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## COPING PATTERNS FOR NOSOGENIC FACTORS OF PSYCHOTRAUMATIZATION AMONG PATIENTS WITH PSYCHOENDOCRINE SYNDROME Ischuk V.

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### ПАТТЕРНЫ КОПИНГА В ОТНОШЕНИИ НОЗОГЕННЫХ ФАКТОРОВ ПСИХОТРАВМАТИЗАЦИИ СРЕДИ ПАЦИЕНТОВ С ПСИХОЭНДОКРИННЫМ СИНДРОМОМ

#### Аннотация.

С целью установления паттернов и стратегий копинга в отношении нозогенных факторов психотравматизации у больных с психоэндокринным синдромом на фоне нарушений обмена гормонов щитовидной железы, коры надпочечниковых желез и гипогонадизма, на базе Украинского научно-практического центра эндокринной хирургии, трансплантации эндокринных органов и тканей МЗ Украины, было обследовано 400 пациентов с указанными формами эндокринных нарушений. Исследование проведено с использованием психодиагностического метода с использованием копинг-теста Лазаруса в ракурсе сравнения групп исследования. Паттерны копинга были изучены в отношении таких факторов: формирование функциональных и морфологических нарушений, факт наличия хронического заболевания, ограничения физической активности, наличие тяжело переживаемых симптомов заболевания, необходимость терапии препаратами, имеющими выраженные побочные эффекты, которые негативно сказываются на состоянии, канцерофобические переживания, интроспективно определенные когнитивные и мнестические нарушения, необходимость проведения диагностических процедур и терапевтических мероприятий, имеющих высокую стоимость, наличие трудовых ограничений которое вызывает финансовые трудности и потеря экономически доминантной роли в семье, ограничение круга общения, связано с наличием заболевания или его симптомами, необходимость соблюдения диеты, отказа от приема алкоголя и любых стимулирующих веществ, и зависимость от приема заместительной гормональной терапии.

**Ключевые слова:** психоэндокринный синдром, копинг, гипотиреоз, гипертиреоз, гипокортицизм, гиперкортицизм, гипогонадизм.

### ПАТЕРНИ КОПІНГУ ВІДНОСНО НОЗОГЕННИХ ФАКТОРІВ ПСИХОТРАВМАТИЗАЦІЇ СЕРЕД ПАЦІЄНТІВ З ПСИХОЕНДОКРИННИМ СИНДРОМОМ

#### Анотація.

З метою встановлення патернів і стратегій копінга у відношенні нозогенних факторів психотравматизації у хворих з психоендокринним синдромом на тлі порушень обміну гормонів щитовидної залози, кори надниркових залоз і гіпогонадизму, на базі Українського науково-практичного центру ендокринної хірургії, трансплантації ендокринних органів і тканин МОЗ України, було обстежено 400 пацієнтів із зазначеними формами ендокринних порушень. Дослідження проведено з використанням психодіагностичного методу з впровадженням копінг-тесту Лазаруса в ракурсі порівняння груп дослідження. Патерни копінга були вивчені відносно таких факторів: формування функціональних і морфологічних порушень, факт наявності хронічного (невиліковного) захворювання, обмеження фізичної активності, наявність обтяжливо пережитих симптомів захворювання, необхідність терапії препаратами, що мають виражені побічні ефекти, які негативно позначаються на стані, канцерофобічні переживання, інтроспективно визначені когнітивні і мнестичні порушення, необхідність проведення діагностичних процедур і терапевтичних заходів, що мають високу вартість, наявність трудових обмежень, що викликає фінансові труднощі та втрата економічно-домінантної ролі, обмеження кола спілкування, пов'язане з наявністю за-

хворювання або його симптомами, необхідність дотримання дієти, відмови від прийому алкоголю і будь-яких стимулюючих речовин, та залежність від прийому замісної гормональної терапії.

**Ключові слова:** психоендокринний синдром, копінг, гіпотиреоз, гіпертиреоз реоз, гіпокортицизм, гіперкортицизм, гіпогонадізм.

## COPING PATTERNS FOR NOSOGENIC FACTORS OF PSYCHOTRAUMATIZATION AMONG PATIENTS WITH PSYCHOENDOCRINE SYNDROME

**Abstract.** In order to establish patterns and coping strategies in relation to the nosogenic factors of psychotraumatization among the patients with psychoendocrine syndrome on the background of metabolic disorders of the thyroid gland, adrenal cortex and hypogonadism, at the Ukrainian Scientific and Practical Center for Endocrine Surgery, Transplantation of Endocrine Organs and Tissues of the Ministry of Health of Ukraine, 400 patients with the indicated forms of endocrine disorders were examined. The study was conducted with the introduction of the psychodiagnostic method and the Lazarus copying test was used in the study of group-comparison. Coping patterns were studied in relation to such factors: the formation of functional and morphological disorders, the presence of a chronic disease, physical activity restrictions, the presence of severely experienced symptoms of the disease, the need for treatment with drugs that have side effects, which adversely affect the state, cancerophobic experience, introspective cognitive and mental disorders, the need for diagnostic procedures and therapeutic measures with high cost, presence of labor restrictions which causes financial difficulties and loss of economically dominant role in the family, limiting the circle of communication, is associated with the presence of the disease or its symptoms, the need to follow a diet, refusal from alcohol and any stimulating substances, and dependence on hormone replacement therapy.

**Key words:** psychoendocrine syndrome, coping, hypothyroidism, hyperthyroidism, hypocorticism, hypercorticism, hypogonadism.

Relevance. Endocrine pathology causes an excessive interest in the field of medical and psychological researches. The successes in the development of the pharmacological therapeutic systems and psychological correction methods had led to huge successes in stabilization and compensation of the most common nosological forms of endocrine disorders. Therefore the main goals of the therapeutic process now are to achieve a high standard of living and the maximal level of control over disease. This shifts the attention of modern researchers to development of methods that focused on achievement of high therapeutic compliance level and correction of pathopsychological and psychopathological aspects of endocrine pathology that presented with definition of "psychoendocrine syndrome" [1, 2, 3, 5, 7].

Psychoendocrine syndrome is considered as an interconnected combination of emotional, cognitive and behavioral violations that develops among the patients with most types of conventional endocrine disorders. Besides of its own influence on psychosocial functions, psychoendocrine syndrome causing the changes in personality of patients that makes them more vulnerable to stress related to nosological background

factors: the formation of functional and morphological disorders, the presence of a chronic disease, physical activity restrictions, the presence of severely experienced symptoms of the disease, the need for treatment with drugs that have side effects, which adversely affect the state, cancerophobic experience, introspective cognitive and mental disorders, the need for diagnostic procedures and therapeutic measures with high cost, presence of labor restrictions which causes financial difficulties and loss of economically dominant role in the family, limiting the circle of communication, is associated with the presence of the disease or its symptoms, the need to follow a diet, refusal from alcohol and any stimulating substances, and dependence on hormone replacement therapy [1, 2, 4, 8].

In this context the analysis of patterns and strategies of coping behavior of patients with endocrine disorders and related psychoendocrine syndrome is relevant for further improvement of their psychological support.

Aim of the study: to establish patterns and strategies of coping behavior related to with nosogenic factors of psychotraumatization among the patients with psychoendocrine

syndrome on the background of metabolic disorders of the thyroid gland, adrenal cortex and hypogonadism.

**Study design.** The study was conducted in prospective parallel group-comparison design by applying structured psychodiagnostic interview based on the Lazarus copying test. 400 patients with psychoendocrine syndrome on the background of metabolic disorders of the thyroid gland, adrenal cortex and hypogonadism were examined at the Ukrainian Scientific and Practical Center for Endocrine Surgery, Transplantation of Endocrine Organs and Tissues of the Ministry of Health of Ukraine.

400 patients were divided on 5 groups according to the nosological form of endocrine pathology. First group (G1) – 100 patients with hypothyroidism, second group (G2) – 100 patients with hyperthyroidism, third group (G3) – 50 patients with hypocorticism, fourth group (G4) – 50 patients with hypercorticism, fifth group (G5) – 100 patients with hypogonadism.

**Study results.** Before the applying the evaluation of coping patterns all patients underwent psychological consulting session that underlined the aim of the study (to find out what behavior is related with stress-factors which appeared as a consequences of endocrinal pathology e. g.: the formation of functional and morphological disorders, the presence of a chronic disease, physical activity restrictions, the presence of severely

experienced symptoms of the disease, the need for treatment with drugs that have side effects, which adversely affect the state, cancerophobic experience, introspective cognitive and mental disorders, the need for diagnostic procedures and therapeutic measures with high cost, presence of labor restrictions which causes financial difficulties and loss of economically dominant role in the family, limiting the circle of communication, is associated with the presence of the disease or its symptoms, the need to follow a diet, refusal from alcohol and any stimulating substances, and dependence on hormone replacement therapy).

Next, the contingent of the study was surveyed using the "Lazarus copying test". The procedure for interpreting the results obtained included ranking of scores from 0 to 3, where "0" – the pattern is not applicable, "1" – the pattern is very limited (rarely), "2" – the pattern is used limited (sometimes), "3" – the pattern is applied unlimited (often).

In order to evaluate the frequency of use of certain coping patterns and the subsequent comparison of the coping strategies in the study groups' quantitative values were introduced into qualitative ones with threshold values of 9 points. Thus, individuals who scored 0 to 8 points for a particular coping pattern were marked as not using this pattern, and people who scored 9 to 18 points – as those using this pattern.

The obtained data presented in tables 1-3.

*Table 1*

**Coping patterns frequency comparison in G1 (Hypothyroidism) and G2 (Hyperthyroidism)**

Coping pattern	G1 Hypothyroidism (N=100)	p(χ <sup>2</sup> )	G2 Hyperthyroidism (N=100)
Confrontation	6	<0,01	77
Distancing	54	<0,01	14
Self-control	26	<0,01	8
Social support search	9	<0,01	34
Taking responsibility	16	0,36	21
Avoidance	67	<0,01	14
Planning and solving	23	<0,01	7
Positive overestimation	5	<0,01	43

Thus, there were established significant differences between the study groups relatively coping patterns, namely, statistically significant differences between patterns (at the level of  $<0.05$ ): "social support search", "avoidance", "planning and solving".

Thus, according to the results of the study, it was found that the representation of patients with coping pattern "confrontation" in G2 (77 patients) was significantly higher than in G1 (6 patients). Among patients with hypothyroidism (G1) coping pattern "distancing" was more common (54 patients) compared with patients with hyperthyroidism (14 patients). In G1 more characteristic coping pattern is "self-control" (26 patients) than in G2 (8 patients). The "social support search" among patients with hypothyroidism (G1) is less pronounced (9 patients) than in patients with thyrotoxicosis (G2 - 34 patients). For patients from G1, "avoidance" became the most frequent pattern of coping (67 patients), while for G2 patients this pattern was

biological influence of thyroid hormones on psychosocial interactions and mood. In opposition to this, among the patients with hypothyroidism the main patterns of coping behavior are distancing and avoidance, that shows decreased activity and increased sensitivity, that is also could be understood as biological effects of thyroid hormones inefficiency.

Among patients with Cushing's syndrome (G4), the coping pattern "confrontation" (23 patients) was more common than among the patients with adrenal insufficiency (G3 - 3 patients). The representation of the coping pattern "self-control" among the patients with adrenal insufficiency (G3) was less pronounced (39 patients) than among the patients with Cushing's syndrome (G4 - 6 patients). The implementation of the "social support search" coping pattern for G3 patients was significantly higher (40 patients) than in G4 (8 patients). The representation of patients with a coping pattern of "avoidance"

Table 2

#### Coping patterns frequency comparison in G3 (Hypocorticism) and G4 (Hypercorticism)

Coping pattern	G3 Hypocorticism (N=50)	p( $\chi^2$ )	G4 Hypercorticism (N=50)
Confrontation	3	$<0,01$	23
Distancing	21	0,84	20
Self-control	39	$<0,01$	6
Social support search	40	$<0,01$	8
Taking responsibility	22	0,10	30
Avoidance	29	$<0,01$	15
Planning and solving	15	$<0,01$	2
Positive overestimation	2	0,08	7

detected much less frequently (14 patients). "Planning and solving" is the pattern that was used among 23 patients (G1) and 7 patients (G2). The representation of patients with a coping pattern of "positive overestimation" in G2 (43 patients) was significantly more than in G1 (5 patients).

The semi-structured psychodiagnostic interview showed off that combination of confrontation, active search of social support and positive overestimation is the main coping strategy for patients with hyperthyroidism. This mix shows the increased activity and motivation in this group, which could be associated with direct

in G3 (29 patients) was significantly more than in G4 (15 patients). Among patients with adrenal insufficiency (G3) coping pattern "planning and solving" was more common (15 patients) compared with patients with Cushing's syndrome (2 patients).

For the patients with hypocorticism self-control and search of social support are the mostly used coping patterns that shows the increased sensitivity and high level of disease understanding. Patients with hypercorticism had shown a coping strategy which is similar to one presented among the patients with hyperthyroidism, but without pronounced search of social support.



Table 3

**Coping patterns frequency comparison in G3 (Hypocorticism) and G5 (Hypogonadism)**

Coping pattern	G3 Hypocorticism (N=50)	p(χ <sup>2</sup> )	G5 Hypogonadism (N=100)
Confrontation	3	0,32	11
Distancing	21	<0,01	89
Self-control	38	0,78	78
Social support search	40	<0,01	3
Taking responsibility	22	<0,01	14
Avoidance	29	<0,01	91
Planning and solving	15	<0,01	79
Positive overestimation	2	0,21	10

As a result of the study, it was revealed that the representation of patients with a coping pattern of "distancing" in G5 (89 patients) was significantly higher than in G3 (21 patients). Among patients with hypogonadism (G1) coping pattern "distancing" was more common (54 patients) compared with patients with hyperthyroidism (14 patients). The "social support search" among patients with hypogonadism (G5) is significantly lower (3 patients) than among the patients with adrenal insufficiency (G3 – 40 patients). In G3, the more characteristic coping pattern is "taking responsibility" (22 patients) than in G5 (14 patients). For patients with hypogonadism (G5), the most frequent coping pattern was "avoidance" (91 patients), while patients with adrenal insufficiency (G3), this pattern was much less common (29 patients). "Planning and solving" is the pattern that was used among 79 patients (G5) and 15 patients (G3).

According to psychodiagnostic data patients with hypogonadism demonstrated pronounced distancing, avoidance and self-control coping patterns which is similar to combination of coping-strategy features common to both groups of patients with hypothyroidism and hypocorticism.

Conclusions. Patterns and strategies of

coping behavior related to nosogenic factors of psychotraumatization among the patients with psychoendocrine syndrome on the background of metabolic disorders of the thyroid gland, adrenal cortex and hypogonadism were established.

It was found that for patients with hyperthyroidism combination of confrontation, active search of social support and positive overestimation is the main coping strategy. Among the patients with hypothyroidism the main patterns of coping behavior are distancing and avoidance, that shows decreased activity and increased sensitivity, that is also could be understood as biological effects of thyroid hormones inefficiency.

Among the the patients with hypocorticism self-control and search of social support are the mostly used coping patterns, that shows the increased sensitivity and high level of disease understanding. Patients with hypercorticism had shown a coping strategy which is similar to one presented in patients with hyperthyroidism, but without pronounced search of social support.

Patients with hypogonadism demonstrated pronounced distancing, avoidance and self-control coping patterns which is similar to combination of coping-strategy features common to both groups of patients with hypothyroidism and hypocorticism.

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