

## The Influence of Gender on Achievement Motivation of Students

### Abstract

The contribution focuses on the investigation into the influence of gender on students' achievement motivation. Achievement motivation perceived as a relatively stable predisposition of an individual is an important factor of achievement. The research was performed on the sample of 213 university students, out of whom 102 were women and 111 men. The research method was achievement motivation inventory (AMI), which diagnoses the achievement motive, anxiety hindering achievement and anxiety supporting achievement. The research findings have confirmed assumptions about gender differences in all the measured variables.

**Key words:** *achievement motivation, gender differences, achievement motive, anxiety hindering achievement, anxiety supporting achievement*

### Introduction

The theory of achievement motivation started to form in the Anglo-Saxon countries already in the 1930s thanks to F. Hopp who analysed psychological conditions for structuring an activity on the basis of new goals. The term achievement motive was mentioned for the first time in the works of H. A. Murray in the 1930s. Later, J.D. Frank attempted to elaborate a projective method determined for the diagnostics of motivational peculiarities. It was D.C. McClelland and his colleagues J.W. Atkinson, R.A. Clark and E.L. Lowel who succeeded in this effort and in 1953 they published the paper: "The achievement motive". At that time the theory of achievement motivation aroused interest not only of the professional, but also the general public. Other authors responded to the well-known theory,

for example, H. Heckhausen with the cognitive concept of achievement motivation (the 1960s), D. Birch, J.O. Raynor, M. Horner and N.T. Feather with a prospective-cognitive model of achievement motivation (the 1970s), U. Buckert, W. U. Mayer, H.D. Schmalz with an interactional model of achievement motivation, and others. The first more comprehensive definition of achievement motivation was derived from the classic model of McClelland (1976), according to which achievement motivation can be perceived as a relatively stable predisposition of an individual which represents one of the important factors of achievement. To the more recent definitions of achievement motivation belongs the definition by T. Clark, P.R. Varadarajan and K.M. Pride (1994; according to: E.A. Ward, 1997), according to which achievement motivation is a multidimensional concept defined as a competition with standards of excellence or as people's desire to set and realize goals for themselves. According to E.A. Ward (1997) people with high achievement motivation:

- a) are potentially energetic employees with intense concentration on work;
- b) are competitive;
- c) centre their thoughts on improving achievement;
- d) are focused on achievement goals;
- e) have big managerial potential;
- f) are proactive.

In relation to achievement motivation, naturally already D.C. McClelland and his colleagues (1953; according to J. S. Hyde, K.C. Kling, 2001) were interested in the influence of gender on the level of achievement motivation. Since the findings have been changing over the years, obviously also thanks to the emancipation efforts of women, we have decided to research into the issue in our conditions at present.

## **1. Theoretical analysis of the issue**

J.S. Hyde and K.C. Kling (2001) in a research article called: "*Women, motivation and achievement*" point out that the classic research by McClelland was based on the fact that the occurrence of achievement motivation is very low in women, and therefore they were excluded from the research. Research that was performed from 1950 to 1960 pointed to the fact that women have a lower level of achievement motivation than men in accordance with the social emphasis of the time when women stayed at home instead of venturing into the achievement-oriented world of work. However, further research indicates that women's achievement motivation has increased over time. J. Veroff and C. Depner (ibid) found out that the achieve-

ment motivation of American women increased from 1957 to 1976 and Jenkins determined an increase from 1967 to 1981. Several contemporary studies point to gender differences in achievement motivation. According to J.S. Hyde and K.C. Kling (2001) the increase in women's achievement motivation was probably caused by better opportunities to gain education and also to find employment. Similar findings were also reported by B.A. Greene, T.K. DeBacker (2004), who state in their study that in the 1960s men and women differed more significantly in long-term goals and future plans. Men expressed mainly plans concerning a career in sciences and technologies and also gaining prestige and good earnings. Women focused more on personal comfort and altruistic behaviour in the future. R. Fiorentine (ibid) in long-term research carried out in the period from 1969 to 1984 found out that the women's plans to achieve a higher status and authority were gradually increasing over time. T. Gjesme (1979; according to B.A. Greene, T.K. DeBacker, 2004) found out a higher level of future orientation in girls, and that mainly in its anticipation and in the work place. The higher level of future orientation was related positively to the motive of success and negatively to the motive of avoiding failure. In later similar research T. Gjesme found out that female students with a low level of future orientation and with low abilities had a higher level of motivation to avoid failure. The authors of the expectancy-value theory, J.S. Eccles and his colleagues (1983; according to B.A. Greene, T.K. DeBacker, 2004), used the system of expectancy-values to study the influence of psychological and developmental factors on the choice of academic tasks and achievements. Expectancies are influenced by past achievement results, but also by the individual's interpretation of past results, of perceived ability in the task and by perceiving the task, particularly the difficulty of the task. This model consists of two main constructs, and thus expectancy for success in the task and perceived value of achievement area of operation. Boys and men often have higher expectancy for success than girls and women, though this fact can be explained by the historical concept of gender roles, gender stereotypes. Studies in the 1970s showed generally lower expectancies in female students regardless of age (I.H. Frieze et al., 1978; according to B.A. Greene, T.K. DeBacker, 2004). In the 1980s and 1990s also other findings were reported; and thus higher expectancies in men in stereotypically male realms, such as e.g. mathematics (J. S. Eccles, 1984; according to: B.A. Greene, T.K. DeBacker, 2004) and sports, and higher expectancies in women in stereotypically female realms such as English and music. In our conditions, O. Řehulková and L. Osecká (1996, p. 262) investigated gender differences in achievement motivation in school by means of Pekrun's scale of achievement motivation. They found out that the profiles of girls and boys are statistically significant in the individual items of the inventory. However, a gender difference in the total score of the achievement

motivation scale has not been confirmed. B.A. Greene and T.K. DeBacker (2004) discovered the biggest gender differences in the character of future goals. Men have higher goals, but fewer goals than women. Women showed differences in expectancies mainly regarding their future careers, women focus more on interpersonal goals. In relation to gender differences in achievement motivation there are interesting findings concerning the need to avoid success, which was studied by M.S. Horner (1969; according to A. Plháčková, 2005) among female university students by applying the method of unfinished sentences. M.S. Horner found out that fear of success is quite frequent among girls, which at that time was obviously connected with a passive, non-competitive role which society at the time expected them to fulfil. Girls felt that it was not feminine to be successful in academics. According to M.S. Horner girls were afraid that if they were ambitious, others would treat them deprecatingly. S.R. Jenkins (1987; according to A. Plháčková, 2005) monitored in the long-term the career of women, who graduated from university in 1967. Women with a high need for successful performance very often became teachers; however, they rarely attempted to join the sphere of business or industry. S.R. Jenkins came to the conclusion that the teaching profession enables satisfaction of achievement needs without being in conflict with the traditional female role in contrast to the career of, e.g., a business manageress. Similarly, also S. Kariková (2006) and M. Valihorová (1995) point to the fact that exactly the choice of the teaching profession is significantly influenced by gender in terms of social determination. Women's ambitions are thus manifested in a way which takes into account social stereotypes. G.H. Elder and D.J. MacInnis (1983; according to A. Plháčková, 2005) investigated a set of girls aged 17 and 18, who, on the basis of scores reached in an interest inventory, were divided into a group oriented entirely to family and a group which was interested in both family and career. All the girls were measured also for the need for successful performance. In adulthood these motives manifested differently among investigated persons. Women with an above-average need for success, who were oriented to family, invested a big effort into partnership relations and starting a family. For them success meant a satisfying family life. Ambitious women focused on both career and family entered marriage relatively late and before getting married they dedicated great effort to their occupational promotion. G.H. Elder and D.J. MacInnis came to the conclusion that women with a big need for successful performance carry out their ambitions in a way which corresponds to their self-notion and their place in the world. At present, the cultural delimitation of a male and female role has changed considerably. Women are rather concerned about the dilemma family versus career.

The latest research findings among university students include the results by L. Pašková (2006), who states that boys have a higher achievement motivation than

girls. As regards the individual dimensions participating in the total motivation for achievement, a significant difference was revealed in the following aspects: confidence in success, competitiveness, eagerness to learn, fearlessness, preference for difficult tasks, independence, engagement, dominance, goal setting, and self-control.

## **2. Research goals**

As follows from the previous subchapter, differences between men and women in achievement motivation are determined historically. On the basis of the presented findings the situation has been changing over time in favour of women, despite this in the 1990s O. Řehulková and L. Osecká (1996) pointed in their study to gender differences in achievement motivation. Women in general show higher situational anxiety than men, which is also related to their experiencing of stress in achievement situations. This ambivalence has led us to investigating this relationship and formulating the main research goal, which is the determination of the influence of gender on the factors of students' achievement motivation. On the basis of the goal we formulated the following hypotheses:

H1. We assumed that women would reach a lower level of the achievement motive than men.

H2. We assumed that women would reach a higher level of anxiety hindering achievement than men.

H3. We assumed that women would reach a lower level of anxiety supporting achievement than men.

We verified the hypotheses by means of a achievement motivation inventory (AMI), which was constructed on the basis of Hermans' concept of achievement motivation. The inventory contains 52 items and consists of three scales: the scale of achievement motive (AM)-24 items, the scale of anxiety hindering achievement (AH)-17 items and the scale of anxiety supporting achievement (AS)-10 items. The achievement motive (AM) is characterized mainly by the following aspects: Achievement behaviour is formed by 8 items of the type: "I like working." "My friends and acquaintances consider me to be hard-working." The aspiration level is formed by 5 items of the type: "I do not avoid work which requires responsibility." "When I do something, it must be perfect." Persistence at work is formed by 5 items: "Persistence is an important quality." "If I get down to demanding work, I can hardly stop." Future time orientation is formed by 6 items of the type: "I like planning." "In general, I am focused on future." The scale of achievement motive forms a relatively heterogeneous scale. The scale of anxiety hindering achievement

(AH) represents self-confession of a decrease in achievement, loss of readiness and activity in states of stress aroused particularly in critical, burdensome or new situations. The scale of anxiety supporting achievement (AS) is related mainly to a moderate state of stress and mobilization of activity as favourable conditions of good performance.

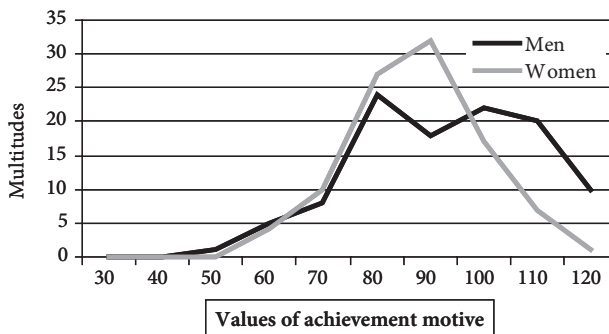
The inventory was standardized on the choices of university and secondary school youth. When analysing the data we used a raw score of individual variables.

### 3. Research findings

The research sample in our research consisted of 213 university students, out of whom 102 were women and 111 men at the average age of 20. We processed the obtained data into distribution curves and tested the significance of differences between the sexes by means of the statistical procedure Mann-Whitney U test.

On the basis of Graph 1, differences in achievement motive in dependence upon gender can be assumed. The raw score of women culminates mainly at the mean values and then it sharply declines, whereas the curve with men is more regular. On the basis of testing the significance of differences between the sexes in individual variables we can find out that women have a statistically significant lower value of achievement motive than men ( $AM=85.47$ ,  $SD=0.17$ ,  $p\text{-value}=0.0148$ ), Table 1.

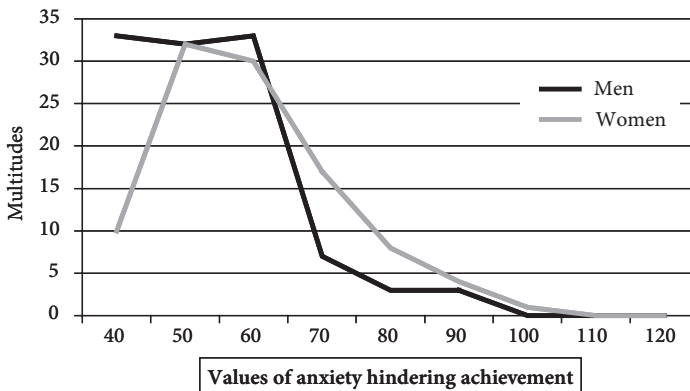
Graph 1: Distribution of values of achievement motive in dependence upon gender



Women on average reach a significantly higher level of anxiety hindering achievement (Graph 2, Table 1) than men ( $p\text{-value}=0.0001$ ). Similar conclusions

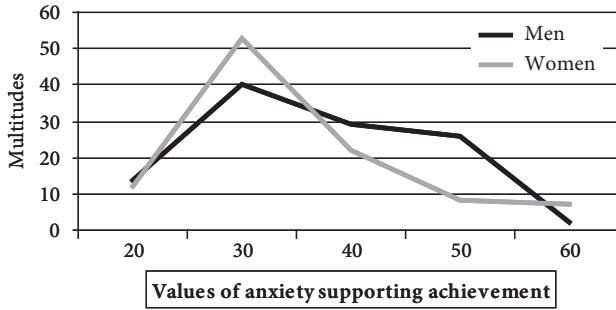
were also drawn by the authors of the AMI inventory (1984), who stated at its validation that women are more anxious and men reach a higher level of achievement motive. Inter-gender differences in the higher anxiety of girls were also confirmed by L. Medvedová (1996), (J. Daniel, 1984). Inter-gender differences in social anxiety were also confirmed by V. Kubáni (1998). The findings by O. Řehulková and L. Osecká (1996, p. 262) complete the picture of inter-gender specifics in achievement motivation, which were determined mainly by means of an item analysis of Pekrun’s scale of achievement motivation. They state that a statistically significant difference has been confirmed for the item “*they perform their tasks possibly the best*” and “*even though the tasks are monotonous, they finish only if they are done*”, where girls reached higher values than boys. Another difference was revealed in the item “*The school seems to me to be really difficult*”, where the school seems to be really more difficult for girls than for boys. The sources of higher anxiety hindering achievement in girls can probably be found in the combination of endogenous and exogenous influences.

**Graph 2: Distribution of values of anxiety hindering achievement in dependence upon gender**



Women in our research sample reach a statistically significant lower level of anxiety supporting achievement (Table 1, Graph 3), although overall differences between men and women are not so significant. The AMI inventory does not diagnose fear of failure which could be the reason for lower scores with some women, which was also confirmed by V. Hrabal, F. Man, I. Pavelková (1984), who state that students with the need to avoid success include particularly girls who in some situations intentionally do not perform achievement so as not to threaten their relationships with other classmates.

**Graph 3: Distribution of values of anxiety supporting achievement in dependence upon gender**



**Table 1: Significance of inter-gender differences in individual variables in the total set**

	Women		Men		p-value (Mann-Whitney U test)
	AM	SD	AM	SD	
achievement motive	85.47	0.17	89.77	17.28	0.0148 *
anxiety hindering achievement	55.38	12.62	48.31	12.92	0.0001***
anxiety supporting achievement	29.26	10.06	31.89	9.8	0.0048**

#### **4. Discussion**

Gender differences in achievement motivation are stated by several authors (McClelland, 1976, J.S. Hyde, K.C. Kling, 2001, B.A. Greene, T.K. DeBacker, 2004, O. Řehulková, L. Osecká, 1996, T. Pardel, L. Maršálová, A. Hrabovská, 1984, L. Pašková, 2006). We obtained the same findings. Women reached a statistically significant lower value of achievement motive than men (p-value=0.0148). Women possess lower aspirations to gain achievement than men. In spite of that, women in our set reached better grade averages. We assume that with men the achievement motive can be focused on other, after-school activities (sport, a job during the study, various interest activities and the like).

On the basis of our findings we can state that women on average reach a significantly higher level of anxiety hindering achievement (AM=55.38) than men (AM=48.31), (p-value=0.0001). Similar findings are also stated by the authors of the AMI inventory (1984), further by Ľ. Medvedová (1996), J. Daniel (1984), V. Kubáni (1998), O. Řehulková and L. Osecká (1996). Overall, women have higher anxiety in various situations of life and mainly in critical, burdensome or new



situations in which they often confess to the loss of readiness and activity and mainly a decrease in achievement. We can probably find the reasons not only in endogenous, but also in exogenous influences.

In our research sample women reached a statistically significant lower level of anxiety supporting achievement ( $AM=29.26$ ), although overall the differences between men ( $AM=31.89$ ) ( $p\text{-value}=0.0048$ ) and women were not so significant. Similar findings are also stated by T. Pardel, L. Maršálová and A. Hrabovská (1984). E. Kováčová (2005) also found out moderate differences between genders in anxiety supporting achievement, in favour of men; however, the differences were not statistically significant. Situations accompanied by a moderate state of stress are experienced by men apparently as more favourable for their achievement than women.

## **5. Conclusion**

The presented findings confirm that in spite of the increasing emancipation of women, women are more anxious, they possess lower aspirations to gain achievement and they experience achievement situations worse than men. Despite this, women have better grade averages. Since the formation of achievement motivation is significantly influenced by the mechanisms of social learning in the course of education, we assume that it would be possible by gradual moderation of gender stereotypes in education to lead to a partial balancing of these differences between men and women. Evidently, on the other hand, they cannot be eliminated comprehensively and completely, and apparently it would not be a desirable phenomenon. Women are naturally more careful and more anxious, that is probably related to their important biological and social role as a mother who wants to protect her child from various dangerous situations. Gaining achievement in our society is assessed particularly in the occupational area. The AMI inventory is composed in a similar way; it contains a lot of items focused on work at school, preparation and aspirations in situations of testing. If we questioned the generalized character of the achievement motive, similarly as B. Weiner (B. Weiner, 1990; according to: M. Bong, 2004), or M. Vaněk, V. Hošek and F. Man (1982), the situational variability of a specific achievement need, in which a person feels for example competent, could lead to the assumption that women possess aspirations to gain achievement, however in specific activities, not in those relating to study. It is remarkable that in spite of lower aspirations in study activities, women reach better grade averages than men. This brings us to another assumption that it is possible that women are more influenced by social desirability and their answers copy the desirable feminine

ways of behaviour in achievement situations. The worse experiencing of achievement situations is related to the higher affectivity of women in contrast to men.

In conclusion we can state that although our research has confirmed gender differences in individual factors of achievement motivation in favour of men, which we also assumed, they cannot be definitively generalised; they are valid mainly for our research sample. The fact that there are increasingly more women at high posts proves that our society is changing and the labour market with interesting posts opens for both men and women. The revealed gender differences reflect the natural femininity and masculinity and they have an undesirable influence only if they prevent an individual's self-fulfilment and self-realization.

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