). Subjects with non-invasive cancers had the lowest WHODAS 2.0 score, followed by the invasive group, while metastatic cancers had the highest score.

The objective of the study was achieved: the statistically significant correlation was confirmed between breast cancer diagnosis, breast cancer severity and psychiatric symptoms such as depressed mood, anxiety in all its forms and self-blurred ideation which directly influence patients' quality of life.

6. STUDY 3: PSYCHIATRIC PATHOLOGY SECONDARY TO ONCOLOGIC PATHOLOGY THROUGH THE PRISM OF PERSONALITY DIMENSIONS

The aim of this study is to confirm or refute the direct relationships between the clinical-evolutionary particularities of breast cancer and individual personality traits by correlating the results of the questionnaires applied in the other 2 studies.

Levels D, E and SE were low, according to the DECAS Personality Assessment Inventory, while levels C and A respectively were at the lower limit of normal.

Referring to the Anxiety domain, statistically significant differences were obtained for D and SE, applying the Kruskal Wallis test. Comparing the frequency of the presence of anxiety among the patients, using the Mann-Whitney test with Bonferroni correction, we obtained notable differences between the severity grades - according to the patients' answers - 4 and 2 ($p < 0.001$) and 3-2 ($p = 0.003$) according to the level D. In the case of SE we obtained differences between the same severity grades 4-2 ($p = 0.001$), 3-2 ($p = 0.044$). In the case of the other dimensions no notable differences were found. Statistically significant data were also found when analyzing domain VI - self-policed ideation - of the Level 1 inventory at D and A between severity grades 2-0 ($p=0,001$, $p=0,014$ respectively).

Exploration of the relationship between personality traits and mental health has shown that certain traits may predispose individuals to the onset of mental disorders or, conversely, may contribute to overall well-being. Moreover, the presence of a breast cancer diagnosis, by its disabling nature, facilitates the onset of psychological symptoms.

7. CONCLUSIONS

Individual personality traits are directly involved both in favoring and triggering psychiatric episodes and illnesses as well as in the diversity of developmental and therapeutic response modalities, and also play a major role in subsequent psychosocial rehabilitation. The adaptive deficits of certain personality types are independent of contextual factors but the latter can also activate maladaptive behavior.

The intensity of depressive and anxious symptoms is closely related to the severity of breast cancer (non-invasive, invasive, metastatic). Comparing the WHODAS 2.0 disability scores between the three groups, higher scores were obtained according to the severity of diagnosis.

More than half of the patients diagnosed with breast cancer develop a psychiatric disorder with symptoms ranging from sadness to anhedonia, anxiety and panic attacks, with mood changes also closely related to cancer treatment and its consequences.

In the third study we were able to demonstrate that the emotional response to a breast cancer diagnosis can vary greatly depending on personality. It almost invariably involves depressive and anxiety symptoms, somatic symptoms and relatively frequently self-limiting concerns.

8. ORIGINALITY OF THE THESIS

This thesis confirms its originality by approaching a particular territory where individual personality traits and a serious and disabling somatic condition meet.

In this way - within the concept of vulnerability - the role of the premorbid terrain in the onset and evolution not only of psychopathological disorders, but also of somatic sufferings is highlighted.

The subject of the doctoral thesis is also original in that it is based on the dimensional perspective on personality, which allows us to understand inter-individual differences and the gradual transition from normality to abnormality. A particular contribution is also the evaluation of somatic pathology in terms of the relationship between personality traits and the degree of disability of the subjects, as well as with the remaining adaptive capacities. These interfere with the facets of the personality dimensions and confirm their role in the disease context described.