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Subjective determiners of treating the final secondary school examination as a threat

The article discusses the findings of the research carried out basing on the investigation procedure originating from the function-action approach to psychological defense developed by A. Senejko, where every reaction to threat can be considered as a defensive reaction. A nation-wide final secondary school examination was employed as the threat in the study and the reactions to such a threat were diagnosed twice: in January 2005 and two weeks before the exam in April 2005. The participants were 177 students of secondary schools (aged 18-19; 121 females and 52 males) of the Lower Silesian and Upper Silesian regions of Poland. In the she study two questionnaires were employed. Part one of The Psycho-Social and Psychic Defenses Questionnaire (PSPDQ) and the Questionnaire of Personal Judgements (QPJ) developed by Kinga Lachowicz-Tabaczek and Alicja Senejko for identifying the following psychological dispositions: self-esteem, social anxiety, depressiveness, obligation will, emotional reactivity, sensitivity, activity and endurance. The basic research questions concerned the effect which the diagnosed factors had on the two dimensions of the subjects' attitude to their final exam as a threat as well as how they influenced their reactions to it, that is their psychological defenses. The multiple regression analyzes showed that the two dimensions of the participants' approach to their exam as a threat were the most substantially influenced by endurance, self-esteem, gender and reactivity. However, the way the examinees reacted their exam was the most substantially influenced by their obligation will, depressiveness and endurance.

Keywords: *final secondary school examination, threats, psychological defense*

Introduction: the basic assumptions of the function-action approach to defensive activity applied in the research on the students taking their final secondary school exam.

The main developmental task of adolescence is to shape young peoples' identity (Erikson, 1985/2002; Havighurst, 1948/1981). Within the context of this task the final secondary school exam is associated with the formation of adolescents' vocational identity and carrying out their professional aims in life. On the other hand the high importance of this exam makes young people treat it as a serious threat because they perceive the failure to pass it a potential impediment to achieving their most important life purposes, especially the ones related to their further education and future work. According to the function-action approach to defensive activity underlying both the construction of PSPDQ used in the research as well as serving the interpretation of its results, a threat (a threatening situation) is defined as a disruption (an impediment or a blockage) to carrying out the individual's most important motivational factors (needs, values, attitudes etc.), i.e. the regulatory standards which stimulate, direct and give meaning to the human activity. Therefore, for most students passing one's final exam is the most important regulatory standard in a given period of their lives, whereas potential disruption in carrying out this standard is - according to the definition - a threat. Apart from identifying whether the exam posed a potential threat to the students or not their attitude to it was also diagnosed basing on another assumption of our function-action approach, which says that attitude to a threat manifests itself both in its *emotional-motivational* and *operational* aspects.

The attitude towards a threat expresses the character of the motivation (its power and direction) involved in coping with it. Four dimensions of such an attitude were distinguished within the function-action concept:

1/ considering an existing situation a ***small threat*** (weak motivation, exclusively defensive motivation);

2/ considering an existing situation a ***big threat*** (strong motivation, exclusively defensive motivation);

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3/ considering an existing situation a big threat and a challenge, with prevalence of its threatening aspect (multi-motivational character of behaviour; task and defensive motivation – more powerful defensive motivation) **– a *threat/challenge***.

4/ considering an existing situation a big threat and a challenge, with strong prevalence of its challenging aspect (multi-motivational character of behaviour; task and defensive motivation – more powerful task motivation) –a ***challenge/threat***.

According to the action-function approach the next type of an attitude to a threat**, *assessment of a threat,*** is based on the evaluation of one's abilities to cope with it. The individual can treat a threat in various ways:

1/ as an ***impediment***, if they are convinced they are able to cope with it (permanent evaluation);

2/ as a ***blockage***, if they are convinced that they unable to cope with it as it exceeds their abilities (permanent evaluation);

3/ they may evaluate it as exceeding their abilities to cope with it but then, in the course of a threatening situation, they can come to believe that they are capable of managing it (changeable evaluation) – a ***blockage/impediment*;**

4/ they may evaluate threat as possible to cope with and then, in the course of a threatening situation, as impossible to avert (changeable evaluation) –an ***impediment/blockage***.

According to some other assumptions of the function-action perspective on a defensive activity employed in the study presented below the defensive activity (psychological defense) is understood as a system of reactions manifested by people in the wake of perception of a threat irrespective of the character of such reactions. (Senejko, 2001,2003, 2005). Thus, each response to the final exam taken as a potential threat is in fact (due to its currently performed function) a defensive action. Therefore the reaction to the exam is a good example of the close connection between psychic development and psychological defense as it is assumed by our approach to defensive activity described in some earlier papers (Senejko, 2001,2003, 2005).

As it is implied by this concept (Senejko,2005), detailed functions of psychological defense are carried out by particular defenses (defensive activities and strategies). The first specific function of psychological defense is connected with overcoming threats, thus it is aimed at restoring the ability to accomplish the individual's most important regulatory standards, which is performed by the so-called constructive defenses providing results which directly contribute to development. The second specific function of psychological defense manifests itself through minimizing negative consequences of not carrying out regulatory standards, which is fulfilled by the so-called non-constructive defenses, whose results do not directly contribute to the development. Since, as it is viewed from the function-action construct perspective, reactions to threat differ in the extent to which they transform and improve regulatory processes, therefore they vary in the extent to which they are conductive to development. From this developmental perspective other criteria for the division of defenses into psycho-social and psychic are less essential. They are based on estimating whether activation of social relations and objects is necessary to carry out defensive purposes (functions) - psychosocial defenses, or whether there is no such necessity - psychic defenses. The above criteria make it possible to distinguish within the system of defensive activities some subgroups of their groups: the constructive, nonconstructive, psychosocial, psychic, psychic constructive, psychic nonconstructive, psychosocial constructive and psychosocial nonconstructive ones. These groups of defenses were analysed in the presented research as the reactions to the final secondary school exam. The function-action approach of defensive activity also involves the categorization of 16 detailed defensive reactions as included in the types of defenses mentioned-above (Senejko, 2005). However, due to a wide range of posed and disscussed research problems, only the results related to the general types of defences were presented in this article.

Factors determining the behavior of the adolescents facing their oncoming final secondary school exam

Young people's developmental and defensive potential are determined by various factors. The research presented in this paper was mainly directed at exploring the ones influencing behavior of the young people facing their oncoming final exam, i.e. exposed to the situation of long-lasting stress, which is usually experienced by an average student over a several-month period prior to such an event. We took into account the factors which play a significant role in determining the way of reacting in difficult situations (Folkman., Lazarus,1987; Heszen-Niejodek, Ratajczak,2000; Strelau, 2000; Stawiarska, 2002; Rosenfarb, Aron, 1992; Parkes, 1986). These, on the one hand, are such personality dispositions as self-esteem, social anxiety, depressiveness and obligation will, and on the other some temperament traits such as emotional reactivity, sensory sensitivity, endurance and activity.

What decided about choosing the factors?

The relevant literature makes it possible to maintain (see e.g. Kandel, Andrews,1987; Baumeister, Heatherton, Tice, 2000) that personality dispositions, which may influence undertaking behaviors associated with the way of functioning in examination stress-related conditions, include the level of self-esteem.In particular researchers emphasized the role of high self-esteem based on positive self-evaluation

in succeeding and coping with difficulties (Gilbert, 1995; Wills, 1981). They also stress the existence of systematic differences between genders indicating lower self-esteem among girls and women as related to boys and men.

Though not all the findings dealing with the relations between the self-esteem and some forms of the individual's activities are unambiguous, a part of them shows that high (in some cases low) self-esteem is conductive to performing self-destructive behavior (see Baumeister, Smart & Boden, 1996; Baumeister, Heatherton, Tice, 2000). In the presented study the self-esteem, due to its evaluative character, was predominantly associated with the attitude towards a threat.

The obligation will as a personality disposition of a more cognitive character has erroneously been neglected in the research on personality determiners of reactions to threats. It was defined by Piaget (1966) to be the regulator of energy, giving the advantage to some aims at the expense of others, the importance of which reveals when a conflict between two tendencies or intentions arises e.g. when one wavers between a tempting pleasure and a duty. Thus the will is the obedience to the basic responsibilities, which enables the individual to stay self-possessed (Szuman, 1995), or, to use more modern language, exercises effective self-control. Interestingly enough, the general difficulty which the youth have exercising self-control and restraining their reactions in various situations of temptation, such as. drinking and abusing alcohol, has been ascribed to their emotional hyperactivity and not to their weak will (Abrams, Niaura, 1987; Poprawa, 2000). It could have resulted from the lack of a method for diagnosing the obligation will, which made me and my colleague develop such a scale for research purposes while preparing a set of measurement tools to be applied in our studies on the youth (Senejko, Lachowicz-Tabaczek, 2003). I assume that the weaker obligation will a young man has the more frequently they tend to employ non-constructive defenses, as opposed to constructive ones in threatening situations (see Senejko, 2005).

The studies on the effect of the social anxiety showed, however, that it is an important predictor co-determining reactions to different life situations in a positive or negative way (see e.g. Baumeister, Heatherton, Tice, 2000). Within the framework of the function-action approach the individual's necessity (or the lack of it) to enter social relations is one of the theoretical criteria for distinguishing types (psychic or psycho-social) of defenses. This is why the impact of social anxiety is assumed to be observed especially with regard to the group of psychosocial defences.

Depressiveness, the next factor taken into account in the presented study, can contribute to impairing the task-oriented attitude towards difficult situations and treating them as rather impossible to overcome (Wright, Beck, 1983). It also should be noticed that girls are more often characterised by this disposition than boys. Therefore, it can be expected that in girls depressiveness has the strongest effect on the way of dealing with the threat related to taking the important school-leaving exam.

The dispositional factors connected with the need for stimulation were also included in the research design as they also play an important role in responding to difficult situations. The most significant of them are temperament (Strelau, 1993, 2000; Zawadzki, Strelau, 1997), especially those temperament traits which influence the energetic aspect of behavior as well as their interrelations (Zawadzki, Strelau, 1997, p 39). They are as follows: emotional reactivity, endurance, sensory sensitivity and activity.

Procedure

Two methods were used in the study.

1/. The Psycho-Social and Psychic Defences Questionnaire (PSPDQ) for diagnosing young peoples' approach to threats and their reactions to threatening situations.

The questionnaire is made up of 11 multiple-choice questions (depending on the question one more than one or any possible categorized answers are possible). PSPDQ also comprises two lists : 1/ the list of threatening situations (36 threats) and, 2/ the list of reactions to the threats (48 defenses). The first list includes the statements describing 6 categories of threats (6 items for each category of threat). The categories are as follows: 1/ school or work-related problems (e.g. the necessity of taking a difficult or decisive exam, strong stress resulting from being questioned by in front of one's class, stress related to work responsibilities etc, coming into conflict with one's teacher or superior at work, one's superior or teacher's bias); 2/ existential problems (e.g. problems with finding faith in God or losing one's faith, the fear of entering adulthood, future, responsibility etc; 3/ family problems (e.g. abusing alcohol, taking drugs, etc. by a family member, conflicts with one's siblings or parents, violence in a family); 4/ intimate problems (e.g. serious conflicts with one's girlfriend or boyfriend caused by jealousy, infidelity, lack of respect or dishonesty, fear of unwanted pregnancy or conflicts associated with sexual intercourse); 5/ social incidents (e.g.: items: coming back home late, staying in potentially dangerous places, being accosted by strangers, being robbed of one's property or witnessing robbery, vandalism, assault and battery, accident etc.); and 6/ social life problems (e.g.: acting seriously unfairly towards one's friend (colleague) or being treated in the same way by them, persuading one's close friends to committing dangerous acts (taking drugs, theft, escaping from home etc.). The second list of the questionnaire includes statements describing 16 categories of specific defences (three items for each defense category). The specific defenses were grouped into several more general classes, which were mentioned-above. Some

example items referring to some chosen categories of the grouped defenses concerned the following activities: thinking how to deal with a threat, being committed to certain roles in the groups one belonged to (constructive defenses); experiencing physiological symptoms of fear (diarrhoea, stomach ache, accelerated heartbeat, trembling legs and hands, tics, perspiring, crying etc.), rebelling, acting against somebody or something for no important reason (nonconstructive defenses); experiencing strong emotional tension, anxiety, irritation etc., imagining a threatening situation (psychic defenses), expressing anger toward others, talking with friends and/or parents, reading books etc. to get ready to cope with a threat (psycho-social threats); trying not to think about a threat, putting aside thoughts about a threat, explaining to oneself that what was experienced was not actually as dangerous as it in fact it was (psychic nonconstructive defenses), thinking of plans to deal with a threatening situation, convincing oneself of being capable, wise, attractive etc. enough to deal with a threat (constructive psychic defenses), watching TV for hours, surfing on the Internet, playing computer games, habitual 'addictive' reading, learning, going in for sports etc. to forget about a threat, taking anger out on people, animals, things etc. (psychosocial nonconstructive defenses; drawing hope and power from being an important or needed person to somebody, going to private lessons, therapies, courses etc. in order to cope with a threat (psychosocial constructive defenses).

The PSPDQ has a three-part structure. The first of them provides the information regarding the threats based on evaluations given by the participant (answers to questions I, II, III, V). The second part of the questionnaire comprises the questions (VI, VII, VIII, IX) concerning a particular threat indicated by the participant (the final secondary school exam) and his/her responses to this threat, i.e. used defenses. Finally, its third part includes the questions (IV, X, XI) related to the subject's most typical threats (i.e. the ones experienced by them most often starting from the beginning of their adolescence) as well as his/her typical defenses.

The analysis of research results can be performed basing on subjects' responses to the questions from all the PSPDQ parts or the ones coming from any of its parts. For the purpose of the presented study the participants' answers to the second part of the questionnaire were collected and analyzed. They filled in the second part diagnosing their attitude to their final exam twice: the fist time in January 2005 and the second time later in the same year, i.e., two weeks before their exam.

The reliability and validity of PSPDQ were found to be satisfying and, due to the complex structure of the questionnaire, were verified using several methods (see Senejko, 2003a).

2/ The Questionnaire of Personal Judgements (QPJ) by Lachowicz-Tabaczek and Senejko – the first part.

Originally this questionnaire was developed for diagnosing social and individual factors which influence abusing alcohol by the youth. QPJ includes 102 items and is made up of several subscales as well as some independently functioning questions diagnosing the level of the distinguished factors. The first part of the questionnaire comprises 58 questions and diagnoses the mental dispositions described below. The remaining 42 questions are included in the second part of the questionnaire to diagnose the social factors expressed in the degree to which parents are interested in their children's problems, the strength of parents-children bonds as well as the structure of power in the family indicating who is such power exercised by i.e. a mother, a father or both of them. This part of the questionnaire is also aimed at diagnosing relations with peers manifested by one's susceptibility to peers' influence, strength of bonds with them, the amount of time spent with them and the pressure they put to drink alcohol (Senejko, Lachowicz-Tabaczek, 2003).

Because of the purpose of the presented study the first part of QPJ diagnosing individual factors was used. The following factors were investigated: the *self-esteem* which was understood here as having a positive self-image, self-satisfaction, being proud of oneself, considering oneself a valuable person equipped with many positive features. The self-esteem scale included in QPJ is the Rosenberg scale adapted by Lachowicz-Tabaczek. The reliability of the scale measured by Cronbach's alpha was .63; the *social anxiety* is understood here as shyness and embarrassment in social situations, especially new ones involving strangers. The scale of social anxiety included in QPJ is the Fenigstein, Scheier and Buss scale adapted by Lachowicz-Tabaczek. Its reliability was α=.60; the *depressiveness* which was defined as a general state of lowered mood, sadness, depression and a sense of helplessness. The depressiveness scale included in QPJ is a shortened version of the Beck scale adapted by Lewicka and Czapiński. Its reliability was α=.81; the *obligation will* which was defined here as the ability to make choices in the situation of motivational conflict between the aims related to fulfilling one's basic duties. The scale of obligation will as a part of QPJ was developed by the authors and comprises 6 items (e.g. 'When I don't feel like doing anything I don't do it though I know I should', I'm easy to be talked into playing when I know that I should carry out my duties'). The reliability of the scale was α =.66.

The scales for measuring energetic temperament traits included in QPJ were constructed by the authors basing on the Formal Characteristics of Behavior – Temperament Inventory (FCB-TI) by Strelau and Zawadzki (Zawadzki & Strelau, 1997).

The *activity* is the tendency to undertake the behavior of high stimulative value or leading to receiving high

Table 1
Effect of the studied factors on the dimension of the attitude toward a threat (a threat/challenge, a challenge/threat) in both stages of the study (multiple standard regression analysis).

A challenge/ threat - stage I R^2=.20; F(9,163)=4.48; p<.0000		A challenge/ threat stage II R^2=.15; F(9,142)=2.69; p<.006	
Gender	β= .19 p=.01	Endurance	β=.17; p=.04
Self-esteem	β= .16; p=.05		
Endurance	β=.16; p=.03		
A threat/challenge – stage I R^2=.19; F(9,163)=4.30; p<.0000		**A threat/challenge – stage II** R^2=.11; F(9,142)=1.98; p<.04	
Gender	β= -.23 p=.002	Reactivity	β= .19; p=.06
Self-esteem	β= .-16; p=.05	Social anxiety	β=.18 ; p=.059
Will	β =.16; p =.051		
Social anxiety	β = -.15; p =.09		

Coding of gender: 1- females; 2 – males

stimulation. The correlation of the activity scale of QPJ with the FCB-TI was r=.63, and its reliability α =.63.

The *emotional activity* as a feature of temperament involves the individual's tendency to react intensively to stimuli generating emotions accompanied by high sensitivity and low emotional endurance. Its correlation with FCB-TI was r=.70, and its reliability α =.61.

The *endurance* is the ability to adequately react in long-lasting stressful situations characterized by high stimulation. Its correlation with FCB-TI and reliability were r=.71 and α =.63, respectively.

The *sensory sensitivity* is the ability to react to sensory stimuli of low stimulation value. Because of the purpose of the presented research the authors constructed the sensory sensitivity scale diagnosing mainly visual sensitivity (see Senejko, Lachowicz-Tabaczek, 2003). The correlation between the scale and FCB-TI was r=.47 and its reliability was α =.61.

Subjects

The subjects were 177 secondary school students aged 18-19 (52 males and 121 females) of the Lower Silesian and Upper Silesian regions of Poland. The students were the first ones to take their final secondary school exam based on new principles introduced throughout the country. They participated in the study twice. Just after their mock exams in January 2005 and then in April 2005 (two weeks before the real exam). 155 participants took part in the second stage. The rest of them were not able to participate in this stage for personal reasons.

Research questions and hypotheses

We formed the following questions and hypotheses in connection with the effect psychological factors have on considering the final secondary school exam a threat:

1/ which of the diagnosed factors will have the strongest effect on the two dimensions of the subjects' attitude towards the exam as a threat: *the attitude towards a threat and its evaluation?* H1. It was hypothesised that the attitude to the exam would be influenced most strongly by self-esteem and depressiveness as they are the factors of the most evaluative character among the diagnosed traits.

2/ which of the diagnosed factors will influence most strongly *the way of the subjects' reaction to the exam?* H2. It was hypothesised that temperament traits, obligation will and social anxiety (but not self-esteem and depressiveness) would exert the most substantial influence on the way of responding to the exam as they refer more to the operational than evaluative aspect of the individual's activity.

Statistical methods of analyzing results.

To analyze the results the standard multiple regression analysis was employed (Ferguson, Takane, 2004).

Results

The first of the research questions concerned two dimensions of the attitude towards a threat. As it was mentioned before**,** the approach to a threat manifests itself both through one's attitude to it and through its evaluation.

The analysis of the findings was carried out separately for each of the listed dimensions.

Factors having the strongest effect on the attitude towards a threat.

In order to answer the research questions related to the influence exerted by the personal factors on the attitude towards a threat standard multiple regression analysis was performed. All the diagnosed factors, i.e.self-esteem, social anxiety, depressiveness, obligation will, reactivity, sensitivity, activity and endurance, as well as gender were used as independent variables The dependent variables were four dimensions of the attitude towards a threat i.e. a small threat, a big threat, a threat/challenge, a challenge/threat) diagnosed in both stages of the study.

The results of the regression analysis (see Table 1) showed that in the first stage of the study the model of the factors affecting the attitude towards the final secondary school examination appeared to be only significant for

Table 2
Effect of the studied factors on the evaluation of the secondary school final exam as a threat (multiple standard regression analysis).

Evaluation of a threat as an impediment – stage I R^2=.18; F(9,163) = 3.91; p<.0001	
Reactivity	β= -.19; p=.04
Sensitivity	β= -.14; p=.06
Endurance	β=.14; p=.08
Evaluation of threat as a blockage – stage I R^2=.10; F(9,163)= 1.91; p<.05	
Self-esteem	β= -.28; p=.002

the poly multi-motivational dimensions of the attitude associated with the co-existence of strong task motives –a challenge - and defensive motives (here threats). They were symbolically named as a challenge/threat and a threat/challenge. The challenge/threat dimension (i.e. multi-motivational attitude where task motivation prevails) was most strongly affected by gender (such an attitude was more often revealed by male subjects), the high self-esteem and high endurance. In the first stage the threat/challenge attitude **(**i.e. multi-motivational attitude where defensive motivation prevails) was most strongly influenced by gender (such an attitude was manifested more frequently by female participants) and the low self-esteem. In the second stage of the study the same pattern of factors proved to be significant in relation to the same attitude dimensions. The challenge/threat dimension was most strongly associated with the high endurance, whereas the threat/challenge one with the high reactivity and social anxiety (both of them, however, at a barely statistically significant level).

Thus the results of the regression analysis showed that in both phases of the study the investigated factors turned out to be significantly related only to the dimensions of the attitude towards a threat, which expresses its multi-motivational character, i.e. the presence of both defensive and task motivation with the prevalence of the latter (the challenge/threat) or the former (the threat/challenge).

Factors exerting the strongest influence on evaluation of a threat.

The posed research question also referred to the factors indicating the strongest influence on evaluation of the final secondary school exam as a threat. Let me remind you that in terms of the function-action approach to a threat its evaluation is based on the estimation of one's abilities to cope with it.

The regression analysis showed (Table 2) that in the first stage of the study the model of the factors' impact appeared to be significant in the case of the two out of four types of the evaluation of the threat – as an impediment and a blockage, i.e. the stable factors, not the ones dynamically changing in the presence of the threat. As it was shown by the results of the multiple regression analysis, low reactivity turned out to be the strongest predictor of assessment of the exam as an impediment. The influence of the temperament traits such as low sensitivity and high endurance was only marginally significant. The low self-esteem, in turn, was revealed to be the strongest predictor of considering the exam to be a blockage.

It is worth noticing that in the second stage the model of the factors' impact on the dependent variables relating to evaluation of the threat was insignificant for all four types of the evaluation of the threat.

Factors having the strongest effect on psychological defenses

The next question posed in our study regarded the type of diagnosed factors, which had the strongest effect on the way the examinees reacted to their exam, in other words on psychological defenses which they employed.

The multiple regression analysis was performed to answer the question regarding the types of diagnosed factors which demonstrated the greatest impact on how the students reacted to their exam. The predictors were all the diagnosed factors along with gender, whereas the dependent variables were the grouped psychological defenses (constructive, non-constructive, psychic, psycho-social, psychic constructive, psychic non-constructive, psycho-social constructive and psycho-social non-constructive).

Some essential patterns of relations were obtained in both stages of the research.

Factors having the strongest effect on grouped constructive and non-constructive defenses.

In both stages of the study the predicted pattern of the factors proved to have influenced both types of grouped non-constructive defenses (Table 3).

The results of the regression analysis included in Table 3 indicate that in either stage of the study our model proved to be accurate and that in both stages the high depressiveness, weak obligation will and low endurance had the strongest effect of the activation of the grouped non-constructive defenses.

Table 3
Effect of the studied factors on the grouped non-constructive and constructive defenses (multiple standard regression analysis).

Grouped nonconstructive defenses Stage I R^2=.27; F(9,163)= 6.54; p<.0000		Grouped nonconstructive defenses Stage II R^2=.28; F(9,142)=6.15; p<.0000	
Depressiveness	β=.22; p=.004	Depressiveness	β=.25; p=.003
Will	β= -.24; p=.001	Will	β= -.20; p=.008
Endurance	β= -.20; p=.006	Endurance	β= -.23; p=.003

Table 4
Effect of the studied factors on the grouped psycho-social and psychic defenses (multiple standard regression analysis).

Grouped psycho-social defenses Stage I R^2=.17; F(9,163)= 3.75; p<.0002		Grouped psycho-social defenses Stage II R^2=.13; F(9,142)= 2.37; p<.01	
Will	β= -.15; p=.05	Depressiveness	β =.21; p =.02
Sensitivity	β = .18; p =.01	Will	β= -.18; p=.02
Activity	β= .19; p=.02		
Endurance	β= -.17; p=.02		
Grouped psychic defenses Stage I R^2=.15; F(9,163) = 3.32; p<.0009			
Depressiveness	β = .24 p =.005		

Table 5
Effect of the studied factors on the grouped psycho-social non-constructive defenses (multiple standard regression analysis).

Grouped non-constructive psycho-social defenses Stage I R^2=.17; F(9,163)= 3.66; p<.0003		Grouped non-constructive psycho-social defensesStage II R^2=.16; F(9,142)= 3.02; p<.002	
Will	β= -.28; p=.0002	Will	β= -.28; p=.0009
Endurance	β= -.17; p=.02	Endurance	β= -.18; p=.03
Gender	β= .13; p=.08		

1 – females; 2- males

Table 6
Effect of the studied factors on the grouped psychic non-constructive defenses (multiple standard regression analysis).

Psychic defenses Grouped nonconstructive – Stage I R^2=.31; F(9,163)=8.05; p<.0000		Psychic defenses Grouped nonconstructive – Stage II R^2=.26; F(9,142)= 5.57; p<.0000	
Depressiveness =	.28; p=.0000	Depressiveness	β=.23; p=.006
Gender	β= -.19; p=.008	Endurance	β= -.19; p=.01
Endurance	β= - .15; p=.03	Gender	β= -.15; p=.05
Will	β= - .12; p=.08	Reactivity	β= .17; p=.07

1 – females; 2- males

On the other hand, the only significant effects were found for the first stage (Table 3). The results of the regression analysis revealed that the strong will and low anxiety were the most important predictors of the employment of grouped constructive defenses.

Factors exerting the strongest effect on grouped psychic and psycho-social defenses

The results included in Table 4 show that the weak will appeared to be a significant predictor for the use of the psycho-social defenses in either stage, whereas the high sensitivity, high activity and low endurance proved to have a significant effect on these defenses only in the first stage.

As it regards the psychic defenses the significant relations were found only in the first stage of the research (Table 4) with the depressiveness as the strongest predictor of the grouped psychic defenses in response to the exam.

Factors exerting the strongest effect on grouped psycho-social nonconstructive defenses.

The regression analysis also served to determine the impact of the investigated factors on the grouped psycho-social non-constructive defenses in both stages (Table 5), and our model proved to be accurate. The weak obligatory will and low endurance had especially strong effect on the specific psychosocial non-constructive defenses activated by the examination threat. In addition, gender was marginally significant for the first research stage. The male students tended to use the grouped psycho-social defenses more often than the female ones.

Factors exerting the strongest effect on grouped psychic nonconstructive defenses

The regression analysis was also used to test how the designated factors influenced the grouped psychic non-constructive defenses at both phases of the study (see Table 6.). The assumed model proved to be accurate in each stage. The activation of the grouped psychic non-constructive defenses was affected in particular by the high depressiveness and low endurance. What is more, this kind of defense was more often applied by women. Weak will in the first stage and high reactivity in the second turned out to be marginally significant predictors of this type of defenses.

Factors exerting the strongest effect on grouped psycho-social constructive defences

As regards another group of defenses the obtained significant relations referred only to the first stage of the study (see Table 7). High self-esteem, high activity, high sensitivity together with gender (female subjects tended to use such defenses more often) appeared to be the most important predictors of utilizing of the grouped psycho-social constructive defences, that is the ones realized

Table 7
Effect of the studied factors on the grouped psycho-social constructive defences (multiple standard regression analysis).

Psycho-social constructive defenses grouped – Stage I R^2=.18; F(9,163) = 3.85; p<.0001	
Gender	β= -.18; p=.02
Self-esteem	β= .18; p=.03
Activity	β= .17; p=.03
Sensitivity	β= .14; p= .056

1 – females; 2- males

through social interactions, and the results of which contribute directly to the individual's development. In consequence it is not surprising that high self-esteem expressed through one's positive self-image as well as high activity as the individual's tendency to undertake behaviors providing high external stimulation and high sensitivity are the predictors of the grouped psycho-social constructive defenses.

Factors exerting the strongest effect on grouped psychic constructive defenses

As regards the last discussed group of defenses employed in response to the final secondary school exam, predictions concerning the effect of the studied factors on the grouped psychic constructive defenses proved insignificant for both stages of the study.

Conclusions

Both Table 8 and the analysis of the findings made it possible to draw some conclusions regarding the research questions and hypotheses set at the beginning of this article.

1/ Endurance, obligation will, depressiveness, self-esteem and gender were the factors which had the greatest effect on treating the exam as a threat, i.e. on the attitude and reactions to it. At the same time endurance , self-esteem and gender turned out to be not only the predicators of the attitudes towards a threat but also of the ways of responding to it, i.e. of psychological defenses, whereas obligation will and depressiveness influenced the activation of defenses exclusively and not the attitude to a threat. The analysis of the results showed that stronger influence of the diagnosed factors was associated with the reactions to a threat than with the attitude to it. Relatively strong and unambiguous relations were found especially between high depressiveness, weak will and weak endurance, which is the most unfavourable pattern of individual factors conductive to the students' improper reactions to their exam.

2. The temperamental factor of endurance deserves special attention, as it co-determined both the diagnosed students' attitude to their exam and the way of reacting to it. High endurance combined with high self-esteem determined the most beneficial attitude to the exam in male subjects in both stages of the investigation i.e. the challenge/threat type - the one where task-oriented motivation prevails. The high endurance combined with low emotional reactivity and low sensitivity influenced the formation of the students' conviction that they were able to cope with that particular threat, and, consequently, perceive the exam as an impediment.

Interestingly enough, the psychological defenses were only influenced by low, not high endurance, which makes it a good predictor of both types (psychic and psycho-social) of nonconstructive defenses. Thus, the low endurance combined with low will and high depressiveness were the strongest predictors of applying the grouped nonconstructive defenses in both research stages. In the boys low endurance accompanied by the weak will were in both stages the strongest predictors of employment of the grouped psycho-social nonconstructive defenses. In the girls, however, low endurance combined with high depressiveness contributed in each stage to activating the grouped psychic nonconstructive defenses. Such findings are consistent with the studies which have shown that depressiveness is more often diagnosed in girls, whereas weak will in boys (Senejko, Lachowicz-Tabaczek,2003; Wright, Beck, 1983). It is not difficult to explain why low endurance co-determines the activation of nonconstructive defenses as it determines the ability to react adequately in long- term stressful situations characterised by high stimulation. Therefore, low endurance means a lack of an adequate response to prolonged stress, as it is the case with the stress before the important final secondary school exam. It is not surprising then that low endurance leads to activating nonconstructive defenses as a result of confronting a threat of this kind. On the other hand, it is much more difficult to explain why the high endurance influenced only the attitude to the exam and not the defenses (especially the constructive ones). This issue needs further studies.

3/ The impact of self-esteem manifested itself both through the attitude towards a threat (thus, it confirmed hypothesis 1) and by influencing the activation of psychological defenses.

Low self-esteem also marked its impact in the female students in the first stage of the study by influencing the formation of an unfavourable threat/challenge attitude to the exam where the defensive motivation prevailed. The low self-esteem also had a significant effect on the shaping in the students the conviction that they were unable to manage the examination threat (blockage).

The self esteem influenced mainly the grouped psycho-social constructive defenses as well as psychic nonconstructive defenses in the first stage of the research. The high self-esteem in the girls combined with their high activity and sensitivity effected the activation of the grouped psycho-social constructive defenses. It should be emphasised that self-esteem only affected handling the examination threat in the first research stage (in January),

whereas in the second one (in April, two weeks before the exam) it proved not to have a significant effect. In this period of time the factors like real mastering the knowledge necessary for such an exam, rather than self-esteem are quite likely to determine reacting to the exam as a threat.

4/ Obligatory will appeared to be the following essential predictor of reacting to the examination threat to substantially affect the activation of psychological defenses and confirm the hypothesis 2. As in the case of endurance, only weak obligation will was linked with designated groups of defenses. The only exception was its marginally significant effect on the activation of constructive defenses at the first research stage.

As a predictor of different groups on nonconstructive defenses, weak will most frequently coexisted with low endurance and (less often) high depressiveness. Psycho-social defenses, that is the ones making use of social objects, proved to be associated with obligatory will in an interesting way. In the first stage of the study the weak will combined with the low endurance, high activity and high sensitivity influenced the grouped psycho-social defenses, whereas in the second stage the same factor accompanied by high depressiveness was a strong predictor of this group of defenses. Thus, in both stages only the weak will was a stable predictor of the psycho-social defenses. A possible interpretation is that the individuals resorting to psychosocial defenses in threatening situations might tend to enter social interactions to compensate their weak will, make others get involved in their problems or through taking advantage of them as an external source of venting their emotions or helping to forget about a danger.

5/ Depressiveness turned out to strongly influence only the activation of the psychological defenses and not the attitude towards a threat, which is contrary to hypothesis 1. What is more, it was mainly the high not low depressiveness which was associated with the grouped nonconstructive defenses and, in the female participants, the grouped nonconstructive psychic defenses in both research stages. The high depressiveness was also a predictor of the grouped psychic (in the first stage) and grouped psycho-social (in the second stage) defenses.

Thus, as it was revealed by the regression analysis, depressiveness, understood as a relatively permanent state of lowered mood, poor concentration of attention and a generalised sense of helplessness accompanied by negative views on oneself, the world and the future (Wright, Beck, 1983), contributes to weakening the task-oriented attitude to difficult situations and taking them as impossible to be overcome yet, as it was revealed by the study, it is not manifested in the attitude to a threat, which I assumed, but through specific nonconstructive defenses with high depressiveness as their significant predictor. The obtained result might be explained by the relations between depressiveness and self-esteem. In this study self-esteem would constitute a stronger predictor of the attitude to the threat than the depressiveness, which, as I assume, is related to it. On the other hand, especially in the female students, their depressiveness would be its stronger predictor compared with their self-esteem (linked with depressiveness).

6/ The influence of social anxiety appeared be much weaker than it had been expected by hypothesis 2. As a rule social anxiety as a predictor of particular defenses did not exceed the level of marginal significance. Also in this case it might be assumed that there is a connection between this type of anxiety and other predictors, mainly emotional reactivity and depressiveness.

7/ Emotional reactivity, activity and sensory sensitivity are the temperamental factors which, similarly to social anxiety, turned out to be rather infrequent significant predictors of responding to the examination threat. The low emotional reactivity together with the low sensitivity only co-determined the evaluation of the threat as an impediment in the first research stage, whereas the high activity together with the high sensitivity participated in the activation of the constructive psycho-social and psychic defences in the same stage. In fact endurance was the main temperamental factor to determine both the students' attitude and the response to the examination threat, which might indicate that the final secondary school exam is an example of long-term stress, thus the state characterized by the unquestioned significance of endurance.

8/ As a rule all the relations revealed by the multiple regression analysis and described in this article were significant at high significance levels (R coefficients ranged from .10 to .31). Thus the independent variables included in this study like gender, self-esteem, obligation will, social anxiety, depressiveness, reactivity, endurance, sensitivity and activity accounted for up to 30% of primary changeability of the dependent variables.

9/ The choice of a two-stage research procedure (in January and April) proved to be accurate. The effect which the individuals' factors had on some dependent variables, both the ones related to the attitude (evaluation) to the final secondary school examination threat and the psychological defenses employed in response to it (constructive defenses in particular), appeared to be insignificant in the second stage of the study. It seems to suggest that in response to the oncoming trial the examinees manifested more nonconstructive than constructive defenses. Meanwhile, the percentage of the constructive and nonconstructive defenses was about the same in either stage, with nonsignificant prevalence of the former (47.45% - nonconstructive and 52.6% constructive for the first stage and respectively 48.2% and 51.8% for the second stage).

Therefore, further search for the predictors of this examination threat may focus attention on social factors (e.g. family and social support), a sense of competence in

Table 8
Direction of the influence of the studied factors on the attitude towards the exam and on the grouped defenses in both stages of the research.

Variables	Gender	Self-esteem	Depressiveness	Will	Social anxiety	Endurance	Emotional reactivity	Activity	Sensitivity
An attitude to a threat									
Challenge/threat I stage	Male*	High*				High*			
Challenge/threat II stage						High*			
Threat/challenge I stage	Female**	Low*							
Threat/challenge II stage					High		High		
Impediment I stage						High	Low*		Low
Blockage I stage		Low**							
Grouped defenses	Gender	Self-esteem	Depressiveness	Will	Social anxiety	Endurance	Emotional reactivity	Activity	Sensitivity
Nonconstructive I stage			High**	Weak**		Low**			
Nonconstructive II stage			High**	Weak**		Low**			
Constructive I stage				Strong	Low				
Psycho-social I stage				Weak*		Low*		High*	High*
Psycho-social II stage			High*	Weak*					
Psycho-social nonconstructive I stage	Male			Weak**		Low*			
Psycho-social nonconstructive II stage				Weak**		Low*			
Psycho-social constructive I stage	Female*	High*						High*	High
Psychic I stage			High**						
Psychic nonconstructive I stage	Female**		High**	Weak		Low*			
Psychic nonconstructive II stage	Female*		High**			Low*	High		

** p<.01; *p<.05; without mark: .1>p> .05

particular school subjects, results of mock exams as well as other factors which have not been taken into account in this study.

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