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Procedia - Social and Behavioral Sciences 132 (2014) 391 – 397
Procedia
Social and Behavioral Sciences

6th International Conference on Intercultural Education "Education and Health: From a transcultural perspective"

Incidence of eating disorders in family environment in high school adolescents

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Abstract

The impact of risk factors occurring in families on the adolescents' attitude towards food, using the EAT-26 questionnaire and the Short (s)-EMBU was examined. Respondents were 464 high school students. Results show that in nearly 79% respondents there is at least one risk factor present in the family. Connection between a disturbed attitude to food and being on a family diet and failure to solve problems and absence of communication in families and the occurrence of psychic diseases in families was confirmed. The attachment was more disturbed on the father's side than on the mother's.
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Selection and peer-review under responsibility of HUM-665 Research Group "Research and Evaluation in Intercultural Education".

Keywords: Eating disorders; Family; Risk factors; High school students; Short EMBU; EAT-26

1. Introduction

In 1987, eating disorders were declared by the World Health Organization as one of priority issues of the world's population. It is estimated, that around eight millions of people worldwide suffer from certain form of eating disorder (anorexia nervosa, bulimia nervosa, binge eating). A number of various hypotheses have been presented with regard to the possible etiology of eating disorders. However, each one of them, or the etiological and interpretation models have their restrictions and cannot explain all variants of the disorder. Controlled studies involving wider samples of patients have not yet confirmed a general validity of any of these models (Krch et al., 2005). Nowadays, majority of authors stress the coexistence of various factors and say that eating disorders are preconditioned biologically, psychologically and socially. In recent years, this multi-factorial conception is

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Selection and peer-review under responsibility of HUM-665 Research Group "Research and Evaluation in Intercultural Education".
doi:10.1016/j.sbspro.2014.04.327

becoming a generally accepted standard of the description, interpretation and therapy of eating disorders (Garner et al., 1982; Vandereycken, 1996; Krch et al., 1999). Therefore, it can be said that eating disorders are a complex issue and have various causes (Lovell, 2002). Development of the disease depends on several matters and their mutual combination. Professional literature mentions the following risk factors in particular: socio-cultural factors, biological factors, life events, emotional factors, human personality and impact of the family.

1.1.1 Risk factors for eating disorders

One of the most important biological factor is gender. Girls and women are much more likely than boys and men to have eating disorders. Other important factor seems to be age, as most of the eating disorders are common during the teens and early 20s. Certain role also plays genetic, some genes may increase the possibility of development an eating disorder. Chemicals controlling appetite, hunger, mood, reward – pleasure response are still being examined.

Life events are often considered to trigger eating disorders. It may be a traumatic event, such as sexual abuse, relationship issues, loss, moving or critical comment about the body, etc. According to NICE (2004) 70% of eating disorders are trigerred by life event or issue. In this case, lack of support after stressful event is seen as most problematic and therefore triggering eating disorders (Pike et al., 2006)

It is mainly the low self-esteem that contributes to the development of eating disorders. But there is number of other psychological factors or personality traits that may be present in eating disorders, e.g. perfectionism, obsessive-compulsiveness, neuroticism, low self-control,

or some emotional disorders (Krch, 2005).

Socio-cultural factors can also contribute to eating disorders. It is especially the beauty ideal of modern society – thin and petite females and lean, muscular and strong males which affects dissatisfaction with body-image. People who internalise this ‘thin ideal’ have a greater risk of developing body dissatisfaction which can lead to eating disorder behaviours. Important role in the life od adolescents at present play media and especially social networks. Through them the beauty ideal not only is distributed and „supported“, but young people can often find here also many recommendations on how to gain such an ideal body. With changes in communication also the forms of „support“ are changing. Pro-anorexic or pro-bulimic websites providing tips, advice and an online community for unhealthy weight management are becoming the subject of research (e.g. Tong et al., 2013; Crowe, Watts, 2013). The society pressure is increasing and skinny body is seen as desirable and welcome. Physical appearance becomes important part of human or personal worth. Dunker and Phillippi (2003) connected the increase in the prevalence of anorexia nervosa with the greater emphasis on female thinness, which is seen as sexually attractive. From this point of view obesity has become a highly-stigmatized and rejected condition.

1.1.2 Eating disorders and family environment

In a family with a eating disorder, the communication among individual family members and the way of solving problems and conflicts is often a problem (Crooková, 1995). Families with anorexic children were described in detail by Minuchin, Rosman, Barker (1978) who described them as rigid, hyper-protective, having difficulties expressing their emotions and avoiding conflicts and conflict decisions. Štichová (2002) found the following common features of families with patients suffering from eating disorders: members of these families are overprotective and caring too much for one another, failing to respect personal boundaries; these families are isolated, separated, having a sense of being threatened; they are closed as if some danger was coming from outside and also rigid and not adopting to changes within the family (maintaining adults in the roles of children). These families do not express emotions, in particular negative ones and therefore are not able to solve conflicts. The families of eating disorders patients are often less cohesive and encouraging of personal growth (Latzer et al, 2002). Parental relationships are not very significant in terms of partnership which means that the husband and wife mostly take the positions of parents with mothers being usually dominant, but with too little empathy to real needs of their children. Mothers themselves often suffer from eating disorders. Fathers are not important, distant, either due to work overload and non-presence or inability to establish a strong relationship with the child.

1.2 Critical age for the development of eating disorders

Problems with eating habits most often start during the period of adolescence. In case of anorexia nervosa, the peak occurrence is between 13 and 14 years of age and between 17 and 18 years of age (Kraushuberová, 2000). Bulimia nervosa occurs in particular in girls from 16 to 25 years of age and its occurrence is more frequent than in case of anorexia nervosa (Leibold, 1995). In order to cover as wide age dispersion of the occurrence of both most frequent eating disorders as possible, high school students were chosen as participants for this study.

2. Aim of the study

Primary goal of our research was to determine the prevalence of risk of eating disorders in a family environment with specific focus on high school adolescents as a risk group with regard to the incidence of eating disorders. As part of the research, we identified potential impact of selected risk factors within families on attitude to food in adolescents. In particular, we were interested in (1) whether there is any difference in the disturbed attitude to food between girls and boys, (2) how the attachment in the family looks like, and (3) whether there is any connection between the identified risk factors within families and disturbed attitude to food.

3. Methodology

3. 1. Participants

The sample consisted of 464 of participants, students of different types of public[*] high schools (e.g. business school, pedagogical and social academy, medical school, art school, etc.). According to the statistics (Maloney, Kaňková, 2005), only about 10% of patient with eating disorders are male. Therefore we created sample with predominantly female participants (89,7 %). The age of participants varied from 15 to 23 years, with an average age of 17,7. The sample was non-clinical.

3.2. Measures

3.2.1. Attitudes to food

A quantitative research strategy was used, employing two standardized questionnaires. The EAT-26 (Eating Attitude Test; Garner et al, 1982) questionnaire was used to measure symptoms and concerns characteristics of eating disorders. The EAT-26 is a short version of the EAT-40 that was first published in 1979 by Garner and Garfinkel. The EAT-26 is self-report, where participants are assessing statements using a 6-point Likert type scale ranging from 1 (always) to 6 (never). The cut-off score for the EAT-26 is 20 points.

3.2.2. Parental rearing practices

Together with the EAT-26 questionnaire, the Short (s)-EMBU questionnaire was administrated The s-EMBU (Swedish acronym standing for Egna Minnen Beträffande Uppfostran [My memories upbringing]`Arrindell et al, 1999) was used to measure adolescent's perceptions of their parents' rearing behavior. The s-EMBU is a 23-item self report questionnaire. Participants Respondents are assessing individual statements using a 4-point Likert type scale ranging from 1 (no, never) to 4 (yes, for the most part). It contains three sub-scales: Rejection, Emotional Warmth and (Over)Protection. Items are scored for fathers and mothers separately. It was concluded that the three factors are factorially-invariant across nations (Arrindell et al, 2005). In order to cover the whole range of risk factors, the questionnaires were supplemented with additional questions related to the dependence within the family, mental disorders and food habits in family

[*] There are only few private high schools in Slovakia, therefore we focused on public schools as they are more common.

4. Results

4.1. Gender differences in attitude to food

The average score achieved in the EAT-26 in the present sample was 25,17 points. Although it was a non-clinical sample, the cut-off score, 20 or more points, was achieved by 11,85% (N=55) participants. If the values are like this, the attitude to food is so disturbed that it is recommended that the affected person visit an expert, either a physician or a psychologist. Therefore, we also examined the number of people whose score was somewhere around this limit. 18% (N=84) participants had a score of 16 and more points. Moreover, 5,17% (N=24) participants achieved a score which was above 30 points and one participant achieved a maximum value of 60 points.

Score achieved in EAT-26 was compared between girls and boys. The average score achieved by boys was nearly the same as that achieved by girls. Although only five boys had a score above the cut-off score of 20 points; in case of their total number n=48 this means that 10.41% of boys reported to have disturbed attitude to food. It is almost the same percentage as the percentage of girls with disturbed attitude to food (12.25%). Results did not show any statistically significant difference in the attitude to food between the sexes. It means that boys do not differ significantly from girls in their claimed attitude to food.

4.2. Disturbance of the attachment

Since the disruption of the attachment by parents may induce many pathological occurrences and psycho-somatic diseases, we focused on the attachment in participants's families, separately with fathers and mothers. The results showed a statistically significant difference in the attachment, with more disrupted attachment in case of fathers ($p < .05$). These results were also confirmed in all three subscales of s-EMBU separately (for rejection 10,2 vs 10, 7; $p < .05$; for emotional warmth 14,8 vs 17,1; $p < .05$; for over-protectivity 18,3 vs 20,4; $p < .05$).

4.3 Risk factors in family environment

Results did not show a clear connection between disturbed attitude to food and the occurrence of risk factors for the origination of eating disorders.

Existence of the relation between disrupted attachment and attitude to food was tested. However, the analysis did not show any relation between the attitude to food and the attachment. Nevertheless, we were also interested in the relation between the attitude to food and individual subscales of the s-EMBU questionnaire. No relations between attitude to food and the subscales of rejection, emotional warmth and (over)protection were demonstrated. Therefore, in the current study, the disrupted attachment was not a direct cause of disturbed attitude to food.

Prevalence of risk factors in family environment as common family diets, divorce of the parents, mother's or father's death, failure to solve the problems, abuse of alcohol or other substances, mother's diets, suicide attempt or suicidal thoughts, refusal, emotional warmth and hyper-protection by the parents and previous treatment of eating disorders was examined. Prevalence of risk factors for the development of eating disorders in a family environment was confirmed in the present sample in more than a half of the participants. In 78,02% (N= 362) cases, the participants reported that one or several risk factors were present in their family. Only 21.98%, (N=102) participants did not mention presence of any of the examined risk factors in their families.

We determined the difference between the attitude to food in families which maintain or do not maintain common diets. The results have demonstrated a statistically significant difference in the attitude to food in these families, with higher average score in case of the attitude to food achieved by the families of those respondents who confirmed maintaining common family diets compared to families in which no diets are maintained (10,7 vs 7,9; $p < .05$). Contrary, the fact of mother being on diets did not demonstrate to have an influence on participants's attitude to food. Group of participants with mothers being on diet did not score significantly differently from group of participants whose mother weren't on diet.

Statistically significant difference was found between the attitude to food and risk factors of a psychic disease in

a family and insufficient communication about problems. Average score of attitude to food in families with a member suffering from a physic disease (10.5) was significantly higher than in families with no psychic disorder (8.1; $p < .05$). In families where parents did not speak with their kids about the problems, the average score in case of attitude to food was 9.2, while in families communicating about problems the rough score was 8.1 ($p < .05$).

When testing the difference in attitude to food between participants who reported abuse of alcohol or other substances and those who did not report any kind of substance abuse, no statistically significant difference was found. Likewise, no differences in attitude to food were observed in families of respondents who went through the divorce of parents compared to those who came from complete families.

5. Discussion

Results of our research showed that many young people live in incomplete families, in families with a dependent member of families predisposed to a psychical illness. It also indicated that high school students see the relations with their parents as fairly disrupted and they perceive refusal, emotional warmth and hyper-protectiveness more from their mothers than from their fathers. Among negative phenomena within a family, the research also confirmed communication problems; parents often criticize their kids or have unreasonable comments on their appearance or fail to communicate sufficiently about problems that need to be solved. In their family relationships, some students feel that their siblings are preferred over them and are set as a good example in connection to studies or the overall behavior. It was also confirmed that families are to a considerable degree influenced by the latest trends and maintain common diets; diets are predominantly maintained by mothers whose behavior is often an example for the kids. It was proven that some of them have disturbed attitude to food and should seek advice of an expert, either a psychiatrist or a psychologist.

It is widely believed that men are less likely to develop eating disorders in particular due to the fact that in their efforts to regulate their body weight they are not on so many diets as women. They do not mind excess weight as much as women do (Hsu, 1990) because during puberty, in comparison with girls, they do not gain as much fat and develop muscles instead which they mostly regard as something positive. As for the eating disorders, they suffer more from bigorexia than from anorexia nervosa or bulimia nervosa. Differences between men and women can be also found on important developmental and physical variables as well as associated psychological features (Barry et al, 2002). As results demonstrate, the number of men with the most common types of eating disorders is growing and quite a lot of boys with disturbed attitude to food can be found even among students. Knowing the similarities and differences in eating disorders in gender groups is particularly important in case of creating specific and effective preventive programs.

Results of the present study did not show a clear connection between disturbed attitude to food and the occurrence of risk factors for the origination of eating disorders. However, as we have mentioned, yet there are significant differences between some factors and attitude to food. On the other hand, in the recent study surprisingly no statistically significant relationship was demonstrated between disturbed attitude to food and the attachment between parents which may be so due to several causes. Castro et al (2002) also reported that their results do not support the idea of altered rearing practice in anorexic patients, at least in young patients with a short evolution of the disease. However, rejection, control and lower independence are considered to have an appreciable effect on the development of eating disorders and/or the short-term outcome in anorexic patients (Baker, Hoerger,2012; Casto et al, 2002, Felker, Stivers, 1994). In this area it would be necessary to perform further research.

6. Conclusion

Based on these results we may present the conclusions to be used in practice, although we are aware that it is difficult to turn them into reality. It is problematic and hardly feasible to perform primary prevention in families since experts do not have a real opportunity to enter a family with no pathological signs. Therefore, we believe that schools in which young people spend majority of their time have a key position in the prevention of eating disorders. Trained pedagogical staff and school social workers are able to do so by means of suitably selected and

targeted methods and techniques (e.g. regularly organized discussions and workshops with parents and so on). In our opinion, when working with a family it is important to focus on developing communication skills and skills necessary in order to solve family problems, stress the importance of positive assessment of children, warn of potential impacts of excessive criticism or excessive focus on child's physical imperfections, advise parents of the importance of providing high-quality behavior patterns to their children as well as eating habits and value systems. Parents should ensure that their children have enough positive interests; they should support their children's appropriate self-assurance, focus on creating a healthy attitude of their children to food, maintain healthy family lifestyle and teach children to become assertive, able to express their opinion, have a different attitude and not succumb to the pressure of the media. One way of supporting healthy parent-child relationship can be through development of educational initiatives. These should focus on the prevention of attitudes that can favour the emergence of eating disorders in the adolescents. Also, it is important to provide parents with expert information regarding eating disorders, focused in particular on early recognition of symptoms of the disease and provision of aid; increase parents' awareness of aid options when they find out that their child has a problem with food. Since the issue of eating disorders is very extensive in nature and involves several institutions, we believe that it is important to improve cooperation of parents with teachers who are often the first to warn of the child's problems. And last but not least, it is more than desirable to support public efforts in elimination of this disease by spreading advertising campaigns on the detrimental effects of eating disorders and to distribute information on projects fighting against eating disorders. Also, it is of chief concern to expand research activities in these areas, taking into account multi-factorial etiology of this disease. For this reason, it is necessary to focus research not only on the family, but also on other possible factors leading to the onset of eating disorders, in particular on the new phenomena, such as the impact of social networks, continuously increasing pressures of the environment on children being successful and so on. Finally, we recommend continuous reassessment of the up-to-datedness, severity and dominance as to the level of impact of individual risk factors on adolescents.

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