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**INTELLECTUAL AND SCHOOL STATUS OF PUPILS AT
COMPULSORY SCHOOLS ATTENDANCE**

Michaela Pugnerová (a)*

*Corresponding author

(a) Faculty of Education, Žižkovo nám. 5, Palacký University in Olomouc, Czech Republic,
lmichaela.pugnerova@upol.cz, +420 585635211

Abstract

The start of compulsory school attendance is an important milestone in a child's life. The process of individual adaptation to the school environment and the ability of adaptive behavior is related to personal characteristics like self-confidence, anxiety, level of frustration, tolerance and emotional stability. Apart from social abilities, the intellectual status of the child are also related to the successful process of individual adaptation to the school environment. The aim of this research is to analyse the relationship among some contributing factors such as behavioral adjustment, freedom from anxiety and popularity in class to the process of adaptation to the school environment in the context of the intellectual status of the child. The data was obtained using the Piers-Harris questionnaire (Piers & Herzberg, 2009) within the IGA_PdF_2017_002 project. The research group consisted of 300 pupils (149 boys, 151 girls) of middle school age from selected primary schools in the Czech Republic. The findings reveal that intellectual and school status do contribute to the child's adaptation to the school environment. Hence, identifying possible interventions is important to help to eliminate shortcomings in the mentioned area and support adaptive processes in terms of compulsory school attendance.

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1. Introduction

The child's entrance to school signals the approach of his/her developmental stage of younger school age. It can be defined as the duration from 6-7 years to 10-11 years, when the first signs of sexual maturation appear (pre-pubescency). Based on significant differences between children at the beginning of school attendance and children from advanced classes at the lower primary level, authors (Kuric, 2000; Matějček, 1986; Vágnerová, 1999) talk about two stages of development at younger school age; early school age (6-8 years) and medium school age (from 8-9 to 11-12 years). Psychoanalysis indicates this period as 'Latent stadium', when one stage of psychosexual development is completed, and basic instinctive energy is relatively still, until the beginning of puberty. Langmeier (1983) characterized this stage as the age of 'sober realism', where the pupil focuses the world as it is and wants to understand the world. This tendency for realism can be seen in speech, drawing, written form, hobbies, reading and also in play. At the beginning pupils are usually dependent on authority (naïve realism), but, at the end with the upcoming puberty, the pupil's attitude becomes more critical (critical realism). Psychosomatic developmental changes are not tumultuous, nor revolutionary; indeed, the development is rather fluent with improvement in all areas. What is striking is the activity, diligence and willingness to cooperate of the child. Erikson (1963) or Erikson (2015) indicates this stage as a stadium of diligence and initiative aimed at gaining the feeling of competency and self-confidence, as opposed to feelings of failure and inferiority. In this case, the dominant role plays the subjective experience with school. In general, we can say that this stadium is the most stable in the child's development, if the child is growing in optimal healthy conditions.

1.1. Development of cognitive processes

The development of the cognition area is in the signs of the child's increasing activity. Children are not comfortable with passive reception of information; they want to be part of everything, understand the context, get to know the nature of objects and phenomena. In this view, children as pupils are attentive, persistent and systematic. Cognitive processes are slightly connected with emotions. Perception becomes a purposeful act. The increasing ability of analysis and differentiation allows a higher quality of perception. During this developmental stage, the child moves from specific perception to more general perception and at roughly about 10 – 11 years, the perception is almost the same as an adult's perception. However, the child has less experience for sorting information and making connections. Imagination takes precedence at this stage. The child can differ between reality and fantasy and even more is becoming familiar with the reality of life. Fantasy is slightly limited by reality, by the effect of school-work, deliberate and intentional imagination is developed. The ability of operating with ideas precedes the ability of operating with concepts. Unintentional or mechanical memory dominates at the beginning of compulsory school attendance and it is connected with perception. Nevertheless, memory is improving. Intentional memorization, rationality and logical judgement is used even more. The child is using intentional memory strategies and connects different types of memory.

The dominant role for pupils is the development of attention, which affects the quality of other cognitive processes and subsequently, school achievement. At the beginning of compulsory school

attendance, attention is short-timed and spontaneously aimed; excitement dominates and children are unable to resist disturbing influences. Attention, controlled by will, is very demanding and is highly influenced by the organization of teaching, because children do not have created autoregulative mechanisms. With lower school age, tasks should be short and motivation more frequent. The development of thinking is strongly affected by school activity and the personality of the teacher. The child as pupil gradually acquires the ability of logical operations preferring cognition and verification of the reality. According to Piaget (1970) this stage is the stadium of specific logical operations. Visual aids are very beneficial for the teacher at the beginning of the compulsory school attendance as the pupil can connect intellectual processes and thought processes at the level of specific logical operations creating an integrated system. The pupil's performances are dependent on motivation, appropriateness of the task and other factors. In general, younger pupils are able to work on the illustrative level of objects. Thought processes differ from perception and become relatively separate process. With focused processes, it is possible to develop logical thinking. Cognition at this age is becoming more objective and more precise. At the early school age, the pupil can abandon his/her subjective egocentric view and we can say that his/her attitude is realistic. Logical operations allow the pupil to understand the variability of reality. According to Vágnerová (1999), development of thinking leads to the ability of operating with symbols and signs, which is the prerequisite for reading, writing and calculating. At roughly about 8 years, the understanding of time increases. Generally, children of this age can sort events, tell time, and understand daily or weekly rhythms, seasons and so on. At this age, the image of causality is also changing. According to Vágnerová (1999), the development of metacognition should not be neglected. Metacognition is the ability of thinking about own's perception and the ability of using feedback. Motivation for a good performance has to come from external sources (praise, a good grade, smile, touch, etc.). On the other hand, some studies (Langmeier, Krejčířová, 1998) show that power motivation itself is a sign of a child's intelligence.

1.2. Emotional and social development

Emotional stability and social adroitness are very important characteristics for useful school adaptation and success. At the early school age, lability and impulsiveness is the typical retreat of the child. The child is able to repress or show emotions—taking into account the expectations of the environment (Langmeier, Krejčířová, 1998). At this stage, the ability of emotional understanding is increasing as well as the understanding of ambivalent emotions. There are significant differences among pupils related to emotional satisfaction in early childhood. This stadium is also characterised by emotional influencability. This emotional aspect has a crucial impact on success rate and subjective satisfaction of children. Emotional development and the gradual ability of self-knowledge highlight the relationship with cognitive development. Higher emotions (social, esthetic, athical and intellectual) start to develop. The school has relatively strict rules, and the child is exposed to many expectations at school. If the child behaves according to this expectation, he/she is rewarded. The respect of norms is motivated by the need of fulfilling social expectations (Vágnerová, 1999). Moral development is strongly affected by educational process and interactions among family members. The child is strongly tied to its family and absorbs family's value system and attitudes. Teachers' authority does not play as important a role as parental

authority. The difference in parental and teachers' attitudes can create emotional problems for the child. The child loses its grip on certainty and safety with the new social role; as a school child. During this stage, evaluation and norms of peers start to become important for the child. In the area of self-concept positive self-evaluation is important, which is vital for overall health and emotional performance. Self-perceptions, and its derivatives such as self-concept, self-esteem, or self-worth, influence psychosocial well-being. (Piek et al., 2005; Rose, Larkin & Berger, 1997; Schoemaker & Kalverboer, 1994; Skinner & Piek, 2001). Marsh (1989; 2007b; Marsh, Craven & Debus, 1991) proposed that the self-concepts of very young children are consistently high but that with increasing life experience, children learn their relative strengths and weaknesses, so that mean levels of self-concept decline, multiple dimensions of self-concept become more differentiated, and self-concepts become more highly correlated with external indicators of competence (e.g. skills, accomplishments, and self-concepts inferred by significant others). The natural acceptance of the child in the family is also important. Parents are strong identification idols, interaction between parents is also a model for mutual relationships between men and women. In accordance with current children's development as an active person, some authors of new studies confirm that the child is socialized not only from outside (parents, siblings, peers, teachers, etc.) but also by the child partially socializing itself (self-socialization) (Langmeier & Krejčířová; 1998). The child creates a certain "theory about itself" which is consequently the basis for its own identity development. The subjective feeling of success or failure at school becomes important. School offers new experiences which may or may not concur with the child's existing self-image. Consistent failure is highly dangerous in terms of the threat to the child's "self" as the child could easily experience feelings of inferiority, helplessness and anxiety. The feeling of success or failure that the child is forming during the early school age stabilises roughly from the 4th to 6th grade.

The period of early school can be marked as a period of extravagancy, collective life and relationships. The child forms new relationships with peers and learns how to cooperate and compete. At the beginning of compulsory school attendance, the child is more focused on his/her own success and later, considers also school-collectiveness and tries to develop friendships. A group of children at the beginning is less differentiated, but later lasting friendships appear and the whole group becomes differentiated. Boys and girls' groups are very dissimilar at this age. Boys tend to be more active, have more intensive reactions and are able to switch from activity to another. In contrast to girls, boys are less resistant against disturbing influences, are less obedient and so on. The relationship with teachers is non-critical. Vágnerová (1997) states that teachers' attitude towards children is gradually becoming fixed, resulting in formation of a stereotypes in many cases. The separation of "problematic" pupils become frequent, which later works as social stigmatization. According to Vágnerová (1997) it is to define recurring mistakes in pupils' manifestation based on teacher's typology: An authoritative teacher requires compliance of all norms, is intolerant against any misbehaviour, does not want child's individual manifestation and requires mainly fulfillment of duties. Additionally, an uncertain teacher limits the variability of the child's actions while a temperamental teacher usually does not have enough patience to understand more active children. An older, tired teacher is little tolerant of any disturbing behaviour and tends to inflexibility.

The main activity of early school-child is learning and working and fulfilling given tasks. Games are very important for the healthy development of personality. Games at this stage are more differentiated. Among the favourites are constructive games, physical, competitive and social games with more complicated rules. Compared to girls' games, boys' games are more original and creative and also louder, aggressive, preferring more open spaces. Games are irreplaceable relaxation and natural abreaction from school tasks. While games can be used directly in school especially for younger children, older children appreciate it as a friendly working atmosphere. Games play diagnostic and therapeutic function too. In early school age, participation in hobbies can be seen. Successful self-realization through participation in hobbies develops and enriches the personality and could be appropriate compensation for academic failures. The possibility of self-realization is an integral part of human life.

2. Problem Statement

This study aims to identify if children with high intellectual scores and school status displayed lower levels of anxiety.

3. Research Questions

In accordance with the problem statement, the following research questions were developed;

- 3.1 *Is there a relationship between intellectual scores and school status and the level of anxiety in early school aged children?*
- 3.1. *Does a gender difference exist in the level of anxiety in early school aged children?*
- 3.2. *Does a gender difference exist in intellectual scores and school status in early school aged children?*

4. Purpose of the Study

The aim of this study is to analyse some factors which affect the process of children's adaptation to the school environment. The following relationships between variables were analysed: level of cognitive (intellectual) and school status and the level of anxiety, possible gender differences between cognitive (intellectual) and school status in context of level of anxiety were examined.

5. Research Methods

5.1. Research group

300 pupils from lower level of primary school (151 girls, 149 boys) formed the research sample. The average age of the sample was 9.90 ± 1.03 years (girls 9.67 ± 1.00 , boys 9.71 ± 1.05). No child was handicapped. The project was realized from March to May 2017 in primary schools in the Czech Republic. The research was approved by Ethical Committee of author's institution (N 03/17). Legal representatives (children's parents) were informed about the aims, methods and process of research before the start of the research. The anonymity of obtained data was declared and all questions about the

research were answered by researcher. Possible questions from children were answered adequately to their age. The participation in the research was voluntary, without reward and no benefits for participants. The sample could interrupt or stop participating anytime during the research. After the legal representatives confirmed the participation of their children in the research, the research commenced. Obtained data were processed anonymously Data was obtained for the project IGA_PdF_2017_002.

5.2. Research methods and techniques

Data about intellectual and school status and freedom from anxiety were collected using the standardized questionnaire Piers-Harris Children 's Self-Concept Scale 2 (Piers & Herzberg, 2009). The sample were divided based on their T-score into categories. In the intellectual and school status, falling into. Category I (high score ($\geq 56T$)) are children who are sure about their intellectual abilities and also in school tasks like reading, answering questions and performance in front of classmates. Falling into Category II (average score (40–55T)) are children who think that they reach acceptable school results, but admit certain difficulties. Falling into Category III (Low score ($\leq 39T$)) are children who admit that they have problems during school tasks. Falling into Category IV (very low score ($\leq 29T$)) are children who have specific learning or attention disorders. Freedom from anxiety is categorised as Category 1 (high score - $\geq 56T$) which has children who hardly experience feelings of sadness, nervousness, fears or unpleasant moods. They also are satisfied with their looks, social environment and other personal values. In Category 2 (average score - 40–55T) are children who usually experience positive emotional states but admit certain difficulties in terms of moods. In Category 3 (low scores - $\leq 39T$) are children who admit to serious problems with dysforic moods. These children do feel anxiety connected to certain school tasks (writing tests, assessed in front of the class, etc.). In Category 4 were children who scored very low score (- $\leq 29T$)

5.3. Statistical analysis

Basic statistical values about the sample (number and age of girls and boys) were expressed using average number and standard derivation number. Self-concept factors scores were assessed based on current methodology (Piers & Herzberg, 2009). The relationship between the intellectual level and school status and the level of anxiety was analysed by prostřednictvím χ^2 . For gender differences in the level of anxiety Mann Whitney U test. The level of significance was established at $p < 0.05$. Data were processed STATISTICA, version 13.0 (StatSoft).

6. Findings

80 children (27%) of the sample fell into the above average category for intellectual level. According to expectations, about half the sample of 158 children (53%) fell into the average intellectual level. 54 children (17%) fell into the poor category while 8 children (3%) fell into the very poor category (see Table 01).

Table 01. Frequency of pupils in freedom from anxiety(FRE) in context of intellectual and school status (INT) (n=300)

INT	FRE - Category I	FRE -Category II	FRE -Category III	FRE -Category IV
1	21	54	5	0
2	15	101	38	4
3	5	23	22	4
4	1	2	4	1

Based on research findings, there is a relationship between the intellectual level and school status and the level of anxiety ($\chi^2 = 33.52$ df=3; p=0,001). The Mann Whitney U test confirmed a significant difference between girls (Mdn=151) and boys (Mdn=149) in the area of anxiety (U=9595.50; p=0.03) (gender differences). There was no significant difference in gender in terms of intellect and school status (U=10328.50; p=0.22) (from the perspective of gender).

7. Conclusion

The aim of the research was to analyse some relationships which contribute to children's adaptation processes to the school environment at early school age. The relationship between cognitive (intellectual) level and school status and the level of anxiety which were the variables were examined. Additionally, possible gender differences between cognitive (intellectual) and school status in context of level of anxiety were examined. The three research questions were answered. Based on the research results, relationships between mentioned variables were confirmed. It was confirmed that there is dependency between intellectual level and school status and the level of anxiety. This research concurred with other researches on the start of compulsory school attendance. Cognitive, social and emotional factors have been found to be important in order for the child to satisfy criteria for school maturity. The level of fulfilling those criterias predicts children's adaptation to the school environment (Jucovičová & Žáčková, 2014). The analysis of cognitive development highlights primarily mental maturity, which is created mainly by optimally developed thinking and perceptive functions, which creates primarily perception (Šmelová et al., 2012). Differentiation of certain mental functions, some level of visual and auditory perception, transition from global perception to analytic perception, ability of analytic-synthetic operations, development of memory, realistic understanding of life, ability of intentional attention, curiosity and creative approach towards the world and certain level of verbal skills can be observed among children at this age. All this contribute to children's inclusion into the collective of children and school. Also according to confirmed relationship between mentioned factors it is possible that those participate on child's emotional experience and experience of anxiety in school environment. Schöffelová, Mikulajová & Zubáková (2012) state that school demands high levels of autoregulation and self-control of children. During the last decade, more knowledge about the workings of the human brain has been uncovered, particularly in pedagogical and psychological context, related to attention and its disorders (ADHD), memory and so on. So called executive functions belong to new and not so stable terms of neuropsychology. Those functions are basis for classification, integration and regulation of cognitive functions, behaviour and experiencing.

The analysis of gender differences analysis showed a statistical significant difference between boys and girls in the level of anxiety. That is not very surprising because available sources (Drtilová, Koukolík, 1994; Kebza, Rymeš, 2001) confirm higher emotional experiences in girls (later women) than in boys (later men). Not only research, but also anecdotal evidence shows that doubts about school failure and failure to adapt to school environment is more related more to girls than boys.

A significant difference between genders was not found in the area of intellectual and school status. That is a rather surprising finding because research indicates cognitive superiority in girls (Jirásek, 1992; Adamovič, 1972, Šmelová et al. 2012; Rigoli, Piek, & Kane, 2012). Cognitive superiority are meant to be understood as processes related to academic achievement and the pursuit of success.

The presented results indicate the need for further and more detailed research on the mentioned variables, because the relationship between cognitive processes, school status and emotional experiences of children is critical and requires urgent attention as these are essential determinants in children's overall development and school success.

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