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# The involvement of cognitive schemas in the manifestation of anxiety according to sex

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## Abstract

The assumed purpose of this study is to show the gender differences in the manifestation of anxiety both as a condition and as a feature; the studies show that – up to the present moment – women present a higher susceptibility to this disorder. Anxiety states are characterized by subjective feelings of tension, worry, mistrust and nervousness and by the arousal of the central nervous system at a certain intensity. Anxiety trait refers to relatively stable individual differences in the process of anxiety or to the differences between people in their tendency to perceive a stressful situation as dangerous or threatening.

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## 1. Introduction

Cognitive schemas are deep cognitive structures which store the individual's knowledge and experience in a certain field and they are determined genetically. These schemas present what each individual knows about himself, about the others and about the world in general. The schemas are functional mechanisms which help storing and processing the information. Cognitive schemas may be general or limited, flexible or rigid, active or latent. Malfunctions of the schemas come from their rigid, exclusivist and absolutist character. In this regard, cognitive

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psychologists distinguish two types of beliefs and assumptions, which Beck doesn't seem to differentiate clearly enough (Blackburn, Jones & Lewin, 1986).

More precisely, Beck, Freeman, & Associates (1990) explain them in two ways: conditional beliefs, expressed in the form of "if...then" ("If I don't work hard enough to do what the others like me to do, they won't love me"), unconditional beliefs, which are categorically and rigorously defined to resemble categorical imperatives ("I'm not good enough to be loved".) On the other hand, Young (1990) provided the cognitive schema a similar term with the one given by Beck Freeman, & Associates (1990). In his perception, the schemas represent organized structures which are the result of past experiences and reactions; they also form a coherent set of knowledge which can guide the way of perception of reality. The child thus identifies selectively and internalizes his thoughts, feelings, experiences and the parents' behaviour. Early maladaptive schemas are deep structures made up in childhood which help the interpretation of future experiences (Young, 2000).

In Young's model, the 15 types of dysfunctional schemas are grouped in five big categories of emotional needs, these being known as schema domains: (1) disconnection and rejection domain, (2) impaired autonomy and performance domain, (3) impaired limits domain, (4) other directedness domain and (5) over vigilance and inhibition domain (Young, 1998 cited in Dindelegan, 2008).

Anxiety is an acute problem of the times we live in. Those gripped by anxiety are always on alert, having the feeling of helplessness in regard to the dangers they feel coming (Osher, Hamer & Benjamin, 2000). Anxiety states and features may be partially analogical, in some cases of kinetic and potential energies: (1) the state of anxiety as well as the kinetic energy refers to an observable reaction or a tangible product that takes place within a specified time with a degree of anxiety and (2) the anxiety trait as well as potential energy is caused by individual differences of reaction (Dindelegan, 2012). Anxiety replies can be adaptive or maladaptive. When responses are given to stimuli associated with danger, they are considered adaptive. When answers are given to stimuli without the danger, they are maladaptive. Misfits are called neurotic or clinical habits.

People who suffer of anxiety disorders tend to make misinterpretations of their own somatic sensations compared with normal individuals; the cognitive structure is represented by the increasing sense of vulnerability. As a result of living an anxiety episode, the person becomes vulnerable and prone to reactivation of similar experiences later, in less stressful conditions than when the first episode occurred. In this way, the person "learns" a way to respond that will trigger more easily until it comes spontaneously. To the person making selective negative evaluations, but also anticipations of future negative events, the cognitive products are represented by automatic thoughts.

Bearing in mind this problematic, the present study aims to discover gender differences in the case of cognitive schemas detailed on the five domains. We have searched to identify differences between men and women in terms of anxiety - both as a state and as a feature.

## **2. Methodology**

### *2.1. Hypothesis and design*

Hypothesis no. 1: There are significant differences between men and women in terms of maladaptive cognitive schemas. In this case we used a one-factor design intergroup.

Hypothesis no. 2: As for the anxiety as a state and as a feature, there are significant differences in terms of sex. In this case we used a one-factor design intergroup.

### *2.2. Participants*

In order to achieve these objectives, we used a sample of 95 participants of whom 46 were men and 49 women. Among men, 23 had above-average symptoms of anxiety and 23 had low and very low anxiety symptoms. There were 25 women who had experienced above average anxiety and there were 24 women who experienced low anxiety.

### 2.3. Instruments

In order to perform this research we used two inventories which were given to every participant individually.

- State - Trait Anxiety Inventory – S.T.A.I.
- Young Schema Questionnaire – S4, YSQ-S4 (short form 4)

STAI is a psychological inventory which points out the difference between state and trait, a person's state of anxiety from the personality trait which makes it have a generalized tendency towards anxiety. S.T.A.I. was intensely used in the clinical study and the clinical practice and it is made up of two self-evaluation scales to measure the state anxiety (A-state) and the trait anxiety (A-trait). A-trait scale presents 20 basic descriptions which help the participants express the way they generally feel, while A-state scale also presents 20 descriptions, but the instructions suggest the participants to describe the way they feel at a certain moment.

On the other hand, Young's schema questionnaire is a self-assessing cognitive schemas registry. The short form of the inventory deals with 75 items and includes 15 sub-scales, with the highest items which appear in every schema in the long form. The short form is used in research studies because it requires less time of administration. The inventory implies that the subject rates on a 6 point Likert scale the way in which an item describes him best. The sub-scales are in fact the maladaptive schemas described by Young and they are grouped in 5 domains: disconnection, rejection, impaired autonomy and performance, impaired limits, other directedness, over-vigilance and inhibition.

### 2.4. Processing and interpretation of data

This research was based on a number of assumptions. These hypotheses were tested on the two samples of participants: people who have increased generalized anxiety and people who do not suffer of anxiety.

Hypothesis no. 1: There are significant differences between men and women in terms of maladaptive cognitive schemas. In this case we used T test and one-factor design intergroup. In the case of the interest variables, the result of the Kolmogorov-Smirnov test (for each variable in particular) allows to assume that distribution data respect the normality criteria.

Table 1. Means, standard deviations and t test for the five domains scores

	Sex	N	Mean	SD	t	Sig.
Domain no. 1	Male	46	55.02	17.58	-42	.67
	Female	49	56.89	21.32		
Domain no. 2	Male	46	36.00	13.90	-1.58	.11
	Female	49	41.67	17.60		
Domain no. 3	Male	46	28.51	5.95	-31	.75
	Female	49	29.08	9.37		
Domain no. 4	Male	46	29.05	7.47	-2.19	.03
	Female	49	32.79	7.82		
Domain no. 5	Male	46	29.77	5.85	-72	.47
	Female	49	30.89	7.77		

From the analysis of the above table we can see that there are differences between women and men in terms of cognitive schemas only on Domain no. 4: Other directedness schemas. Only on this field we obtained a significance threshold of  $p = 0.031$ , which is lower than the critical threshold  $p = 0.05$  so we can say that women are more dependent, showing a higher concentration on the feelings and needs of others in order to gain appreciation and avoid rejection.

Regarding cognitive schemas related to separation / rejection, there were no significant differences between women and men. Cognitive schemas in this area have similar implications both for women and for men.

Cognitive schemas in domain no. 2 on autonomy and performance have the same influence on people, whether female or male. Same situation is true for cognitive schemas on impaired limits, the faulty perception of the personal

limits, the responsibility toward others, the commitments they take and the goals they set are no different for women or men.

Cognitive schemas that refer to the tendency to always be on guard, to be constantly aware of behaviors and reactions in order to avoid criticism and disapproval do not differ by gender.

Hypothesis no. 2: As for the anxiety as a state and as a feature there are significant differences in terms of sex.

In this case we used the T test and one-factor design intergroup. In the case of the interest variable for the second hypothesis, the result of the Kolmogorov – Smirnov test (for each variable in particular) indicate that data are normally distributed.

Table 2. Means, standard deviations and t test for the anxiety as state and anxiety as trait scores

	Sex	N	Mean	SD	t	Sig.
Anxiety as state	Male	46	36.51	9.98	-1.64	.10
	Female	49	40.44	11.32		
Anxiety as trait	Male	46	39.31	8.92	-3.46	.001
	Female	49	46.69	10.09		

The results we obtained partially confirm the hypothesis; there are significant differences according to sex, but only in the matter of anxiety as trait.

It is noted that the lowest scores are obtained by men both in terms of state anxiety, as well as in terms of trait anxiety. Thus, we can say that women are more anxious than men, but as it appears from the results, these differences are not significant in terms of state anxiety.

### 3. Conclusions

Analyzing the results of the first hypothesis, we can say that there are significant differences between women and men in domain no. 4 - Other directedness -. Thus, because men have the lowest level, we can say that maladaptive cognitive schemas concerning exaggerated focus on the feelings of others to the detriment of their own to win appreciation and avoid abandonment influences in a greater way to women than men. They are most likely to have such schemas in this area.

Our hypothesis regarding gender differences in the manifestation of state anxiety and trait anxiety was only partially proved. Our study shows no gender differentiation in terms of state anxiety manifestation. Women and men are equally prone to anxious situations. Regarding trait anxiety our results confirm the previous studies which state that anxiety disorders are more common in women, 55-60% of those suffering from this disorder.

The present study represents a contribution regarding the development of this subject – even in other future studies – in two specific directions. More precisely, theoretically speaking, the statistic data prove that a lack of satisfaction concerning fundamental needs (such as understanding, stability, approval and respect) has a strong contribution to the appearance of anxiety as a state.

Moreover, our study shows that in the case of women, the maladaptive schemas concerning hyper-vigilance are more strongly activated, generating an entire anxiety syndrome. Pragmatically speaking, the obtained data are of great aid in implementing specific cognitive-behavioral intervention programs – both for individuals and for groups – concerning anxiety disorders as a state and as a feature, in relation to gender.

As a limit of this study, we must mention the reduced number of participants. Therefore, in the future, the research could be broadened to a larger number of persons, both diagnosed and not diagnosed with anxiety disorder.

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