The Attitudes of Elementary School Teachers to Eating Disorders

Lenka Adámková

MASARYK UNIVERSITY PRESS

MUNI
PRESS

The Attitudes of Elementary School Teachers to Eating Disorders

Lenka Adámková

Masaryk University Press

Brno 2020

KATALOGIZACE V KNIZE - NÁRODNÍ KNIHOVNA ČR

Adámková, Lenka
The attitudes of elementary school teachers to eating disorders / Lenka Adámková. -- 1st edition. -- Brno : Masaryk University Press, 2020. -- 1 online zdroj. -- (Physical education and health education ; volume 3)
Obsahuje bibliografii a rejstříky

ISBN 978-80-210-9803-9 (online ; pdf)

* 373.3.011.3-051 * 316.64 * 616.3-008 * (437.3) * (048.8)
- učitelé základních škol -- Česko
- názory a postoje
- poruchy příjmu potravy
- monografie

37 - Výchova a vzdělávání [22]

Edition: Physical Education and Health Education
Volume 3

Reviewers:
PaedDr. Eva Marádová, CSc.
Doc. MUDr. Petr Kachlík, Ph.D.

CC BY-NC-ND 4.0 Creative Commons Attribution-NonCommercial-NoDerivatives 4.0

© 2020 Masaryk University
ISBN 978-80-210-9803-9
ISBN 978-80-210-9802-2 (paperback)
https://doi.org/10.5817/CZ.MUNI.M210-9803-2020

Content

Introduction **7**

1/ Eating Disorders **11**

1/1 Selected Eating Disorders 11
1/1/1 Anorexia Nervosa 11
1/1/2 Bulimia Nervosa 14
1/1/3 Rare Eating Disorders 14
1/2 Factors of the Onset of Eating Disorders 16
1/2/1 Biological Risk Factors 16
1/2/2 Mental Risk Factors 17
1/2/3 Social and Cultural Risk Factors 22

2/ Prevention of Risk Behaviour **25**

2/1 Programmes Aimed at Primary Prevention of Risk Behaviour in CR 26
2/2 Role of the School in Primary Prevention 28
2/3 Role of the Teacher in Primary Prevention of Eating Disorders 29
2/3/1 Recognition of Eating Disorders in Pupils 31
2/3/2 Teacher's Behaviour Towards a Pupil With Suspected Eating Disorder 33

3/ Attitudes **37**

3/1 Teachers' Attitudes to Eating Disorders 38
3/2 Current Research on Teachers' Attitudes to Eating Disorders 40

4/ Research on Teachers' Attitudes to Eating Disorders **45**

4/1 Research Problem and Objective 45
4/2 Research Sample 47
4/3 Research Instrument 47
4/4 Preparation of the Research and Data Analysis 49
4/5 Results of the Research 51
4/5/1 Differences in Teachers' Attitudes by Gender 52
4/5/2 Differences in Teachers' Attitudes by Teaching Qualification 56
4/5/3 Differences in Teachers' Attitudes by Gender and Teaching Qualification 61
4/5/4 Differences in Teachers' Attitudes by Length of Teaching Experience 66

4/5/5 Differences in Teachers' Attitudes by Their Age 72
4/5/6 Complementary Analyses 77
4/5/7 Summary of the Results of the Research 85

5/ Complementary Research on Teachers' Attitudes to Eating Disorders 89

5/1 Research Problem and Objective of the Complementary Research 89
5/2 Methodology of the Complementary Research 90
5/3 Results of the Complementary Research Study 90
5/3/1 Summary of the Results of the Complementary Research 103

6/ Discussion 105

6/1 Limitations of the Research Study 109

Conclusion 111

Resume 115

References 117

Subject Index 125

Name Index 129

List of Tables and Graphs 131

Introduction

Health is one of the most important life values, but in the 21st century it has also become a programme with a specific definition that includes the economic, healthcare, and other aspects, but also the educational aspect. Therefore, the *Framework Education Programme for Elementary Education* (FEP EE, 2017) in the Czech Republic defines the educational area Man and health, which encourages schools to include specific tasks in Health education or in an equivalent subject.

One of the areas that deserves special attention especially among adolescent learners is the issue of prevention, specifically the prevention of risk behaviour.

This issue is very broad and for this reason the authors of the monograph focused on a specific part of the prevention of risk behaviour in children and adolescents: prevention of eating disorders.

In recent decades, the issue of eating disorders has been paid great attention not only in scientific literature but also in research studies. Despite this fact, there is a plethora of ambiguities and speculations. One of the reasons for the lack of clarity might be the large number of attitudes, such as individual, biological, or family attitudes, but also the fact that eating disorders are caused by the interaction of several different factors.

The group that is most at risk of eating disorders includes girls and young women aged 13 to 25 years. At this age, many of them search for their place in society and among peers. In addition to other things, the school age brings significant changes in the attitude to one's body and eating habits. Even eight-year-old girls say that they are not happy with their body. The fear of becoming obese and dietary tendencies affect younger age categories, especially among girls.

Appropriate education, particularly during the critical age of the onset of puberty, may act as a prevention of eating disorders in children. The fundamentals of prevention lie in the family, but schools should implement

primary prevention measures to raise awareness among children, promote healthy eating habits, support a positive social climate, and last but not least provide suitable conditions for the development of the personality of each child and for strengthening their self-confidence in order to eliminate the manifestations of self-destructive behaviour.

The core of prevention lies in the family and the family is the first significant social group where the individual adopts his/her attitudes. The family is the first source of satisfying one's needs, but at the same time brings the first restrictions and disappointments. The family has a strong formative effect on the individual and can positively encourage or on the other hand cause disruptions in the development, skills, and personality.

The strategies that govern the attitudes and behaviour in all areas (also the attitude to oneself) gain their final form in adolescence. Besides the family, a significant role in the development of attitudes is played by social influences such as requirements placed by the school and society.

The importance in shaping attitudes by the teacher is even greater today because sometimes the family fails to fulfil its functions and the school to a large extent replaces the function of the family. For this reason, it is important to examine teachers' attitudes to the prevention of eating disorders because they should be its main advocates.

The present monograph outlines an insight into the issue of eating disorders with a focus on teachers' attitudes. The research instrument to investigate the attitudes of Czech teachers to the issue of eating disorders was the semantic differential. The monograph also describes how the attitudes of Czech teachers are affected by qualification, gender, and length of teaching experience. The publication builds on the author's research (Procházková, 2014) and presents an updated perspective of the current state of the issue.

Given the extent of the research data, the publication presents a selection of data that relate to the primary testing which was carried out in 2014 and was followed by a qualitative research study for comparison. The purpose of the qualitative research was to investigate whether teachers identified any eating disorders in their pupils, what steps they took in these situations, and what their possibilities were in cooperating with the pupils affected by eating disorders and their families.

The theoretical background is followed by a detailed description of the research study. The results of the research are complemented with graphs and explanations. The monograph also describes how teachers' attitudes are affected by qualification, gender, and length of teaching experience. The results of the research also describe the correlations between the indicators of the research instrument. The publication also includes the statements of 10 randomly selected teachers acquired by means of semi-structured interviews. The final part of the publication summarizes the most important findings and proposes suggestions for further research and the application of the results in educational practice. This makes the monograph attractive not only to professionals but also the general public.

I would like to thank Doc. PaedDr. Vladislav Mužík, CSc. for providing a large body of information and for valuable and stimulating discussions. I would also like to thank Doc. PhDr. Miroslav Chráska, Ph.D. for statistical data processing and relevant comments. Finally, I wish to thank all the respondents who willingly provided both quantitative and qualitative research data.

The author

1/ Eating Disorders

In 1987, the World Health Organization (WHO) declared eating disorders as one of the priority issues of the global population. It is estimated that around eight million people worldwide suffer from one of the forms of eating disorders (anorexia nervosa, bulimia nervosa, or binge eating). In the Czech Republic, this serious psychogenic disease affects one in twenty young women or girls[1] (Krch, 2010; Papežová, 2010; Sladká, 2004).

The opening lines of the paper are devoted to eating disorders because understanding of this complex issue is crucial for the following text. Eating disorders affect all aspects of life. They disrupt emotional, sexual, social, and occupational life of the patients. They cause long-term distress not only to the patients but also the patients' families, friends, and other close persons. Eating disorders usually occur in a period which is critical to further psychosocial development of the individual. In the case of anorexia nervosa, the disease usually occurs during puberty and adolescence between 14 and 18 years of age. Bulimia nervosa usually comes later.

Eating disorders are one of the most frequent diseases that affect adolescent girls and women, and due to their chronic nature they are very serious diseases with somatic, mental, and social consequences. Some symptoms of anorexia nervosa can be observed in up to 6% of girls at the end of puberty, and one in twenty adolescent girls suffers from an eating disorder (Krch, 2010).

1/1 Selected Eating Disorders

1/1/1 Anorexia Nervosa

The onset of anorexia nervosa often occurs before 14 years of age. This early onset of an eating disorder requires immediate professional help in order

1 The prevalence of eating disorders in boys and men is relatively rare, although it has increased recently. The number of affected boys/men compared with girls/women is 1:10 to 1:20. Therefore, in the text below patients are referred to as girls/women.

to prevent the dramatic consequences of insufficient nutrition including dehydration, stoppage of body growth, and other possible complications. The symptoms of anorexia nervosa have even been observed in children younger than 10 years (Krch, 2005).

The symptoms of anorexia nervosa were described already by Galen in the second century. The mental causes of extreme spontaneous starvation were reported by Morton in 1689 in his work *Phthisiologia Seu Exercitationes De Phthisi: Tribus Libris Comprehensae* (Fraňková & Dvořáková-Janů, 2003). He called the pathological condition *nervous eating*. More than 100 years ago, expert studies were conducted that described cases of spontaneous starvation and referred to them as an independent syndrome. The spreading of anorexia nervosa was supported by aesthetic norms and beliefs of society about the female ideal. The efforts to explain the mechanisms of anorexia nervosa focused on researching starvation in experimental animals living in the wild, but no suitable animal model was found that would by fully consistent with human symptomatology. Anorexia nervosa has been systematically studied since the 1960s (Fraňková & Dvořáková-Janů, 2003).

Anorexia nervosa is a disorder characterized especially by deliberate weight loss. However, the term *anorexia* may in some cases be misleading because a loss of appetite or decreased appetite is a secondary consequence of long-term starvation and need not occur in all patients. The disorder is about fighting appetite and hunger, and finding pleasure in controlling oneself and losing weight. In some patients, food restriction is accompanied by interest in food (thinking about food, collecting recipes, cooking for others, etc.). Anorectic patients do not refuse to eat because they lose appetite but because they do not want to eat. Their aversion to food is a manifestation of their irreconcilable and disrupted attitude to body weight, body proportions, and fatness (Krch, 2005; Papežová, 2010; Procházková et al., 2012).

The diagnostic criteria of anorexia nervosa can be summarized by the following basic features (Krch, 2010; Papežová, 2000, 2010):

- Active maintenance of abnormally low body weight: maintained at least 15% below the expected level (whether never reached or decreased) or BMI of 17.5 (kg/m^2) and lower; during their growth, prepubescent patients do not meet the expected weight gain.
- Fear of fatness despite very low body weight: weight loss is caused by the patient by avoiding fattening food and by self-induced vomiting,

laxatives, anorexics (drugs that suppress appetite), diuretics (drugs that increase fluid excretion), or excessive exercise; persisting fear of fatness and a distorted image of one's body as an obsessive concern about becoming fat.

- Endocrine disordersin women are manifested as amenorrhea (absence of menstruation) and in men as a loss of sexual interest and potency.
- If the disease occurs before puberty, the manifestations of puberty are delayed or stopped including stoppage of growth, poor development of the breasts and primary amenorrhea (absence of menstruation) in girls, poor development of the genitals in boys.

Regarding the fact that the typical characteristics in adolescents partially differ from the adult population, they are specified below.

Typical features in patients with early (under 14 years of age) onset of eating disorders:

- Smaller fat reserves, which may result in faster onset of health problems and a higher risk of dehydration.
- Limited food intake leads to greater thinness.
- Body growth may stop completely, puberty changes and sexual maturation are delayed.
- Children are more consistent in observing personal dietary rules, are more conscientious in maintaining anorectic attitudes, and compared with older patients suffer less from overeating, vomiting, and use laxatives.
- They respond to any fattening efforts in a more dramatic way than adults, they are mostly aggressive or on the other hand behave like even smaller children.
- Cooperation with children in the course of treatment is very complicated because they do not understand the objective of treatment and consistently refuse being fed.
- Children's problems may lead to conflicts in the class or peer group, but also to conflicts between the child and the teacher; the interest of the family focus more and more on the problematic child, while the other children remain side-lined.

1/1/2 Bulimia Nervosa

Bulimia nervosa is a disorder characterized by recurrent overeating seizures associated with excessive weight control. Bulimic conditions were observed already in 130, but the symptoms were described only in 1800. Later in 1979 the American psychiatrist G. Russel coined the term *bulimia nervosa*. Since then, the study of bulimia has expanded. For some time, bulimia was referred to as *the disease of the eighties*. Between 1983 and 1989, scientific journals published more than 1,000 papers on this issue. In 1987, the WHO declared bulimia nervosa one of the priority medical issues and pointed to the conspicuous or even epidemic occurrence of the disorder (Fraňková & Dvořáková-Janů, 2003; Kocourková et al., 1997).

The diagnostic criteria of bulimia nervosa can be summarized by the following basic features (Krch, 2010; Papežová, 2003; Procházková, 2011a):

- Recurring overeating episodes (at least twice a week for a period of three months), during which large amounts of food are consumed in a short period of time, eating is impulsive and uncontrollable.
- The feeling of overeating is very relative, sometimes large amounts of food are consumed, but often the patients eat just a little more than they originally wanted.
- Perception is strongly affected by thinking about food.
- A typical feature is the loss of food control.
- Each overeating episode is accompanied by feeling of remorse and depression resulting from failure – this is followed by compensatory behaviour including vomiting, laxatives, periods of starvation, diabetics may try to skip insulin treatment.
- Often (not always) the patient's medical history includes an anorectic episode or more intense food restriction.

1/1/3 Rare Eating Disorders

The rare eating disorders described below are not as frequent as anorexia nervosa or bulimia nervosa but they are dangerous for the adolescent population. These disorders are briefly mentioned to provide a comprehensive overview of the issue.

Binge Eating

Recurrent episodes of overeating without starvation or self-induced vomiting, exercise, or the use of laxatives. During a single episode the patient consumes a large amount of food (including less favourite food) despite not being hungry and not having appetite. Food is used to avoid boredom, disappointment, loneliness, or nervousness.

Night Eating

Most of the daily food is consumed after dinner and at night. A typical feature of this disorder is insomnia and loss of appetite in the morning. This disease is usually triggered by being on a diet and overall disruption of the eating regimen, for example during a period of increased stress.

Orthorexia Nervosa

This is a pathological obsession with healthy nutrition. The patients are unable to eat anything that contains preservatives, colourants, sugar, salt, white flour, industrially processed food, etc. Following a healthy lifestyle and thinking about the food structure takes them a lot of time. The fear of consuming unhealthy food may lead to significant malnutrition and narrowing of the food spectrum to a minimum. The patients eat only certain foods (for example special biofoods), which may lead to social isolation because this type of food is not generally available.

Drunkorexia

The fear of gaining weight leads to a deliberate reduction in food intake in order to reduce energy intake in exchange for consumption of high-calorie alcohol. This less known type of eating disorders was observed especially among American adolescents.

Bigorexia

This disorder occurs especially in men (most frequently among body builders). Bigorexia is an obsession with one's appearance and an effort to achieve high physical fitness and build muscle mass. The patients believe that they are under-developed, small, and weak. They often abuse anabolic steroids and other substances that support the growth of muscle mass (Procházková, 2011b; Švédová & Mičová, 2010).

1/2 Factors of the Onset of Eating Disorders

There are a number of theories and hypotheses concerning the possible causes involved in the development of eating disorders. Just as there are many different theories, there are many different treatment approaches and many experts have opposing opinions. Currently, scientific literature usually divides the factors that lead to the development of eating disorders into three major groups – biological factors, mental factors, and social factors. This classification is adopted by most professionals dealing with this issue (for example Krch, 2004, 2010; Papežová, 2010). However, some authors (for example Novák, 2010) describe these factors as individual, family, and sociocultural determinants. In the present publication the authors adhere to the bio-psycho-social conditionality as described by major professionals in the Czech Republic (Krch, 2007, 2010; Papežová, 2000, 2010; etc.).

It should be noted that many foreign and domestic experts point out that it is very difficult to identify the true and most central cause of the onset of the disorders mentioned above although the conditionality is known. If there was a specific cause of eating disorders, removing it would automatically lead to treatment.

1/2/1 Biological Risk Factors

One of the most significant risk factors for the development of eating disorders is the female gender. Women and girls are more concerned about their weight and body fat, while men and boys focus more on muscle mass. Significant differences in the perception of one's body were observed already among younger schoolchildren, both girls and boys. However, most risky changes in terms of eating disorders take place in puberty and adolescence. The average body weight of Czech girls naturally increases between 8 and 16 years of age from BMI[2] 16 to 19 (Krch, 2005).

> **Research on women's satisfaction with their own body suggests that women themselves create a contemporary and an ideal model of their body. A comparison between the two models (real and dreamed of) inevitably leads to dissatisfaction of most women with their body. (Sladká, 2004)**

2 Body Mass Index (BMI): formula the result of which informs about whether the individual has an optimum weight, underweight, overweight, or obesity. The calculation is only indicative.

During physical maturing, boys want to get close to the masculine ideal of beauty which is a muscular and well-developed body, while maturing girls develop in the opposite direction of what is currently considered beautiful (Krch, 2005). After puberty, girls' satisfaction with their body decreases and this dissatisfaction persists until adolescence (Shore & Porter, 1990). In terms of the etiology of the onset of eating disorders, a significant factor in girls may be the earliness of puberty and physical maturation. A summary of the findings of some authors suggests that eating disorders generally pose a greater risk to girls who are more developed during adolescence than their peers, not satisfied with their weight, and unhappy about the onset of menstruation and the associated development of secondary sex characteristics. Earlier physical maturation is associated with a fear of further weight gain, feelings of inferiority, and some other depressive symptoms.

> The period of maturation is currently affected by the mentioned lifestyle, which more than ever emphasises physical appearance, slimness as a prerequisite for personal attraction, physical beauty, and elegance, which together lead to social success. Therefore, slimness is attributed the highest value that must be constantly pursued. On the contrary, overweight individuals are considered ugly, lazy, stupid, with insufficient self-control and will, and therefore tend to be subject to mockery and discrimination. (Machová & Kubátová, 2009)

About 15 years ago, a research study was conducted in which the authors focused on inappropriate eating behaviour in Czech adolescents. The results suggested that up to 60% of older school-aged girls are driven by a fear of overweight and fatness, regardless of whether their concern reflects reality or not. They often skip meals or are on reducing diets (Krch et al., 2003).

As far as the biological factors are concerned, focus is especially on the correlation between neural mechanisms, hormones, neurotransmitters, and peptides. However, regarding the focus of the paper, these factors will not be analysed in detail.

1/2/2 Mental Risk Factors

In the context of the onset and development of eating disorders, experts emphasise certain personality traits and psychological characteristics that manifest already before the disease and therefore may be the risk factors in the development of eating disorders.

In the case of anorexia nervosa, these factors for example include a focus on achieving success (especially in the area of education). Girls show excessive adaptability and obedience, avoidance, anxiety, doubts about oneself, high self-control, and responsibility towards oneself and especially towards others including for example teachers. In the case of bulimia nervosa, these manifestations include for example impulsiveness, unrestraint, instability, self-criticism, and vulnerability.

Developmental Factors of Eating Disorders in Early Childhood

Regarding the focus of the monograph, it is important to mention the developmental determinants from the earliest age of the child, which we believe will help a more comprehensive understanding of the problem.

It is generally known that the needs of feeding and love combine shortly after birth when the mother satisfies both the physical and emotional needs of the new-born (infant). The first pleasant feelings result from satisfying the infant's needs, which takes place during feeding. At this moment, food is associated with safety, warmth, comfort, and love. In the process of feeding, the relationship between the child and the mother is developed and their emotional attachment and intimacy are strengthened. The child learns the mother's responses to his/her feeding requests. In childhood, this relationship is further intensified because the mother's love is also reflected in the delicacies she serves to the child. Food primarily satisfies hunger and secondarily the need for love. The child may find out that favourite food can be used to dispel discomfort and anxiety. These children may have difficulty recognizing real hunger from other needs and use food to soothe them. This situation takes place particularly when the mother does not fulfil her duties or is absent; the child feels lonely and yearns to satisfy the need for love. In these cases, food is easily accessible and the child (later young girl) gets used to it easily. The social expectation is to follow the ideal of beauty, or slimness, which forces the girl to pay attention not only to the structure but also the amount of food the girl consumes. This leads to the deprivation of the most primitive need for love (Novák, 2010).

Strengthening of the idea that the female role includes serving and preparation of food is related to the memories of women in the role of feeders, and supports the notion that food will have a privileged position in women's lives. The personality and love of the mother is personified in food intake situations and her presence is evident in many types of food that the child receives from her. By refusing

or accepting food served by the mother the child is given the opportunity to refuse or accept the mother. If food is denied by the mother in childhood, the child may associate food restrictions with the absence of her love or absence of love in general (Novák, 2010).

Many research studies confirm the exceptional development of the primary attachment between the mother and the child. For example, Ward et al. (2000) defined four types of attachment: secure, fearful, preoccupied, and dismissing. The last two – preoccupied and dismissing – are high-risk types of attachment in the context of eating disorders. According to the authors, eating disorders in women are related to interpersonal dependence, insecure attachment and egocentrism, while in men pathological eating behaviour is positively correlated with social incompetence and problematic course of the separation process in early childhood.

Developmental Factors of Eating Disorders in School-Aged Children

According to various studies (for example Krch et al., 2003; Novák, 2010; Papežová, 2010; Procházková, 2012), concerns about body weight appear already at an early age. Already at the age of nine years, some girls are worried about their body proportions and weight. According to a study published in Pediatrics up to 40% of girls aged 9–10 years are trying to lose weight (Hittner, 1997).

The HBSC (Health Behaviour in School-Aged Children) study is an international collaborative research study on children's lifestyle. The study is based around the statement of the WHO that behaviour and lifestyle in adulthood result from the development in childhood and adolescence. Monitoring of the presence of health-affecting behavioural components in youth is of great importance in terms of public health. According to the Health Behaviour in School-aged Children (HBSC, 2019), young people with specific risk factors should be the target group of preventive efforts in the area of health promotion.

The HBSC research project dates back to 1982, when the first meeting of researchers from Norway, Finland, and England took place. In 1983, the HBSC study was taken under the auspices of the WHO Regional Office for Europe as a collaborative study. In 2018, the HBSC included 48 countries and regions across Europe and North America.

The Czech Republic (CR) joined the study together with 24 mainly European countries in 1994. The research is repeated in four-year intervals. Since 1994,

comprehensive data sources have been available on health, physical activity, obesity, drug and alcohol experience, leisure, and other aspects in the youngest generation in the CR (HBSC, 2019).

The issue of eating disorders is not directly addressed by research studies; nevertheless, the results suggest worrying dietary trends in children and a critical self-assessment of their body. According to Kalman et al. (2011), the prevalence of respondents who were on a diet or took activity to reduce body weight ranged from 10% (15-year-old boys) to 25% (15-year-old girls). The percentage of respondents who assessed their body as slightly obese or obese ranged from 22% (15-year-old boys) to 38% (15-year-old girls).

Weight reduction is associated with problems such as irritability, concentration issues, insomnia, irregular menstruation, sexual immaturity, risk of growth retardation, and malnutrition. Extreme weight reduction is associated with eating disorders, reduced self-confidence, depressions, anxiety, and suicidal thoughts (Procházková & Sladká Ševčíková, 2017; Thompson & Chad, 2002).

Other authors (for example Krch et al., 2003; Novák, 2010; Papežová, 2010; Procházková, 2012) came to similar conclusions and observed that the proportion of girls on a diet to lose weight increased with age and one in three to four girls was not happy with her body, posing a high risk of eating disorders. The most frequent concern among girls is, similarly to the adult population, the fear of fatness (Csémy et al., 2005; Dixey et al., 2001). All of these studies agree that children want to be slimmer, especially if they are overweight.

Harrison (2000) points out that childhood is the most critical period in terms of the onset of eating disorders. The adoption of dominant ideas about acceptable or unacceptable body shapes takes place already in preschool age, which is confirmed for example in a study by Fraňková et al. (2000), in which girls aged 3–7 years were shown pictures of three identical dolls – slim, medium-sized, and obese. The girls were supposed to pick one doll as a friend and explain their choice. The youngest girls chose fat dolls, while the oldest girls clearly preferred slim dolls. The girls also assessed the bodies of five adult women from the slimmest to the fattest and made a comparison with their mother. The size of their mother's body was mostly overestimated by the youngest girls. From four years on, the girls were able to describe the differences in body dimensions and older girls had a more realistic view of body dimensions. The oldest girls described their mother slimmer than she really was.

The media are very influential in childhood. This was analysed in a research study by Ricciardelli and McCabe (2001), who concluded that boys were less susceptible to the effect of the media than girls, but only if they had sufficiently high self-esteem. In the group of boys, the media did not have a negative effect of their body satisfaction as opposed to girls. Boys considered the media more a source of useful information on how to improve their body.

The effect of the media was investigated by Harrison (2000) who concluded the following: watching TV by boys was directly proportional to the risk of negative stereotypes of a fat girl but did not support the negative stereotypes of a fat boy. Under the effect of the media, children (especially boys) learn to defame fatness before they idealize slimness.

Developmental Factors of Eating Disorders in Adolescence

The majority of Czech and foreign experts agree that anorexia nervosa is a manifestation of the fear of adulthood and that girls are worried about the physiological and psychological changes that take place in puberty. At the beginning of puberty, girls undergo typical body changes (onset of menstruation, shaping of the body, weight gain, etc.). There are many research studies and publications suggesting that the turbulent physiological changes during puberty and adolescence represent a risk factor in the development of anorexia nervosa. Especially weight gain in young girls poses a danger that they are not prepared for. These girls are concerned about not being able to control their weight. Their efforts to overcome the fear of losing control of their weight result in "guaranteed" diets and exercise (Csémy et al., 2005; Krch, 2010; Novák, 2010; Papežová, 2010).

As was confirmed by a research study on a representative sample of Norwegian young women, adolescent girls pay excessive attention to what others think about them. They are very concerned about whether they are physically attractive, slim, and popular (Kansi et al., 2003).

According to Harrison (2000), boys are at a greater risk of eating disorders in early childhood, while girls are exposed to the greatest risk in adolescence, which is also supported by the studies and experts' opinions described above. In adolescence, both genders are affected by the media-promoted ideal of slimness, because they are at the stage of shaping of their own identity (Botta, 1999).

Critical life events such as sexual conflicts, sexual abuse, life change (for example change to another school), family problems (quarrels, divorce, alcohol addiction) can lead to feelings of inferiority and incompetence, especially if they cannot be controlled. This may result in attempts to overcome these feelings by controlling and improving the body (Švédová & Mičová, 2010).

In addition to critical life events, another factor contributing to the onset of eating disorders is peer influence (Dixey et al., 2001; Krch, 2010; Papežová, 2010; Sanderson et al. 2002; Švédová & Mičová, 2010, etc.). Adolescent girls adopt certain attitudes (for example emphasis on slimness) and behaviour (for example dietary behaviour or the use of laxatives) from their peers, based on either encouragement or derision resulting from non-compliance with peer norms. Naturally, it is very difficult to distinguish between the relative influence of peers, media and family. Some authors tend to believe that the family and peers have a greater effect on the onset of eating disorders than the media, while other studies show the opposite (for example Polivy & Herman, 2002). Similarly to other authors, we are aware that the influence of peers just as other influences is so elusive and sharp that it is likely to cause more inappropriate behaviour than is apparent at first sight. On the other hand, we believe that it is important to understand that not all friends and peers are equally interested in achieving a slim body and therefore it is impossible to automatically assume an adverse effect of any friend or peer group.

An interesting finding was presented by Abrams and Stormer (2002). According to the authors, the co-educated school environment is a risk factor in the development of eating disorders compared with purely girls' or boys' schools.

Regarding the focus of the monograph, all important mental factors that contribute to the onset of eating disorders have been described. Other mental factors will not be analysed in detail.

1/2/3 Social and Cultural Risk Factors

According to Švédová and Mičová (2010), the biological and mental determinants are responsible for the severity of the disease, whereas the social factors in the form of the media-proclaimed emphasis on appearance and slimness are directly responsible for the increasing prevalence of the diseases. Anorexia nervosa and bulimia nervosa also occur in countries that have adopted the so-called Western culture and where these disorders had not occurred before.

The media often uncritically celebrate bony slimness and skinny models, and defame obesity: "Away with excess kilos!", "Lose weight after Christmas!", "Lose weight and put on your swimsuit!", "Have you put on weight? We know what to do!" The fashion industry, magazines, television, and the internet support the idea that even a slight overweight is harmful to health and that slimness is the most important aspect of attractiveness and success. Excessive interest in body weight is becoming a social norm, but the ideal is not an optimum body weight but gauntness. The social and cultural trends presented in this way are in contradiction with the biological variability and naturalness of the human body. They present unrealistic targets and inappropriate models that weaken people's self-confidence, because they are unachievable for most people and lead to dissatisfaction and impaired perception of the body. In response to this dissatisfaction, which is evident in most adolescent girls, they desire to lose weight, deliberately restrict food intake, are concerned about obesity, and choose forced vomiting. If girls manage to lose weight, their low body weight and body proportions corresponding to the current ideal of beauty increase their sense of self-value and in this way they compensate for the lack of self-confidence. The social risk determinants of the development of eating disorders also include professions or professional training closely associated with physical appearance where a slim figure is a career prerequisite (Grogan, 2000; Procházková, 2011; Švédová & Mičová, 2010).

Sladká (2004) refers to studies that documented significant dissatisfaction with one's body among young Chinese females after they had quickly adapted to the Western standards of female beauty. They began to suffer from a feeling of fatness of the abdomen, thighs, and buttocks. They experienced traumas they had not known until then.

Regarding the above – especially the fact that eating disorders are present already in childhood – preventive measures should be in place aimed at children at around the age of ten when they enrol in lower secondary school. Ideally, prevention should be in place from birth in the family, for example by supporting a positive attitude to eating and building a healthy self-confidence and respect for oneself. Further preventive measures aimed at eating disorders should be the responsibility of the school and the teacher. The issue of prevention in relation to eating disorders is described in detail in the following chapter.

2/ Prevention of Risk Behaviour

The purpose of primary prevention is to prevent socially undesirable phenomena. Regarding the focus of the monograph, this type of prevention will be analysed in detail. The aim of secondary prevention is early recognition (or discovery) of social and medical problems that already exist and their professional treatment or elimination of their negative health or social consequences (Miovský et al., 2012). The last type is tertiary prevention, the purpose of which is to prevent the recurrence of socially undesirable phenomena or complications of a particular disease.

According to Čech (2012), prevention can be any type of training, educational, health, social, or another type of intervention aimed at preventing the occurrence of risk behaviour, eliminating its further progression and mitigating the already existing forms and manifestations of risk behaviour, or at least helping to address its consequences.

Primary prevention should be aimed at preventing the occurrence of risk behaviour, which can be achieved for example by raising the awareness of society that this is not only a specific problem of an individual but a problem that relates to everybody and the whole society (Kubátová, 1998). In the area of primary prevention, emphasis is on the so-called specific primary prevention. This includes activities and services aimed at working with a population where a negative development can be expected without such prevention. The objective is to prevent or limit this negative development (Ministry of Education, Youth and Sports [MEYS], 2013, 2019). Primary prevention is usually implemented as general, selective, or indicated. Each of these types has a different focus:

- *General primary prevention* focuses on a group, in this case on a class, which has so far not manifested any risk behaviour. The purpose of this type of prevention is to present to the pupils new information on the risks and pitfalls of risk behaviour and teach them the skills necessary for dealing with these phenomena (MEYS, 2013, 2019; Nešpor et al., 1996, 1998).

- *Selective primary prevention* focuses on groups with a higher risk of undesirable behaviour. These groups are characterized by the presence of risk factors (biological, social, or psychological), by age, gender, family, place of residence, or the level of social disadvantage (Lejčková, 2006).
- *Indicated primary prevention* precedes secondary prevention and is based on direct individual work with the client. Focus is on individuals as well as groups who have been shown to have an increased presence of risk factors. The aim of this type of prevention is to delay risk behaviours and decrease their frequency (Lejčková, 2006; MEYS, 2013, 2019; Nešpor et al.,1998).

Non-specific primary prevention includes activities that develop a harmonious personality, including the development of interests, talents, etc.

Presently, primary prevention is not based on intimidation of pupils by the teacher or the use of punishments. This type of behaviour does not support pupils' healthy development and a positive social climate (Miovský et al., 2010).

Consistently with other authors (for example Čech, 2012; Miovský et al., 2010) we believe that primary prevention should be given the greatest attention as it essentially serves the purposes of immunization, i.e. protection of individuals and groups at risk from the negative effects and consequences of risk behaviour.

2/1 Programmes Aimed at Primary Prevention of Risk Behaviour in CR

The website of the Ministry of Education, Youth and Sports of the Czech Republic informs that all schools and educational establishments in the Czech Republic are required to provide at least the minimum primary prevention of risk behaviour related to eating disorders. According to the law, the issue of eating disorders is part of the mandatory prevention of social and pathological phenomena (Act No. 561/2004 Coll. on pre-school, basic, secondary, tertiary professional and other education, 2019). The minimum prevention programme is this part of the school prevention strategy and the *School Education Programme*, which is based on the *Framework Education Programme* (FEP EE, 2017).

The development of the minimum prevention programme is affected by several factors including the current time resources, personnel, and finance. The programme should also be adapted to the cultural, social and political

circumstances, the structure of the school or the specific population, both within and around the school, thereby respecting the differences in the school environment. Its content should be clearly defined including long-term and short-term objectives, and its design should allow proper implementation.

The main objective is to improve the effectiveness of the process of education of children and adolescents in preventing social and pathological phenomena including eating disorders in a long-term perspective. It is also an attempt to maximize the pupils' ability to make responsible and informed decisions. The minimum prevention programme promotes a healthy lifestyle and physical and mental balance among pupils, thereby supporting the most vulnerable groups (MEYS, 2019).

Not all activities (their structure and method of implementation) contribute to positive results. The prevention programme in the CR is also based on pupils' own activity, variability of forms of preventive work, but also on the involvement of teachers and cooperation with parents. The prevention programme in the CR should be appropriate to the age of pupils and the special requirements in the area of knowledge, attitudes, skills, and critical thinking. Through preventive activities pupils learn to respect each other and to make compromises, but also to recognize and satisfy their own needs because this is what is considered the best prevention (Procházková, 2011b).

Miovský et al. (2010) recommend considering an appropriate type of prevention programme and refer to various types of programmes including one-off programmes, comprehensive long-term programmes, collective programmes, and indicated and selective primary prevention programmes. The type of prevention programme should be chosen with regard to the school educational programme and should according to the authors meet the following criteria:

- Direct and explicit link to a specific form of undesirable behaviour.
- Clearly defined time and space boundaries for the implementation of the programme.
- Clearly defined target group.

The most frequent types of prevention programmes in the CR are one-off events, such as presentations given by the Police of the Czech Republic, Fire Rescue Service, or health professionals. In the case of eating disorders, these presentations are given by for example the Anabell Centre or CEVAP (Centre

for Ethical Education and Prevention of Social Pathological Phenomena). However, these events do not have a significant impact on pupils' social skills in their future life. Nešpor et al. (1996, 1998) emphasise the advantages of these events including availability and affordability. Yet the authors believe that one-off events cannot replace systematic preventive work with pupils including a thorough development of their personalities.

In addition to accepting the specific problems, needs, and rights of the target group, the school must also ensure the organizational, personnel, and economic requirements of the primary programme provider. Only after ensuring all materials and technical requirements, the quality can be evaluated. According to Pokorný (2003) the evaluation of the effectiveness of the preventive programme is an important part of primary prevention, including the evaluation of its success or achievement of objectives.

2/2 Role of the School in Primary Prevention

Our society respects certain values in the education of the young generation. In addition to the family, the place where children and youth can identify with this hierarchy of values is the school, as suggested by the Slovak authors Babiaková and Kasáčová (2007). After the family, the school is the most influential socializing agent, where both positive and negative effects are reflected and which is the main location of primary prevention. The school can include preventive activities in lessons, thereby systematically acting on all pupils (Helus, 2006; Výrost & Slaměník, 2008).

The school cannot completely replace family upbringing, but should try to remedy or eliminate deficiencies that children bring into the school environment. Obviously, without mutual cooperation between the school and the family, the prevention of risk behaviours will be inefficient.

Průcha (2002) describes the school as an institution which is part of the children's environment. Children spend a significant part of the day at school for a period of 10–12 years or more (in most countries) and therefore the school is the place where children grow up and develop. This implies that the role of the school is to be a professional educational establishment but also the place where children find a pleasant environment for life. The school should help children step into society where their lives will take place; it is the centre of primary prevention for the largest target group in terms of preventive measures

aimed at children, youth, and young adults. The school provides a very specific environment for prevention because its attitude to and effect on pupils allow inclusion of preventive activities in lessons and ensure pupils' participation.

It is important to understand that children come to elementary school with eating habits adopted in the family and kindergarten. They are used to a particular daily eating and drinking regimen. Their dietary preferences and potential aversions are already relatively stable. In most cases, children are not forced to eat their food and they have free access to drinks or sweets. As they enter primary school, children are presented with appropriate eating habits. At the same time, the school regimen and school meals provide them with new food-related experience. In any case, the formation of appropriate nutritional habits at school is a challenging task and requires close cooperation between the school and the family (Marádová, 2004, 2011).

2/3 Role of the Teacher in Primary Prevention of Eating Disorders

The family, especially positive communication between parents and children, good relationships, but also the attitudes to food and appropriate eating habits in the family remain the basis of eating disorders prevention. Nevertheless, the issue should not be underestimated in school, also because the period of adolescence is the riskiest period for the occurrence of eating disorders.

Pupils usually spend more time at school than at home. At school, teachers provide pupils with knowledge but also social values. Teachers are those who can provide correction where parents had failed. Some parents put excessive emphasis on performance or appearance and prefer authoritative upbringing styles that undermine children's self-esteem. These factors may trigger eating disorders and therefore, teachers and also prevention methodologists, school psychologists, or educational counsellors should have sufficient information on the causes and consequences of eating disorders and should present this information to their pupils in an appropriate and especially comprehensive manner.

It is not advisable to intimidate pupils, exaggerate, or highlight only certain aspects of eating disorders. It is well known and confirmed by professionals in the field (Krch, 2010; Papežová, 2010; Sladká, 2004) that inappropriate prevention can act as a trigger of inappropriate behaviour that is supposed to be prevented. It may happen that during a prevention session they hear for the first

time that food intake may be followed by vomiting or use of purging aids such as laxatives or diuretics, some may be attracted by pictures of skinny models, actresses, singers, etc.

It is very important to prepare pupils, especially girls, for physical changes (weight gain, breast enlargement, rounding of the hips, etc.), as well as mental changes, particularly in the upcoming risk period of adolescence. Pupils should also be instructed about various physical types and differences between people. It is advisable to prevent the spread of prejudices against differences (support their self-acceptance and teach them to like themselves and other people as they are).

The teacher may also emphasise inappropriate eating habits and particularly the risks of weight control. By teaching appropriate eating habits (full lunch meals including appropriate lunch break, importance of varied and regular diet, avoidance of frequent consumption of sweets and sweetened drinks) teachers inculcate their pupils with obesity prevention measures.

In the prevention of eating disorders, it is important for the teacher not to strengthen pupils' fear of overweight and certain types of food, and should refrain from categorical statements about calorie values of foods or the harmfulness of certain foods.

Similarly to the information described above, it is important to support a positive social climate in the class and create favourable conditions for pupils' self-confidence and healthy personal growth. This is closely related to promoting pupils' skills, teaching them to be assertive, and supporting the art of conflict resolution and healthy self-assertion. The ability to adequately respond to stress, failure, or criticism, and the promotion of group activities are also closely related to the prevention of eating disorders (Procházková, 2011a, 2011b; Švédová & Mičová, 2010).

Health education teachers, prevention methodologists, school psychologists and other school personnel can greatly contribute to the prevention of eating disorders, but their potential is insufficiently used. The little success of some prevention programmes may result from the inability to identify the knowledge, values and attitudes of school employees concerning the prevention of these disorders. Possibly, they are not sufficiently informed about this issue and suitable methods of prevention of eating disorders. They can also be more susceptible to problems related to their own appearance and weight (this mostly

applies to young people and women). Moreover, their role of "specialists" might not protect them from making mistakes. The combination of these factors may have a significant impact on the success of preventive activities, especially with respect to possible inappropriate modelling and transfer of behaviour and attitudes to pupils.

To ensure effective prevention of eating disorders, teachers must not only have outstanding theoretical knowledge about the issue but should also enhance their expertise by means of seminars, lectures, or e-learning in order to develop positive attitudes to this issue. The approach focused on teacher education as a form of secondary prevention might improve their attitudes to the issue.

2/3/1 Recognition of Eating Disorders in Pupils

In schools, there is a high probability that teachers will recognize the first signs of eating disorders in time. It is therefore crucial for them to be aware of the specific manifestations of anorexia nervosa or bulimia nervosa. The manifestations described below are part of an e-learning application developed by the author of the monograph especially for teachers of health education in elementary schools as part of primary prevention. The manifestations of eating disorders are as follows (Procházková, 2011a, 2011b; Švédová & Mičová, 2010):

- Weight changes – significant weight loss for example after summer holidays, provided that this was not caused by a disease associated with weight reduction and loss of appetite. Bulimia nervosa or overeating are associated with a rapid weight increase or relatively significant weight fluctuations.
- Noticeable isolation from others – this applies especially to cases when the girl was previously included in the group of classmates and now avoids them and does not seek their presence.
- Loss of interest – this applies to typical activities among teenagers such as parties, discos, etc. Suddenly, the girl is rather introverted, sad, thoughtful, and serious.
- Striving for high performance – typically in all subjects; later the girl's achievement decreases and the girl shows lack of concentration, fatigue, and even apathy in almost all school activities.

- Increased physical activity – especially Physical education teachers may notice excessive physical activity during PE lessons. Typical signs in other subjects include restlessness at the desk, running upstairs during breaks, the girl needs to be physically active all the time.
- Strong emphasis on appearance – but at the same time uncertain behaviour and embarrassment among others, for example during visits to the swimming pool with a swimsuit on. At the beginning the girls prefer close-fitting clothes to emphasize their slim figure, then they prefer loose clothes such as sweatshirts or sweaters to cover their gauntness, which has been noticed by people around.
- Deterioration of physical health – the signs include poor quality of hair, skin, the girls are often ill, anorexia nervosa is sometimes associated with lanugo (downy hair all over the body), the girls are sensitive to cold even in summer.
- Deterioration of mental health – depressive mood, the girls are irritated and oversensitive.
- Changes in eating behaviour – skipping snacks, snacks are usually thrown to the bin. Later on, lunch in the school canteen is skipped and the girls avoid almost all joint activities because of food, including trips and school events with joint meals, they refuse food in front of others, they have various excuses for not being able to eat. In the event of joint meals when the girl is together with other people, she requests smaller portions and meticulously compares her food with the food of others. The girls often assess their portions as excessive and impossible to eat. In the case of anorexia nervosa, the girl eats very slowly (often an hour or longer), takes very small bites and carefully chews the food, is picky and chooses on the plate what she will eat. In the event of overeating problems, the teacher may notice that the girl eats very quickly, gulps her food, and eats unusual combinations of foods.
- Dietary structure changes – these changes can be noticed not only by the teacher, but also by classmates. The girls reject fat or sweet foods, energy-rich foods, but also usual foods such as bread and meat, arguing that these are unhealthy foods and that they prefer dietary foods (light yoghurt and particularly vegetables). In some cases, the girls use too much salt, drink coffee, and are often sick after eating. Sometimes they

drink a lot, which exerts pressure on the kidneys, or do not drink at all, which may cause dehydration. They are well aware of the calorie value of foods and carefully study food labels and packaging.

- Compared with the typical anorectic gauntness, bulimia nervosa is more difficult to recognize. This is one of the reasons why this disorder is trickier. Sick girls are capable to concealing their illness for a long time because they are ashamed of overeating and subsequent vomiting or a different way of purging. People around may not notice any signs for a long time. Possible signs of bulimia nervosa include prolonged stays in the toilet, food getting lost, or weight fluctuations.

2/3/2 Teacher's Behaviour Towards a Pupil With Suspected Eating Disorder

In communication with a pupil with an eating disorder the following must be remembered (Procházková, 2011a; Švédová & Mičová, 2010):

- This is a mental disease, mostly unaffected by the patient's perspective and motivation.
- The disease itself leads to lying, cheating, and excuses.
- Girls with eating disorders tend to be very sensitive, intelligent, thoughtful, and at the same time doubtful, distrustful; in relation to their eating disorder they believe that people around them lie to them about their figure and about food and only try to feed them up.
- The patient cannot be cured without actively wanting to.
- To start eating and gain weight is very difficult for the patients because of the disrupted perception of their body and strongly embedded habits.
- The teacher may offer help, be supportive, but cannot resolve the problem instead of the patient; the teacher should agree on specific rules with the pupil (exercise, testing) and approach the pupil in the same way as the rest of the class.
- It is important not to protect the pupil but prevent possible bullying and stigmatization.
- It is advisable to involve the pupil in group activities, prevent further isolation and withdrawnness.

- The teacher should be patient, kind, tactful, but also firm, should not do anything without informing the pupil (for example contact the pupil's parents or friends); it is very important to build mutual trust between the teacher and the pupil.

Health education teachers, prevention methodologists, but also school psychologists play an important role in the prevention, identification, and treatment of eating disorders. The teacher must be able to identify vulnerable individuals, implement school prevention programmes, take appropriate measures, and support pupils who are recovering from eating disorders. Early intervention and prevention efforts by the teachers, methodologists, and psychologists are essential in achieving a positive perception of one's body and in supporting a healthy lifestyle free from physical and mental hazards associated with these disorders.

Steps to Be Taken in the Case of Suspected Eating Disorders

The teacher is often the first to notice the signs of anorexia nervosa, bulimia nervosa, or psychogenic overeating. If eating disorders are suspected, the teacher should take the following steps:

- Talk to the girl/boy about their feelings and concerns about suffering from eating disorders. ("You've lost a lot of weight recently so I'm worried about your health and I think you may have food problems.")
- Offer help. ("If you want, I'll help you, you can come to me at any time.")
- Inform the girl/boy and contact the family. ("I'm seriously worried about you and because I'm responsible for you I think it is a good idea to tell your parents. You don't have to worry, I'll explain everything to them.")
- Jointly plan further steps to prevent the development of the disease, including especially the following:
  - school exercise (exercise in underweight patients is risky and should be limited; naturally the reasons for this measure must be explained, top-level sport and risky activities such as gymnastics, modelling, ballet, dance must be suspended);
  - school meals (rules on checking the patient should be agreed);

- home preparation for school or preparation in the event of hospitalization (check the time that the patient spends preparing, sometimes they spend too much time and complete their tasks with precision, sometimes they delay their tasks, are unable to concentrate; trying to cope with the pressure may result in frustration and overeating);
- it is mostly advisable to produce an individual plan (Procházková, 2011b; Švédová & Mičová, 2010).

Producing a draft individual plan is not the focus of this monograph, because the specifics of the contact with the patient are always individual and must be adapted to the situation. The information above should be used as inspiration; if communication with the patient is impossible, it is advisable to contact organizations that focus on the issue of eating disorders and consult further procedure (for more information see for example *www.anabell.cz*).

The school is undoubtedly the most massive cultural mediator of psychological development, where all pupils spend most of their time. The school environment offers space for education and training and thanks to its approach and influence on pupils is a suitable place to include prevention activities in lessons. For this reason, the school has an irreplaceable position, especially in terms of the organization of its systematic activities.

The effectiveness of prevention activities in schools increases by using systematic and long-term cooperation with pupils including the application of positive models combined with various strategies. It is also important to adapt the prevention of eating disorders to pupils' age, their current needs, and the development of social skills.

The prevention of eating disorders is mostly implemented in lower secondary school, but prevention activities adequately aimed at supporting a healthy lifestyle and a positive attitude to one's body, preventing the negative effects of the media and advertising, and emphasising the health risks associated with eating disorders may also be applied in primary school, where these disorders have also been diagnosed. The teachers' behaviour may be affected by their attitudes to the pupil or pupils as well as their attitude to eating disorders. This issue is discussed in the following chapter.

3/ Attitudes

An attitude can be characterized as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 1998). An attitude can be defined as an acquired motive expressing an individual's relationship to a particular object, thing, person, activity, group, event, idea, etc. (Čáp & Mareš, 2007). A similar definition was suggested by R. L. Atkinson (1995). A definition of attitude as a tendency to react in a steady manner to objects, people, situations, or the self was proposed by Hartl and Hartlová (2009) in their *Psychologický slovník*. M. Nakonečný (1997) summarizes the development of the term by stating that it was introduced in sociology and psychology by W. J. Thomas and F. Znaniecki (1918), who considered it a conscious relationship of an individual to a value. A year later, Nakonečný (1998) in his publication *Psychologie osobnosti* defined an attitude as an *assessment relationship* suggesting that by taking an attitude to a specific object we in fact make an assessment. The author distinguished attitudes as central, which relate to significant objects, and marginal, which are of lesser importance, but at the same time emphasised that different people might have different attitudes to the same object (Nakonečný, 2009).

An apt definition was provided by G. W. Allport (1967), who described an attitude as a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon an individual's response to all objects and situations with which it is related. The Czech psychologist J. Janoušek (1988) defined an attitude as a psychological structure that constantly characterizes the selectivity of the subject while accepting external effects and performing activities towards the surrounding environment. The sociologist Jandourek (2001) defined an attitude as an unlearned disposition through which a person reacts positively or negatively to a specific object by means of a feeling, idea, assessment, or behaviour.

Relevant literature resources include a tripartite model of attitudes, which was originally developed by Rosenberg and Hovland (Hewstone & Stroebe, 2006; McLeod, 2018):

1) The affective (emotional) component refers to emotional feelings that one holds toward an attitude object; adds a motivational character and governs the orientation of the attitude (for example "I like to implement the prevention of eating disorders.").

2) The cognitive component refers to the beliefs that one holds about the attitude object (for example "The knowledge about the issue of eating disorders is important for me.").

3) The behavioural (conative) component refers to overt actions and responses to the attitude object (whether positive or negative); a strong positive attitude produces greater commitment in favour of the attitude object, on the contrary, a strong negative attitude turns us away from the attitude object (for example "The prevention of eating disorders is insignificant for children.").

Globally, there are many definitions that differ in some aspects. The definitions mentioned in this monograph correspond with the issue in question.

3/1 Teachers' Attitudes to Eating Disorders

In accordance with the above, the teacher's attitude can be defined as a motive expressing the teacher's relationship to the child, a group of children, and especially the prevention of risk behaviours in the school environment. The present research study described below focused on the teacher's relationship to the issue if eating disorders as a risk form of behaviour occurring especially among adolescents. The study is based on the assumption that without thorough knowledge of the teachers' attitudes to the prevention of this issue, where these attitudes are considered a heterogeneous complex of evaluation, feelings, and conative tendencies, it is impossible to affect this area in a successful way or implement preventive measures among children. This type of research studies is highly topical, because the teacher's attitude can affect the learning activity of the child, which is confirmed in their research studies by Helus and Pelikán (1984).

However, the several definitions of attitudes mentioned earlier do not explain the circumstances of their origin or their properties. An important fact is that the attitudes of an individual (teacher) develop, and what we find out relates only to a specific moment. Attitudes influence our conduct, thinking and behaviour.

Attitudes are not innate but are the products of learning that may change under certain conditions because all that is learned is conditional. In the course of life, every individual including teachers is a member of a number of groups (the primary group is the family, the secondary group includes classmates, fellow teachers, friends, etc.) These groups undoubtedly affect the development and shaping of attitudes. In different groups we try to recognize and identify the attitudes of others. We often adapt our attitudes in order to be accepted by an individual or a group; we try to blend in and be accepted. Other people always change our behaviour and our attitudes in a specific way. In addition to the influence of the groups, the individual' attitudes are also affected by other factors. They include for example gender and age (personality maturation), traumatic experiences (psychological shock, life crisis), or opposing personal experiences (disappointment). The most susceptible attitudes are those related to intimate relationships (parental love, intimate partnership, friendship) because these relationships have a strong effect in multiple spheres and last for a long time.

The above suggests that attitudes and relationships determine the direction of the thoughts, feelings, and behaviours of every person. The development of attitudes is also affected by the mass media, which is in the case of eating disorders one of the determinants contributing to their origin and affecting the adolescent population on a massive scale.

As suggested by Krech et al., (1968), the changeability of attitudes depends on the characteristics of their structure, the personality and group affiliation of the individual.

Festinger (1957) described the change of attitudes as the cognitive dissonance theory suggesting that the attitudes of an individual are mutually consistent and that the individual acts in accordance with his/her attitudes in order to feel comfortable and be motivated. According to the author, certain inconsistencies may occur. They are unpleasant and people try to reduce them or avoid them. Concerning the issue addressed in this paper, it is important for teachers to act in agreement with their attitudes to eating disorders. If teachers have a negative attitude to eating disorders, they are very unlikely to give their pupils high-quality information from proven sources.

If there is a high-quality social link between the teacher and the pupil based on empathy and good communication, the child has confidence in the teacher. A teacher with a positive attitude to eating disorders can take preventive

measures in this area. Strategic aspects in this area are adoption of a healthy lifestyle, good communication, and increasing self-confidence. This can be achieved for example by exploring the child's talents.

3/2 Current Research on Teachers' Attitudes to Eating Disorders

The aim of this chapter is to provide an overview of significant international and domestic research studies on teachers' attitudes to the issue of eating disorders. There are not many research studies on this issue. For this reason, the text below mentions publications that relate to the issue addressed in this monograph, albeit remotely.

Zali Yager and Jennifer A. O'Dea (2005) published a study entitled *The Role of Teachers and Other Educators in the Prevention of Eating Disorders and Child Obesity: What Are the Issues?* This paper is highly relevant to the present issue. The authors explore the important contribution of teachers and other educators (including health education teachers, school nurses, school counsellors, school psychologists, and sports coaches) who are engaged in the prevention of eating disorders and childhood obesity. According to the authors, it is important to understand the knowledge, beliefs, attitudes, and expectations of teachers who implement prevention programmes in order to ensure that they are personally and professionally capable of implementing prevention activities in schools. According to the authors, the school is considered an appropriate environment for the prevention of eating disorders and childhood obesity due to the constant and focused approach to a large number of developing individuals (Yager & O'Dea, 2005). The authors observed that teachers and school staff were constantly complaining about insufficient knowledge in the area of eating disorders and considered this aspect the main barrier to the implementation of prevention programmes. A high proportion (70%) of secondary school teachers of Physical education, Health education, and Family education showed interest in training that would improve their knowledge and skills in the prevention of eating disorders (Yager & O'Dea, 2005).

According to the results published in a similar study, school staff have a distorted perspective of the causes and development of eating disorders, which may not only support their negative attitudes to the issue, but they can also pass on these negative attitudes to their students (O'Dea & Abraham, 2001).

Another research study explored and compared body image, dissatisfaction with one's body, dieting, and eating disorders among future teachers of Health education and PE and students of other disciplines. The participants were teacher training students ($N = 502$)[3] from randomly selected classes at three Australian universities. The research was carried out by means of a questionnaire. Significantly worse results concerning body image and higher dissatisfaction with their own body, dieting, and disorganized eating behaviour was reported by future teachers of Health education and PE compared with students of other disciplines. The authors emphasise that these inappropriate and dangerous attitudes and behaviours can be intentionally or unintentionally passed on to schools (Yager & O'Dea, 2008).

The teachers' opinions concerning the prevention of eating disorders was analysed by Vardano-Sullivan et al. (2013). The author declares that a greater teachers' understanding of the problem of eating disorders can contribute to their greater involvement in the process of prevention. No previous studies aimed at teachers had used the *acceptability methodology* or compared the prevention of eating disorders with other prevention efforts. In the study, teachers ($N = 135$) assessed the acceptability of five sample programmes and expressed their opinions on eating disorders and other prevention programmes. The results suggest that programmes aimed especially at the psycho-educative concept were most acceptable. Although the issue of preventing eating disorders was considered important, it was not considered as serious as other programmes, such as preventing substance abuse.

Russell-Mayhew et al. (2008) used the focus group approach to investigate the attitudes and opinions of teachers and parents. The respondents answered five main questions about what they believed was important in the eating disorders prevention programme, how the intervention programme affected their students/pupils and relationships with their students/pupils, how it affected the teachers personally, and how the programme could be improved in order to increase its effectiveness. This pilot study concluded that interventions in schools that focused on the issue of eating disorders and targeted parents, teachers, and students were effective in terms of promoting positive changes in pupils' attitudes and behaviour.

The prevention of eating disorders is also correlated with the prevention of obesity, which was the focus of the studies mentioned below.

3 N = number of respondents.

In her study on the prevention of childhood obesity, Borra et al. (2003) focused on the understanding of the attitudes, perceptions, and behaviours of pupils, teachers, and parents. She performed a qualitative research study involving all of the groups mentioned above. The research consisted of the following consecutive stages:

1) 16 focus groups ($N = 112$);

2) home observation, in-depth interviews, and diaries ($N = 6$ families);

3) 10 qualitative interviews ($N = 46$).

The results suggest that children need direct motivation to change their fitness and eating habits, as well as tips on collaboration with their parents to achieve their new fitness goals. Parents need to learn how to talk to their children about eating and fitness habits in a positive and encouraging way, and how to maintain their children's effort to remain fit. Teachers believe that parents need to support a healthy lifestyle at home.

Power et al. (2009) believes that obesity is a major health problem of young people today. According to the author, most school prevention programmes have had a limited effect. The author used focus groups involving students from grade seven and eight, parents, and teachers in order to provide an insight into the development of a comprehensive programme aimed at the prevention of obesity in adolescents. The questions related to the beliefs about the relationship between the behaviour of pubescent children and health, and about their physical activity habits, preferences, influences, and obstacles. In addition, the questions related to the recommendations concerning the interventions to promote physical activity and healthy nutrition in early adolescence. The qualitative analysis suggested that pubescent children understood the relationship between their behaviour and health, although they had a limited understanding of the concept of healthy nutrition. The young participants involved in the study suggested their preferences concerning healthy food and physical activity but also a number of barriers to their success. The main difference between students, parents, and teachers reflects the fundamental attribution error: students attribute their behaviour to situational factors, teachers blame parents, while parents blame their children.

Derwi et al. (2011) examined the attitudes of students and teachers in preparatory schools in Upper Egypt to obesity and healthy eating habits, and assessed teachers' abilities to achieve an active role in nutrition education of

their students. Educational staff ($N = 48$) of different subjects from different preparatory schools shared their opinions in four discussion groups. These discussions covered several topics: severity of obesity and their willingness and readiness to participate in the prevention programme. All teachers agreed that obesity was a national as well as global problem. They were concerned that obesity affected especially the young generation as a result of the increasing use of computers and video games. 70.8% (34) of teachers agreed that they should play an active role in prevention programmes, but only 48.8% (22) believed that they were well prepared (equipped). According to all teachers the school environment played the major role in promoting unhealthy behaviour among students (school canteens and lack of control by school). Three quarters of teachers (36) suggested that they would like to participate in school activities or programmes related to obesity prevention, but significant measures would be needed to do so. All teachers agreed that parental involvement at home was essential to make any changes happen. All respondents also agreed on the importance of a healthy lifestyle and prevention of not only obesity but also eating disorders as the opposite side of the problem.

The use of the semantic differential to investigate the attitudes to different issues is described in international scientific journals. However, these studies mostly involve doctors and other health professionals, not teachers.

A study entitled *Primary Care Physicians' Attitudes about Obesity and Its Treatment* assessed the attitudes of doctors to obese patients and the causes and treatment of their obesity. Nine items of the semantic differential were used to assess the attitudes of doctors related to the personality characteristics of obese individuals, for example hones–dishonest, lazy–hard-working, etc. (Foster et al., 2003).

The attitudes of teachers to Health education as a subject were investigated by Edrich (2013), who focused on the attitudes of teachers from the school where the author of the study taught Health education. Apostolidou and Fontana (2003) investigated teachers' attitudes to Health education in Greek schools. The authors concluded that teachers had positive attitudes to Health education, but 58% of teachers complained about inadequate education in this area. All teachers considered Health education an important subject in elementary schools. According to Myers-Clack & Christopher (2001) effective delivery of Health education depended on the degree of teacher education. The authors used a pre-test and post-test to examine the ability of teachers after a training session to provide appropriate health-related information.

There is an abundance of international research studies on the inclusion of learners with special educational needs or students' attitudes to different subjects (for example mathematics or chemistry). Some studies also focused on the attitudes of teachers to pupils' obesity or obesity prevention, but research on the attitudes of elementary school teachers to the prevention of eating disorders has not been found in international electronic resources or scientific publications.

In the Czech Republic, attitudes were analysed from an educational perspective using the semantic differential by Chráska (1997, 2003b), who focused on the attitudes of elementary and secondary school students to the educational reality, attitudes to school, learning, and education of students at the end of compulsory school attendance, and the attitudes of teacher training students to the teaching profession, etc. The attitudes of teachers to various issues were also analysed by other authors, for example Fialová (2011) analysed the attitudes of teachers to the education of obese learners in elementary schools. Teachers' attitudes to the transformation of Czech education were analysed by Šimíčková (2003). Teachers' attitudes to environmental issues were studied by Horáčková (2012). Reserved teachers' attitudes to further education as one of the risk factors of the curricular reform were addressed by Beran et al. (2007). Havlík (2003) dealt with teachers' attitudes to their own preparation. Attitudes to further teacher education were analysed by Lazarová and Prokopová (2004). Students' attitudes and their changes as a significant part of teacher training were addressed by Chrásková (2012). Attitudes in general have been investigated by a number of professionals but research studies focusing specifically on teachers' attitudes to learners are rare (for example Havel & Filová, 2010; Šafránková & Kocourková, 2011).

Although many authors analyse teachers' attitudes to different aspects, a study focusing on the attitudes of teachers to eating disorders has not been found in the Czech Republic or abroad.

4/ Research on Teachers' Attitudes to Eating Disorders

The study describes a research study on the attitudes of the teachers of Health education teachers or an equivalent subject in lower secondary schools. The research on the teachers' attitudes was conducted by means of the semantic differential. The publication describes how the teachers' attitudes are affected by their qualification, gender, and length of teaching experience. The results of the quantitative research are complemented by qualitative data based on interviews with the respondents. The final part summarizes the most important findings and recommendations for the prevention of eating disorders in educational practice. The novel findings can also be applied in foreign educational systems.

4/1 Research Problem and Objective

Previous research on eating disorders has shown that the problem is serious and involves an increasing number of children and adolescents (for example Krch et al., 2003; Novák, 2010; Papežová, 2010; Procházková, 2012, 2018; Procházková & Sladká Ševčíková, 2017). In the Czech Republic and abroad, the experience with eating disorders in children and adults is limited. Many authors address specific areas that relate to this issue, as was mentioned above (for example HBSC, 2019; Yager & O'Dea, 2005, 2008). These areas include particularly health, physical activity, obesity, weight reduction, awareness about eating disorders, appropriate prevention, or the occurrence of this issue in different educational establishments. As mentioned in the previous chapter, no studies were found on the attitudes of teachers to eating disorders. We believe that the role of the teacher in lower secondary education is crucial in terms of the development and shaping of students' attitudes to this issue. Should teachers influence their students in a positive way concerning this area, they must have a positive attitude in the first place.

The main objective of the research study was to identify teachers' attitudes to the issue of eating disorders. The main objective was achieved by means of several sub-objectives, including literary research on attitudes, analysis of the current state in the Czech Republic and abroad, and designing of an adequate research structure. The study focused on teachers in lower secondary schools and their attitudes to eating disorders in terms gender, qualification, age, and length of teaching experience.

The research was based on the following *research questions:*

1) Are the attitudes to the issue of eating disorders different between female teachers and male teachers?

2) Are the teachers' attitudes to the issue of eating disorders affected by their qualification?

3) Are the teachers' attitudes to the issue of eating disorders affected by the length of their experience?

4) Are the teachers' attitudes to the issue of eating disorders affected by their age?

The research questions were used to formulate the following *hypotheses:*

H1: Female teachers have more positive attitudes to the issue of eating disorders than male teachers.

H2: Teachers qualified in Health education have more positive attitudes to the issue of eating disorders than unqualified teachers.

H3: Teachers with longer teaching experience have more positive attitudes to the issue of eating disorders than teachers with shorter teaching experience.

H4: With increasing age, teachers' attitudes to the issue of eating disorders are more positive.

The following chapters provide a detailed description of the methodology of the main research study. For a more accurate interpretation of the quantitative data the authors also performed a complementary research study using semi-structured interviews with teachers randomly selected from the research sample. The objective of the additional study was to identify the specific ways of cooperation with pupils, both in school and in families (see chapter *Complementary Research on Teachers' Attitudes to Eating Disorders*).

4/2 Research Sample

The research sample consisted of 168 teachers from lower secondary schools. The teachers were selected by means of total sampling in four regions. The respondents were teachers of Health education in lower secondary schools. According to the FEP EE (2017), this subject is compulsory in lower secondary school with at least one lesson per week in any two years of lower secondary school. The proportion of qualified Health education teachers was 21.43% ($N = 36$), the proportion of unqualified teachers was 78.57% ($N = 132$). The lower number of qualified respondents was caused by the implementation of FEP EE from the school year 2007/2008 and the introduction of the following new educational areas: Man and health and Health education. A number of schools introduced the Health education subject but there was a lack of qualified teachers in the Czech Republic. Therefore, universities introduced the Health education course shortly before 2007 (for example Masaryk University in 2005) or later (for example the Faculty of Education, University of South Bohemia in 2008). The average age of the respondents was 42 years and ranged from 25 to 68 years of age; the average length of teaching experience was 13.5 years and ranged from 1 to 41 years of experience. The number of female respondents was 149, of whom 32 were qualified; the number of male respondents was 19, of whom four were qualified.

The complementary research study was based on a semi-structured interview with 10 respondents (for details see chapter *Complementary Research on Teachers' Attitudes to Eating Disorders*).

4/3 Research Instrument

The method of semantic differentiation (better known as the semantic differential) is a psychosemantic technique. Most of these techniques (incomplete sentence test, verbal association method, semantic selection method and others) are used especially in psychology. The semantic differential method is one of the few used in educational research. This research method identifies how people (respondents) perceive various concepts. The respondents describe a phenomenon by assigning properties on a continuum of their extreme characteristics (e.g. good–bad, easy–difficult, useful–useless, etc.) Then the semantic differential is used to place the concept in a semantic space according

to three dimensions (factors): factor of evaluation, factor of potency, and factor of activity. The quality of measuring attitudes by the semantic differential largely depends on the characteristics of the scales used in the measurement.

The authors of the present study also used the semantic differential. One of the inspirations for the development of the research tool was a research study carried out in 2002 at the Faculty of Education in Olomouc aimed at the measurement of the attitudes to teachers among students/future teachers (Chráska, 2003b). The author used an instrument based on the semantic differential and measured the attitudes of teacher training students to the teaching profession using four conceptual indicators.

On the basis of personal consultations with the author of the research mentioned above, a total of 15 conceptual indicators were selected for the purposes of the preliminary research (for example prevention of eating disorders, anorexia nervosa, teacher, pupil, person suffering from bulimia nervosa, etc.) For each indicator a seven-point scale was provided representing 19 bipolar terms (for example good–bad, easy–difficult, pleasant–unpleasant, light–heavy, dark–light, etc.) All bipolar concepts used in the preliminary research are shown in Table 2. The assessment scales included both positive and negative items. For the purposes of statistical processing, the negative items were re-coded in a reverse order. Coding of the scale was performed by means of numbers 1 to 7.

At the beginning the demographic data were specified (gender, age, length of teaching experience, qualification, and subjects that the respondents teach).

The validity of the research instrument was double checked for construct validity. Firstly, the validity was determined by an expert on the semantic differential and three experienced teachers. The assessors were asked to comment on the items and their clarity. All of the items were assessed as clear. Secondly, the construct validity was determined by an exploratory factor analysis (see chapter *Preparation of the Research and Data Analysis*).

After the completion of the preliminary research the research instrument was administered to elementary schools by email and in person by the students of the Faculty of Education, Masaryk University who submitted the instrument directly to the teachers. A total of 766 elementary schools with lower secondary education were addressed in the following regions: South Moravian Region (276 schools), Zlín Region (159 schools), Olomouc Region (181 schools), and Vysočina Region (150 schools). In all of the regions, the research sample included all schools according to the information provided by the Analytical and Statistical Department of the Ministry of Education, Youth and Sports as

of September 2012. The administration was mostly electronic; the respondents were informed of the anonymity of the research instrument and use of the data for research purposes. A total of 168 questionnaires were returned, which equals 21.93%. All of the questionnaires were completed in a way that allowed their inclusion in the analysis.

4/4 Preparation of the Research and Data Analysis

Upon receipt of the completed questionnaires from the preliminary research, the results were numerically encoded and recorded in an Excel spreadsheet as described above. The reliability of the measurement by means of the semantic differential was tested by Cronbach's alpha coefficient (the calculation was performed by STATISTICA Cz 10.0). The value of Cronbach's alpha for the indicators ranged from 0.67 to 0.89 in each indicator, where the value of 0.7 or higher represents high consistency and reliability (Cronbach & Shavelson, 2004).

The encoded responses were subjected to a factor analysis. The items of the semantic differential were designed to measure two factors (constructs) of the attitudes to eating disorders. These factors are referred to as the evaluation factor and potency (strength) factor (Chráska, 1996). Subsequently, the construct validity of the research instrument was verified.

Table 1 ***Cronbach's Alpha Coefficient for Each Indicator***

Indicator	Cronbach's alpha coefficient (α)
Prevention	0.73
Implementation	0.76
I as the teacher	0.89
Family	0.81
Self-esteem	0.73
Pupil	0.79
Teaching profession	0.67
School	0.82
Implementation of eating disorders prevention	0.73

Table 2 ***Results of the Factor Analysis of the Preliminary Research***

Factor	Scale number	Scale	Charge factor [a]	
			Factor evaluation	Factor potency
E	1	good-bad	**-0.76**	-0.46
P	2	easy-difficult	-0.16	**-0.79**
E	3	unpleasant-pleasant	**0.75**	0.48
P	4	easy-difficult	0.33	**0.76**
E	5	beautiful-ugly	**-0.80**	-0.42
P	6	undemanding-demanding	-0.04	**-0.75**
E	7	sweet-sour	**-0.70**	-0.47
E	8	dark-light	**0.72**	0.46
P	9	troublesome-trouble-free	0.52	**0.63**
E	10	cold-hot	**0.61**	0.29
E	11	important-unimportant	**-0.57**	0.21
P	12	slow-fast	0.06	**0.24**
E	13	useful-useless	**-0.76**	-0.24
E	14	passive-active	**0.63**	-0.12
P	15	shallow-deep	0.45	**-0.49**
E	16	entertaining-boring	**-0.71**	-0.27
P	17	simple-difficult	-0.05	**-0.80**
E	18	frequent-rare	**-0.16**	0.12
P	19	strict-lenient	0.12	**0.48**

Note. [a] Rotation: varimax normalized (PRELIMINARY total);
Extraction: main components (dominant charges are in bold).

To verify construct validity, the standard explorative factor analysis was used, where (unlike the traditional C. Osgood's semantic differential [Osgood et al., 1967]) only two common factors were extracted (calculations were made using STATISTICA Cz 10.0). The factor structure of the scales was also verified by a factor analysis of the results of individual conceptual indicators. This analysis was used to verify that the factor structure of the scales was identical with the structure obtained by the analysis of the results of all indicators.

Based on the analyses, a total of nine conceptual indicators were selected (shown in Table 1) with an 11-point scale (the scales applied are highlighted in grey in Table 2), which show a high degree of factor stability and purity. The remaining indicators[4] and scales showed insufficient factor purity and were removed from the research instrument.

4/5 Results of the Research

To identify suitable statistical methods the test of normality was performed, specifically the Kolmogorov–Smirnov test, the result of which allowed the application of parametric statistical methods. The specific values of the K–S test are shown in Table 3. For none of the values a significant difference was found in the results, which suggests a normal distribution.

The results of the research will be described in detail on the following pages. The first part shows the graphs with all of the indicators by gender and qualification. The differences between the groups of independent variables were identified by means of an analysis of variance (ANOVA), which was followed by the Tukey post-hoc test to specify any differences between the groups of the variables. If a statistical significance was found in any of the groups, a relevant comment was provided under the graph.

Table 3 ***Kolmogorov-Smirnov Test Values***

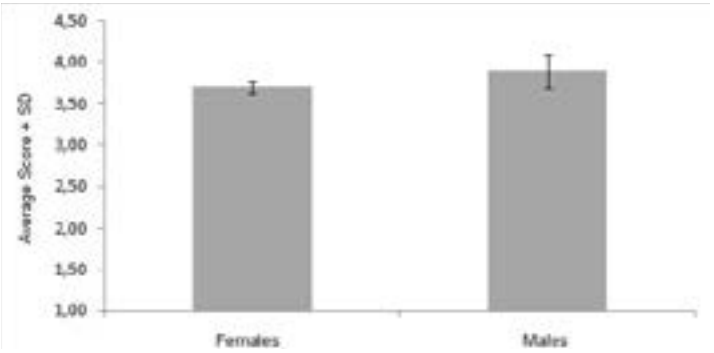
Indicator	Kolmogorov-Smirnov test value
Prevention	0.06
Implementation	0.07
I as the teacher	0.09
Pupil	0.08
Implementation of eating disorders prevention	0.09
Teaching profession	0.07
School	0.08
Self-esteem	0.09
Family	0.06

4 Indicators excluded on the basis of the preliminary research: anorexia nervosa, bulimia nervosa, media, person suffering from anorexia nervosa, person suffering from bulimia nervosa, eating disorders.

4/5/1 Differences in Teachers' Attitudes by Gender

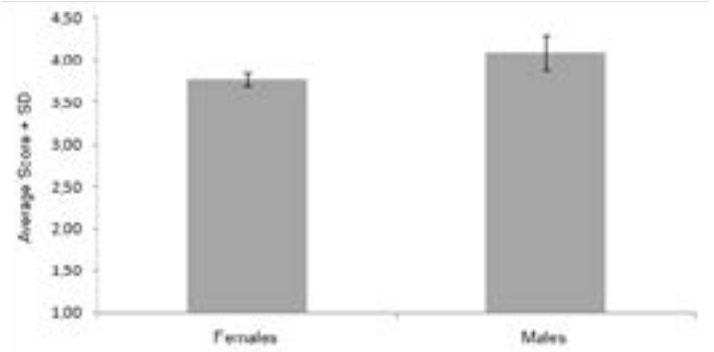
As shown in Graph 1, a slightly more positive attitude to the *prevention* indicator was found among men compared with women. No statistical significance was observed for the indicator ($F = 0.73$; $p = 0.39$)[5]. Despite this finding, it is well known that women are generally more concerned about their health and therefore have a more positive attitude to prevention.

Graph 1 ***Teachers' Attitudes to the Prevention Indicator by Gender***



As with the previous indicator, no statistical significance was found ($F = 2.13$; $p = 0.15$). As seen in Graph 2, men showed a slightly more positive perception of the *implementation* indicator compared with women.

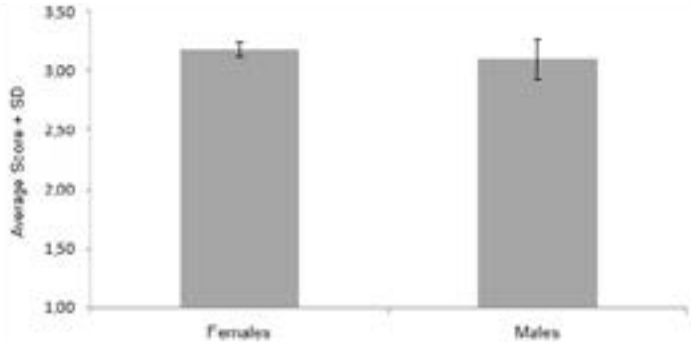
Graph 2 ***Teachers' Attitudes to the Implementation Indicator by Gender***



5 For indicators where statistical significance was observed, a relevant comment is provided; statistical significance was determined at a level higher than 5% ($p < 0.05$), higher than 1% ($p < 0.01$), and higher than 0.1% ($p < 0.001$).

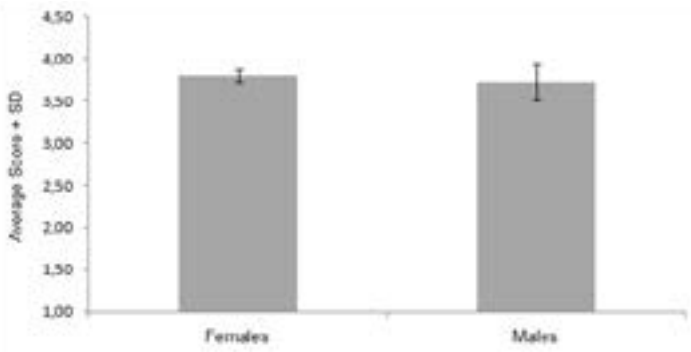
A relatively interesting finding was observed in the third indicator named *I as the teacher*. The respondents agreed on almost the same positive perception of this concept, although a slightly more positive perception was reported by women. No statistical significance was observed ($F = 0.23$; $p = 0.63$). However, contrary to the two previous indicators, the perception of the attitudes to this concept was the least positive, although the indicator concerned the perception of oneself in the profession of the teacher. As shown in Graph 3, the evaluation of this concept is below average in both genders (considering the scale value of 3.5 in the seven-point scale an average value). Similar results were also formulated by Chráska (2003a), who investigated the attitudes to the teaching profession in undergraduate teacher preparation.

Graph 3 ***Teachers' Attitudes to the I As the Teacher Indicator by Gender***

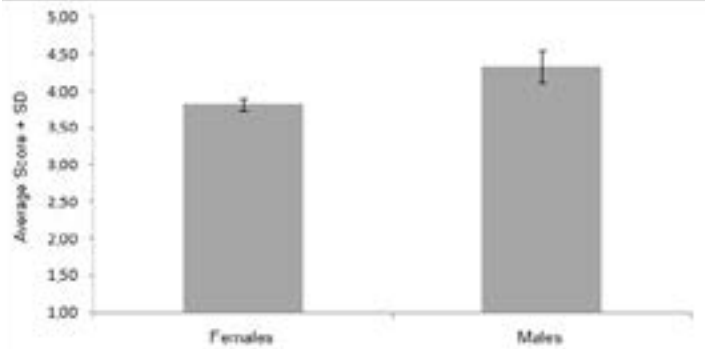


Graph 4 shows the responses for the *pupil* indicator. In comparison with the previous concept, the perception of this concept is much more positive. The difference by gender was negligible and no statistical significance was observed for the concept ($F = 0.12$; $p = 0.73$).

Graph 4 ***Teachers' Attitudes to the Pupil Indicator by Gender***

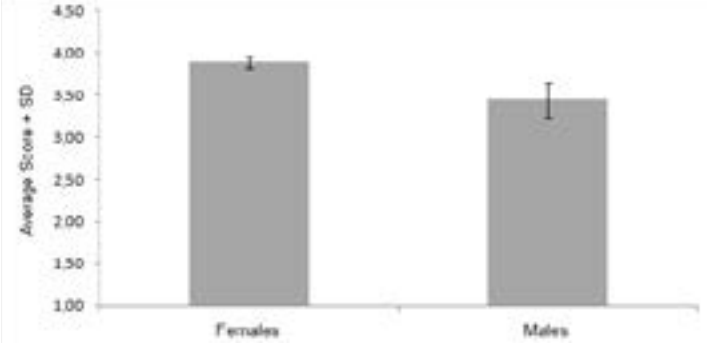


Graph 5 ***Teachers' Attitudes to the Indicator of Implementation of Eating Disorders Prevention by Gender***



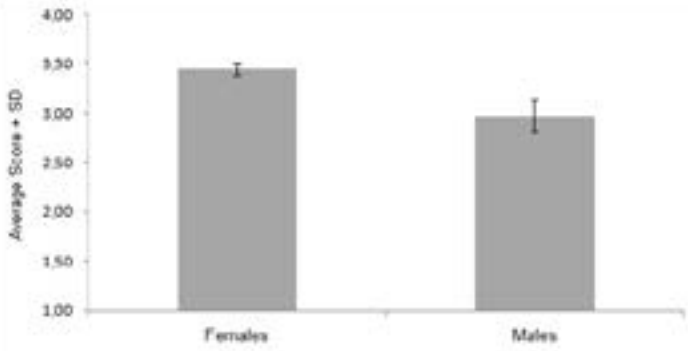
For the fifth indicator of *implementation of eating disorders prevention* a statistical significance was observed at a level of ($F = 5.14$; $p < 0.05$). As shown in Graph 5, more positive attitudes to this concept were reported by men. It is possible that men notice the growing problem of eating disorders not only in the media but also in the school environment, and therefore have a more positive attitude to this issue.

Graph 6 ***Teachers' Attitudes to the Teaching Profession Indicator by Gender***



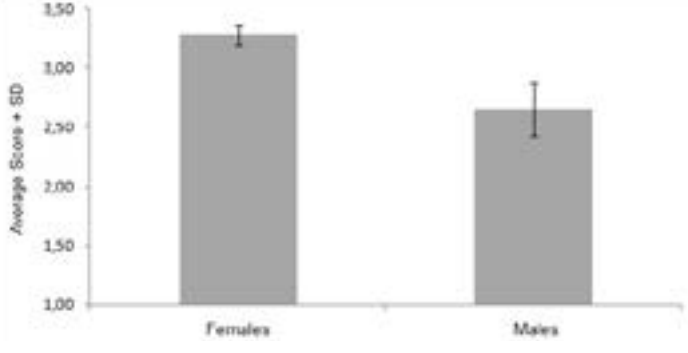
The sixth indicator examined the attitudes to the *teaching profession,* as can be seen in Graph 6. According to the respondents, women had a more positive attitude to the teaching profession compared with men, which is also confirmed by other authors, for example Průcha (2002). A statistical significance was observed ($F = 4.29$; $p < 0.05$).

Graph 7 ***Teachers' Attitudes to the School Indicator by Gender***



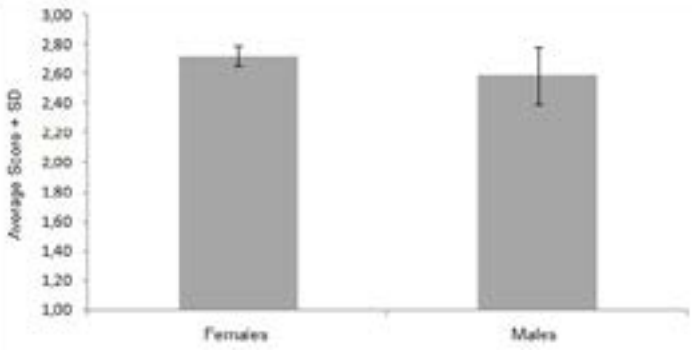
In the *school* indicator, a statistical significance was observed ($F = 7.74$; $p < 0.01$). As suggested in Graph 7, this indicator was again perceived more positively by women than men, as was the case for the *teaching profession* and *I as the teacher* indicators.

Graph 8 ***Teachers' Attitudes to the Self-Esteem Indicator by Gender***



A statistical significance was observed for the eighth indicator entitled *self-esteem* ($F = 6.63$; $p < 0.05$). Just as in the previous two indicators, this concept was perceived more positively by women. As shown in Graph 8, positive perception of this concept was below average (considering the scale value of 3.5 in the seven-point scale an average value).

Graph 9 ***Teachers' Attitudes to the Family Indicator by Gender***



The ninth indicator was entitled *family*. In this concept, no statistical significance was observed ($F = 0.38$; $p = 0.54$). Both genders showed almost identical perception of this concept, as shown in Graph 9. The family concept had the least positive perception of all of the indicators. The *family* indicator was included intentionally. As was mentioned in the theoretical part of the paper, the family is an environment suitable for the primary prevention of eating disorders. It can be assumed that if teachers do not perceive the family in a positive way, their attitudes to the prevention of eating disorders will not be positive either. However, this correlation was not analysed in detail in the present study.

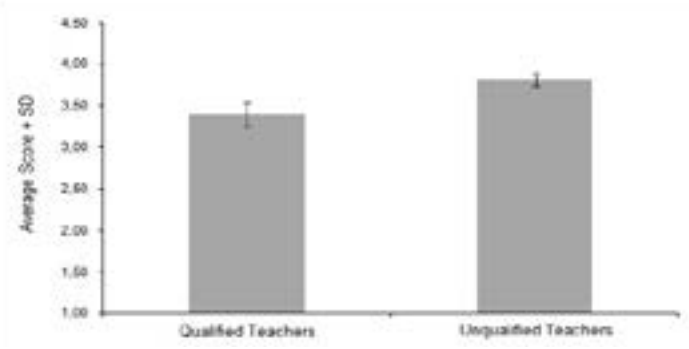
All of the indicators are related to eating disorders; therefore, the responses under the indicators cannot be analysed individually but as a whole.

4/5/2 Differences in Teachers' Attitudes by Teaching Qualification

The following graphs compare the effect of teaching qualification in the context of each indicator. The results were evaluated using an analysis of variance (ANOVA) followed by the Tukey's post-hoc test. If a statistical significance was found in any of the groups, a relevant comment was provided under the graph.

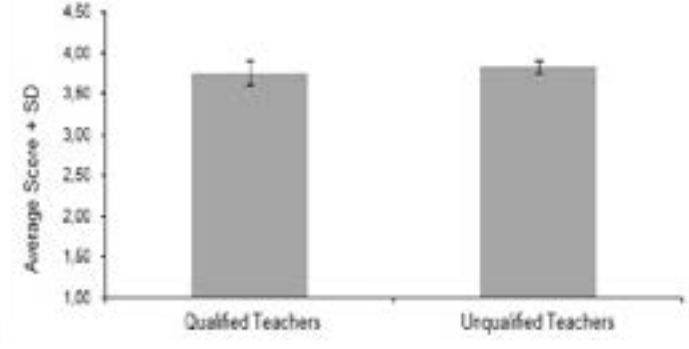
Graph 10 shows the results of the *prevention* indicator by teaching qualification. A statistically significant difference was observed ($F = 6.46$; $p < 0.05$), which suggests that unqualified teachers had a more positive attitude to the aspect of prevention. As previously mentioned, the Health education course was introduced in universities only recently (in 2005 at Masaryk University), and for this reason qualified teachers have relatively short teaching experience and limited skills in the implementation of school-based preventive measures. This may have influenced the results shown in the graph.

Graph 10 ***Teachers' Attitudes to the Prevention Indicator by Teaching Qualification***



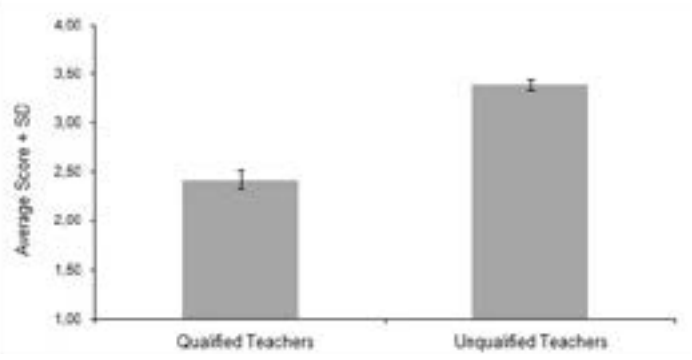
In the second indicator entitled *implementation* no statistically significant differences were observed ($F = 0.16$; $p = 0.69$). Graph 11 suggests an almost identical attitude of the teachers in the research sample to this concept. It can be assumed that teachers newly qualified in Health education (see the comment in the previous graph) have identical positive attitudes to the implementation of prevention activities as unqualified teachers.

Graph 11 ***Teachers' Attitudes to the Implementation Indicator by Teaching Qualification***



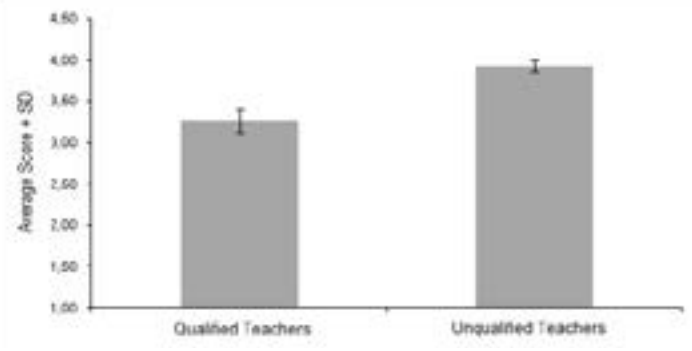
The indicator focused on the attitudes to the *I as the teacher* indicator. Similarly to the first *prevention* indicator, a statistical significance was observed ($F = 69.22$; $p < 0.001$). Unqualified respondents had a much more positive attitude to this concept than qualified respondents. The differences in the responses between qualified and unqualified respondents are clearly shown in Graph 12. It can be assumed that this is also influenced by the relatively recent introduction of Health education.

Graph 12 ***Teachers' Attitudes to the I as the Teacher Indicator by Teaching Qualification***



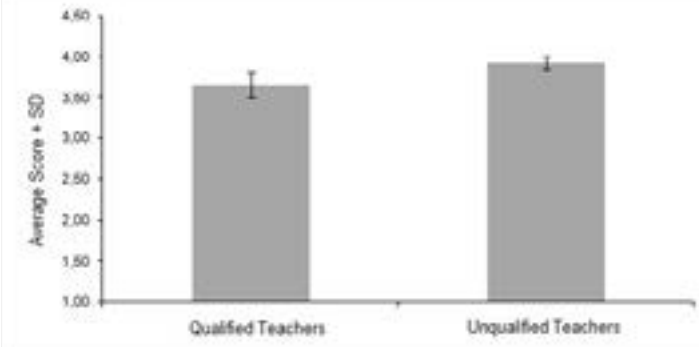
The indicator shown in Graph 13 shows the teachers' attitudes to the *pupil* concept. In this indicator a statistically significant difference was also observed ($F = 16.47$; $p < 0.001$) in the perception of this concept. Unqualified respondents had a much more positive perception of the indicator compared with qualified respondents.

Graph 13 ***Teachers' Attitudes to the Pupil Indicator by Teaching Qualification***



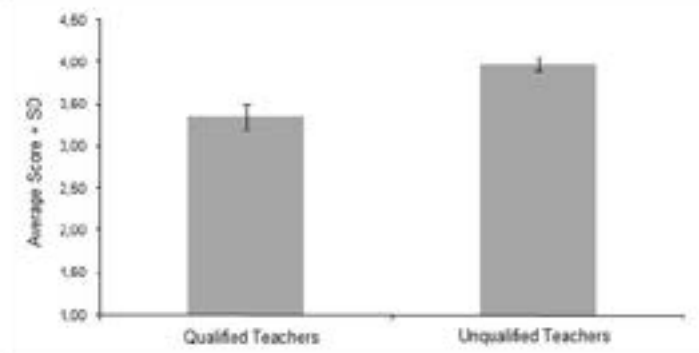
The fifth indicator analysed the respondents' attitudes to the concept of *implementation of eating disorders prevention*. No statistical significance was observed in this indicator ($F = 2.33$; $p = 0.13$) but Graph 14 shows that among all of the indicators, the implementation of eating disorders prevention is perceived in a very positive way. It can therefore be assumed that the implementation of eating disorders prevention is of identical importance to teachers qualified in Health education as well as unqualified teachers.

Graph 14 ***Teachers' Attitudes to the Indicator of Implementation of Eating Disorders Prevention by Teaching Qualification***



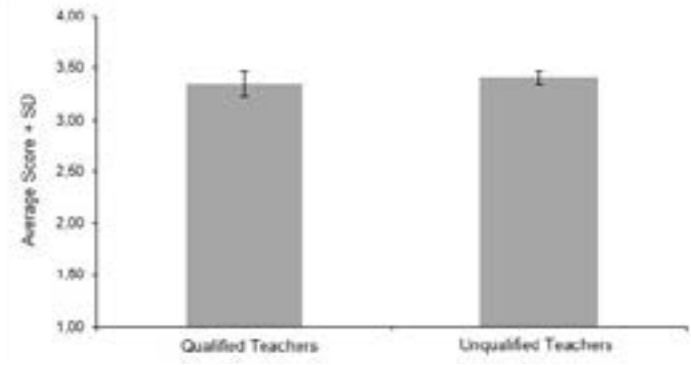
Graph 15 shows the respondents' attitudes to the *teaching profession* concept. Also for this indicator a statistical significance was observed ($F = 14.42$; $p < 0.001$). Unqualified teachers had a more positive perception of the concept compared with qualified teachers. This finding may again be influenced by the relatively short teaching experience of teachers qualified in Health education.

Graph 15 ***Teachers' Attitudes to the Teaching Profession Indicator by Teaching Qualification***



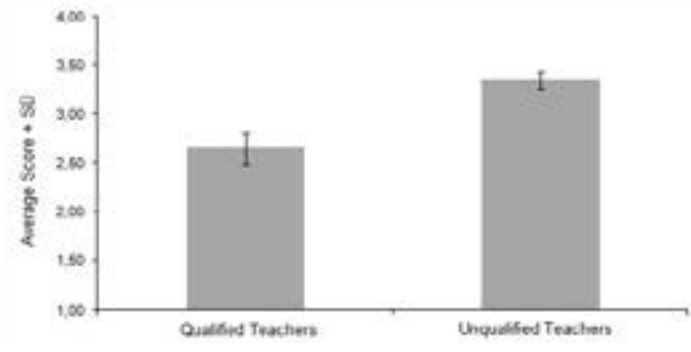
The perception of the seventh indicator entitled *school* was almost identical among all of the respondents. The interpretation of this fact could be that unqualified teachers have a more positive attitude to their profession compared with qualified teachers, as can be seen in the Graph 15 and also in Graph 16, but they have a similar perception of the school as an institution or as a complex concept. No statistical significance was observed for the *school* concept ($F = 0.21$; $p = 0.65$).

Graph 16 ***Teachers' Attitudes to the School Indicator by Teaching Qualification***



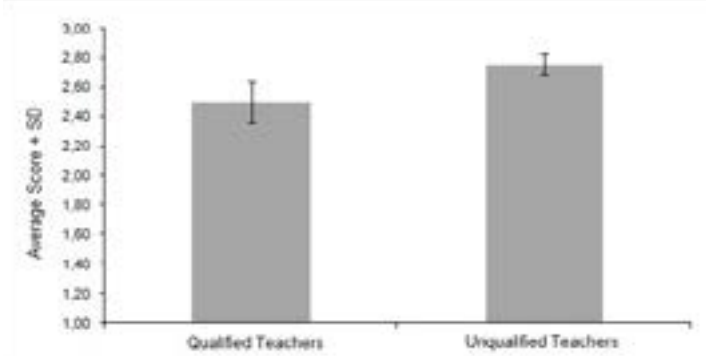
Another statistical significance ($F = 14.38$; $p < 0.001$) was demonstrated for the *self-esteem* indicator, see Graph 17. Unqualified teachers have a more positive perception of self-esteem compared with qualified teachers.

Graph 17 ***Teachers' Attitudes to the Self-Esteem Indicator by Teaching Qualification***



The last ninth indicator was entitled *family*. In this concept, no statistical significance was observed ($F = 2.61$; $p = 0.11$). As Graph 18 suggests, teachers unqualified in Health education had a more positive perception compared with qualified teachers.

Graph 18 ***Teachers' Attitudes to the Family Indicator by Teaching Qualification***

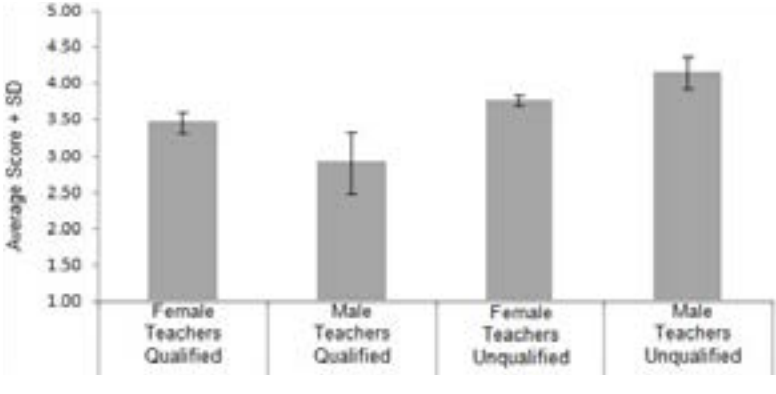


4/5/3 Differences in Teachers' Attitudes by Gender and Teaching Qualification

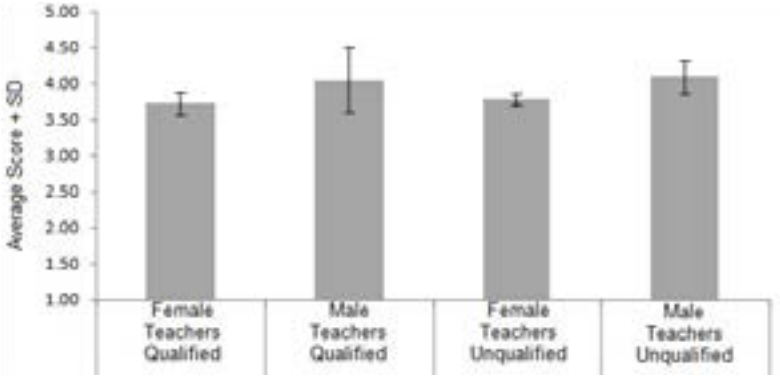
For clarity reasons, the following graphs show the effects of qualified and unqualified female and male teachers for each indicator. The results were evaluated using an analysis of variance (ANOVA) followed by the Tukey's post-hoc test. If a statistical significance was found in any of the groups, a relevant comment was provided under the graph.

The analysis of variance did not identify any significant differences between the groups ($F = 3.33$; $p = 0.07$). The Tukey's post-hoc test did not identify any statistically significant differences between qualified and unqualified male teachers ($p < 0.05$). Unqualified male teachers had a more positive attitude to the *prevention* indicator compared with qualified teachers. Graph 19 also shows a more positive attitude of unqualified female teachers to the concept of *prevention* compared with qualified female teachers.

Graph 19 ***Teachers' Attitudes to the Prevention Indicator by Gender and Teaching Qualification***



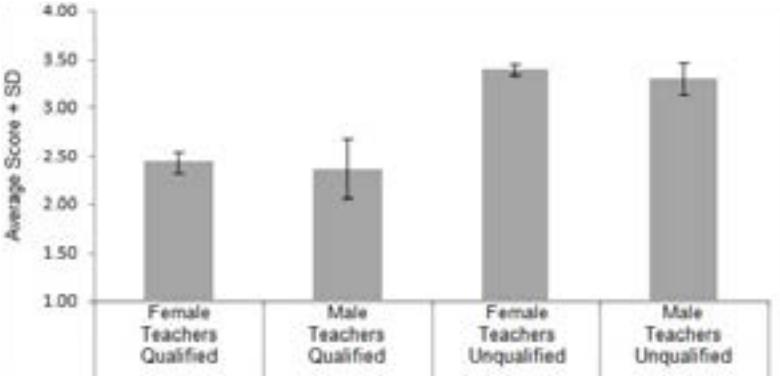
Graph 20 ***Teachers' Attitudes to the Implementation Indicator by Gender and Teaching Qualification***



The analysis of variance did not suggest a statistically significant difference between any of the categories ($F = 0.01$; $p = 0.97$). Graph 20 suggests almost identical evaluation of the *prevention* indicator among qualified and unqualified male teachers and similarly among qualified and unqualified female teachers.

The Tukey's post hoc test revealed a statistically significant difference at ($p < 0.001$) in the variables between qualified and unqualified female teachers. Unqualified female teachers had a more positive attitude to the *I as the teacher* indicator compared with qualified female teachers, as seen in Graph 21.

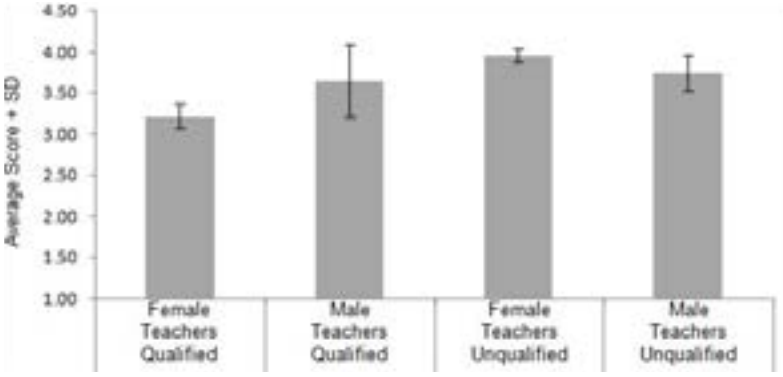
Graph 21 ***Teachers' Attitudes to the I as the Teacher Indicator by Gender and Teaching Qualification***



A statistically significant difference was also observed between qualified female teachers and unqualified male teachers at ($p < 0.001$). Unqualified male teachers had a more positive approach to their profession compared with qualified female teachers. A statistically significant difference was also observed at ($p < 0.05$)

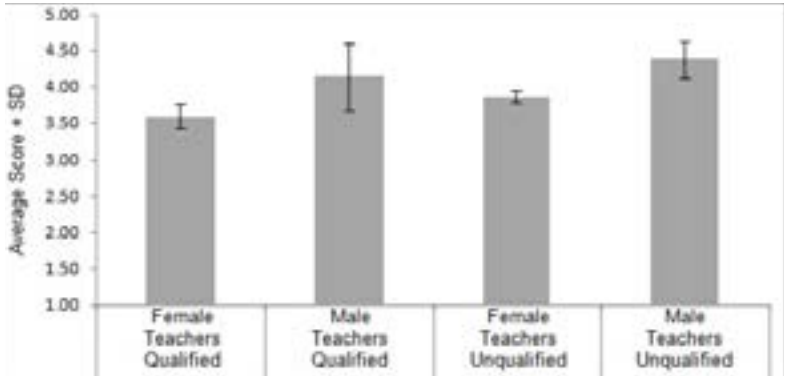
between qualified male teachers and unqualified female teachers. Unqualified female teachers had a more positive perception of the indicator compared with qualified male teachers. The analysis of variance did not identify any other significant differences between the groups ($F = 0.01$; $p = 0.93$).

Graph 22 ***Teachers' Attitudes to the Pupil Indicator by Gender and Teaching Qualification***



The analysis of variance did not identify any significant differences between the groups ($F = 1.48$; $p = 0.23$). Nevertheless, Graph 22 shows that the least positive perception of the *pupil* concept was observed among qualified female teachers, while qualified and unqualified male teachers had an almost identical score. The Tukey's post-hoc test identified a statistically significant difference at ($p < 0.001$) between qualified and unqualified female teachers. Unqualified female teachers had a more positive attitude to the *pupil* indicator.

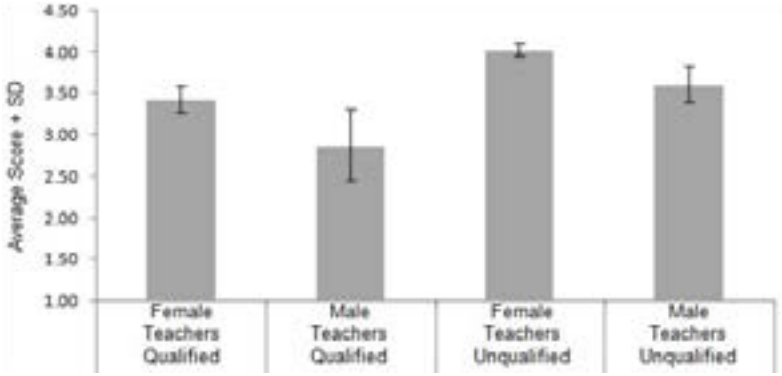
Graph 23 ***Teachers' Attitudes to the Indicator of Implementation of Eating Disorders Prevention by Gender and Teaching Qualification***



Graph 23 shows that the most positive perception of the *implementation of eating disorders prevention* concept was reported by unqualified male teachers, while qualified female teachers had the least positive perception. This difference was identified as statistically significant at ($p < 0.05$). The analysis of variance did not identify any other statistically significant differences between the groups ($F = 0.01$; $p = 0.95$).

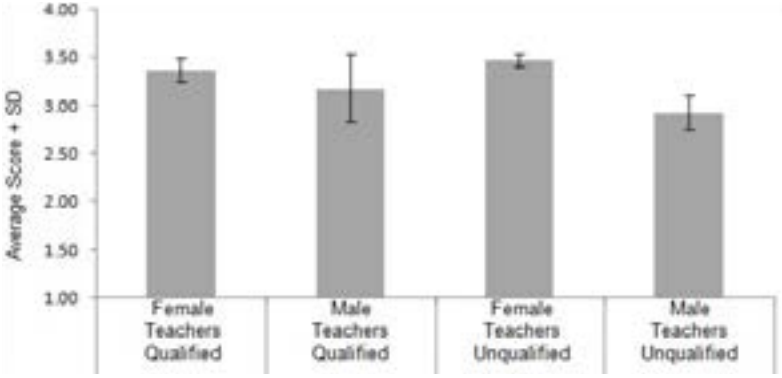
A statistically significant difference was observed at ($p < 0.001$) between qualified and unqualified female teachers. Unqualified female teachers had a more positive perception of the *teaching profession* concept. Another statistically significant difference was observed at ($p < 0.01$) between unqualified female teachers and qualified male teachers. Unqualified female teachers had a more positive perception of the concept. No other statistically significant differences were observed in the remaining categories ($F = 0.07$; $p = 0.79$). As shown in Graph 24, qualified female teachers and unqualified male teachers had an almost identical perception of the teaching profession indicator.

Graph 24 ***Teachers' Attitudes to the Teaching Profession Indicator by Gender and Teaching Qualification***



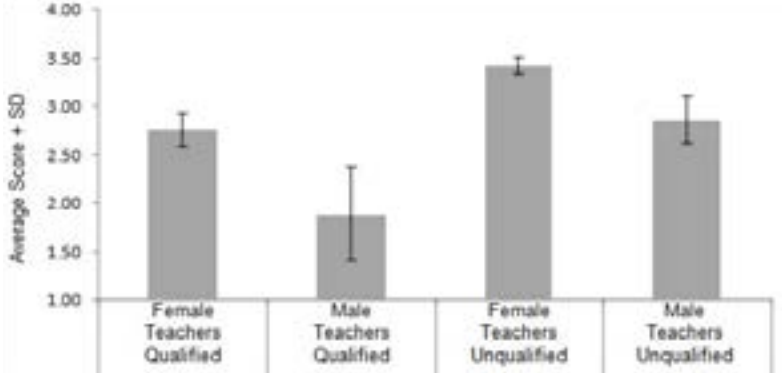
The analysis of variance did not identify any significant differences between the groups ($F = 0.77$; $p = 0.38$). The Tukey's post-hoc test identified a statistically significant difference at ($p < 0.05$) between unqualified male teachers and unqualified female teachers. As suggested in Graph 25, unqualified female teachers had the most positive perception of the *school* indicator compared with all of the other respondents. Unqualified male teachers had the least positive perception of the concept.

Graph 25 ***Teachers' Attitudes to the School Indicator by Gender and Teaching Qualification***

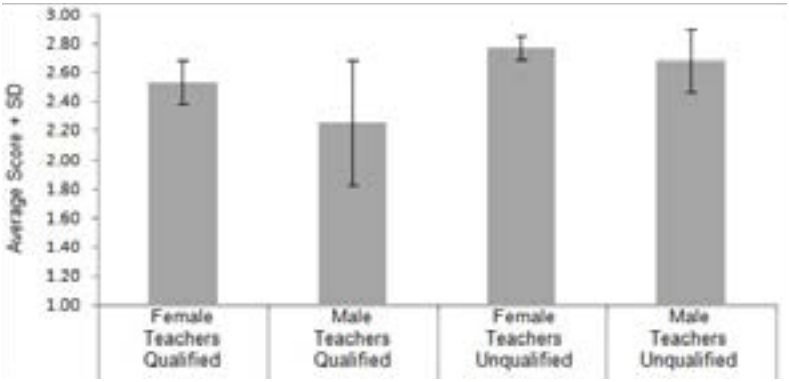


In the *self-esteem* indicator a statistically significant difference was observed between qualified and unqualified female teachers at ($p < 0.01$) with a more positive perception among unqualified female teachers. A statistically significant difference was observed at ($p < 0.01$) between qualified male teachers and unqualified female teachers. As seen in Graph 26, unqualified female teachers had a more positive perception of the *self-esteem* concept. In the remaining groups no statistically significant differences were observed using the analysis of variance ($F = 0.29$; $p = 0.59$).

Graph 26 ***Teachers' Attitudes to the Self-Esteem Indicator by Gender and Teaching Qualification***



Graph 27 ***Teachers' Attitudes to the Family Indicator by Gender and Teaching Qualification***



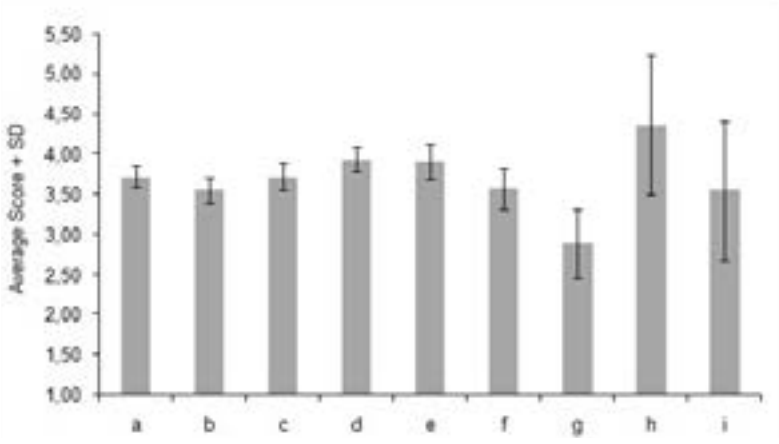
The analysis of variance did not identify any significant differences between the groups ($F = 0.14$; $p = 0.71$). Graph 27 shows the most positive perception of the *family* concept in the group of unqualified female teachers. Qualified male teachers had the least positive perception of the indicator. A marginal difference was observed in the perception of the concept between unqualified female teachers and unqualified male teachers. The two groups had an almost identical perception of the concept.

4/5/4 Differences in Teachers' Attitudes by Length of Teaching Experience

As in the previous graphs, the results were evaluated by means of the analysis of variance (ANOVA). All of the indicators were compared together with respondents' length of teaching experience.

No statistical significance was observed in Graph 28 ($F = 1.08$; $p = 0.38$). The most positive perception of the *prevention* indicator was reported by respondents with experience of 36 to 40 years. The least positive perception was reported by respondents with experience of 31 to 35 years. Regarding the fact that no scientific papers or discussions have been found on this issue, we are unable to compare the results of the present study with other studies.

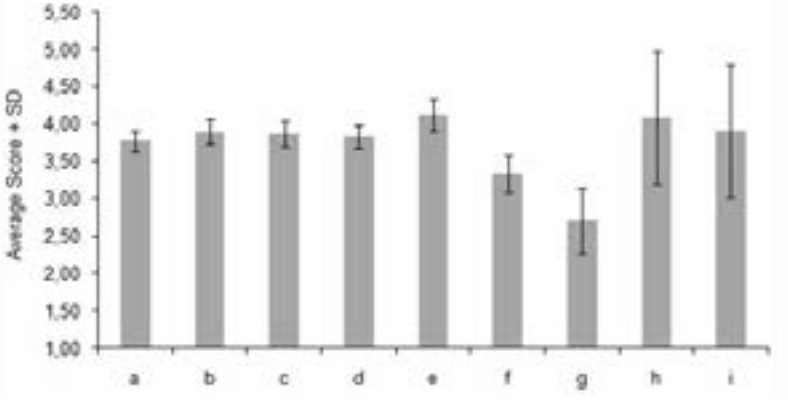
Graph 28 ***Teachers' Attitudes to the Prevention Indicator by Length of Teaching Experience***



Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c – length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years**

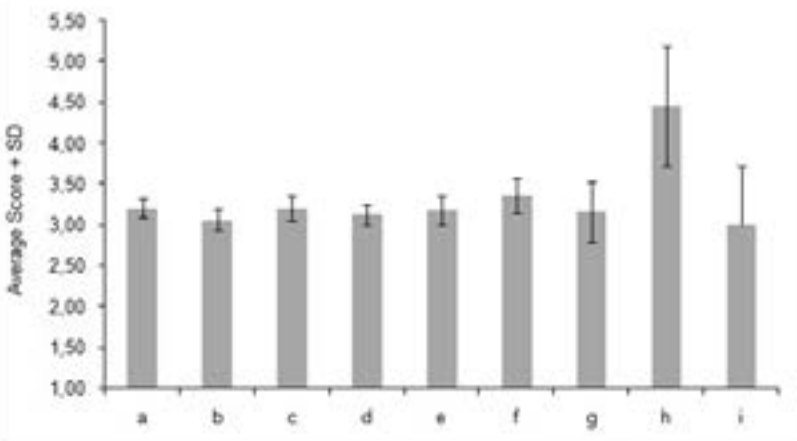
The results of the teachers' attitudes to the *implementation* indicator correspond with the results of the previous Graph 29. Similarly, the most positive perception of this indicator was reported by respondents with experience of 36 to 40 years, while the least positive perception was suggested by respondents with experience of 31 to 35 years. No statistical significance was observed ($F = 1.55$; $p = 0.14$).

Graph 29 ***Teachers' Attitudes to the Implementation Indicator by Length of Teaching Experience***



Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c – length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years**

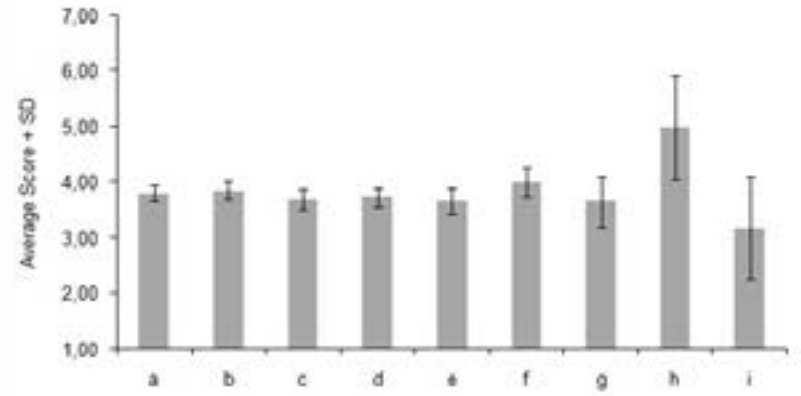
Graph 30 ***Teachers' Attitudes to the I as the Teacher Indicator by Length of Teaching Experience***



Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c –length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years**

Similarly to the previous two graphs, Graph 30 shows that the respondents with experience of 36 to 40 years had the most positive perception of the *I as the teacher* indicator. A relatively balanced perception was reported by respondents with experience of 1 to 35 years. Teachers with experience of 41 to 45 years had the least positive perception of the concept. No statistical significance was observed in the *I as the teacher* indicator ($F = 0.61$; $p = 0.76$).

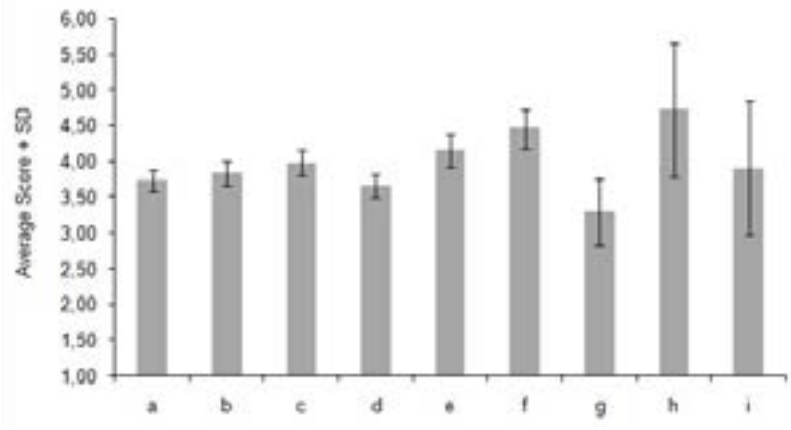
Graph 31 ***Teachers' Attitudes to the Pupil Indicator by Length of Teaching Experience***



Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c – length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years.**

A surprising finding was that also in this indicator the most positive perception was observed among teachers with experience of 36 to 40 years. As in the previous graph, also in Graph 31, the least positive perception of the *pupil* concept was reported by respondents with experience of 41 to 45 years. Otherwise, the perception of the *pupil* indicator was evenly distributed across the remaining categories. No statistical significance was observed ($F = 0.47$; $p = 0.88$).

Graph 32 ***Teachers' Attitudes to the Indicator of Implementation of Eating Disorders Prevention by Length of Teaching Experience***

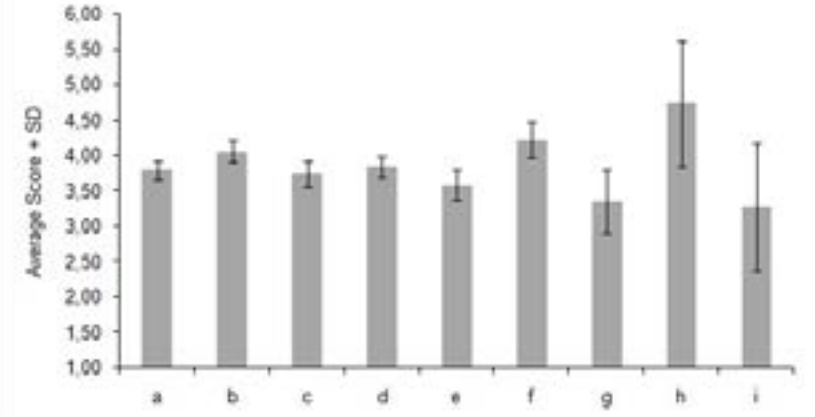


Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c – length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years**

No statistical significance was observed for the indicator ($F = 1.47$; $p = 0.17$). As shown in Graph 32, the least positive attitude to the indicator of *implementation of eating disorders prevention* was reported by teachers with experience of 31 to 35 years. The most positive attitude was reported by respondents with experience of 36 to 40 years. In this context, it could be interesting to compare qualified and unqualified teachers by length of teaching experience. This was, however, not analysed in the present research study.

The least positive perception of the *teaching profession* indicator was reported by respondents with experience of 41 to 45 years, as can be seen in Graph 33. On the contrary, the most positive perception (consistently with the previous graphs) was reported by respondents with experience of 36 to 40 years. No statistical significance was observed ($F = 1.04$; $p = 0.41$).

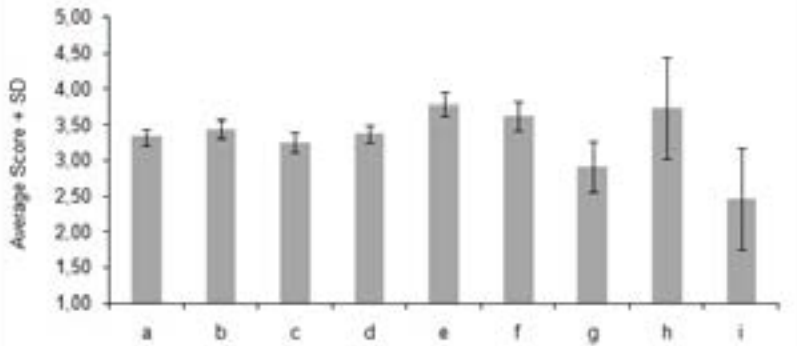
Graph 33 ***Teachers' Attitudes to the Teaching Profession Indicator by Length of Teaching Experience***



Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c – length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years**

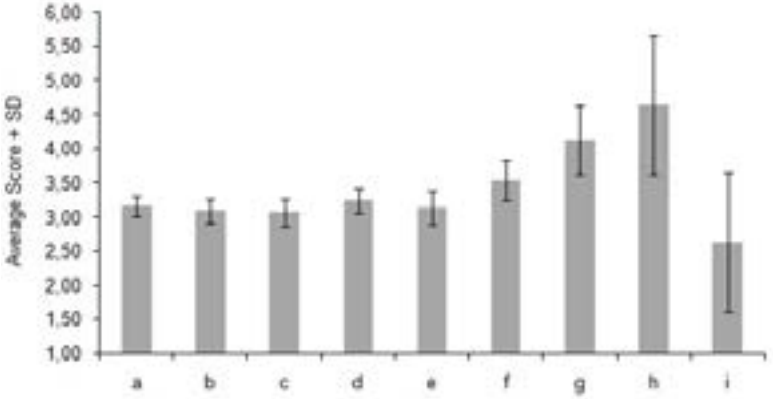
Graph 34 shows that contrary to the previous two graphs the most positive perception to the *school* indicator was reported by teachers with experience of 21 to 25 years. The least positive perception was reported by respondents with experience of 41 to 45 years. The teachers with experience of 1 to 20 years had an almost identical perception of the concept. No statistical significance was observed for the *school* indicator ($F = 1.46$; $p = 0.17$).

Graph 34 ***Teachers' Attitudes to the School Indicator by Length of Teaching Experience***



Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c – length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years.**

Graph 35 ***Teachers' Attitudes to the Self-Esteem Indicator by Length of Teaching Experience***

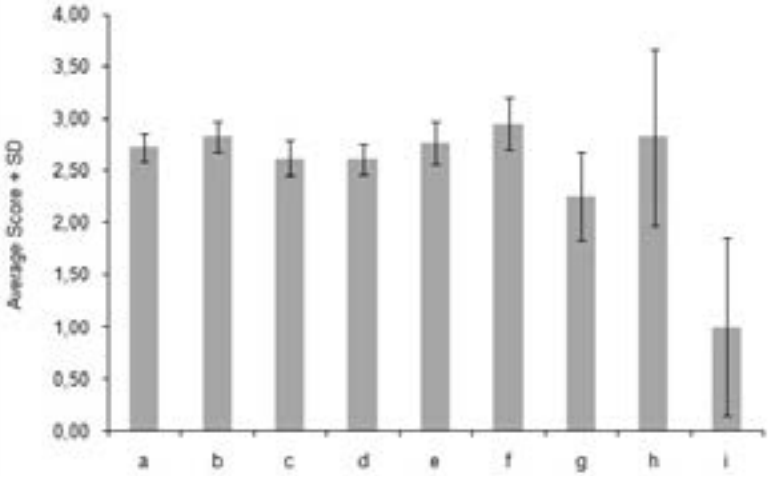


Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c – length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years**

Graph 35 shows the increasing positivity of the perception of the *self-esteem* indicator, except the last group of respondents with experience of 41 to 45 years who had the least positive perception of the concept. Just as in most of the previous graphs, also here the most positive perception of the indicator was reported by teachers with experience of 36 to 40 years. No statistical significance was observed for this indicator ($F = 1.00$; $p = 0.44$).

A relatively balanced perception of the *family* indicator is shown in Graph 36. The most positive perception of this indicator was reported by respondents with experience of 26 to 30 years. On the contrary, the least positive perception of the concept was reported by respondents with experience of 41 to 45 years. Just as in all of the previous indicators, no statistical significance was observed ($F = 0.93$; $p = 0.49$).

Graph 36 ***Teachers' Attitudes to the Family Indicator by Length of Teaching Experience***



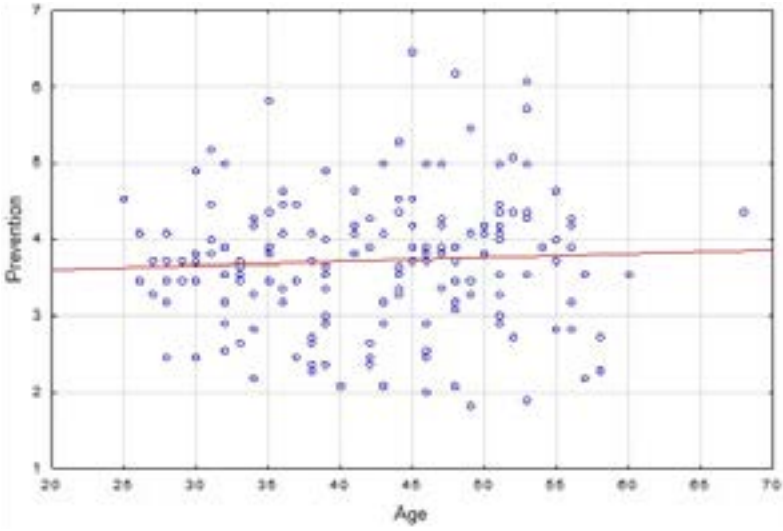
Note: **a – length of experience 1–5 years; b – length of experience 6–10 years; c – length of experience 11–15 years; d – length of experience 16–20 years; e – length of experience 21–25 years; f – length of experience 26–30 years; g – length of experience 31–35 years; h – length of experience 36–40 years; i – length of experience 41–45 years**

4/5/5 Differences in Teachers' Attitudes by Their Age

The following pages show graphs based on the Pearson's correlation coefficient. A correlation is a mutual relationship between two processes or quantities. If one of them changes, the other one changes as well and vice versa. If a correlation is shown between two processes, they are likely to be dependent on each other. But this does not necessarily mean that one is the cause and the other is the effect. The correlation alone does not inform about cause and effect. The correlation values range from -1 to +1. The zero value suggests a neutral relationship, while a value closer to +1 shows a more positive relationship between the variables. All of the indicators were compared with respondents' age. Then all of the indicators were compared with each other.

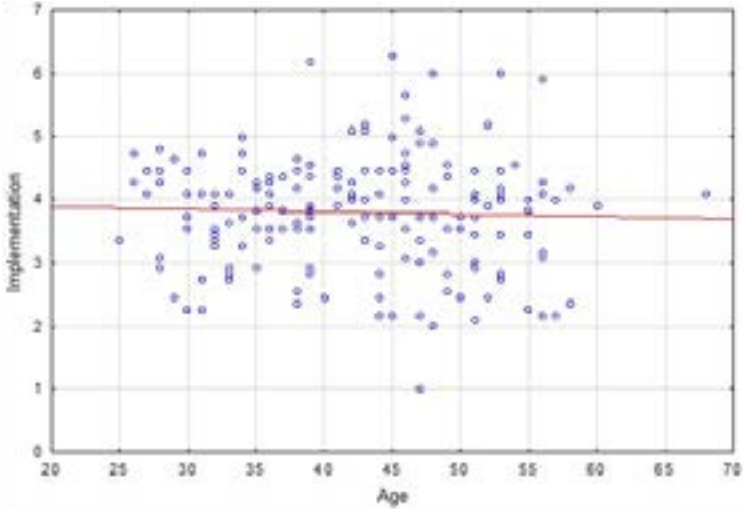
Graph 37 shows the correlation between the *prevention* indicator and respondents' age ($r = 0.05$; $p = 0.48$). The resulting value suggests that the two quantities almost do not influence each other.

Graph 37 ***Correlation Between the Prevention Indicator and Respondents' Age***

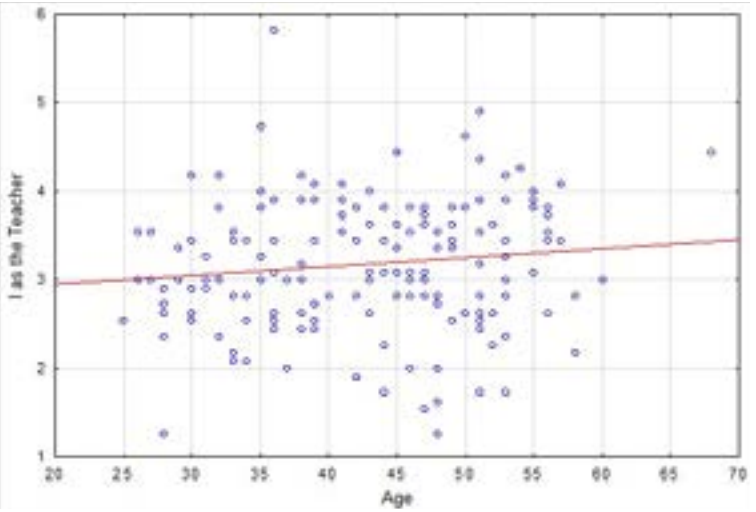


Graph 38 shows the correlation between the *implementation* indicator and respondents' age. The value of the correlation between the two quantities measured by the Pearson's correlation coefficient ($r = -0.03$; $p = 0.66$) suggests a slightly negative relationship where the variables do not affect each other.

Graph 38 ***Correlation Between the Implementation Indicator and Respondents' Age***



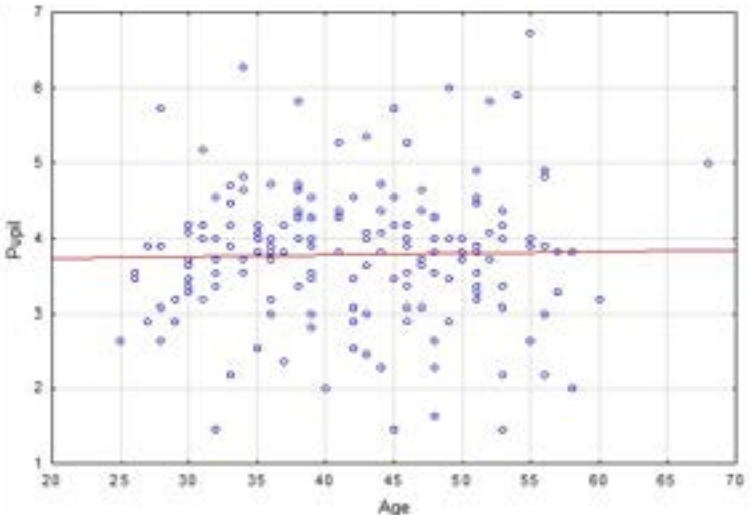
Graph 39 ***Correlation Between the I as the Teacher Indicator and Respondents' Age***



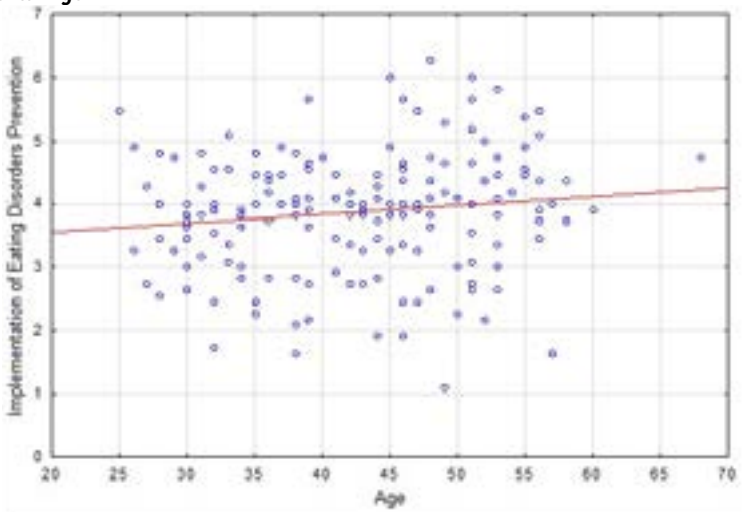
The value of the correlation coefficient ($r = 0.13$; $p = 0.11$) suggests a correlation between the *I as the teacher* indicator and respondents' age. Graph 39 above and the value of the correlation coefficient suggest that the two quantities have a weak positive effect on each other.

Graph 40 shows the correlation between the *pupil* indicator and respondents' age. The value of the correlation coefficient ($r = 0.02$; $p = 0.78$) suggests that these two categories almost do not influence each other.

Graph 40 ***Correlation Between the Pupil Indicator and Respondents' Age***

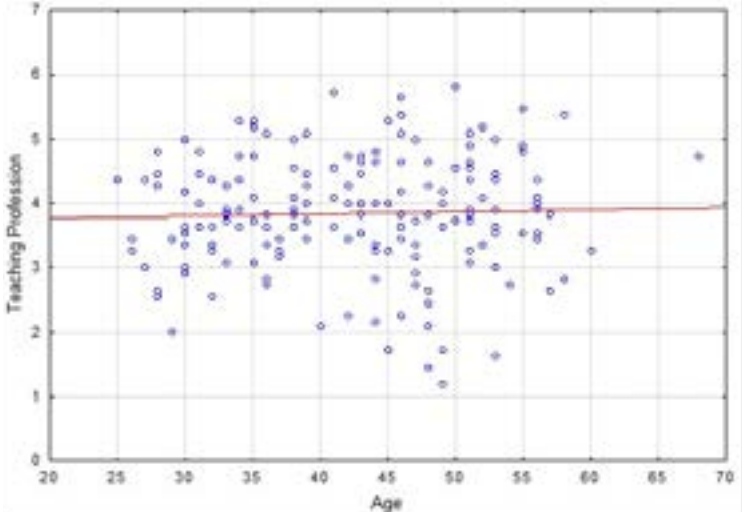


Graph 41 ***Correlation Between the Implementation of Eating Disorders Prevention Indicator and Respondents' Age***



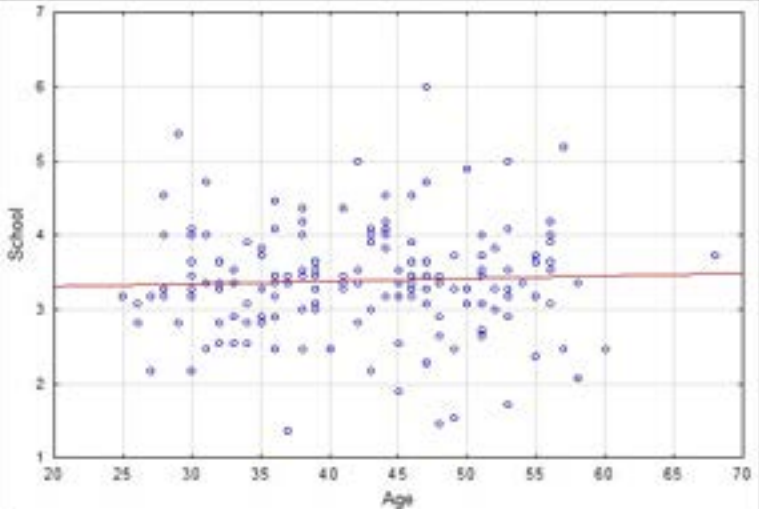
Graph 41 shows the correlation between the *implementation of eating disorders prevention* indicator and respondents' age. The value of the correlation between the two quantities measured by the Pearson's correlation coefficient ($r = -0.13$; $p = 0.09$) suggests a slightly positive relationship where the variables slightly affect each other. This finding can be interpreted in a way that the need for the implementation of eating disorders prevention does not increase with increasing respondents' age.

Graph 42 ***Correlation Between the Teaching Profession Indicator and Respondents' Age***



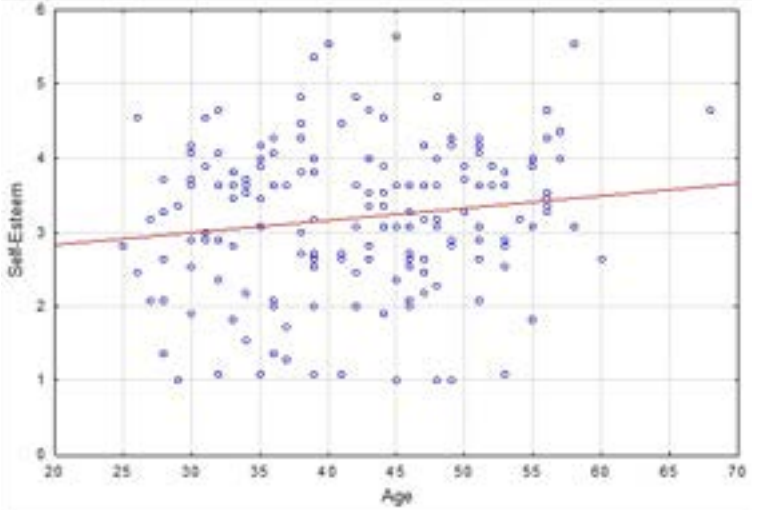
Graph 42 shows the correlation between the *teaching profession* indicator and respondents' age ($r = 0.03$; $p = 0.69$). The resulting value indicates an almost neutral mutual effect, which means that the two categories are relatively independent.

Graph 43 ***Correlation Between the School Indicator and Respondents' Age***



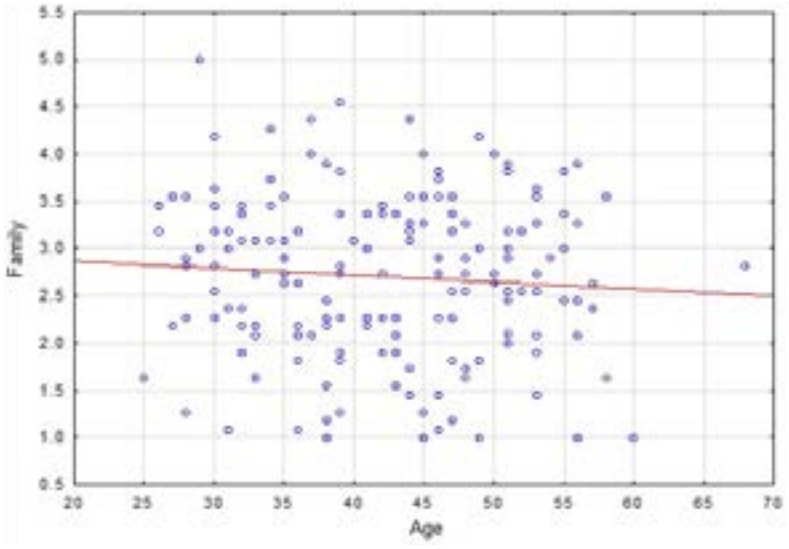
The value of the correlation coefficient ($r = 0.04$; $p = 0.57$) suggests a correlation between the *school* indicator and respondents' age. The value of the correlation coefficient shows that both quantities are relatively independent, which points to a neutral correlation, see Graph 43.

Graph 44 ***Correlation Between the Self-Esteem Indicator and Respondents' Age***



Graph 44 shows the correlation between the *self-esteem* indicator and respondents' age. The value between the two quantities ($r = -0.13$; $p = 0.06$) suggests a slightly positive relationship where the variables slightly affect each other.

Graph 45 ***Correlation Between the Family Indicator and Respondents' Age***



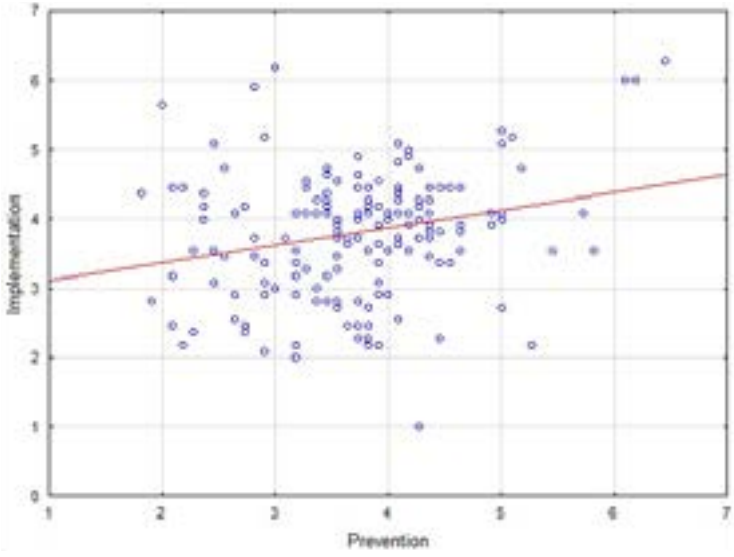
Graph 45 shows the correlation between the *family* indicator and respondents' age. The value of the correlation coefficient ($r = -0.08$; $p = 0.32$) suggests a slightly negative relationship between the two categories, which means that the two subjects do not affect each other.

4/5/6 Complementary Analyses

The section below shows the results of an additional comparison of the indicators analysed by the Pearson's correlation coefficient. All of the indicators were compared with each other. Only those graphs are shown where a significant relationship was confirmed between two indicators (quantities).

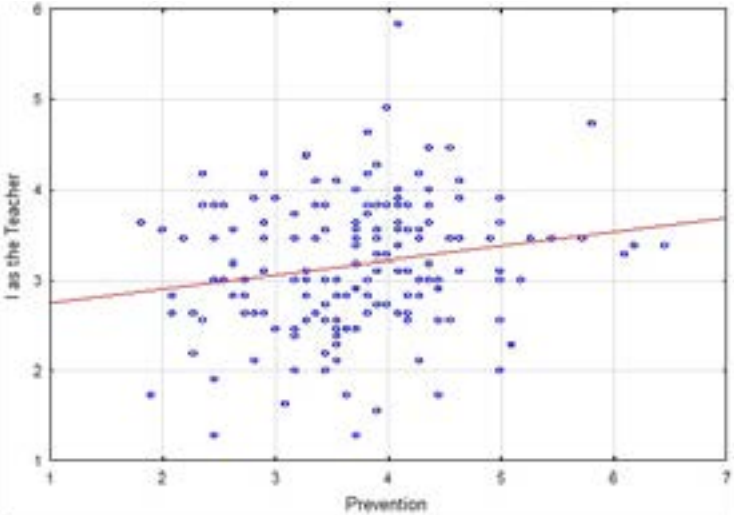
Graph 46 shows the correlation between the *implementation* and *prevention* indicators. The value of the correlation coefficient ($r = 0.25$; $p < 0.001$) indicates a mutual effect. This value may indicate that teachers consider the implementation of prevention programmes important.

Graph 46 ***Correlation Between the Implementation and Prevention Indicators***



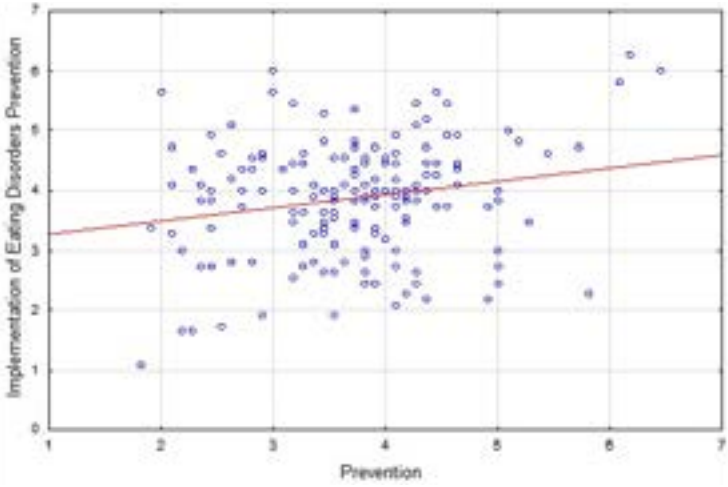
The value of the correlation coefficient ($r = 0.19$; $p < 0.05$) suggests a correlation between the *I as the teacher* and *prevention* indicators. Graph 47 and the value of the correlation coefficient suggest that the two quantities have a weak positive effect on each other. This finding can be interpreted in a way that prevention is important from the perspective of the teaching profession.

Graph 47 ***Correlation Between the I as the Teacher and Prevention Indicators***



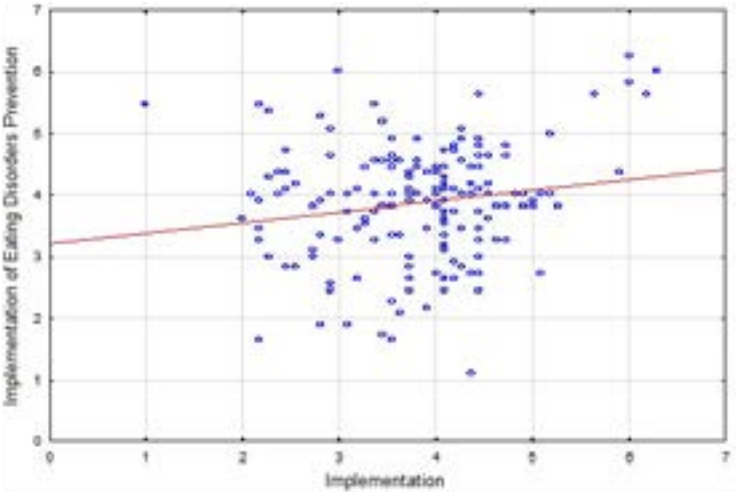
Graph 48 shows the correlation between the *implementation of eating disorders prevention* and *prevention* indicators. The value between the two quantities (r = -0.21; p < 0.01) suggests a positive relationship where the variables positively affect each other.

Graph 48 ***Correlation Between the Implementation of Eating Disorders Prevention and Prevention Indicators***



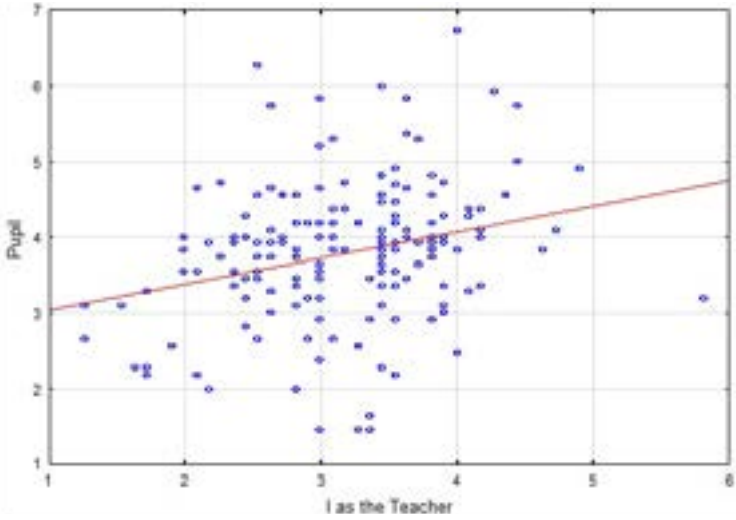
The value of the correlation coefficient ($r = 0.16$; $p < 0.05$) suggests a correlation between the *implementation of eating disorders prevention* and *implementation* indicators, see Graph 49. The value of the correlation coefficient suggests that the two quantities have a weak positive effect on each other. This finding can be interpreted in a way that the implementation of eating disorders prevention is important for teachers, which was also confirmed during the semi-structured interviews conducted as part of the complementary research study.

Graph 49 ***Correlation Between the Implementation of Eating Disorders Prevention and Implementation Indicators***

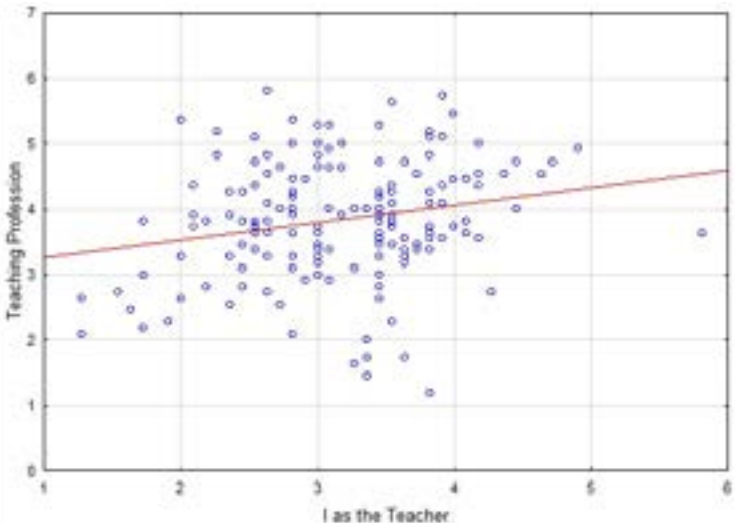


Graph 50 shows the correlation between the *pupil* and *I as the teacher* indicators. The value of the correlation coefficient ($r = 0.27$; $p < 0.001$) indicates a mutual positive effect, which is a positive finding taking these two indicators into consideration. The same conclusion was observed in Graph 53, where a positive effect was found between the *teaching profession* and *pupil* indicators.

Graph 50 ***Correlation Between the Pupil and I as the Teacher Indicators***

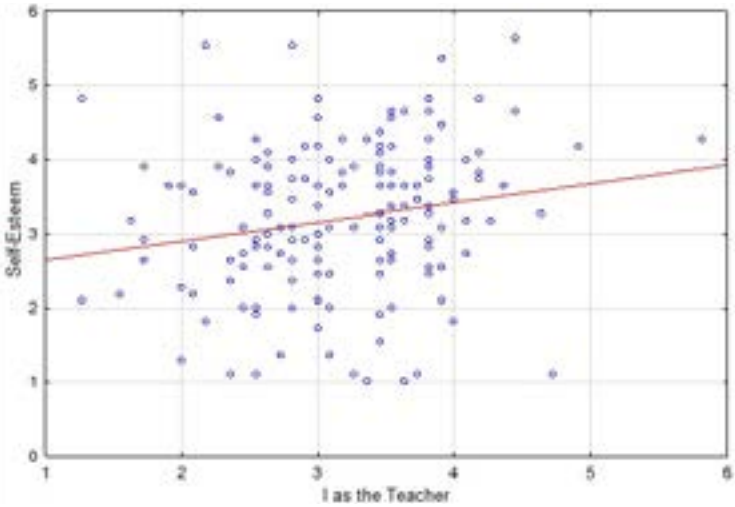


Graph 51 ***Correlation Between the Teaching Profession and I as the Teacher Indicators***



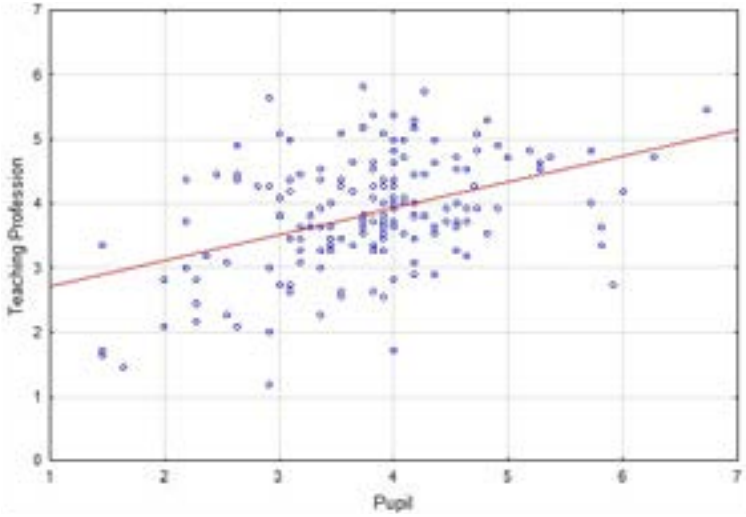
Graph 51 shows the correlation between the *teaching profession* and *I as the teacher* indicators. The value between the two quantities (r = -0.22; $p < 0.01$) suggests a positive relationship where the variables positively affect each other. This may be an indication of the fact that teachers have a positive perception of their profession.

Graph 52 ***Correlation Between the Self-Esteem and I as the Teacher Indicators***



The value of the correlation coefficient ($r = 0.18$; $p < 0.05$) suggests a correlation between the *self-esteem* and *I as the teacher* indicators, as can be seen in Graph 52. The value of the correlation coefficient suggests that the two quantities have a weak positive effect on each other.

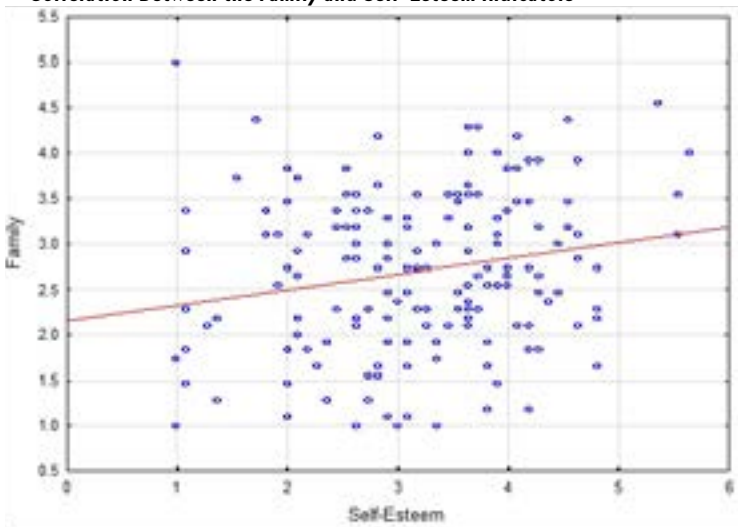
Graph 53 ***Correlation Between the Teaching Profession and Pupil Indicators***



Graph 53 shows the correlation between the *teaching profession* and *pupil* indicators. The value of the correlation coefficient ($r = 0.42$; $p < 0.001$) was the highest among all values included in the comparison. These two categories have a very positive effect on each other, which may indicate that teachers consider their pupils important subjects in the context of the teaching profession.

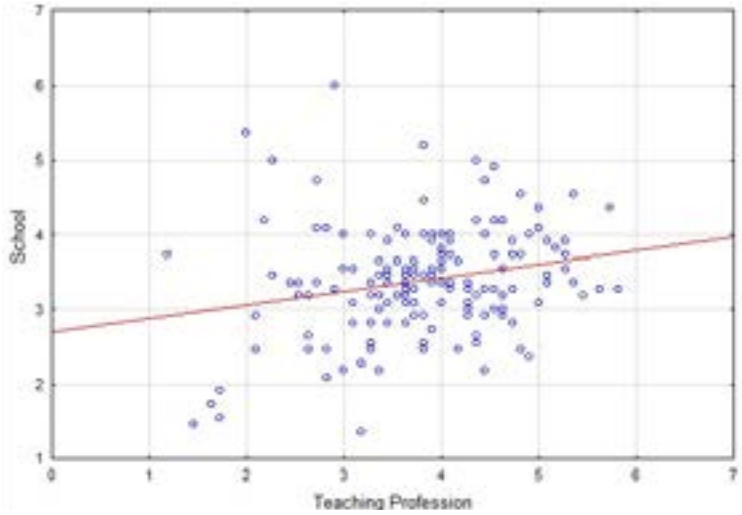
The value of the correlation coefficient ($r = 0.20$; $p < 0.01$) suggests a correlation between the *family* and *self-esteem* indicators. Graph 54 below and the value of the correlation coefficient suggest that the two quantities have a positive effect on each other.

Graph 54 ***Correlation Between the Family and Self-Esteem Indicators***

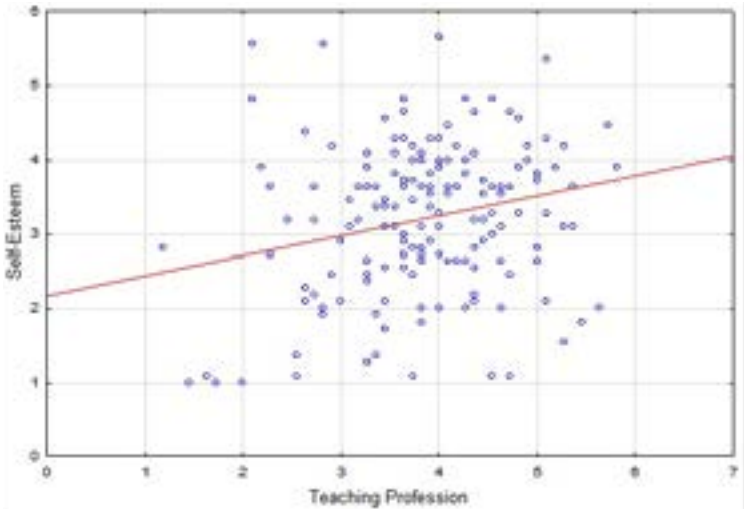


Graph 55 shows the correlation between the *school* and *teaching profession* indicators. The value between the two quantities ($r = -0.23$; $p < 0.01$) suggests a positive relationship where the variables positively affect each other. This fact may indicate that teachers perceive the school as an educational institution and their profession in a positive way.

Graph 55 ***Correlation Between the School and Teaching Profession Indicators***



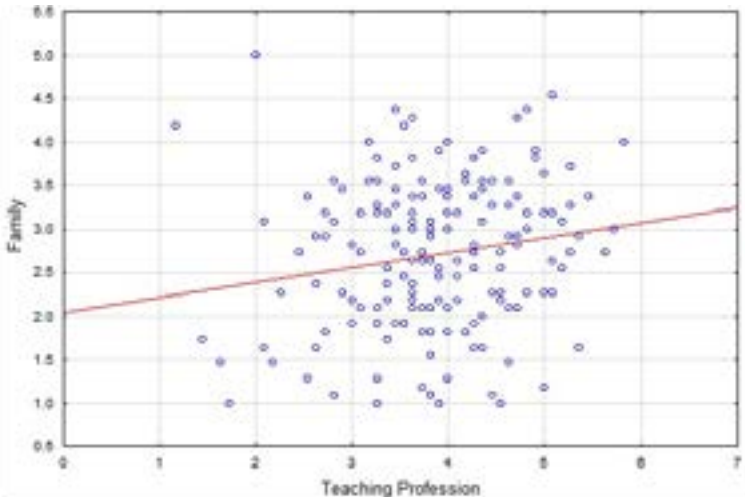
Graph 56 ***Correlation Between the Self-Esteem and Teaching Profession Indicators***



Graph 56 shows the correlation between the *self-esteem* and *teaching profession* indicators. The value of the correlation coefficient ($r = 0.24$; $p < 0.01$) indicates a positive mutual effect.

Graph 57 shows the correlation between the *family* and *teaching profession* indicators. The value of the correlation coefficient ($r = 0.18$; $p < 0.05$) indicates a weak positive effect between the two indicators.

Graph 57 ***Correlation Between the Family and Teaching Profession Indicators***



4/5/7 Summary of the Results of the Research

The objective of the present research study was to confirm or disprove the hypotheses as described below.

The first hypothesis related to the effect of gender on the attitudes to eating disorders. The analysis of variance suggested statistically significant differences between the attitudes of women and men. Women had more positive attitudes in six indicators out of nine. As suggested by the results of other studies (Csémy et al., 2005; Janout et al., 2001; Krch & Drábková, 1996), eating disorders were significantly more frequent in girls and women; therefore, a more positive attitude of women to this issue was expected. Interesting findings were observed in the *I as a teacher indicator*. The responses relating to this concept were below average in both genders (considering the scale value of 3.5 in the seven-point scale an average value). Similar results were also formulated by Chráska (2003a), who investigated the attitudes to the teaching profession in undergraduate teacher preparation. Women had a more positive attitude to the *teaching profession* compared with men, which was also confirmed by other authors, for example Průcha (2002). A more positive perception in women was also observed in other indicators, for example *school, self-esteem, family*.

Hypothesis H1: Female teachers have more positive attitudes to the issue of eating disorders than male teachers was confirmed.

The purpose of the second hypothesis was to confirm or disprove the assumption that qualified Health education teachers have more positive attitudes to the issue of eating disorders. An analysis of variance suggested statistically significant differences in the following indicators: *prevention, I as the teacher, pupil, teaching profession,* and *self-esteem*. In seven out of nine concepts, more positive attitudes were observed in unqualified teachers. In the remaining two indicators the perception of qualified and unqualified teachers was almost identical. Below is a brief justification for the above. It is true that Health education is a relatively new discipline in Czech universities. The average length of teaching experience of qualified teachers was seven years only because the group of qualified teachers included those who were qualified in Family education, which had preceded Health education and was based on a similar concept. Health education is included in the FEP EE (2017) as a compulsory subject with one lesson per week in any two grades of lower secondary schools.

Teachers of this specialization are educated in a multidisciplinary field of study, which includes not only understanding of the issue of health but also other broad activities such as prevention of risk behaviour (smoking, alcohol, eating disorders, drug abuse). As suggested by the results of research studies performed by the students of Health education in elementary schools (so far unpublished), teachers qualified in Health education usually do not teach this subject in elementary schools because it is considered an additional subject taught by teachers with full-time equivalent (FTE) lower than 1.0. Therefore, an interesting and positive fact is that unqualified teachers have positive attitudes to the issue of eating disorders. As suggested by the complementary research method (semi-structured interview), four teachers out of ten had addressed eating disorders as part of their profession. This is a relatively high proportion of teachers and a proof that the issue of eating disorders must be focused on.

Hypothesis H2: Teachers qualified in Health education have more positive attitudes to the issue of eating disorders than unqualified teachers was not confirmed.

The third hypothesis assumed that teachers with longer teaching experience had more positive attitudes to the issue of eating disorders than teachers with shorter teaching experience. The most positive attitudes in six out of nine indicators were reported by respondents with experience of 36 to 40 years. If the intervals of the length of experience category were not five years but for example 10 years, the results would probably be similar, i.e. that increasing length of teaching experience would not affect more positive attitudes of teachers to the issue of eating disorders. Spurná (2013) focused on educational research from the perspective of elementary and secondary school teachers. The author formulated identical conclusions as the authors of the present paper, although the issue was different. She observed neutral attitudes affected by intervening variables (such as gender, length of teaching experience, etc.) and factors extracted from the responses. For this reason, the present quantitative research study included a complementary research method – a semi-structured interview.

Hypothesis H3: Teachers with longer teaching experience have more positive attitudes to the issue of eating disorders than teachers with shorter teaching experience was not confirmed.

The fourth hypothesis assuming that increasing age was associated with more positive attitudes of teachers to the issue of eating disorders was rejected on the basis of the results of an analysis of variance and Pearson's correlation coefficient. Statistical significance was not observed in any of the indicators and an association between more positive attitudes and increasing age of respondents was not confirmed. Similar results were also formulated by Šimíčková (2003), who emphasised that most teachers with longer teaching experience succumb to occupational stereotype and it is difficult for them to cope with new teaching procedures. The results of the present study suggest that many teachers lack further (extension) theoretical study and the ability to absorb the process of transformation of the system of education. The authors of the present study tend to agree with Gavora (2000) that it is necessary to respect the personality of the teacher and that it would be desirable in the future to combine quantitative and qualitative methods and analyse teachers' life stories to better understand the issue.

Hypothesis H4: With increasing age, teachers' attitudes to the issue of eating disorders are more positive was not confirmed.

5/ Complementary Research on Teachers' Attitudes to Eating Disorders

The complementary research was performed by means of a semi-structured interview. The purpose of the interview was to find out how the respondents perceived the issue of eating disorders and whether they had encountered a pupil with an eating disorder, how they approached the prevention of eating disorders, and what possibilities teachers and schools had. This qualitative approach was a suitable complement to the quantitative research design (Miovský, 2010).

The interview method was chosen in order to increase the validity of the research and to acquire more detailed information concerning the issues involved. The questions for the respondents were of a complementary nature. The questions were formulated in a way to be easily categorized and to provide a comprehensive and clear body of information (Skalková, 1983; Švaříček & Šeďová, 2007).

5/1 Research Problem and Objective of the Complementary Research

The main objective of the interview was to identify how teachers perceived the issue of eating disorders. In order to answer this extremely broad question, it had to be broken down to sub-questions that matched the objectives of the quantitative research study. The specific sub-questions were defined as follows:

- What in your opinion is the cause of eating disorders?
- Can the onset of eating disorders be influenced by the school or the teacher?
- How does your school implement the prevention of eating disorders?
- What is in your opinion the best prevention of eating disorders?
- What procedure is in place in your school in the case of suspected eating disorders in your pupils?

Other sub-questions and their interpretations are described on the following pages.

5/2 Methodology of the Complementary Research

The sample included 10 randomly selected teachers from all of the regions where the quantitative research study was performed. All of the respondents were women aged 31–58 years old with teaching experience ranging from 3 to 32 years. All of the respondents taught Health education or an equivalent subject (Family education, Healthy lifestyle education). Eight of the teachers had not completed a Health education course and therefore were not qualified. Two of the respondents were qualified (one had completed a Health education course, the other one a Family education course). The questions were not sent to the respondents in advance. They had been offered this option but none of the respondents used it. The content of the interview was recorded and then transcribed into an electronic form. The responses were transcribed in the original language and therefore include non-standard language and colloquial expressions. At first, the researchers established a friendly relationship with the respondents using contact questions the purpose of which is according to (Hendl, 2005; Miovský, 2010) to tune in the respondents at the beginning of the interview. Then the researchers asked about the respondents' age, length of teaching experience, qualification, school where they taught, and subjects they taught. In order to increase validity, the interviews also included control questions in which the formulations were changed and the responses were compared. In the interpretation of the results these questions were summarized in a single question.

5/3 Results of the Complementary Research Study

Not all of the responses are stated below. Identical responses were categorized by open encoding and commented on without verbatim transcriptions. The text below specifies the questions and responses.

Question: Are you happy with your job?

In their answers, all of the respondents agreed. They like their job, they mostly gave a one-word response "Yes"; sometimes they mentioned their dissatisfaction with the system of education: "I like my job but I'm not happy with the education system, I think it's constrained and half-baked." The respondents with shorter teaching experience expanded more on the ideals about their profession:

> It's been my dream since childhood, but I didn't know that in addition to teaching I'd have to keep discipline and address the students' endless disrupting. Furthermore, the class teacher has a lot of administration and has to teach not only the students but often their parents.

Question: Do you think prevention is important in elementary school?

All of the teachers agreed and gave an affirmative answer. Some of the respondents gave a more detailed answer: "I believe it is very important and should be more intensive." The following response is similar: "Yes, especially in lower secondary school, parents don't really inform their children about the risks, but children need to know what these hazards can do to them (drugs, smoking, eating disorders)." It should be mentioned that all of the respondents agreed that the family rather failed in primary prevention and that "it's up to the school to fix where the family had failed".

Question: What do you think about the implementation of prevention in your school?

All of the teachers assessed the implementation of preventive measures as good or very good: "The school has a minimum prevention programme in place, so in every subject you focus on prevention of a pathological phenomenon. As a school I think we're trying to do our best, we even offer a great variety of clubs." In each school the system of prevention is different:

> I've been here for six years and I've taught Health education since the beginning. I can't say anything about prevention before that but now I think it's sufficient. In my lessons I focus on the prevention of psychopathological phenomena (drugs, smoking). You can also include eating disorders, and I have done this since the beginning because one of my classmates at college had an eating disorder, I have also seen it here as a teacher.

One of the teachers had a different opinion:

> I believe there are reserves, I think there should be more lectures on prevention, but unfortunately the school can't afford them due to financial reasons. The students like sessions with external lecturers, especially if they include case reports and illustrations from practice.

Question: Are you pupils informed about the risks?

The awareness of risks differs between schools but all of the teachers gave an affirmative answer: "In lessons we also try to use the media (TV, radio) to see

what's new and we discuss these things." In the responses, the media were also mentioned from a different perspective: "They are informed but often they have a misinterpreted picture because they usually search for information on the internet and use unverified web portals or make conclusions from what they see on TV." Also in this question most of the teachers gave a one-word affirmative response. One of the teachers was very specific and answered with a list of risks, which in fact was the subject of the next question: "I don't know which specific risks you have in mind. But as I said already, they are aware of smoking, drugs, eating disorders, bullying, addictions."

Question: Which specific risks are your pupils informed about and how?

Most of the responses included drugs, bullying, and smoking: "Bullying and drugs – by means of specialized lectures delivered by external professional or our prevention methodologist." Only two of the teachers mentioned eating disorders as a risk. The way that pupils are informed is obvious – mostly they are informed by the teacher. Sporadically, this information was presented by external lecturers and as part of prevention programmes. Consistently with Čech (2005a), most teachers seem to have the deep-rooted belief that prevention is mere awareness. However, according to many authors (for example Čech, 2005b, 2012; Krch, 2005; Papežová, 2010; Procházková, 2011), this strategy is not a preventive measure.

Question: Do your pupils have a chance to obtain some information about the risks outside classes?

The responses mostly included sources such as notice boards; a few of the respondents mentioned leaflets:

> Yes, I regularly put up-to-date information on notice boards. And also organizations that people can turn to. The most important for the pupils is anonymity. Sometimes it is enough to talk about the problem, ask questions that they are concerned about and that they don't know the answers to. But they don't want to say their name.

The responses suggest that only one school provides information about the risks through independent or group project work: "When they work individually on various projects they can find information on the internet or in the library close to our school. I try to include various talks in lessons."

Question: Does your school organize lectures by external professionals? What are the topics and in which grades?

Regarding the focus of the monograph, the text below does not describe all of the lectures mentioned by the respondents. The purpose of the questions was to find out whether the prevention of eating disorders was generally supported.

The issue of eating disorders was marginally mentioned by one of the respondents: "There are in place – bullying, drugs, eating disorders prevention – but this area is insufficient." Funding problems were mentioned by more than half of the respondents:

> Mostly there's a problem with funding, now we have many projects and people expect everything to be free of charge. When a programme is paid, especially children in lower secondary school stay at home and their mum excuses their absence… parents think that their children don't need this or perhaps really do count the pennies.

Only one of the teachers made a detailed comment on the prevention of eating disorders: "Since I've been here, for the past three years, we've had lectures by the Anabell Centre, they are located here in Brno and focus on eating disorders. We've had some problems with eating disorders here in our school."

Question: What do you think is the most serious risk in adolescence?

According to the respondents, the most serious risks included the following: computer addiction, smoking, alcohol, marijuana, cyber bullying, substance abuse, and social networks – in this order. One of the teachers mentioned the mass media in the context of eating disorders:

> Presenting the ideal of beauty on TV, in magazines, and the need to compare oneself. I believe that one of the risks is the availability of a vast amount of information which is not always reliable and professional, and children take it for granted.

One of the respondents also mentioned the issue of eating disorders: "Drugs, well addictions in general, mainly alcohol and marijuana, and also those disorders (= eating disorders[6])".

6 Note by the author of the monograph.

Question: Do you think that your school or teachers may be co-responsible for the development of some risk phenomena?

Most of the respondents gave a negative answer to this question. One of the teachers admitted that teachers may be partly responsible for the development of risk phenomena: "I hope not. But the teacher should set the standard, so when pupils meet a teacher who doesn't practice what he preaches, they might adopt this attitude as a positive fact."[7] Two of the respondents were of an opposite opinion compared with the rest of the teachers: "I'm convinced about that. The personality of the teacher is very much involved." The other respondent replied: "Well, it depends. It depends on what we're talking about. From the experience I've had in this school I believe so. About the eating disorders. This was a girl who was a little stout."[8]

The following questions focus of the issue of eating disorders, prevention of these disorders, teachers' attitudes to this issue, and teachers' experience with pupils with eating disorders. The interview method was selected in order to point out that although the issue of eating disorders is rather specific, the teachers and their attitudes are very powerful in influencing the pupils. Especially when the teacher meets a pupil with an eating disorder, the teacher's attitudes are of crucial importance, which was also confirmed during the interview.

Question: What in your opinion is the cause of eating disorders?

This question was asked in order to find out whether the teachers who are responsible for the prevention of this issue knew what they should avoid in the context of appropriate prevention strategies and especially whether they knew what could be the cause of this disorder.

Two of the respondents were not fully aware of the causes: "Irregular meals, loss of appetite, pickiness. Children in the dining room don't eat soup or vegetables." The other response was not accurate either: "Social networks will ruin children." If teachers are unaware of the causes of risk behaviour, it is impossible for them to carry out prevention, they will not have a positive attitude to this issue and they will be unable to influence their pupils in a positive way. The remaining eight responses were more accurate. Two of the respondents mentioned a desire

7 After this response the respondent was asked to provide more details. She mentioned the teachers smoking in areas accessible by the pupils (for example in front of the school).

8 Here the respondent was asked not to describe the case any further because this was going to be discussed later.

for perfection and failure to cope with physical changes in puberty. Four of the teachers agreed that this could be caused by absent communication in the family, absence of joint meals, suppressing emotions and placing excessive demands on the girl or the boy by their parents, which may of course be one of the bio-psycho-social factors as described in the theoretical part of the monograph. The remaining three respondents had a clear idea of the causes including the school environment: "Incorrect models, retouched models, Facebook, harsh comments by classmates and sometimes PE teachers, internet, advice and instructions on how to quickly lose weight by vomiting, etc." The second response was as follows:

> This may differ. Television and models, home problems at home or problems at school. If a girl does not match the 90-60-90 proportions, she's considered inferior. I also see it here in our school, girls care too much about themselves and they don't go out without makeup and they do exercises or sports to be as slim as possible, they discuss various diets all the time. Or there are girls who are overweight or obese. I think there's nothing in between. These are extremes on both sides.

In the third answer the respondent mentioned a specific case: "The media. We have a girl with anorexia nervosa this year, she lost 17 kilos in three months. Her mum believes that everything is all right and thinks that she has everything under control."

Question: Can the onset of eating disorders be influenced by the school or the teacher?

The responses to this question considerably differed. On the one hand, the respondents were convinced that the school and the teachers could not influence the development of eating disorders, but their opinions were not related to eating disorders being influenced by the teacher:

> No, today, when you tell a child 'Eat your meal' (roast chicken, potato mash), they reply 'I've paid for that, it's none of your business'. Earlier, children had to sit until they had eaten at least something. Today, whatever they have on the plate, they wait for me to turn around and quickly throw it away. I don't know what their parents give them at home.

The following reply admitted a degree of teacher's participation:

> No, but you know, they can be the final nail in the coffin. By suggesting the child that he/she will fail the teacher may be one of the factors but probably not this thing alone. It's mostly school failure combined with something else, but rarely school failure alone. When the family is functional, school failure is no big deal, but when the family does not work and neither does the school or friends, the teacher will not be the main cause but may contribute.[9]

9 The responses are authentic and have not been modified in any way.

Despite her negative response, the following teacher was optimistic about prevention:

> I'm afraid this is so much subjective and if it's hidden somewhere in the person it will simply happen. But I'm not losing my head, I'm trying to see the positive side of the prevention of eating disorders, otherwise I wouldn't be able to teach.

One of the responses was neutral: "Partly I think, but only partly. Through prevention (lectures) or communication with the girl who shows warning signs. I think the teacher doesn't trigger the disorder."

The majority of the responses to this question were not positive, but there were a few:

> Hopefully yes, I mean in terms of limiting the onset of eating disorders, a lot of girls are really obese, to advise them how to stop gaining weight, how to lose weight in a healthy way, teach them to like themselves as they are, explain the boys that it's all right if girls become a bit round in puberty, and that it's because of hormones and not that they would eat like horses all the time.

There were two definitely positive responses: "Yes, the teacher definitely, either by prevention or by inviting a professional, or perhaps by organizing excursions to a centre that focuses on this issue." The other response was as follows:

> Maybe yes, but we can't be those who watch over them. The disorders always have a cause somewhere, there are usually more causes, and until they settle it there[10] we can't do much really. But I believe the supervision that we teachers do is more important than that of parents'... This is unbelievable how parents are naive, they don't understand it.

Question: How does your school implement the prevention of eating disorders?

All of the respondents suggested that the prevention was implemented in Health education or in an equivalent subject. Some of the respondents were more specific and again mentioned the funding issue as in the previous question:

> In health education in grade six and seven, in nutrition education, in biology in grade eight when we go through the digestive system, at least one lesson is devoted to eating disorders. Isabelle Caro case report. Notice boards with information about Anabell, I know they organize talks but unfortunately they're paid and half of the children won't come to save 30 crowns for crisps...

10 Meant in their minds. The respondent pointed to her head.

One of the teachers mentioned lectures given by external professionals: "I think I've already answered in the previous questions. I tell my pupils in grade seven and again in grade eight. If our school has the money or the pupils are willing to pay, we arrange for Anabell lectures."

Most preventive activities are implemented in grade seven once a year. This prevention is insufficient because the occurrence of eating disorders has been confirmed in grade seven (Krch, 2005) and the purpose of prevention is to eliminate these negative consequences. One of the respondents answered with a question: "People talk about it a lot and children watch each other. When we send a signal home that something is wrong, they are really alarmed. We have contacted professionals and asked for help, but what can you do it they're not interested?" The primary prevention of eating disorders should be implemented when pupils start lower secondary school at the latest. Mere provision of information is not sufficient, discussions with children are desirable, they are interested in case reports of people who have suffered an eating disorder. Pupils' attention can be caught for example by an e-learning application or a document that explains the issue in detail (Procházková, 2011).

Question: Can pupils obtain some information about eating disorders outside classes?

Most of the information is shown on notice boards. Two of the respondents mentioned the internet and websites: "The internet, girls are interested." The other answer was as follows: "Leaflets on notice boards, searching on the internet." One of the respondents mentioned books: "I know especially from girls that they know about it from books or girls' magazines." Projects are also a good source of information." The notice board, or the project on healthy lifestyle which was implemented in lower secondary school some time ago."

Question: What do you personally think about the issue of eating disorders?

From the formulation of the question it was clear that the responses would greatly vary. Two of the respondents perceived the issue as highly topical. Another two respondents suggested that they did not have sufficient experience due to their short-term experience and did not provide any details. One of the respondents did not answer: "I haven't encountered a serious case, most of the risk behaviour in our school falls into different categories." The remaining responses varied and were extremely difficult to categorize. Therefore, they

are provided in their entirety: "Very dangerous, and the danger is increasing. I think that eating disorders are frequent especially in lower secondary school." Another response was as follows:

> The problem is in the head, they can't do anything without professional help. I think mostly it's the problem of the family, not the individual. In puberty, when these children live at home, it's the problem of the family. When this happens when they're 21 or 22 and they're away from home, it can also be the problem of the family, but they make their own living, while in the case of children it's definitely the problem of the family. And it's always because something doesn't work in the family and that the child calls for help in this way.

Two of the respondents believed that the issue of eating disorders was very serious:

> I personally think it's very serious. As I have already mentioned, I've met this problem several times in my life. At college, we had two girls with an eating disorder. And there were only ten of us in the group. One of them had anorexia, the other one bulimia. Neither of them confessed in public but after five years with them you could tell. And that's why I also believe the school is an important institution not only to inform but also to help if parents can't.

Question: What in your opinion is the best prevention of eating disorders? Do you have enough materials to teach about eating disorders?

Not all of the answers responded directly to the question but still they were recorded during the interviews:

> Eat regularly, but children don't eat their lunch at school, it's too expensive. Children don't have their breakfast, make their snacks on their own, get pocket money and buy something in the supermarket (sandwich, crisps, two litres of coke) and that's how their day begins. When I ask them whether it's from mum they say that mum was still in bed. This would have never happened back at home when I was preparing my kids for school. Today in most families parents are lazy, children are left on their own, they buy whatever food they like, in the morning they eat all sorts of things, on the ground floor there are vending machines for drinks and snacks, they buy these with their pocket money, they're not hungry at lunchtime so they don't eat, or when there's a family with three children, one lunch is 35 crowns, this means 100 crowns a day, so children eat at home, they open the fridge and put something in the microwave, but there's no control over what they eat.

The remaining responses were categorized; three of the respondents believed that the best prevention of eating disorders was the following:

> Healthy self-confidence, good models in the family and society, understanding that quality of life is very little related to body weight. Girls must understand that they cannot compare themselves to their friends in all aspects and that a friend who is 2 kilos lighter is maybe shorter or her breasts haven't grown yet.

Four of the teachers mentioned a specific story as the best prevention of the issue. Previous studies conducted by the authors of the present monograph (Matyášová et al., 2013; Procházková, 2012; Procházková et al., 2013; Procházková & Kostihová, 2013) suggest that both elementary and secondary school students believe that a very important aspect in the primary prevention of this issue is discussing a specific story (case report). According to two of the respondents, the best prevention is the family and open communication in the family:

> The family – open communication, ability to show emotions, sincerity in the family, focus on one's own family, not comparing oneself to the environment and especially increasing healthy self-confidence, praising, etc., all this contributes to the development of a healthy personality.

Six of the respondents mentioned a lack of appropriate teaching materials related to the prevention of eating disorders: "There's never enough suitable materials. Today, children want to have interactive teaching, they're not interested in sitting and listening." Or: "Good materials on eating disorders are always useful, I could use some case reports or videos that I could show to my students." One of the respondents knew the e-learning application prepared by the author of the present monograph:

> Some time ago, I came across an e-learning application on this issue and I have used it in classes since then, there's a video, case reports and worksheets for pupils. If all the themes were processed in this way, I would save me a lot of time on preparation, and most importantly, children like this, it's fun for them.

Question: What procedure is in place in your school in the case of suspected eating disorders in your pupils?

Informing the parents through the class teacher was mentioned by three of the respondents. Communication of the class teacher or prevention methodologist with the girl was mentioned twice. One of the respondents suggested the following:

> Ordering a primary prevention lecture, communication with the lecturer about the fact that there is a girl with symptoms (the lecture should be adapted accordingly), here the children receive leaflets and information including contacts (the first possibility for the girl to seek help).

Most of the responses were similar: "A conversation with the child, a group discussion in the class, trying to find out what the children know, then the methodologist or class teacher, discussion with parents, and then contacting

professionals." The Anabell Centre which focuses on primary prevention of eating disorders was also mentioned in the responses:

> A meeting of the school counselling centre is called, the class teacher or psychologist talk to the girl to find out the severity of the situation, we call her parents (mother), recommend a visit to the general practitioner, offer specialist help, recommend the Anabell Centre, etc.

Question: Have you met a pupil with an eating disorder?

The following replies were suggested by four of the respondents who had indicated an affirmative answer.

Question: How old was she?

In three cases the girls were 13 years old, the fourth girl was 14. All four girls were in grade seven.

Question: How did you recognize the disease? Or did the girl entrust herself to you?

Two of the teachers noticed a considerable weight loss after summer holidays, this is usually the first thing to be noticed. One of the girls confided her problems: "She brought this up herself, she looked normally, I wouldn't have thought she had food problems." The last respondent addressed the girl: "I didn't try to diagnose the disease, I told the girl that I noticed her weight loss and asked whether something was wrong and whether I could help. I tried to be sensitive to give the girl space for confiding."

Question: How did the situation begin and how did it continue?

The factors that predispose individuals to eating disorders were mentioned in the theoretical part and also in the responses:

> She was an obese girl, her classmates laughed at her, her parents were watching her food portions, she was on a diet, did a lot of sport. All of this resulted in a considerable weight loss – 15 kilos in three months – and losing weight continued. Then her parents contacted me. The girl was on therapy and her parents kept me informed.

Many cases of eating disorders involve the desire for perfection and slimness: "The desire for perfection, the class teacher informed the parents, and then together with the girls they visited the Anabell Centre." In one case the girls contacted the class teacher:

> The girl came to me after classes (not because I'm the prevention methodologist but rather because we had spoken about this in health education and she trusts me). She said she didn't eat normal meals (in the school canteen or dinner at home) and that her food was irregular – a bar, crisps, fruit. She said she didn't like normal meals because she thought this would make her fat. I explained to her that she would definitely gain less weight after a soup than a Snickers bar and coke. She looked normal and I calculated her BMI. She was in the average zone (20.5). She was unable to show me where exactly she was fat. She only said she had put on two kilos in a month. We spoke about weight changes during the menstrual cycle, about the yo-yo effect… I recommended her regular meals and adequate physical activity. No one even told her she was fat, she only compared herself to the classmates.

In one of the cases, the probable cause was a death in the family: "The death of the father, who had been responsible for everything. Three women were left and each responded differently."

Question: Did you inform the parents? How? Was the girl present?

In one of the cases the parents informed the school and asked the teacher to help by supervising the girl. In two of the cases, the conversation between the teacher and the parents took place without the girl's presence: "She was not present, we spoke to the parents alone." According to one of the responses the girl told her mother: "She told her mother, her parents are divorced. Then the mother and the girl spoke to the class teacher who was at the same time the educational counsellor." Neither of the respondents commented on the course of the conversation.

Question: How did the parents respond?

In two of the cases, the parents' reaction was similar: "They were grateful, they had been unable to handle the situation themselves and immediately started to cooperate." The other response: "Despair, fear, cooperation." The following two responses were quite different:

> They trivialize it until somebody's life is at risk. They don't know anything, they're like the children, if they've never experienced it they don't see the consequences, they don't see where the child is heading, they're not aware of the seriousness. Today, raising awareness is insufficient, in our generation it wasn't so common.

Another response: "They cooperate only when it's alarming. They don't come to group therapy, they leave the child alone to fight it, they expect miracles from teachers. They tell you that they spend most of their time in school so what."

Question: Was there any subsequent contact between the school and the family?

In two of the cases, cooperation between the family and the school followed, but the school was rather a supervisory authority than a partner. In one case, the mother was offered help by the school: "The school was helpful and the mother and the girls had an interview with the school psychologist, plus they received contact details of counselling centres." According to one of the responses, the family did not want to cooperate and the problem was addressed by the school and the teacher: "Yes, we had the mother here about 3–4 times, she promised to keep an eye on the girl, but she only promised to get rid of us. Sometimes the family believed it will somehow settle down itself."

Question: Did the parents have specific requirements towards the school or the teacher?

In two of the cases, the parents asked the teacher to check whether the girl eats her meals: "Checking on the girl, informing the parents how much the girl has eaten or how she behaves among her classmates." The following answer suggests an effort to conceal the problem by the parents: "The parents didn't have any requirements just to make an impression that everything is okay and so that nobody knows." Only one of the answers to this question was negative.

Question: Have there been any changes in the girls' position among classmates after her return from treatment or in the course of treatment?

As in the previous question, there was one negative response: "No, the classmates didn't know." A completely opposite response was suggested by another respondent: "Definitely, but this can simply result from the fact that she'd been away for three months. She's lost contact with the class and now it's difficult to continue." One of the responses suggested the girl's hostility: "The girl began to be hostile, she avoided her classmates, now it's better but in September the girl does to grammar school..." One of the teachers could not answer the question on the girl's position among her classmates because she had not been on treatment.

5/3/1 Summary of the Results of the Complementary Research

In order to find out whether the teachers have encountered the issue of eating disorders and how the prevention of this issue is implemented, the authors used a complementary research method (semi-structured interview) to acquire additional information following the quantitative research study. The content of the interview was recorded and then transcribed into an electronic form. At first, the researchers established a friendly relationship with the respondents using contact questions the purpose of which was to tune in the respondents at the beginning of the interview. Then the researchers asked about the respondents' age, length of teaching experience, qualification, and the subjects they taught. In order to increase validity, the interviews also included control questions in which the formulations were changed and the responses were compared. In the interpretation of the results these questions were summarized in a single question. All of the respondents were aged 31–58 years old with teaching experience ranging from 3 to 32 years. The respondents agreed on the importance of the prevention of eating disorders. They mentioned the role of the family as the primary preventive social group, but at the same time they were aware of the significance of the school in providing preventive measures where the family fails to do so. The responses also suggested that teachers may be partly involved in the onset or development of this issue, albeit unconsciously. Four of the teachers had experience with eating disorders in their pupils. In two of the four cases the situation was resolved in cooperation between the family and the school.

6 / Discussion

The objective of the research study was to identify the attitudes of elementary school teachers to the issue of eating disorders. In addition to the main objective, the study examined the effect of demographic variables including gender, qualification, age, and length of teaching experience. The purpose of the qualitative research study in the form of the semi-structured interview was to analyse how teachers perceived the issue of eating disorders and whether they had encountered this issue in their career.

The research instrument was tested for reliability and validity, which is a usual method of determining its characteristics (Hendl, 2004). The reliability was identified by means of Cronbach's alpha. In of the all nine indicators, the value ranged from $\alpha = 0.67$ to 0.89, which suggests a high degree of reliability of the research instrument and the structure of the indicators. Another method used to verify the construct validity was the factor analysis according to McDonald (1991). Based on the factor analysis, a total of nine conceptual indicators with an 11-point scale were identified which show a high degree of factor stability and purity. The remaining indicators showed insufficient purity and were removed from the research. A similar approach was used in studies aimed at different issues such as for example studies by Chráska (1996, 2003a, 2003b) who investigated the attitudes to the teaching profession in the context of undergraduate teacher training, or Chrásková (2012) who analysed students' attitudes as a significant part of professional teacher training. Similarly, Švandová (2012) and Švandová and Kubiatko (2012) used the same statistical approach to analyse the factors that affect the attitudes of grammar school students to the chemistry subject.

The research hypotheses were assessed at the end of the quantitative research study; the text below provides the answers to the research questions.

The first research question focused on the effect of gender on the attitudes to the issue of eating disorders. A difference between the attitudes of female teachers and male teachers was confirmed in six out of the nine indicators. Statistically

significant differences were observed between women's and men's attitudes. Eating disorders are more common among girls and women, and therefore, more positive attitudes to this issue can be anticipated among women. This was also confirmed by the results of the present research study.

In the second research question, the authors of the present study focused on the differences between the attitudes of teachers qualified and unqualified in Health education. In seven out of the nine concepts, more positive attitudes were observed in unqualified teachers. In the remaining two indicators the perception of qualified and unqualified teachers was almost identical. Health education is a relatively new discipline in Czech universities. The average length of teaching experience of qualified teachers was seven years only because the group of qualified teachers included those who were qualified in Family education, which had preceded Health education and was based on a similar concept. According to the results of the present study, teachers' qualification did not have a clear effect on their attitudes to eating disorders.

The purpose of the third research question was to investigate whether the attitudes were influenced by the length of teaching experience. The most positive attitudes in six out of the nine indicators were reported by respondents with experience of 36 to 40 years. The results were categorized by five years of experience. It would be interesting to categorize the results by for example 10 years of experience, but the results would probably suggest similar conclusions and the effect on teachers' attitudes to eating disorders by length of their teaching experience would not be confirmed.

The purpose of the fourth research question was to identify the effect of age and teachers' attitudes to eating disorders. A positive teachers' attitude to the issue of eating disorders by respondents' age was not observed in any of the indicators. It is possible that most teachers with longer teaching experience succumb to occupational stereotype and it is difficult for them to cope with new teaching procedures. The results of the present study including the interviews suggest that many teachers lack further (extension) theoretical study and the ability to absorb the process of transformation of the system of education. It is certainly advisable to respect the individuality of the teacher and analyse their life stories. This could bring interesting results and a deeper understanding of the issue of teachers' attitudes to eating disorders. In the present study the effect on the attitudes to the issue in question has not been confirmed.

Similar research was addressed by several papers. In her bachelor's diploma thesis, Skrbková (2016) examined secondary school teachers' attitudes to the issue of eating disorders. Data collection was performed by means of electronic structured questionnaires. As a complementary method the author used two semi-structured interviews with teachers and one interview with an adolescent patient with an eating disorder. The questionnaires were completed by a total of 118 teachers. Only 28 (24%) respondents analyse this issue with their pupils in class, while 68% do not address this issue at all. Most teachers (63%) believe that they know what to do if they notice an eating disorder in their pupils. Only 19% of respondents believe that teachers have the right competences in addressing their pupils' eating disorders. Teachers considered the severity of eating disorders to be moderate or high. Respondents under 34 years of age were most interested in increasing their knowledge of the issue. Although the study addressed a similar issue, a comparison with the results of the present study is impossible because the research method was not the semantic differential.

In her master's diploma thesis entitled *Teacher's Attitudes to Eating Disorders* Reichlová (2017) performed a research study by means of semi-structured interviews involving a total of 10 respondents. The results showed that teachers' beliefs concerning eating disorders were mainly based on specific concepts including a set of mental and physical difficulties. They believed that the main risk factor was the family environment. Teachers believed that their role in the treatment of eating disorders was important, although most of them were not involved in the prevention of eating disorders. Most teachers believed that eating disorders were based on mental suffering of the patients, not physical, which was also confirmed by the results of the present research.

The authors of the present study also identified some international research studies. These studies did not focus on teachers' attitudes, but they related to the issue of eating disorders.

Bullivant et al. (2019) published a study on the knowledge and opinions concerning obesity and eating disorders among the key actors. The research sample comprised 62 Australian participants, including six teachers and other staff (including health care professionals, personal coaches, social workers). According to the researchers, teachers did not have sufficient knowledge about the issue of eating disorders (especially concerning the types of eating disorders and patients' behaviour) and at the same considered eating disorders a less serious public health issue compared with obesity, which is disproved by the

authors of the present study as well as top professionals on this issue from the Czech Republic or abroad (see chapter *Current Research on Teachers' Attitudes to Eating Disorders).*

In their study entitled *Spotting and Supporting Eating Disorders in School: Recommendations from School Staff* Knightsmith et al. (2013) addressed the process of recognizing eating disorders in schools and supporting students with eating disorders by teachers. The participants (N = 63) in the research study were employees from British schools. The research was performed by means of focus groups and semi-structured interviews. Most of the participants were informed about the issue of eating disorders but complained about insufficient awareness among their colleagues. Some identified eating disorders as children's whims or something that would automatically disappear. According to the respondents, it is virtually unacceptable in some schools to talk to colleagues about pupils' eating disorders or other mental health problems. In schools where the staff had an opposite approach and discussed the issue the identification of eating disorders was faster and the patients received better support. The respondents felt very insecure in teaching about eating disorders saying that they had insufficient knowledge and that they were worried that their presentation might have the opposite effect on their students. Based on their study, the authors defined a total of five key themes: a number of employees do not have the basic knowledge and sufficient understanding of the issue of eating disorders; eating disorders are a taboo in staff rooms; school staff do not like to discuss the issue of eating disorders with their pupils; to establish a positive teacher-parent relationship, adequate support is required; teachers would appreciate practical advice on how to support their pupils during their recovery. Particularly the last two items match the results of the present study. Teachers would appreciate advice from experts and the opportunity to consult the approach to a pupil with an eating disorder with a professional.

Although there are authors who examine teachers' attitudes to various issues, there are no available studies on teachers' attitudes to the issue of eating disorders using the semantic differential in the Czech Republic or abroad.

6/1 Limitations of the Research Study

According to the guidelines on research ethics, the author should consider the circumstances of the research, which are sometimes controversial and limit the extent and quality of the results. The authors are aware of the fact that the present monograph has certain limitations that need to be considered. One of them is the application of the research tool only in the Czech Republic, specifically in four regions. The application of the research tool in other regions or other countries may bring different results which may cause changes in the names of the indicators, their number, and content in order to make the research tool applicable in an environment other than the Czech Republic.

Another limitation that could affect the results of the research is the application of the research methods. The research approaches applied in the present study were the semantic differential and semi-structured interview. A research on the attitudes to the issue of eating disorders may also be performed by different methods. In addition to the semantic differential, attitudes are presently analysed for example by means of Likert scales (Likert, 1932; Rod, 2012). Redesigning the indicators into a form that would be adequate for the use of Likert scales and their application could confirm or disprove the results of the research. The authors believe and the results of the paper confirm that the use of the interview that would be applied as a stand-alone research method could be a suitable research instrument regarding the specification of the theme.

Further limitations relate to the non-inclusion of other categorical variables such as the school where the respondents teach (rural vs. urban), or a comparison of the differences between the regions which may to a certain extent affect the attitudes of teachers to the prevention of eating disorders. It would certainly be interesting to analyse whether teachers who have addressed eating disorders in their pupils have more positive attitudes to the prevention of eating disorders compared with those who have not addressed this issue. Further possibilities for future research are described in the final part of the monograph.

Conclusion

The objective of the research study was to identify the attitudes of teachers in lower secondary schools to the issue of eating disorders. The sub-objectives focused on the effect of gender, age, qualification, and length of teaching experience on the development of the respondents' attitudes. The complementary method was the semi-structured interview in order to find out whether the teachers had encountered the issue of eating disorders, whether they considered the prevention of this issue significant, and especially how they implemented this prevention.

The results suggested more positive attitudes among unqualified teachers, although the results were not always significant. Those teachers who are not qualified in Health education or Family education perceive the prevention of eating disorders more positively than teachers qualified in this field of study.

As far as attitudes by gender are concerned, more positive attitudes to the prevention of eating disorders were observed in women. A gender-based comparison revealed more positive attitudes of women in six out of the nine indicators. It was observed that increasing age of the respondents was not associated with more positive attitudes to the issue. The length of teaching experience had no effect on the attitudes to the issue of eating disorders. Positive attitudes to this issue were observed also during the semi-structured interviews, which was a complementary research method. The respondents were aware of the importance of the issue and the need for preventive measures. In their professional career, four out of the ten respondents have encountered a girl with an eating disorder and tried to resolve the situation.

Teachers of Health education or an equivalent subject have a formal and informal access to a large number of young people in an environment that stimulates discussion and provides space for education focused a healthy lifestyle, positive relationship of students to their own body, prevention of negative effects of the media and advertisements, and health risks associated

with eating disorders. Teachers' positive attitudes to the issue of eating disorders are important because these teachers also have the opportunity to strengthen the position of prevention programmes in their schools.

Contribution of the Research Study

The contribution of the research study described in the monograph is the identification of the attitudes to the issue of eating disorders among teachers of Health education in lower secondary schools or its equivalent (for example Family education). This approach could become more positive if teachers receive the teaching materials that they desire (videos, case reports, e-learning). Another contribution is the use and verification of the research instrument to examine teachers' attitudes to the issue of eating disorders. This research tool may also be used among teachers with a different specialization, especially among prevention methodologist or school psychologists and the results can then be compared with the results of the present study. These statistical methods can inspire other researchers who address similar issues. Another beneficial aspect is the application of the statistical methods to reveal the differences in the variables.

Suggestions for Further Research

It would certainly be desirable to perform a research study involving all of the regions of the Czech Republic in order to check the reliability of the research instrument. Another option would be to carry out a repeated comparative research study, compare the attitudes of teachers from the different regions, and identify the causes of the differences in their attitudes to the issue of eating disorders.

Research could also focus on the attitudes of teachers to the issue of eating disorders using the Likert scale. The items of the present study could be converted into the form of a questionnaire (for example a five-point Likert scale). Then it would be interesting to see whether this method brings the same results as the semantic differential. A complementary research method to the questionnaire approach could be for example the unfinished sentences method.

In addition to these variables, it could also be interesting to examine other categorical variables that could influence the attitudes of teachers. One of the significant variables is the teacher's effect on changes in attitudes. At the same time, it would be interesting to examine the teaching methods applied in

the prevention of eating disorders. Last but not least, a potential research area is the identification and comparison of teaching styles, which could bring novel results concerning this issue.

A longitudinal research study focused on changes in attitudes would require a long-term involvement of a researcher. These changes could be monitored for example for a period of five years in a teacher after the beginning of the teaching career of for the same period of time in an experienced teacher.

Last but not least, it could be interesting to analyse the effect of the teacher as the promoter of programmes aimed at the prevention of eating disorders. So far, this area has been given little attention.

It would surely be interesting to examine the attitudes to the issue using qualitative research methods.

Educational Implications

Teachers' positive attitudes may be increased by becoming aware of the significance of the prevention of eating disorders. This can be achieved by means of organizations involved in this issue (for example the Anabell Centre). In addition to other things, this association organizes excursions for pupils and students where they are shown how the services work and how people with eating disorders are treated.

Teachers' positive attitudes to the issue of eating disorders can be developed by achieving a deeper insight, particularly through teachers' participation in further education (training courses, seminars, etc.) If a teacher is unable to attend these courses in person there are other possibilities (for example an e-learning application developed by the author of the present monograph). This application is also useful in classes. The author of the monograph is also involved in the development of study materials (professional publications and e-learning materials) for elementary and secondary school teachers and is involved in teacher training aimed at eating disorders.

A regular use of teaching aids by the teacher increases the pupils' interest in the learning content and has a preventive function. By linking the topic with situations that may occur in everyday life (for example steps to be taken in case of a friend with a suspected eating disorder) the teacher makes the topic interesting to the pupils. Different kinds of information and communication technology (for example a video showing a girl' testimony of her anorexia nervosa) can be used to present the issue in an interesting way.

Resume

The objective of the present monograph was to identify the attitudes of Health education teachers to the issue of eating disorders. The sub-objectives focused on the effect of gender, qualification, age, and length of teaching experience on the development of the respondents' attitudes. The complementary method was the semi-structured interview which provided additional information to the main body of data acquired by the semantic differential. In the theoretical part the authors defined the concept of eating disorders and the concept of prevention from a general perspective and from the perspective of schools and teachers. The presentation of selected research studies related to the investigation of the attitudes to eating disorders. The final section of the theoretical part included the definition of the attitudes, their components, changes, and measurement.

The empirical part presented the objectives, research questions, hypotheses, research sample, research instrument, and the method of data analysis. The results included graphs and explanations and showed more positive attitudes of teachers who are not qualified in Health education or Family education. As far as gender is concerned, significant differences were identified. Female respondents perceived the issue of eating disorders more positively. With increasing age and longer teaching experience the respondents were increasingly interested in the issue. The Discussion section confirmed or disproved the hypotheses and summarized the results of the research. The contribution of the monograph and proposals for further research were included in the final chapter of the present monograph.

References

Abrams, L. S., & Stormer, C. C. (2002). Sociocultural variations in the body image perceptions of urban adolescent females. *Journal of Youth and Adolescence, 31*, 443–450. https://doi.org/10.1023/A:1020211103936

Allport, G. W. (1967). Attitudes. In M. Fishbein (Ed.), *Readings in attitude theory and measurement* (pp. 3–13). J. Wiley.

Apostolidou, M., & Fontana D. (2003). Teacher attitudes towards health education in Greek-speaking Cyprus schools. *Health Education, 103*(2), 75–82. https://doi.org/10.1108/09654280310467690

Atkinson, L. R. (1995). *Psychologie* (1st ed.). Victoria Publishing.

Babiaková, S., & Kasáčová, B. (2007). Hodnoty v škole a výchova k hodnotám v sociálnom kontexte. In O. Šimoník (Ed.), *Sborník referátů z vědecké konference Hodnoty a výchova* (pp. 118–124). Masaryk University.

Beran, J., Mareš, J., & Ježek, S. (2007). Rezervované postoje učitelů k dalšímu vzdělávání jako jeden z rizikových faktorů kurikulární reformy. *Orbis Scholae, 1*(1), 111–130. https://doi.org/10.14712/23363177.2018.156

Borra, S. T., Kelly, L., Shirreffs, M. B., Neville, K., & Geiger, C. J. (2003). Developing health messages: Qualitative studies with children, parents, and teachers help identify communications opportunities for healthful lifestyles and the prevention of obesity. *Journal of the American Dietetic Association, 103*(6), 721–728. https://doi.org/10.1053/jada.2003.50140

Botta, R. A. (1999). Television images and adolescent girl's body image disturbance. *Journal of Communication, 49*(2), 22–41. New York. https://doi.org/10.1111/j.1460-2466.1999.tb02791.x

Bullivant, B., Denham, A. R., Stephens, C., Olson, R. E., Mitchison, D., Gill, T., Maguire, S., Latner, J. D., Hay, P., Rodgers, B., Stevenson, R. J., Touyz, S., & Mond, J. M. (2019). Elucidating knowledge and beliefs about obesity and eating disorders among key stakeholders: Paving the way for an integrated approach to health promotion. *BMC Public Health, 19*(1681). https://doi.org/10.1186/s12889-019-7971-y

Csémy, L., Krch, F. D., Provazníková, H., Rážová, J., & Sovinová H. (2005). *Životní styl a zdraví českých školáků: z výsledků mezinárodní srovnávací studie Světové zdravotnické organizace The Health Behaviour in School-aged Children (HBSC).* Psychiatrické centrum.

Cronbach, L. J., & Shavelson, R. J. (2004). My current thoughts on coefficient alpha and successor procedures. *Educational and Psychological Measurement, 64*(3), 391–418. https://doi.org/10.1177/0013164404266386

Čáp, J., & Mareš, J. (2007). *Psychologie pro učitele*. Portál.

Čech, T. (2005a). *Protidrogová výchova a její realizace v podmínkách primárního stupně základních škol* [Unpublished master's thesis]. Masaryk University.

Čech, T. (2005b). Primární drogová prevence a protidrogová výchova na školách. In S. Střelec (Ed.), *Studie z teorie a metodiky výchovy II* (pp. 140–152). Masaryk University.

Čech, T. (2012). Prevence. In M. Miovský, T. Adámková, L. Čablová, T. Čech, P. Doležalová, L. Endrödiová, R. Gabrhelík, M. Charvát, L. Jurystová, L. Macková, V. Pavlas Martanová, M. Nevoralová, P. Novák, O. Orosová, L. Skácelová, L. Šťastná, M. Širůčková, M. Štefunková, J. Vacek, & J. Zapletalová, *Výkladový slovník základních pojmů školské prevence rizikového chování* (pp. 107–112).Charles University & Togga.

Derwi, D. E., Sherbiny, N. E., & Atta, A. H. (2011). Exploring Fayoum (Upper Egypt) preparatory school students' and teachers' attitude towards obesity as health risk. *Journal of Public Health and Epidemiology*, 3(9), 401–406. https://doi.org/10.5897/JPHE.9000054

Dixey, R., Sahota, P., Atwal, S., & Turner, A. (2001). "Ha ha, you're fat, we're strong": A qualitative study of boy's and girl's perceptions of fitness, thinness, social pressures and health using focus groups. *Health Education*, *101*(5), 206–216. https://doi.org/10.1108/EUM0000000005644

Eagly, A. H., & Chaiken, S. (1998). Attitude structure and function. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The Handbook of social psychology* (4th ed., pp. 269–322). Oxford University Press.

Edrich, S. (1962). Teacher's attitudes to health education. *Health Education Journal*, *20*(1), 16–21. https://doi.org/10.1177/001789696202000104

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford University Press.

Fialová, I. (2011). Postoje učitelů k edukaci žáků s obezitou na základních školách. In D. Opatřilová, *Vzdělávání žáků se zdravotním postižením a zdravotním znevýhodněním* (pp. 119–130). Masaryk University.

Foster, G. D., Wadden, T. A., Makris, A. P., Davidson, D., Sanderson, R. S., Allison, D. B., & Kessler, A. (2003). Primary care physicians' attitudes about obesity and its treatment. *Obesity Research*, *11*(10), 1168–1177. https://doi.org/10.1038/oby.2003.161

Framework Education Programme for Elementary Education [Rámcový vzdělávací program pro základní vzdělávání]. (2017). Ministry of Education, Youth and Sports. https://www.msmt.cz/file/43792/

Fraňková, S., & Dvořáková-Janů, V. (2003). *Psychologie výživy a sociální aspekty jídla* (1st ed.). Karolinum.

Fraňková, S., Odehnal, J., & Pařízková, J. (2000). *Výživa a vývoj osobnosti dítěte*. HZ Editio.

Gavora, P. (2000). *Úvod do pedagogického výzkumu*. Paido.

Grogan, S. (2000). *Body image* (1st ed.). Grada Publishing.

Harrison, K. (2000). Television viewing, fat stereotyping, body shape standards, and eating disorder symptomatology in grade school children. *Communication Research*, *27*(5), 617–640. https://doi.org/10.1177/009365000027005003

Hartl, P., & Hartlová, H. (2009). *Psychologický slovník*. Portál.

Havel, J., & Filová, H. (Eds.). (2010). *Inkluzivní vzdělávání v primární škole: Inclusive education in primary school* (1st ed.). Paido.

Havlík, R. (2003). Postoje mladých učitelů k vlastní přípravě. In *Sociální a kulturní souvislosti výchovy a vzdělávání: sborník příspěvků z 11. výroční konference České asociace pedagogického výzkumu* (pp. 1–7). Masaryk University. http://capv.cz/images/sborniky/2003/CAPV03_Hav_Posto.pdf

Health Behaviour in School-aged Children. (2019). *HBSC studie*. Health Behaviour in School-aged Children Czech Republic, Palacký University Olomouc. https://hbsc.cz/ostudii/

Helus, Z. (2006). *Sociální psychologie pro pedagogy* (1st ed.). Grada Publishing.

Helus, Z., & Pelikán, J. (1984). *Preferenční postoje učitelů k žákům a jejich vliv na účinnost výchovně-vzdělávacího procesu*. Research Institute of Vocational Education.

Hendl, J. (2004). *Přehled statistických metod zpracování dat* (1st ed.). Portál.

Hendl, J. (2005). *Kvalitativní výzkum: základní metody a aplikace* (1st ed.). Portál.

Hewstone, M., & Stroebe, W. (Eds.). (2006). *Sociální psychologie: moderní učebnice sociální psychologie* (1st ed.). Portál.

Hittner, P. (1997). Dying to be thin. *Better Homes and Gardens*, 75(8), 84–86.

Horáčková, M. (2012). Postoje učitelů k environmentálním tématům: od vymezení pojmů k výzkumnému nástroji. In T. Janík & K. Pešková (Eds.), *Školní vzdělávání: podmínky, kurikulum, aktéři, procesy, výsledky* (pp. 174–187). Masaryk University, Pedagogical Research in Theory and Practice.

Chráska, M. (1996). Spolehlivost a přesnost měření v evaluačních pedagogických výzkumech. In *Sborník referátů ze 4. konference České asociace pedagogického výzkumu* (pp. 27–33). Palacký University Olomouc, Faculty of Education.

Chráska, M. (1997). Jaký vztah k učitelské profesi mají studenti učitelství? In *Sborník referátů z 5. konference České asociace pedagogického výzkumu* (pp. 90–94). University of West Bohemia.

Chráska, M. (2003a). *Metody sběru a statistického vyhodnocování dat v evaluačních pedagogických výzkumech*. Palacký University Olomouc, Faculty of Education, Votobia.

Chráska, M. (2003b). Postoje k učitelské profesi v pregraduální učitelské přípravě. In *Česká asociace pedagogického výzkumu, Sociální a kulturní souvislosti výchovy a vzdělávání: sborník anotací příspěvků účastníků 11. konference České asociace pedagogického výzkumu* (pp. 31–42). Paido. http://www.capv.cz/index.php/cz/2003/47-sborniky-capv/archiv-sborniku/2003/712-postoje-k-ucitelske-profesi-v-pregradualni-ucitelske-priprave

Chrásková, M. (2012). *Postoje studentů a jejich formování jako významná součást profesní přípravy učitelů* [Unpublished doctoral dissertation]. Masaryk University.

Jandourek, J. (2001). *Sociologický slovník* (1st ed.). Portál.

Janoušek, J. (1988). *Sociální psychologie* (1st ed.). SPN.

Janout, V., Kollárová, H., & Němečková, P. (2001). Rizikové faktory u poruch příjmu potravy – průřezová epidemiologická studie. *Česká a slovenská psychiatrie, 97*(7), 350–355.

Kalman, M., Sigmund, E., Sigmundová, D., Hamřík, Z., Beneš, L., Benešová, D., & Csémy, L. (2011). *O zdraví a životním stylu dětí a školáků*. Palacký University Olomouc.

Kansi, J., Wichstrom, L., & Bergman, L. R. (2003). Eating problems and the self-concept: Results based on a representative sample of Norwegian adolescent girls. *Journal of Youth and Adolescence*, *32*(5), 325–335. https://doi.org/10.1023/A:1024917930602

Knightsmith, P., Treasure, J., & Schmidt, U. (2013). Spotting and supporting eating disorders in school: Recommendations from school staff. *Health Education Research*, *28*(6), 1004–1013. https://doi-org.ezproxy.muni.cz/10.1093/her/cyt080

Kocourková, J., Koutek, J., & Lebl, J.(1997). *Mentální anorexie a mentální bulimie v dětství a dospívání* (1st ed.). Galén.

Krech, D., Crutchfield, R. S., & Ballachey, E. L. (1968). *Človek v spoločnosti: základy sociálnej psychológie*. Slovak Academy of Sciences.

Krch, F. D. (2004). Poruchy příjmu potravy – rizikové faktory. *Psychiatrie pro praxi, 2004*(1), 14–16. http://www.solen.cz/pdfs/psy/2004/01/04.pdf

Krch, F. D. (2005). *Poruchy příjmu potravy* (2nd ed.). Grada Publishing.

Krch, F. D. (2007). *Bulimie: jak bojovat s přejídáním*. Grada Publishing.

Krch, F. D. (2010). *Mentální anorexie* (2nd ed.). Portál.

Krch, F. D., & Drábková, H. (1996). Prevalence mentální anorexie a bulimie v populaci české mládeže. *Československá psychiatrie, 92*(4), 237–247.

Krch F. D., Csémy, L., & Drábková, H. (2003). Rizikové jídelní chování a postoje českých adolescentů. *Česká a slovenská psychiatrie, 99*(8), 415–422.

Kubátová, D. (1998). Zdravý životní styl jako součást výchovného procesu. In D. Kubátová, *Primární prevence sociálněpatologických jevů v pedagogické praxi 1* (29–35). University J. E. Purkyně, Ústí nad Labem.

Lazarová, B., & Prokopová, A. (2004). Učitelé a jejich další vzdělávání k některým psychologickým aspektům. *Pedagogika, 54*(3), 261–273.

Lejčková, P. (2006). Primární prevence užívání drog: základní principy a efektivní programy. *Zaostřeno na drogy 1*(4), 1–8.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology, 27*(140), 44–55.

Machová, J., & Kubátová D. (2009). *Výchova ke zdraví*. Grada Publishing.

Marádová, E. (2004). Vývoj nutričního chování dětí a společné stravování. In *Zborník z vedeckej konferencie s medzinárodnou účasťou Výživa a potraviny pre tretie tisicročie* (pp. 23–26). Slovak University of Agriculture in Nitra.

Marádová, E. (2011). K novému pojetí výchovy ke zdravým stravovacím návykům v primární škole. In E. Řehulka (Eds.), *Škola a zdraví 21: výchova a péče o zdraví* (pp. 143–153). Masaryk University.

Matyášová, M., Procházková, L., & Kachlík, P. (2013). Poruchy příjmu potravy aneb fyzický vzhled mládeže jako důležitý aspekt sebepojetí. In E. Řehulka, & J. Reissmannová, *Současné trendy výchovy ke zdraví* (pp. 225–234). Masaryk University.

McDonald, R., P. (1991). *Faktorová analýza a příbuzné metody v psychologii* (1st ed.). Academia.

McLeod, S. A. (2018, May 21). *Attitudes and behavior. Simply Psychology.* http://www.simplypsychology.org/attitudes.html

Miovský, M. (2010). *Kvalitativní přístup a metody v psychologickém výzkumu.* Grada Publishing.

Miovský, M., Skácelová, L., Zapletalová, J., & Novák, P. (Eds.). (2010). *Primární prevence rizikového chování ve školství* (1st ed.). SCAN, Charles University & Togga.

Miovský, M., Adámková, T., Čablová, L., Čech, T., Doležalová, P., Endrödiová, L., Gabrhelík, R., Charvát, M., Jurystová, L., Macková, L., Martanová, V. P., Nevoralová, M., Novák, P., Orosová, O., Skácelová, L., Šťastná, L., Širůčková, M., Štefunková, M., Vacek, J., & Zapletalová, J. (2012). *Výkladový slovník základních pojmů školské prevence rizikového chování* (1st ed.). Charles University & Togga.

Ministry of Education, Youth and Sports. (2013). *Národní strategie primární prevence rizikového chování dětí a mládeže na období 2013–2018*. http://www.msmt.cz/file/28077

Ministry of Education, Youth and Sports. (2019). *Národní strategie primární prevence rizikového chování dětí a mládeže na období 2019–2027*. https://www.msmt.cz/uploads/narodni_strategie_primarni_prevence_2019_27.pdf

Myers-Clack, S. A., & Christopher, S. E. (2001). Effectiveness of a health course at influencing preservice teachers' attitudes toward teaching health. *Journal of School Health*, *71*(9), 462–466. https://doi.org/10.1111/j.1746-1561.2001.tb07327.x

Nakonečný, M. (1997). *Encyklopedie obecné psychologie.* Academia.

Nakonečný M. (1998). *Psychologie osobnosti*. Academia.

Nakonečný M. (2009). *Sociální psychologie* (2nd ed.). Academia.

Nešpor, K., Csémy, L., & Pernicová, H. (1996). *Jak předcházet problémům s návykovými látkami na základních a středních školách: příručka pro pedagogy*. Sportpropag.

Nešpor, K., Csémy, L., & Sovinová, H. (1998). *Programy prevence závislostí a možnosti jejich hodnocení* (1st ed.). National Institute of Public Health CR.

Novák, M. (2010). *Společnost, kultura a poruchy příjmu potravy*. CERM.

O'Dea, J., & Abraham, S. F. (2001). Knowledge, beliefs, attitudes and behaviours related to weight control, eating disorders, and body image in Australian trainee home economics and physical education teachers. *Journal of Nutrition Education*, *33*(6), 332–340. https://doi.org/10.1016/S1499-4046(06)60355-2

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1967). *The measurement of meaning.* University of Illinois Press.

Papežová, H. (2000). *Anorexia nervosa.* Psychiatrické centrum.

Papežová, H. (2003). *Bulimia nervosa.* Psychiatrické centrum.

Papežová, H. (Ed.). (2010). *Spektrum poruch příjmu potravy: interdisciplinární přístup.*Grada Publishing.

Pokorný, V. (2003). *Prevence sociálněpatologických jevů: manuál praxe* (3rd ed.). Ústav psychologického poradenství a diagnostiky.

Polivy, J., & Herman, C. P. (2002). Causes of eating disorders. *Annual Review of Psychology, 53*, 187–213. https://doi.org/10.1146/annurev.psych.53.100901.135103

Power, T. G., Bindler, R. C., & Daratha, K. B. (2009). Obesity prevention in early adolescence: Student, parent, and teacher views. *Journal of School Health*, *80*(1), 13–19. https://doi.org/10.1111/j.1746-1561.2009.00461.x

Procházková, L. (2011a). *V. I. P. e-learning* [European Union project, currently inoperable]. Civic Association Anabell.

Procházková, L. (2011b). *Základní metodika: podpora pedagogům pro výuku v předmětech Člověk a zdraví a Výchova ke zdraví* (1st ed.). Civic Association Anabell.

Procházková, L. (2012). Různé cesty spolupráce rodiny a školy u poruch příjmu potravy. In *Rodina a sociálněpatologické jevy* (pp. 348–355). Gaudeamus.

Procházková, L. (2014). *Postoje učitelů základních škol k prevenci poruch příjmu potravy* [Unpublished doctoral dissertation]. Masaryk University.

Procházková, L. (2018). The attitudes of health education teachers to eating disorders. In M. Krkošková & L. Procházková (Eds.), *Life in Health 2018: Research and practice: Proceedings of the international conference held on 6–7 September 2018* (pp. 115–125). Masaryk University. https://doi.org/10.5817/CZ.MUNI.P210-9178-2018

Procházková, L., & Kostihová, B. (2013). Výživa adolescentů se zaměřením na školní prostředí. In E. Řehulka, & J. Reissmannová, *Současné trendy výchovy ke zdraví* (pp. 193–200). Masaryk University.

Procházková, L., & Sladká Ševčíková, J. (2017). *Poruchy příjmu potravy: odpovědi na otázky, na které jste se báli zeptat* (1st ed.). Pasparta.

Procházková, L., Horká, T., Hruška, T., Krch, F. D., Mucalová, L., Peřinová, N., Švédová, J., & Thielová, H. (2012). *Klobouk nových inspirací aneb i zdravý životní styl může bavit* (1st ed.). Civic Association Anabell.

Procházková, L., Kachlík, P., & Pernicová, V. (2013). Znalosti žáků v okrese Vyškov o závislostním jídelním chování. In E. Řehulka, & J. Reissmannová, *Současné trendy výchovy ke zdraví* (pp. 235–242). Masaryk University.

Průcha, J. (2002). *Učitel: současné poznatky o profesi.* Portál.

Reichlová, R. (2017). *Postoj učitelů k poruchám příjmu potravy* [Unpublished master's thesis]. Masaryk University.

Ricciardelli, L. A., & McCabe, M. P. (2001). Self-esteem and negative affect as moderators of sociocultural influences on body dissatisfaction, strategies to decrease weight, and strategies to increase muscles among adolescent boys and girls. *Sex Roles, 44*(3–4), 189–207. https://doi.org/10.1023/A:1010955120359

Rod, A. (2012). *Likertovo škálování.* University of Economics and Business in Prague. https://doi.org/10.18267/j.e-logos.327

Russell-Mayhew, S., Arthur, N., & Ewashen, C. (2008). Community capacity-building in schools: Parents' and teachers' reflections from an eating disorder prevention program. *Alberta Journal of Educational Research, 54*(2), 227–241. http://search.proquest.com/docview/228630372/fulltextPDF/14034F71C916616C68/2?accountid=16531

Sanderson, C. A., Darley, J. M., & Messinger, C. S. (2002). "I'm not as thin as you think I am": The development and consequences of feeling discrepant from the thinness norm. *Personality and Social Psychology Bulletin, 28*(2), 172–183. https://doi.org/10.1177/0146167202282004

Shore, R. A., & Porter, J. E. (1990). Normative and reliability data for 11 to 18 year olds on the Eating Disorders Inventory. *International Journal of Eating Disorders, 9*, 201–207. https://doi.org/10.1002/1098-108X(199003)9:2<201::AID-EAT2260090209>3.0.CO;2-9

Skalková, J. (1983). *Úvod do metodologie a metod pedagogického výzkumu* (1st ed.). SPN.

Skrbková, D. (2016). *Postoje učitelů vůči problematice poruch přijímání potravy žáků* [Unpublished bachelor's thesis]. Technical University of Liberec.

Sladká, J. (2004). *Tři pé aneb poruchy příjmu potravy od A do Zet* [CD-ROM]. Civic Association Anabell.

Spurná, M. (2013). *Pedagogický výzkum očima učitelů základních a středních škol aneb postoje učitelů k pedagogickému výzkumu* [Unpublished master's thesis]. Masaryk University.

Šafránková, A., & Kocourková, V. (2011). Kvantitativní a kvalitativní rozměr výzkumu postojů učitelů ve vztahu k sociálnímu znevýhodnění žáků. In T. Janík, P. Knecht, & S. Šebestová, *Smíšený design v pedagogickém výzkumu: sborník příspěvků z 19. výroční konference České asociace pedagogického výzkumu* (pp. 416–420). Masaryk University. https://doi.org/10.5817/PdF.P210-CAPV-2012-53

Šimíčková, H. (2003). Postoje učitelů k transformaci české školy. In *Sociální a kulturní souvislosti výchovy a vzdělávání: sborník příspěvků z 11. výroční konference České asociace pedagogického výzkumu* (pp. 1–25). Masaryk University. https://www.ped.muni.cz/capv11/2sekce/2_capv_simickova.pdf

Švandová, K. (2012). *Faktory ovlivňující postoje studentů gymnázií k vyučovacímu předmětu chemie* [Unpublished master's thesis]. Masaryk University.

Švandová, K., & Kubiatko, M. (2012). Faktory ovlivňující postoje studentů gymnázií k vyučovacímu předmětu chemie. *Scientia in Educatione*, *3*(2), 65–78. https://doi.org/10.14712/18047106.37

Švaříček, R., & Šeďová, K. (2007). *Kvalitativní výzkum* v *pedagogických vědách* (1st ed.). Portál.

Švédová, J., & Mičová, L. (2010). *Poruchy příjmu potravy: manuál pro pedagogy* (1st ed.). Civic Association Anabell.

Thompson, A. M., & Chad, K. E. (2002). The relationship of social physique anxiety to risk for developing an eating disorder in young females. *Journal Adolescence Health*, *31*(2), 183–189. https://doi.org/10.1016/S1054-139X(01)00397-4

Vardano-Sullivan, P. J., Parr, F., O'Grady, M. A., & Savoy, S. (2013). Educators' views of eating disorder prevention programs. *Eating Weight Disorders*, *18*, 143–150. https://doi.org/10.1007/s40519-013-0028-9

Výrost, J., & Slaměník, I. (2008). *Sociální psychologie* (2nd ed.). Grada Publishing.

Ward, A., Ramsay, R., & Treasure, J. L. (2000). Attachment research in eating disorders. *British Journal of Medical Psychology Education*, *73*(1), 35–51. https://doi.org/10.1348/000711200160282

Yager, Z., & O'Dea, J. A. (2005). The role of teachers and other educators in the prevention of eating disorders and child obesity: What are the issues? *Eating Disorders*, *13*(3), 261–278. https://doi.org/10.1080/10640260590932878

Yager, Z., & O'Dea, J. A. (2008). Body image, dieting and disordered eating and activity practices among teacher trainees: Implications for school-based health education and obesity prevention programs. *Health Education Research*, *24*(3), 472–482.https://doi.org/10.1093/her/cyn044

Act No. 561/2004 Coll. on pre-school, basic, secondary, tertiary professional and other education. (2019). https://www.msmt.cz/dokumenty-3/skolsky-zakon-ve-zneni-ucinnem-od-15-2-2019

Subject Index

A/
acceptability methodology 41
adolescence 8, 11, 16, 17, 19, 21, 29, 30, 42, 93
adolescent 7, 11, 14, 21, 23, 39, 107
alcohol 15, 20, 22, 86, 93
Allport 37
amenorrhea 13
Anabell Centre 27, 93, 100, 113
anabolic steroids 15
analysis 42, 46, 48–51, 56, 61–66, 85, 87, 105, 115
anorexia nervosa 11, 12, 14, 18, 21, 31, 32, 34, 48, 51, 95, 113
anorexics 13
ANOVA 51, 56, 61, 66
attitudes 7–9, 13, 22, 27, 29–31, 35, 37, 38–49, 53–59, 67, 85–87, 94, 105– 115

B/
binge eating 11
BMI 12, 16, 101
body image 41
bulimia nervosa 11, 14, 18, 22, 31, 33, 34, 48, 51

C/
case report 96, 99
causes 12, 16, 29, 40, 43, 94–96, 112
communication 29, 33, 35, 39, 40, 95, 96, 99, 113
control 14, 17, 18, 21, 30, 43, 90, 95, 98, 103
correlation 17, 56, 72–84, 87
Cronbach's alpha 49, 105

D/
dehydration 12, 13, 33
depression 14
determinants 16, 18, 22, 23, 39
diagnostic criteria 12, 14
diet 15, 20, 30, 100
dietary preferences 29
diuretics 13, 30
drug 20, 86

E/
early childhood 19, 21
eating behaviour 17, 19, 32, 41
eating disorders 7, 8, 11, 13–23, 26–35, 38–51, 54, 56, 58, 64, 69, 75, 79, 85–87, 89, 91–100, 103, 105–109, 111–115
eating habits 7, 8, 29, 30, 42
eating regimen 15
education 7, 18, 26–35, 40–48, 56, 57, 58, 59, 60, 85–87, 90, 91, 96, 101, 106, 111–113, 115
elementary school 29, 44, 91, 105
emotions 95, 99
exercise 13, 15, 21, 33, 34

F/
factor 17, 21, 22, 48–51, 105, 107
family 7, 8, 13, 16, 22, 23, 26, 28, 29, 34, 39, 56, 60, 66, 71, 77, 82, 84, 85, 91, 95, 98, 99, 101–103, 107
Family education 40, 85, 90, 106, 111, 112, 115
fear of fatness 13, 20
focus group 41
food 12–15, 18, 19, 23, 29–34, 42, 98, 100, 101
Framework Education Programme for Elementary Education (FEP EE) 7, 26, 47, 85

H/
HBSC 19, 20, 45
health 7, 13, 19, 20, 23, 25, 27, 31–35, 40, 42, 43, 45, 47, 52, 86, 96, 101, 107, 108, 111
Health education 7, 30, 34, 40, 41, 43, 45–47, 56–60, 85, 86, 90, 91, 96, 106, 111, 112, 115
healthy nutrition 15, 42
help 11, 18, 28, 33, 34, 97–102
hospitalization 35

Ch/
childhood 18–23, 40, 42, 91

I/
indicator 48, 49, 52–77, 85
individual plan 35
intervention programme 41
isolation 15, 31, 33

K/
kindergarten 29
knowledge 27, 29–31, 38, 40, 107, 108
Kolmogorov–Smirnov test 51

L/
laxatives 13–15, 22, 30
leisure 20
length of teaching experience 8, 9, 45–48, 66, 69, 85, 86, 90, 103, 105, 106, 111, 115
loss of appetite 12, 15, 31, 94

M/
media 21–23, 35, 39, 51, 54, 91–93, 95, 111
menstruation 13, 17, 20, 21
mental disease 33
minimum prevention programme 26, 27, 91
Ministry of Education, Youth and Sports (MEYS) 25–27, 48
mother 18– 20, 100–102

N/
nutrition 12, 15, 42, 96

O/
obesity 16, 20, 23, 30, 40–45, 107
organization 35
overeating 13–15, 31–35
overweight 16, 17, 20, 23, 30, 95

P/
parents 27, 29, 34, 41, 42, 91, 93, 95–102
Pearson's correlation coefficient 72, 73, 75, 77, 87
peers 7, 17, 22
perception of one's body 16, 34
personality 8, 17, 18, 26, 39, 43, 87, 94, 99
physical activity 20, 32, 42, 45, 101
preparatory schools 42, 43
preschool age 20
prevention 7, 8, 23, 25–31, 34, 35, 38, 40–45, 48–58, 61, 62, 64, 66, 69, 72, 75, 77–79, 85, 86, 89, 91–103, 107, 109, 111–113, 115
prevention activities 35, 40, 57
prevention methodologist 92, 99, 101, 112
prevention programme 26, 27, 41, 43, 91
profession 44, 48, 49, 51, 53–55, 59, 62, 64, 69, 76, 78, 80–86, 90, 105
puberty 7, 11, 13, 16, 17, 21, 95, 96, 98

Q/
qualification 8, 9, 45, 46, 48, 51, 56, 90, 103, 105, 106, 111, 115
qualitative research 8, 9, 42, 105, 113
quantitative research 45, 86, 89, 90, 103, 105

R/
research 7, 8, 9, 17, 19–21, 38, 40–42, 44–51, 57, 69, 79, 85, 86, 89, 90, 103, 105–115
research questions 46, 105, 115
research sample 46–48, 57, 107, 115
research study 8, 9, 17, 19, 21, 38, 41, 42, 45–48, 69, 79, 85, 86, 89, 90, 103, 105–108, 111–113

S/
scale 39, 48, 51, 53, 55, 85, 105, 112
secondary school 23, 35, 40, 44, 47, 86, 91, 93, 97–99, 107, 113
self-assessment 20
self-esteem 21, 29, 55, 60, 65, 71, 77, 82, 84, 85
semantic differential 8, 43–45, 47–50, 107–109, 112, 115
semi-structured interview 47, 86, 89, 103, 105, 109, 111, 115
school 7, 8, 17, 22, 23, 26–35, 38, 40, 42–44, 46, 47, 54–56, 59, 64, 70, 76, 83, 85, 86, 89–109, 112, 113
school-aged 17
school environment 22, 27, 28, 35, 38, 43, 54, 95
school psychologist 102
school staff 40, 108
slimness 17, 18, 21–23, 100
smoking 86, 91–94
starvation 12, 14, 15
stereotype 87, 106
study 8, 9, 14, 17, 19, 20, 21, 33, 38, 40–48, 56, 66, 69, 79, 85–87, 89, 90, 103, 105–113
symptoms 11, 12, 14, 17, 99
system of education 87, 90, 106

T/
teacher 8, 13, 23, 26, 30–34, 38–45, 48, 49, 51, 53, 55, 57, 62, 68, 74, 78, 80–82, 85, 87, 89, 91– 96, 99–102, 105, 106, 108, 112, 113
teaching 8, 9, 30, 44, 45–48, 53–56, 59, 64, 66, 69, 76, 78, 80–87, 90, 91, 99, 103, 105, 106, 108, 111–115
teaching aids 113
teaching materials 99, 112
training 23, 25, 35, 40, 41, 43, 44, 48, 105, 113
Tukey's post-hoc test 56, 61, 63, 64
types of prevention programmes 27

U/
underweight 16, 34

V/
vomiting 12–15, 23, 30, 33, 95

W/
Ward 19
weight loss 12, 31, 100
WHO 11, 19
World Health Organization 11

Name Index

A/
Abraham 40
Abrams 22
Allport 37
Apostolidou 43
Atkinson 37

B/
Babiaková 28
Beran 44
Borra 42
Botta 21

C/
Cronbach 49, 105
Csémy 20, 21, 85

Č/
Čáp 37
Čech 25, 26, 92

D/
Derwi 42
Dixey 20, 22
Drábková 85
Dvořáková-Janů 12, 14

E/
Eagly 37
Edrich 43

F/
Festinger 39
Fialová 44
Filová 44
Fontana 43
Foster 43
Fraňková 12, 14, 20

G/
Gavora 87
Grogan 23

H/
Harrison 20, 21
Hartl 37
Hartlová 37
Havel 44
Havlík 44
Helus 28, 38
Hendl 90, 105
Herman 22
Hewstone 37
Hittner 19
Horáčková 44

Ch/
Chad 20
Chaiken 37
Chráska 9, 44, 48, 49, 53, 85, 105
Chrásková 44, 105
Christopher 43

J/
Jandourek 37
Janoušek 37
Janout 85

K/
Kachlík 4
Kalman 20
Kansi 21
Kasáčová 28
Knightsmith 108
Kocourková 14, 44
Kolmogorov–Smirnov test 51

Kostihová 99
Krech 39
Krch 11, 12, 14, 16, 17, 19–22, 29, 45, 85, 92, 97
Kubátová 17, 25
Kubiatko 105

L/
Lazarová 44
Lejčková 26
Likert 109, 112

M/
Machová 17
Marádová 4, 29
Mareš 37
Matyášová 99
McCabe 21
McDonald 105
McLeod 37
Mičová 15, 22, 23, 30, 31, 33, 35
Miovský 25–27, 89, 90
Myers-Clack 43

N/
Nakonečný 37
Nešpor 25, 26, 28
Novák 16, 18–21, 45

O/
O'Dea 40, 41, 45
Osgood 50

P/
Papežová 11, 12, 14, 16, 19–22, 29, 45, 92
Pelikán 38
Pokorný 28
Polivy 22
Porter 17
Power 42
Procházková 8, 12, 14, 15, 19, 20, 23, 27, 30, 31, 33, 35, 45, 92, 97, 99
Prokopová 44
Průcha 28, 54, 85

R/
Reichlová 107
Ricciardelli 21
Rod 109
Russell-Mayhew 41

S/
Sanderson 22
Shore 17
Skalková 89
Skrbková 107
Sladká 11, 16, 20, 23, 29, 45
Sladká Ševčíková 20, 45
Slaměník 28
Spurná 86
Stroebe 37

Š/
Šafránková 44
Šeďová 89
Šimíčková 44, 87
Švandová 105
Švaříček 89
Švédová 15, 22, 23, 30, 31, 33, 35

T/
Thompson 20

V/
Vardano-Sullivan 41
Výrost 28

W/
Ward 19

Y/
Yager 40, 41, 45

List of Tables and Graphs

Table 1	Cronbach's Alpha Coefficient for Each Indicator	49
Table 2	Results of the Factor Analysis of the Preliminary Research	50
Table 3	Kolmogorov–Smirnov Test Values	51
Graph 1	Teachers' Attitudes to the Prevention Indicator by Gender	52
Graph 2	Teachers' Attitudes to the Implementation Indicator by Gender	52
Graph 3	Teachers' Attitudes to the I As the Teacher Indicator by Gender	53
Graph 4	Teachers' Attitudes to the Pupil Indicator by Gender	53
Graph 5	Teachers' Attitudes to the Indicator of Implementation of Eating Disorders Prevention by Gender	54
Graph 6	Teachers' Attitudes to the Teaching Profession Indicator by Gender	54
Graph 7	Teachers' Attitudes to the School Indicator by Gender	55
Graph 8	Teachers' Attitudes to the Self-Esteem Indicator by Gender	55
Graph 9	Teachers' Attitudes to the Family Indicator by Gender	56
Graph 10	Teachers' Attitudes to the Prevention Indicator by Teaching Qualification	57
Graph 11	Teachers' Attitudes to the Implementation Indicator by Teaching Qualification	57
Graph 12	Teachers' Attitudes to the I as the Teacher Indicator by Teaching Qualification	58
Graph 13	Teachers' Attitudes to the Pupil Indicator by Teaching Qualification	58
Graph 14	Teachers' Attitudes to the Indicator of Implementation of Eating Disorders Prevention by Teaching Qualification	59
Graph 15	Teachers' Attitudes to the Teaching Profession Indicator by Teaching Qualification	59
Graph 16	Teachers' Attitudes to the School Indicator by Teaching Qualification	60
Graph 17	Teachers' Attitudes to the Self-Esteem Indicator by Teaching Qualification	60
Graph 18	Teachers' Attitudes to the Family Indicator by Teaching Qualification	61
Graph 19	Teachers' Attitudes to the Prevention Indicator by Gender and Teaching Qualification	61
Graph 20	Teachers' Attitudes to the Implementation Indicator by Gender and Teaching Qualification	62
Graph 21	Teachers' Attitudes to the I as the Teacher Indicator by Gender and Teaching Qualification	62
Graph 22	Teachers' Attitudes to the Pupil Indicator by Gender and Teaching Qualification	63

Graph 23 Teachers' Attitudes to the Indicator of Implementation of Eating Disorders Prevention by Gender and Teaching Qualification 63
Graph 24 Teachers' Attitudes to the Teaching Profession Indicator by Gender and Teaching Qualification 64
Graph 25 Teachers' Attitudes to the School Indicator by Gender and Teaching Qualification 65
Graph 26 Teachers' Attitudes to the Self-Esteem Indicator by Gender and Teaching Qualification 65
Graph 27 Teachers' Attitudes to the Family Indicator by Gender and Teaching Qualification 66
Graph 28 Teachers' Attitudes to the Prevention Indicator by Length of Teaching Experience 67
Graph 29 Teachers' Attitudes to the Implementation Indicator by Length of Teaching Experience 67
Graph 30 Teachers' Attitudes to the I as the Teacher Indicator by Length of Teaching Experience 68
Graph 31 Teachers' Attitudes to the Pupil Indicator by Length of Teaching Experience 68
Graph 32 Teachers' Attitudes to the Indicator of Implementation of Eating Disorders Prevention by Length of Teaching Experience 69
Graph 33 Teachers' Attitudes to the Teaching Profession Indicator by Length of Teaching Experience 70
Graph 34 Teachers' Attitudes to the School Indicator by Length of Teaching Experience 70
Graph 35 Teachers' Attitudes to the Self-Esteem Indicator by Length of Teaching Experience 71
Graph 37 Correlation Between the Prevention Indicator and Respondents' Age 73
Graph 38 Correlation Between the Implementation Indicator and Respondents' Age 73
Graph 39 Correlation Between the I as the Teacher Indicator and Respondents' Age 74
Graph 40 Correlation Between the Pupil Indicator and Respondents' Age 74
Graph 41 Correlation Between the Implementation of Eating Disorders Prevention Indicator and Respondents' Age 75
Graph 42 Correlation Between the Teaching Profession Indicator and Respondents' Age 75
Graph 43 Correlation Between the School Indicator and Respondents' Age 76
Graph 44 Correlation Between the Self-Esteem Indicator and Respondents' Age 76
Graph 45 Correlation Between the Family Indicator and Respondents' Age 77
Graph 46 Correlation Between the Implementation and Prevention Indicators 78
Graph 47 Correlation Between the I as the Teacher and Prevention Indicators 78
Graph 48 Correlation Between the Implementation of Eating Disorders Prevention and Prevention Indicators 79
Graph 49 Correlation Between the Implementation of Eating Disorders Prevention and Implementation Indicators 80

Graph 50 Correlation Between the Pupil and I as the Teacher Indicators 80
Graph 51 Correlation Between the Teaching Profession and I as the Teacher Indicators 81
Graph 52 Correlation Between the Self-Esteem and I as the Teacher Indicators 81
Graph 53 Correlation Between the Teaching Profession and Pupil Indicators 82
Graph 54 Correlation Between the Family and Self-Esteem Indicators 83
Graph 55 Correlation Between the School and Teaching Profession Indicators 83
Graph 56 Correlation Between the Self-Esteem and Teaching Profession Indicators 84
Graph 57 Correlation Between the Family and Teaching Profession Indicators 84

Scientific Editorial Board of Masaryk University

prof. PhDr. Jiří Hanuš, Ph.D.
PhDr. Jan Cacek, Ph.D.
Mgr. Tereza Fojtová
doc. JUDr. Marek Fryšták, Ph.D.
Mgr. Michaela Hanousková
doc. RNDr. Petr Holub, Ph.D.
doc. Mgr. Jana Horáková, Ph.D.
prof. MUDr. Lydie Izakovičová Hollá, Ph.D.
prof. PhDr. Mgr. Tomáš Janík, Ph.D.
prof. PhDr. Tomáš Kubíček, Ph.D.
prof. RNDr. Jaromír Leichmann, Dr. rer. nat.
PhDr. Alena Mizerová
doc. Ing. Petr Pirožek, Ph.D.
doc. RNDr. Lubomír Popelínský, Ph.D.
Mgr. Kateřina Sedláčková, Ph.D.
prof. RNDr. Ondřej Slabý, Ph.D.
prof. PhDr. Jiří Trávníček, M.A.
doc. PhDr. Martin Vaculík, Ph.D.

The Attitudes of Elementary School Teachers to Eating Disorders
Lenka Adámková

Edition: Physical Education and Health Education
Volume 3

Cover design: Jana Nedomová
Typeset: Tereza Češková
Published by Masaryk University Press, Žerotínovo nám. 617/9, 601 77 Brno, CZ
1st electronic edition, 2020

ISBN 978-80-210-9803-9

Physical
Education
and Health
Education

The Attitudes of Elementary School Teachers to Eating Disorders

The publication addresses the research on the attitudes of the teachers of health education or an equivalent course in lower secondary schools. The introductory chapters present the knowledge concerning eating disorders and focus on the issue of attitudes in general as well as on the development of attitudes among teachers. The text refers to relevant domestic and international research studies that illustrate the current state of the issue. The core focus of the publication is the new knowledge concerning the attitudes of elementary school teachers to eating disorders. The final part of the paper summarizes the most important findings and recommendations for the prevention of eating disorders in educational practice. The new findings can also be inspiring for educational institutions abroad.

MUNI PRESS
MUNI PED