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BODY ATTITUDE AND BODY EXPERIENCE IN GREEK AND FLEMISH FEMALES WITH AND WITHOUT EATING DISORDERS

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Abstract:

Assessment of young females with anorexia nervosa was carried out at the time of hospitalization. Findings were compared to those from two typical weight control groups from Belgium and Greece. The total sample consisted of three groups: a) a clinical sample of 75 Belgian females with anorexia nervosa (mean age=19.01, sd=2.20), b) a typical Greek sample of 137 females (mean age=18.68, sd=1.92) and c) a control sample of 130 typical Flemish females (mean age=18.61, sd=1.34). The Body Attitude Test (BAT; Probst, et al., 1995) for female patients with eating disorders (ED) was used to measure the subjective body experience and attitudes toward body. The Body Satisfaction Scale, Silhouette Chart and the Semantic Differential were also used. One-way analysis of variance, revealed group differences on body attitudes. As it was initially hypothesised, the female patients indicated more negative attitudes and a poorer self-evaluation of their body in comparison to the non clinical groups. However, analysis of the data from Silhouette Chart and the Semantic Differential revealed that in some items there were no significant differences on body experience and satisfaction between the typical Greek female group and the clinical Belgian female group, which was an interesting and unexpected finding. The authors examined the outcomes from a cross-cultural viewpoint. Research into the cultural factors that could contribute to body dissatisfaction could help us understand the underline mechanisms and create effective preventive interventions for young females.

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1. Introduction

A spectrum of eating and weight-related problems, which affects at least 10–15% of girls and women between the ages of 9 and 19 years, exists, ranging from negative body image and weight/shape concerns to eating disorders such as anorexia nervosa and bulimia nervosa (Levine & Smolak, 2006; Neumark-Sztainer, 2005). This number is much higher taking into account the percentages of individuals engaged in unhealthy, but not necessarily extreme, weight control behaviours, such as meal skipping, fasting, and smoking. Incidence studies examining secular trends enhance our understanding of how eating disorders develop, because changes in incidence over time may uncover risk factors.

Anorexia nervosa is a serious and potentially fatal eating disorder and its etiology is still largely unknown (Walsh, 2013). Existing theories suggest a number of definable risk factors for anorexia nervosa: an impairment in the maternal environment (Bruch, 1973), a particular pattern of family interactions (Minuchin, Baker, & Roman 1978), and perhaps some predisposing endocrine factor. Most often cited are popular media images of women that suggest thinness is fashionable (Gardner, & Brown, 2014), prevailing societal pressures for women to diet and conform to unrealistic weight standards, and belief in the greater importance of body image held by more women than men, on mandate for physical attractiveness and thinness (Gardner, & Brown, 2014; Brooks-Gunn, Burrow & Warren, 1988). Perception of body Social climate factors such as pressure for thinness, traditional female sex-role socialization, and competitiveness have been proposed as contributing to the development of poor body esteem and disordered eating (Brown, Cross & Nelson, 1990).

The definition of anorexia nervosa was recently revised for the DSM-V (APA, 2013). One of the leading reasons for the revision was to reduce the number of patients who receive the diagnosis eating disorder not otherwise specified (EDNOS), who constituted up to 60% of patients in specialized eating disorder units (Fairburn & Bohn 2005; Zimmerman et al., 2008). DSM-V introduced three changes to the criteria defining anorexia nervosa: the weight loss criterion was revised, fear of weight gain does not need to be verbalized if behaviours interfering with weight gain can be observed, and amenorrhea was no longer required (APA, 2013; Attia et al., 2013). A core feature of anorexia nervosa (AN) is a disturbance in the experience of one's body weight or shape and an undue influence of body weight and shape on self-evaluation (APA, 2013). The

distorted perception of one's body (weight, size, shape) and the intense fear to gain weight, even when is severely underweight, indicate how patients with anorexia nervosa (AN) experience their bodies. Research suggests that body image disturbance is comprised of a behavioural, a perceptual and a cognitive attitudinal component (Gardner, & Brown, 2010; Gardner, 1996). The perceptual component means inaccurate judgment of body size, whereas the attitudinal component stands for dissatisfaction with body size, shape or appearance (Thompson, 2001). These components have frequently been explored in relation to the person's own body in eating disorders and body image disturbance in anorexia nervosa (AN) has been widely studied with regard to the patient's own body.

The definition of 'body image' has been argued for a long time. Cash and Brown (1987) indicated that there are two aspects to body image: one is perceptual disturbance as body size distortion, and the other is cognitive and affective disturbance as body dissatisfaction. Perceptual disturbance has been studied by various methods, for example, movable calliper technique, and video distortion method and so on. These methods were used mainly to detect how patients estimate their body size (overestimation or underestimation). Overestimation of their own body size is a common feature seen in AN patients although evidence especially with adolescent populations is still scarce (Conley, & Boardman, 2007; Schneider, Frieler, Pfeiffer, Lehmkuhl, & Salbach-Andrae, 2009). Because cognition and affect influence the estimation of one's body size, disturbances of these aspects also should be focused on as regards body image disturbance. This is why several questionnaires were developed to aspects such as the subjective attitude towards the body (Ben-Tovim, Walker, 1991; Probst, Vandereycken, Van Coppenolle, &Vanderlinden, 1995).

Despite the theoretical and practical limitations, the body image concept would seem to be clinically relevant to anorexia nervosa where the patient's experiences of his/her body are so different from those of others. Body image disturbance in eating disorders (ED) has been associated with disturbances in the perception of body shape and size that manifest as an intense fear of weight gain (A.P.A. 2013). Grogan (2008) defines body dissatisfaction as "*a person's negative thoughts about his or her own body*" (p. 4). This includes judgements about size, shape, and muscle tone and generally involves a discrepancy between one's own body type and an ideal body type. Although there are several techniques for measuring a discrepancy between an individual's own body weight and their ideal body weight, figure rating scales are most commonly used (e.g., Gardner, Jappe, & Gardner, 2009). Cultural beliefs and attitudes have been identified as significant contributing factors in the development of eating disorders. Body experience and body attitudes in anorexia nervosa (AN) have been widely studied with regard to

the patient's own body, but little is known about cross cultural differences and comparison between females from different countries and especially between young women suffering from AN compared to healthy females belonging to different BMI categories.

Research addressing cross-cultural variation suggests there is a lower prevalence of disordered eating in non-Western countries. In developing countries, for example, increasing industrialization, urbanization and globalization are associated with an increase in eating disorders (Pike, Hoek, & Dunne, 2014). Whether the incidence of eating disorders in Western, industrialized countries has changed over time has been the subject of much debate (Hoek, 2006; Smink, van Hoeken, Oldehinkel, & Hoek, 2014). For AN, reports of an 'epidemic' have been downsized to 'a modest increase in AN incidence over the 20th century' (Keel & Klump, 2003), by the identification of methodological confounders in long-term incidence studies such as variations in registration policy, diagnostic criteria, detection methods, and the availability of services; demographic differences between the populations; and faulty inclusion of readmissions (Smink, van Hoeken, & Hoek, 2013). Examination of risk factors for eating disorders has typically concentrated on individuals from the dominant culture within Western societies and despite recognition that sociocultural factors influence disordered eating (Wiseman, Cray, Mossiman & Ahrens, 1992), the important sociocultural factor of ethnicity has been largely overlooked (Dolan,1991).

As the occurrence of eating disorders in young women has grown in Western society in recent years (Smink, van Hoeken, & Hoek, 2013), research into body image dissatisfaction has increased, with a large amount of research highlighting a link between body image disturbances and eating disorders (Thompson, 2001) and a large number of females and males in Western society are dissatisfied with some aspect of their bodies (Tiggemann, & Slater, 2013). Consequently, the measurement of body dissatisfaction is an important aspect of research concerned with body image dissatisfaction and disturbances. During the last 50 years, the prevalence of eating disorders has been studied, both in clinical samples and on a population level. However, a few studies have attempted to assess the prevalence of eating disorders on a national scale and in a population of "typical" adolescents; a group of individual's known to be at special risk for eating disorders. The aim of this study was to investigate possible cross-cultural differences in body experience between female population from South and North Europe using typical and clinical sample from Greece and Belgium.

2. Method

2.1 Sample

Data were collected from a total sample of 342 females. The total sample was consisted of three groups. The first group consisted of 75 Flemish females with anorexia nervosa who are living in Belgium, and were patients at the Eating Disorder Unit of University Center St. Joseph in Kortenberg (Belgium). The second sample included 130 non-clinical Belgian female university students (studying physical education and physiotherapy at the Catholic University of Leuven). The third sample consisted of 137 typical Greek female University students from the Aristotle University of Thessaloniki Greece, who are living in Greece without eating disorders or any other psychopathology. Sample characteristics, means and standard deviations by group are presented in Table 1.

2.2 Assessment instruments

Due to the multidimensional concept of body experience, and in order to measure all the different aspects of body attitudes and body experience and satisfaction, four different questionnaires have been used in this research study. Each questionnaire was used to evaluate a different aspect of the body experience concept. More specifically, the Body attitude test (BAT; Probst, Vandereycken, Van Coppenolle, & Vanderlinden, 1995) was used to measure the body attitude in relation to eating disorders, the Body Satisfaction Scale (Berscheid, Walster, & Bohrnstedt, 1973) for measuring the dissatisfaction concerning body parts, the Silhouette Chart (Bell, Kirkpatrick, & Rinn, 1986) which measures the perceptual aspects of body size and the Semantic Difference test in order to estimate the general attitude towards the body. All participants were asked to complete a packet containing the above psychometrically well-established self-report instruments.

2.3 Body Attitude Test

The BAT questionaire (BAT; Probst, Vandereycken, Van Coppenolle, & Vanderlinden, 1995) measures the subjective body experiences and attitudes toward one's body of female ED patients. It was originally written in Dutch but it has been translated into English, French, German, Spanish, Italian, and Czech. Because the instrument has been used in many countries, it is suitable for the cross-cultural study of ED. For the purposes of this study the Greek version of the questionnaire was developed in order to examine how typical Greek females feel about their own bodies. The original version of BAT is a self-reporting questionnaire consisting of 20 items scored on a 6-point scale (0–5). It consists of the following three factors: negative appreciation of body size; lack of

familiarity with one's body; and general body dissatisfaction. The maximal total score is 100 and a high score indicates a deviated body experience. Adaptations on the Greek version of BAT and on certain expressions in the draft were made after consulting the author of the original BAT questionnaire.

2.4 Assessment procedure

The clinical data derived from a female sample of 75 Flemish females who were patients at the Eating Disorder Unit of University Center St. Joseph in Kortenberg (Belgium). After obtained the necessary permissions, the participants completed the Dutch versions of the four questionnaires during their hospitalization period. The Flemish control group was consisted of University students from the Department of Physical Activity and Physiotherapy, KULeuven, Belgium. The students of the Flemish control group were also asked to complete the Dutch version of the same instrument as the clinical Flemish sample.

In order to collect data from Greek population, the English versions of the four questionnaires were first translated into Greek and then back-translated into English by a Greek native speaker to ensure the language was understandable in both conceptual and linguistic terms. The Greek versions were found to be very similar to the original and pilot studies were conducted using feedback from a random sample of 15 participants in order to ensure that the new versions were easy to follow and understand. The questionnaires were administered to Greek participants by a physical educator during a session of physical activity after the necessary permissions were obtained. A general explanation of the research was given, including a description of the questionnaires and aspects of voluntary participation, consent, confidentiality, and anonymity. Questionnaires were given to 150 Greek females. From the initial sample of 150, 13 either refused to participate or missed the majority of the questionnaire items, leaving usable data from 137 participants. A short self-report list was also used to collect other data of interest, such as age, weight, height and Body Mass Index (BMI) for all the participants. The purpose and procedure of the study were explained to all participants and their written informed consents were obtained.

3. Results

3.1 Age, weight, height and Body Mass Index (BMI)

Analysis of variance was used to investigate the influence of height, weight and BMI in groups GRWED (Greek females without eating disorders) BEWED (Belgian females without eating disorders) and BEED (Belgian females with eating disorders).

Differences between the three groups were statistical significant when omitting the influence of height (F=11396.94, p=0.00), the influence of weight (F=41.86, p=0.00) and when omitting the influence of BMI (F=30.46558, p=0.00). In table 1 mean age, mean height, mean weight and mean Body Mass Index (BMI) are given by group. Belgian female group with eating disorders had a lower mean height, mean weight and mean Body Mass Index comparing to the typical Greek and Belgian sample. Post hoc Tukey test revealed that differences in Body Mass Index between the typical Greek and typical Belgian females were not statistically significant (p>0.05) (p=0.929). In all the other variables, there were statistical significant differences. The clinical Belgian sample with eating disorders differed significant from both the typical Greek and Belgian female samples in the mean height, mean weight and mean BMI. In addition, there were significant differences in mean height (p=0.002) between the typical Greek (M=166.1) and Belgian female sample (M=169.8) and significant differences (p=0.0042) on mean weight between the healthy Belgian group (M=60.1) and the typical Greek sample (M= 56.8).

Table 1: Characteristics of the three groups: age, weight, height and BMI

	Belgian group with AN (N=75)	**Belgian control group (N=130)**	**Greek control group (N=137)**
	M SD	**M SD**	**M SD**
Age (years)	19.01 ± 2.20	18,61 ± 1.34	18,68 ± 1.92
Height (cm)	163,55 ± 20,09	169,87 ± 4.73	166.17 ± 5.65
Weight (Kg)	49,25 ± 11.43	60.13 ± 6.77	56,86 ± 7.10
BMI (Kg/m²)	17.81 ± 4.16	20.79 ± 2.10	20.67 ± 2.38

Note: BMI=Body Mass Index

3.2 The Body Attitude test (BAT)

The Body Attitude test was used to estimate differences among the three different female groups in body experience. Results of One Way Anova analysis (Table 2) indicated that there is a significant difference on mean scores (F=141.89, p=0.00) between the clinical Belgian sample with anorexia nervosa (BEWED) and the typical Greek and Belgian female samples without eating disorders (GRWED and BEED). The Belgian females with eating disorders scored significantly higher than the other two groups and the typical Belgian group scored lower (MN=25.307) than the typical Greek female sample (MN=33.87). Post hoc analysis revealed that the Belgian females with eating disorders differ significant from typical Greek and Belgian sample in every factor of the BAT test (p=0.002).

3.3 Body Satisfaction Scale test (BSS)

Higher scores on the Body Satisfaction Scale test (BSS) represent more negative body attitude. Data from the Clinical Belgian sample and the typical Greek female sample was used to assess body attitudes using BSS. Mean total scores for the two groups are in Table 2. There was a statistical significant difference (p=0.000) between the two groups with the Belgian females with eating disorders (group 2) scoring higher (MN=32.86) comparing to the typical Greek female group (MN=14.22).

Table 2: Mean scores of BAT and BSS by group

	Belgian group with AN (N=75) Mean ± SD	**Belgian control group (N=130) Mean ± SD**	**Greek control group (N=137) Mean ± SD**	**p-value**
BAT	62.94 ± 19.88	25.30 ± 14.97	33.87 ± 14.94	p=0.002
BSS	32.86 ± 18.54	_	14.22 ± 19.81	p=0.000

Note: BAT: Body Attitude Test; BSS: Body Satisfaction Scale

3.4 Silhouette Chart

Scores from the clinical Belgian sample and the typical Greek sample on the Silhouette Chart test are presented in table 3. Means scores for Belgians females with AN for silhouette 1, silhouette 2 and silhouette 3 were 3.49, 4.77 and 5.08 respectively, when the scores for the typical female Greek group on the same instruments were 3.35, 3.91 and 4.09. Analysing differences between the two groups on each component of Silhouette Chart, the results indicated that there was not a significant difference (p=0.262) between group BEED (clinical Belgian sample) and GRWED (typical Greek sample) for Silhouette 1 (what is your ideal image) but for Silhouette 2 (how you perceive yourself) and Silhouette 3 (how you feel you look most of the time) there were statistical significant differences between the two groups (p=0.00018, and p=0.00008 respectively).

Table 3: Scores on Silhouette Test

	Group	**N**	**Mean ±SD**	**p-value**
SILH 1	BEED	75	3.49 (±1.1198)	0.262660
	GRWED	137	3.35 (± 0.8539)	
SILH 2	BEED	75	4.77 (± 1.6698)	0.000018*
	GRWED**	137	3.91 (±1.0077)	
SILH 3	BEED	75	5.08 (±1.7252)	0.000008*
	GRWED**	137	4.09 (±1.1812)	

*Significant differences between groups (P<0.001)

BEED= Belgian females with eating disorders
GRWED= Greek females without eating disorders
Note: Silhouette SILH 1: Ideal image; Silhouette SILH 2: Perception of yourself; Silhouette SILH 3: How you feel you look most of the time

3.5 Semantic Differential test

Finally, the scores on the Semantic Differential test are presented in Table 4. As it was expected, it was revealed that the two groups (clinical Flemish and typical Greek) will have significant differences on the most of the items. However, it was unexpected to find that for the questions 5, 7, 17, 18, 20 (e.g. nervous/calm, big/small, muscular/not muscular) the results indicated that there were not significant differences on the mean scores ($p>0.05$) between the clinical Belgian and the typical Greek female samples.

Table 4: Mean scores of Semantic Difference test by item

Variable	Mean ±SD Group 1*	Mean ±SD Group 2**	p-value
SD1	3.50 (±1.52)	4.71 (±2.02)	0.0001
SD2	2.83 (±1.33)	5.43 (±1.77)	0.0000
SD3	3.49 (±1.78)	2.82 (±1.71)	0.0229
SD4	4.77 (±1.34)	2.86 (±1.72)	0.0000
SD5	2.85 (±1.37)	2.86 (±1.60)	**0.8741**
SD6	2.50 (±1.48)	3.10 (±1.38)	0.0038
SD7	3.91 (±1.69)	4.65 (±1.53)	**0.2090**
SD8	4.79 (±1.61)	3.06 (±1.48)	0.0000
SD9	2.62 (±1.60)	3.67 (±1.86)	0.0008
SD10	5.32 (±1.55)	3.06 (±1.69)	0.0000
SD11	2.77 (±1.42)	5.50 (±1.65)	0.0000
SD12	3.25 (±1.64)	4.65 (±2.32)	0.0002
SD13	2.87 (±1.73)	4.27 (±1.38)	0.0000
SD14	5.47 (±1.61)	2.73 (±1.61)	0.0000
SD15	2.46 (±1.54)	5.04 (±1.83)	0.0000
SD16	2.82 (±1.52)	5.00 (±1.88)	0.0000
SD17	3.59 (±1.82)	4.45 (±1.51)	**0.0821**
SD18	3.74 (±1.61)	4.13 (±2.05)	**0.3148**
SD19	3.00 (±1.54)	5.71 (±1.68)	0.0000
SD20	3.19 (±1.99)	3.21 (±1.42)	**0.6021**
SD21	4.02 (±1.63)	3.00 (±2.11)	0.0011

*Group 1: Belgian females with eating disorders
**Group 2: Greek females without eating disorders

4. Discussion

The clinical importance of body experience and body satisfaction on eating disorders is underlined not only by the fact that it is considered a symptom disorders in diagnostic schemes, but also by its inclusion in most treatment programmes. Because of the great clinical relevance, a considerable amount of research has been undertaken to gain a better understanding of body attitudes and subjective body experience and satisfaction. Interaction of a number of possible causal factors needs to be under consideration in order to understand the development and maintenance of unhealthy eating attitudes and eating disorders in young females. It is also clear that broader cultural factors have to be considered in order to understand the epidemiological pattern of eating problems (e.g. the greater incidence among women). It is increasingly well established that social cultural factors, including peer teasing, media messages, and sexual harassment, contribute to the development of the spectrum of body dissatisfaction and disordered eating (Smolak & Murnen, 2004). In addition, many researchers have stressed the role of cultural influences in creating the climate in which vulnerable individuals might develop eating problems (Pawell & Kahn, 1995). Cross-cultural variation in the epidemiology of eating disorders is well established, with a much lower incidence reported in non-Western than in Western societies (Smink, van Hoeken & Hoek, 2013). Cultural factors in Western societies, like the emphasis on slenderness and fitness, the change in beauty-ideals, the growing tendency to individualization and the changing positions of women, may play an important role in the development of anorexia nervosa. Many clinical and epidemiological studies support a sociocultural approach to anorexia nervosa. The socio psychological background emerging from different economic contexts might influence the development of women's identity differently, providing a way of monitoring the risk of developing eating disorders (Pike, Hoek & Dunne, 2014).

The subject of body attitudes and body image disturbance is a much-debated issue in the eating disorder literature. Some of the principal questions are whether different aspects of body image disturbance are present in all subjects with an eating disorder (Lee & Hsu, 1993) and to what extent these aspects are present in typical adolescent females (Wadden, Brown, Foster & Linowitz, 1991). In the present study, analysing the descriptive statistics of our sample is was obvious that the Flemish females with anorexia nervosa had lower mean height, mean weight and mean Body Mass Index comparing to the Greek and Belgian control samples which differentiates the clinical sample from the others two non-clinical samples. In addition, the typical

Greek female sample had significant differences in mean height and mean weight with the Belgian controls, with the Greek participant having higher mean height and weight.

As it was initially hypothesized, there were statistical significant differences between the three groups on body attitudes. The Belgian female group with eating disorders scored significantly higher in the BAT test, meaning that the females with eating disorders had more negative attitudes concerning their bodies and were feeling less comfortable with their bodies than the healthy participants from Greece and Belgium. These results also support the criterion validity of the BAT, which is able to differentiate clinical from non-clinical subjects. Probst, et al. (1995) using the BAT with typical and clinical samples of females found that there were no statistically differences between anorexics and bulimics but the differences between typical schoolgirls and both the anorexics and the bulimics were statistically significant (Probst, Vaandereycken, Van Coppenolle & Vanderlinden, 1995).

Findings from the data from Body Satisfaction Scale (BSS) revealed that the Flemish females with eating disorders had a higher mean score on body satisfaction than the typical Greeks, which leads to the conclusion that the healthy Greek female participants were feeling better and more satisfied with their body than the Belgian females with eating disorders. Research on this topic is consistent with our results on BSS test (Slade, Dewey, Newton, Brodie, & Kiemle, 1990) who compared two weight problem groups ("eating-disorder and overweight") with three control samples and found that the weight problem groups were more dissatisfied with their bodies.

Analysing the results of the Silhouette Chart Test there were significant differences at the mean scores for silhouette 2 and 3, (how you perceive yourself and how you feel you look most of the time) between the typical female Greek group and the Belgian clinical group. However, the mean scores for silhouette 1 did not differ significant. This is a very interesting finding since the Silhouette test is related with the ideal image of a woman's body. This finding could leads to the conclusion that both groups have no differences in their attitudes about the ideal silhouette of a woman. In addition, it was also initially hypothesized that that the Belgian females with eating disorders would have significant differences on mean scores compared to the typical Greek group without eating disorders in all the items of the Semantic differential test. On the contrary, on six items of the test (e.g. nervous/calm, big/small, muscular/not muscular) there were no significant differences between the two groups. The fact that females with anorexia nervosa and typical females without eating disorders or history of mental health problems, share quite similar profiles on body attitudes, concerning these specific items, is an interesting finding. Although that typical Greek females had similar attitudes towards the ideal female body and similar body attitudes towards

body with the Belgian females with AN, the fact that they did not develop any pattern of eating disorders but they were healthy fit females in terms of weight, BMI, with no warning signs of mental health problems could lead to the conclusion that there are some protective factors that contribute to this result. One possible explanation could be the fact that the Greek female group was consisted by females who were following a healthy and active way of life (e.g. physical education students) and they may have developed some coping strategies to feel satisfied with their bodies. In addition, differences between the two cultures in terms of different nutrition habits (e.g. Mediterranean nutrition) or differences on ideal body patterns, could possible explain these results. Findings must be taken into consideration when designing prevention programs for young females in order to understand the social cultural factors that may contribute to the development of eating disorders.

4.1 Limitations and future research

The typical female sample from Greece was not big enough to test and confirm the psychometric properties of the Greek version of the instrument. Future studies using a bigger typical and/or clinical sample from Greece could be used to confirm the construct validity of the instrument and the psychometric properties of the Greek version. Future studies could also test further the validity and reliability of the questionnaire and provide cut-off scores so the BAT may be a useful instrument for clinical research and practice in Greece. Future research could investigate the role of cross-cultural differences in body experience between typical and clinical population using data from other European countries. Research into the cultural factors that could contribute to body dissatisfaction and promote the development of eating disorders could help us understand the underline mechanisms and create effective preventive interventions for young females 'at risk' for eating disorders.

5. Conclusion

Research into the prevalence of eating disorders in different societies and cultural groups is useful for at least two important reasons. First, basic information about the epidemiology of these disorders is needed for the purpose of planning treatment and prevention programs in different populations (Kellam, & Langevin, 2003). Second, information about eating disorders in different cultures is needed to formulate hypotheses about the social factors which contribute to their etiology.

Within the limitations of the present study, the results lead to the conclusion that there are significant differences between the Belgian group with eating disorders and

the typical group from Greece, concerning the body attitude, with the clinical Flemish girls having more negative attitudes towards their body. Although these results were expected to be met, and confirm the discriminant validity of the questionnaires, some of the findings were contradictory to our expectations.

In addition, given the comorbidity of eating disorders with other psychological problems and health-related issues, particularly mood disorders and substance-related disorders, it seems reasonable to address factors that might underlie not only eating problems, but also other problems when designing prevention programs for eating disorders (Kater, Rohwer, & Levine, 2000; Keel, & Klump, 2003). A broader approach, with the potential to positively affect a variety of behavioural and mental health problems, is likely to appeal to educators and public officials concerned about violence, depression, substance abuse, obesity, and poor nutrition, as well as the financial and time expense of multiple programs. Programs that increase skills for coping with stress and negative affect, improve self-esteem, and reduce depression may well have a positive impact on preventing risk factors for eating disorders among young females (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004).

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