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DIFFERENCES BETWEEN MEN AND WOMEN IN SELF-ASSESSMENT OF ABILITIES TO HANDLE STRESS SITUATIONS

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SUMMARY

The ability to perceive the surrounding world realistically is one of the descriptive characteristics of the human personality. Subjective judgments about one's own competencies for certain activities are referred to as aspiration. This study investigates male-female differences in self-assessment before and after exposure to stress during a five-day sojourn in a challenging environment where subjects had to provide their basic needs by their own efforts. The subjective responses of the experimental subjects were compared with expert evaluations. Subjective rating was the main diagnostic method. The identified differences are interpreted by means of the Big Five personality inventory.

Key words: sex differences, limit performance, aspiration, stress

INTRODUCTION

In spite of strong tendencies toward emancipation and many organizations' tenacious efforts to narrow the gap between men's and women's social roles, many gender differences still exist and their specific social impact remains.

Each individual has a different capacity for handling everyday difficulties. Each person experiences changing situations differently, and responds differently to changes in the environment he or she lives in. Gender differences become more pronounced in stress situations. At different stages of human evolution, the emphasis was on developing different qualities that facilitated survival in the social organisation (in tribes) prevailing at a given time. For millennia, successful roles were defined differently for men and women. The roles of mother and caretaker required the development of different personality traits and a different portfolio of emotions from those required for the roles of hunter and protector.

Today's performance-driven society favours young, confident and fast-moving individuals who can move forward effectively while being flooded by disparate information. Current trends in bringing up children lead to high self-esteem, while information overload encourages superficiality.

The question is how these products of contemporary education will function in situations in which their success depends on their real-life skills and their assessment of dangerous situations particularly when they have no one to rely on but themselves.

Students' compulsory attendance at survival courses gave us an opportunity for direct observation of unique responses to stressful conditions. Here, we tried to identify certain moments that typify male-female differences in functioning under conditions that test the subjects' limits to tolerate physical and psychic stress.

This study is a continuation of previous work (Dvorský, Fiala, Vondrášek, 2010). It focuses on finding useful criteria to measure successful student behaviour in practical survival courses, including their resiliency as described by Antonovsky (1985), and using this information to define useful predictors of an individual's potential for failure.

THEORETICAL BACKGROUND

Any individual's competency characteristics represent a certain personality trait potential underlying his or her approach to addressing everyday problems. However, people rarely face situations in which exposure to stress tests their limits. It is in these extreme moments that people can tap into what characterises them as individuals and distinguishes them from others.

In any particular situation, one person may feel at home while another feels lost. Competency characteristics predispose each person to succeed in certain activities. Repeated exposure to the same kind of stress places people in identical or similar situations for which they develop successful behaviour patterns. The consequence is the ability to resolve the stressful situation more simply. This involves great variability among and within individuals.

During their life, people develop specific formulae that create "islands of experience" in their minds. For the great majority of human activities, this process mostly runs in parallel with the cultural background against which these activities take place. However, there are also other situations, where well-tested behaviour formulae cannot be applied.

The issues under review are associated with the concepts of causal attribution and aspiration level.

Causal Attribution

Causal attribution is the tendency to attribute different motives to the causes of one's own behaviour and the same behaviour in others (Kohoutek, 2009); to attribute different causes to one's own and others' successes and failures; and the tendency to attribute to one's own behaviour, success or failure to other causes than those attributed to the same behaviour, success or failure in others.

Causal attribution is a complex process whose development and resulting format reflect a number of personality-related and situational variables. An ego-defensive tendency in attribution is the aggregate effect of many determinants, the most general and influential of these being the need to protect and/or enhance self-assessment. People who value themselves highly tend toward self-assertion while people with low self-esteem focus on self-protection (Banaji, Prentice, 1994). Performance motivation may be another reason behind the asymmetry in the attribution of the causes of success and failure.

Aspiration Level

Aspiration level is the measure of the effort invested in achieving a future goal or future performance and, at the same time, the measure of expectation based on one's own previous successes or failures. A success usually leads to a slight increase in aspiration, a failure to a slight decrease in aspiration. The difference (both positive and negative) between a previous performance level and subsequent expression of the rate of effort and expectation is referred to as target discrepancy. Performance discrepancy is the difference between the expected and actual level of performance. The achievement of a goal, or failure to achieve it, tend to bring about the feeling of success or failure, respectively, and increases or decreases in self-esteem. The efforts and expectations of people with an adequate self-esteem tend to correspond to their capabilities, whereas the aspirations of people with inadequate self-confidence tend to be unrealistic (in terms of overrating and underrating their own capabilities).

Studies concerning the level of aspiration distinguish between two types of people:

a) Individuals striving to succeed;
b) Individuals striving to avoid failure.

It follows from the above that causal attribution affects an individual's aspirations. A sound aspiration level is congruent with an individual's abilities and skills. Deviations to either side are a manifestation of unrealistic assessment that is not in keeping with reality.

Gender Differences in Handling Stress

Differences between women and men in the perception of stress are based on their psychological and physical differences. Men use their greater physical strength and are able better to cope with the effects of higher levels of stress that is episodic or of shorter duration. Women are better able to withstand exposure to less intensive stress for a longer period of time.

Emotions are the most apparent area of differences between men and women in stress or conflict situations. The differences in the need for communication, sharing and empathy may, in certain circumstances that involve external stress, aggravate an internal relationship problem that is amplified by emotions. Details are described by Goleman (1995) but, at this stage, they are beyond the purview of this study.

The question is what appreciable differences occur in subjective judgments, in estimates of the persons' own capabilities (aspiration levels) and the resultant level of satisfaction with their own performance. These issues are addressed in this study.

THE OBJECTIVE OF THE RESEARCH

The key objective of the study was to identify group differences in the reactions of men and women to forthcoming exposure to stress (the aspiration level) during survival courses.

Another objective was to identify the differences in the subjective and objective judgments (aspiration levels) in comparison with an expert assessment of how stress was actually handled by men and women.

The final objective was to find an adequate explanation for any differences in terms of psychic characteristics.

RESEARCH METHODOLOGY

The experimental subjects' personality characteristics were assessed by means of the five-factor NEO Big Five personality inventory.

Aspiration level as an indicator of the personal perception of the forthcoming exposure to stress, as well as the other feeling indicators concerning the experimental persons' own success after the end of exposure, was determined by subjective rating of the experimental subjects' feelings before departure for the course and immediately after return. Answers to clearly formulated questions were recorded on a 100 mm line graph (1 mm = one point in the questionnaire).

Aspiration level was evaluated by instructors who themselves participated in the survival courses. They evaluated the experimental subjects on the basis of the following points specified in the questionnaires: pro-social, unselfish behaviour, suitability of the proposed sequence of actions for addressing the situation, punctuality, putting the group's interest before their own, and the ability to master new skills. Monitoring continued throughout the course and consultations about the observations (including those recorded by other instructors) were conducted every evening. The instructors recorded their judgments on a 100 mm line graph and the evaluation was performed in the same manner as with the feelings or views of the experimental subjects (1 mm = one point in the questionnaire).

THE EXPERIMENTAL GROUP

Over four years, 52 students (age 21–24) attended practical survival courses under the accredited programme of population protection. Subjects were not informed about the objectives of the investigation, and any inquiries were answered with reference to the Department's neutral effort to optimise the participants' workload that is normally applied in such courses.

THE ORGANISATION OF THE INVESTIGATION

Subjects spent five days in an unfamiliar mountain terrain where each had to rely on his/her own abilities and skills. Stress factors included the need to move to another place every day, exposure to weather conditions and the necessity to provide for the basic needs without access to civilisation. Prior to this, only one meeting was held, at which the participants were informed as accurately as possible about the forthcoming event.

Each participant received a list of recommended outfit and equipment and knew generally what the daily schedule entailed. On the departure date, before boarding the bus, the participants had to fill in a questionnaire in which the aspiration level (i.e. how the participants felt prepared to cope with the forthcoming stress) was measured by subjective rating.

During the course, the participants were monitored by trained instructors who rated each participant against a number of criteria. The rating provided a summary evaluation of the participant's individual performance in handling stress situations, his/her ability to cooperate, find effective solutions to overcome the obstacles that hindered efforts to achieve a goal, his/her unselfish behaviour and individual leadership ability.

Immediately after returning, the participants evaluated their performance in the course (again by subjective rating), thus indicating the level of their satisfaction with how they handled the entire course.

THE RESULTS

The personality data (Fig. 1) indicated that, on average, there were minimal differences between men and women. The greatest dissimilarities were observed in the extraversion factor (the "E" factor), indicating that the women taking part in the practical survival course felt a much greater need to share and expand the scope of their social contacts. With respect to the stress they were exposed to, this suggests that women are better able to resist stress factors in a group whereas men tend to resolve stress situations individually. (Fig. 1)

These results were published in previous articles and therefore only the most important points are presented below.

The experimental subjects were divided *ex post facto* into three groups.

1st group: individuals trying to avoid failure
(*Self rating after returning: at least 10 points higher than before departure*)

Prior to stress exposure, the participants' aspiration level was much lower than the post-exposure subjective rating of performance. In other words, individuals in this group assessed their own capabilities lower and had a cautious – or even hesitant – approach to the stress factors, which they easily managed afterwards. During the exposure they experienced no greater problems than other experimental subjects. This was reflected in their much higher final self-rating when they evaluated their own performance. (Fig. 2)

Subjects in this group worried about how they would cope with the practical survival course and they tended to be cautious when trying new approaches and practices. They would have not tried any experiments without being invited, asked or encouraged to do so. However, in spite of all this, they made no mistakes in overcoming all difficulties and pitfalls and were helpful to others.

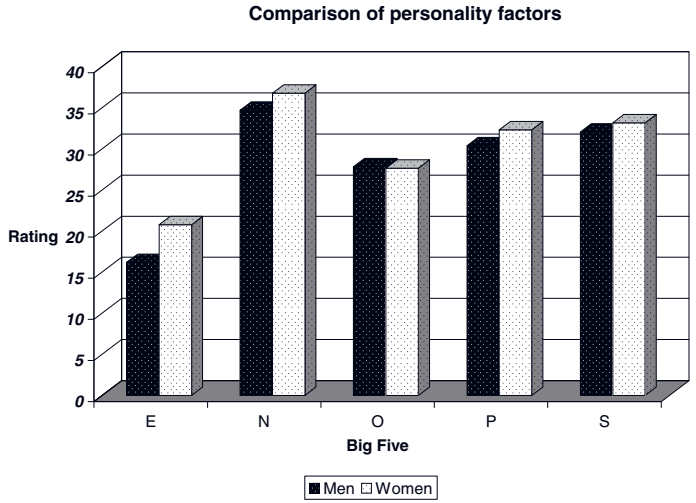

Figure 1. Comparison of the personality factors of men and women.

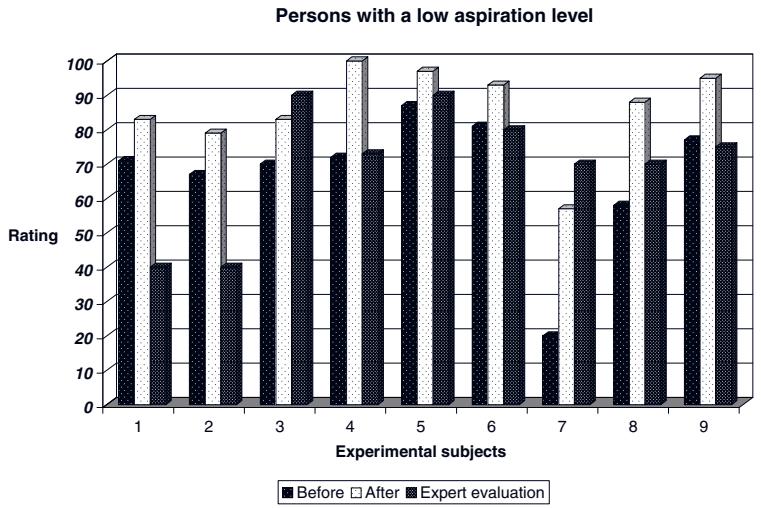

Figure 2. First group: a low aspiration level and high level of performance – 9 subjects.

2nd group: individuals trying not to distort things

(*Difference in self-rating before and after exposure to stress: +/– 9 points*)

Aspiration level before exposure more or less corresponded to the self-rating of the participants' performance after the end of the exposure event. In other words, individuals in this group assessed their capabilities realistically, and their response to exposure was congruent with their prior self-assessment. (Fig. 3)

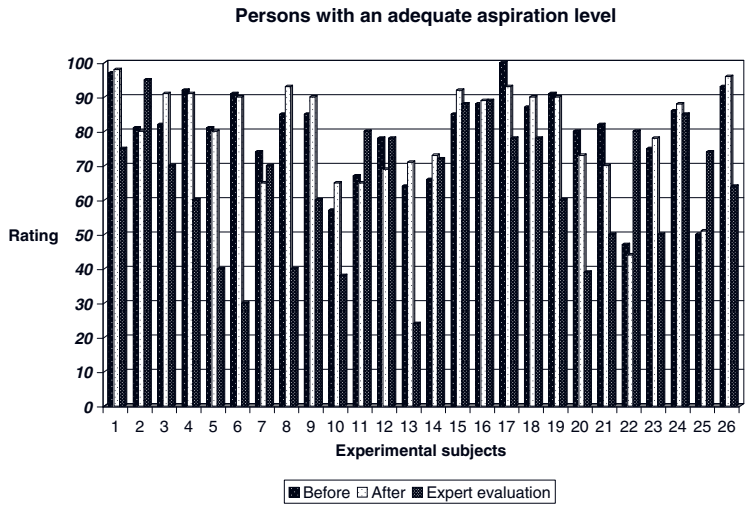

Figure 3. Second group: aspirations corresponding to performance capabilities – 26 participants.

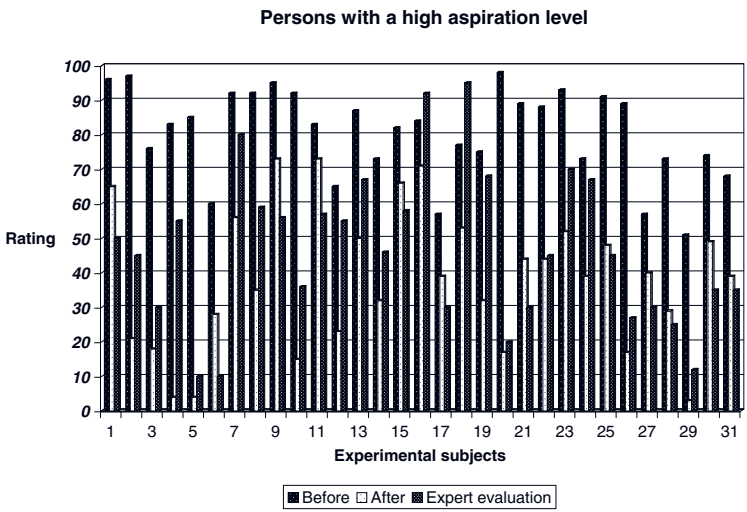

Figure 4. Third group: a high aspiration level and low level of performance – 31 participants.

Each subject in this group had different initial parameters for coping with unusual stress. This group realistically assessed the challenges of the environment and this assessment corresponded with their estimation of their own capabilities. Their statements and judgments were in keeping with reality.

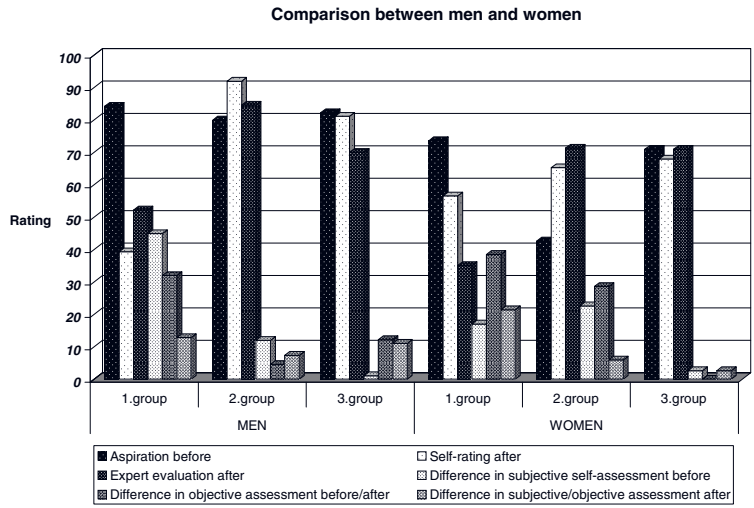

Figure 5. Comparison of men and women by groups.

3rd group: individuals striving for success

(*Self rating after returning: at least 10 points lower*)

Prior to stress exposure, the participants' aspiration level was much higher than their performance subjectively rated after exposure. In other words, individuals in this group assessed their own capabilities high and thought that they would easily manage the forthcoming difficulties. However, they found during exposure that they often had to face situations with which they were unable to cope. This was reflected in their much lower self-rating when they evaluated their own performance after exposure. (Fig. 4)

Members of this group were among the most noticeable subjects. They eagerly responded to new stimuli, but this was not a manifestation of an extroverted personality. They attacked the most challenging situations with confidence, but their performance was inconsistent or ended in failure. (Fig. 5)

Initial aspiration level (dark column) was almost identical in all three groups of men. For women, the aspiration levels were lower, owing to the type of stress they were facing. Women in the second group showed a strong tendency to underrate themselves, and their aspiration level was therefore low.

As for self-rating after exposure (white column), the biggest difference was recorded in the self-rating of the men in the first group. Contact with reality and exposure to stress caused them to change their view, as indicated by their post-exposure self-rating. This testifies to their strong tendency to overrate their capabilities.

Expert evaluation after exposure is interesting across all the experimental groups. The first group of men who overrated their capabilities received a better rating from experts than their female counterparts. It follows from this that the group of women who overrated their capabilities showed the greatest departure from reality – this is so even in the case of post-exposure self-rating.

Table 1. Student's T-test (field 1, field 2, sides 2, two-selection test with uneven variance 3).

	Aspiration before	Self-rating after	Expert evaluat. after	Difference – self-rating (subjective)	Difference – expert eval. (objective)	Difference subjective / objective	Difference – absolute		
1st group	0.0753	0.14	0.009	**0.435**	0.153	**0.394**	**0.435**	0.169	0.109
2nd group	0.02	**0.584**	**0.824**	**0.948**	0.078	**0.534**	0.165	0.001	**0.947**
3rd group	0.011	0.042	0.006	0.001	**0.301**	0.002	0.002	**0.486**	**0.336**

Statistically significant differences between men and women were only recorded in the second group (Table 1). This was due to the consistency of the primary data obtained from subjects who tried to avoid distorting input information. Unrealistic perception of one's own capabilities, as well as excessive self-underrating, generate variables that still await identification, and these variables corrupt primary input data and hinder their statistical interpretation with respect to the initial purpose. As a result, other comparative processes need to be found for the first two groups in which the subjective judgments (self-rating) were not realistic.

The second group of men and women with a realistic perception of their abilities can be characterised as follows: men's subjective judgments (self-rating) both before and after exposure to stress show a tendency to exaggerate their ability to cope successfully with stress factors. Women in the same group showed a high compliance between their self-rating and expert evaluation. The statistical difference in this respect is 0.58 to 0.82 using the Student's T-test (Table 1).

DISCUSSION

The findings obtained from the questionnaire inquiry, conducted with the help of the "Big Five" five-factor personality inventory, can be considered preliminary results. The size of the experimental sample was not sufficient to identify relationships, if any, at the level of personality traits that facilitate better coping with stress situations. Nevertheless, the results suggest certain tendencies in each individual's personality characteristics that may make it easier for them to cope with long-term exposure to stress.

Larger experimental samples and diagnostic tools (16-PF) may make it possible to gain more data, resulting in more precise conclusions.

More accurate descriptions of the gender differences found thus far are also expected: there should be a more sensitive division of experimental subjects into groups than the three groups based on self-rating.

Expert evaluation by instructors as an objective indicator was only compared with the subjects' feelings (recorded immediately after returning from the survival course) as to how challenging the stress exposure was. Three years' worth of results only made it possible to divide the subjects into three groups. The accuracy of results is expected to improve with the increasing number of subjects in additional practical winter and summer survival courses. Continued investigations will clarify further the differences between the subjects' aspirations and the expert evaluation, and enable the allocation of future survival course participants into a larger number of well-defined groups.

CONCLUSION

Three groups based on the aspiration levels were created by comparing aspirations before exposure to stress and the participants' subjective post-exposure estimates of their performance (see Figs 2–4). Previous results concerning the relationship between aspirations and performance stability (Dvorský, Fiala, Vondrášek, 2010) were confirmed in these groups.

Statistically significant differences between men and women were found in the group of subjects who tried to avoid distorting things. Their subjective estimation of the outside situation was realistic (Table 1).

This group of men and women with a realistic perception of their abilities had the following characteristics: men's subjective judgments both before and after exposure to stress show a tendency to exaggerate their ability to cope successfully with stress factors. Women in the same group showed a high compliance between their self-rating and expert evaluation. The statistical difference in this respect is 0.58 to 0.82 using Student's T-test (Table 1).

As follows from the above, the statistical significance of personality factors that can be considered relevant to investigations of the relationships between an individual's personality, psychic endurance and aspirations will increase with the increasing number of experimental subjects. Further research efforts will focus on seeking parameters that can serve as predictors of performance instability of survival course participants. These parameters will be studied further with the goal of contributing to improved safety in practical winter and summer survival courses under the population protection study programme.

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DIFERENCE V SEBEHODNOCENÍ VLASTNÍCH KOMPETENCÍ KE ZVLÁDÁNÍ ZÁTĚŽOVÝCH SITUACÍ MEZI MUŽI A ŽENAMI

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SOUHRN

Schopnost reálného pohledu na svět kolem sebe je jednou z popisných charakteristik lidské osobnosti. Subjektivní soudy týkající se vlastní způsobilosti k nějaké činnosti označujeme pojmem aspirace. Studie se zabývá zjišťováním odlišností mužů a žen v sebehodnocení před a po zátěžové expozici, kterou tvořil pětidenní pobyt v neznámém prostředí a nutnost zajišťovat si základní životní potřeby vlastními silami. Subjektivní reakce pokusných osob byly konfrontovány s expertním hodnocením. Hlavní diagnostickou metodou bylo subjektivní škálování. Zjištěné odlišnosti jsou interpretovány prostřednictvím osobnostního inventáře Big Five.

Klíčová slova: sexuální rozdíly, limitní výkon, aspirace, zátěž

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