

PERCEPTION OF BODY IMAGE IN EARLY ADOLESCENCE. AN INVESTIGATION IN SECONDARY SCHOOLS

Maria Rosaria Juli

Family Counseling of Foggia, Foggia, Italy

SUMMARY

Introduction: The clinical evidence shows that the onset of eating disorders is increasing in the prepubescent phase or even in childhood. Already starting from the prepubescence the certainties related to the body start to unwind and the individual is encouraged to build new ones, based both on the anatomic transformation of his/her own body and on the social expectation according to the identity.

The onset of a Eating Disorders is normally between 13 and 25 years, but in the last years we recorded a lowering in the onset threshold to an age between 11 and 13 years, with some earlier cases at 7 years (Franzoni et al. 2012).

Many theories consider body dissatisfaction as the immediate antecedent to the development of this eating disorder. Different studies have confirmed that a strong concern for physical appearance could sometimes precede an eating disorder (Cuzzolaro 2004). The alteration of the body image is the major predictive factor for the relapse, the patients themselves refer that it is one of the major obstacles for the realization of a lasting recovering. In the following study one hundred kids between 10 and 15 years old, without any Eating Disorders diagnosis, have been tested to evaluate whether if already from this age there is a concern about body image starting at this age, the fear of gaining weight and the desire to be slimmer. It is known, indeed, that these factors, if significantly present in a subject, can turn into predictive factors of a psychopathology.

We need to build our body image over time; changing our perception of reality can change also what we see, in particular the body image we strive for changes (Bianchini 2008).

Method: 100 teenagers split in 53 females and 47 males aged between 10 and 14 years, randomly picked in the secondary school.

Results: The results of the study show that in the age between 10 and 15 years the concern for the body shape is already present, without difference between the genders.

Although 45% of the sample is underweight, the Figure Rating Scale test both males and females want to be of lesser weight. 91 subjects reached a BSQ test score of over 34, so most of the sample has a strong concern for their physical appearance. The results obtained by administering the BUT test also highlighted concern about the body with moderate gravity.

Discussion: Body dissatisfaction, as so many studies have confirmed, can be considered a precursor of psychopathology. Concerns concern both female gender and male gender. It is also necessary to pay close attention to the pressure exerted by family members, friends and the media towards a difficult to reach thinness ideal. That is why we need to focus on strengthening protective factors in adolescents with prevention and awareness campaigns which are properly targeted.

Conclusion: The work resulted a useful reflection on the building of the body image as an early risk factor for the onset of pathologies linked to this concept. We need to commit to an educative practice of support for adolescent, recognition and sharing, which does not avoid the presence of the adults, but in fact it is enriched.

It would be appreciated if we could introduce in the school, in the program of different subjects, the discussion regarding different aspects of a healthy nutrition and the formation of a solid self-esteem in order, for the students, to have a critical interpretation of the media message on food, body and beauty.

It is desirable to promote the emancipation of the adolescents from a condition of dependence to discover their own place in the world. The educative action can help developing the research of the meaning of the own personality.

Key words: Teens and body image - perception of the body image

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Introduction

Eating disorders are defined as weight-control behaviors that damage physical health and psychosocial functioning and are not secondary to any known medical or psychiatric condition. At an early age, problems linked to nutrition are a common condition with a very variable clinical relevance. Indeed, in addition to temporary events that especially happen during some critical evolutionary stages such as weaning, switch to eat alone, etc., there are also very serious pictures characterized by a total refusal of the food with an important impact on the physical and psychological development of the child (Juli 2016).

The current diagnostic classifications of eating disorders (DSM V, ICD-11) consider these disorders as one unique category called "Eating disorders of the early childhood and childhood".

Since the '50s of the last century we could notice a gradual increase of the Eating Disorders (Dalle Grave, 2011) so that in the National Prevention Plan it is stated that: "The spread of eating disorders is really fast and significant: there is no other example of psychiatric illness with such propagation and with the same characteristics of a real social epidemic" (Ministry of Health 2010).

At the same time it a decrease of the age of onset has been recorded (Favaro 2009) so that there are more and

more often diagnosis before the first early period, including cases of girls 8/9 years old (Dalla Ragione 2012). Therefore, currently it is necessary to pay more attention to the pre-adolescence period because a long delay is still occurring before defining the diagnosis that can have a negative impact on the therapeutic diagnostic path and on the prognosis of Eating Disorder (American Academy of Pediatrics 2010).

In the sector of clinical research on eating disorders many useful tools for the study of body image have been developed together with methodologies of investigation about perceptual aspects (Thompson 1995). Indeed, it is well known that the alteration of the image we have about our body has an important role in the onset of Eating Disorders (Dalla Ragione 2005).

The scientific interest for clinical issues related to the body image has determined a progressive elaboration of a wide and various number of methods, techniques and tools to evaluate the different components of the mental representations.

In line with the traditional psychology, the research has been mainly focused on deeper theoretical studies and on the measurement of the behaviors and pathological or anyway negative approach that some people have regarding their body.

The founding father of the current theories on the development of body image is Paul Schilder, author of the first work entirely dedicated to the body image called "The image and the Appearance of the Human Body" (1935). Schilder can be considered as the starting point of all the next works about body image, even if he treated the topic especially from a neurological point of view.

Nevertheless, the work of this author can still be considered very valid in terms of studies about body image; for body pattern he means the mental representation of the body in its spatial and postural tonic disposition, directly influenced by the related sensations; for body image he means a further level of integration of the body pattern with the emotional/cognitive context.

The study suggests, through the use of self-administered tests to investigate within a preadolescent group, perception of body image, body weight dissatisfaction, predictive factors for the birth of psychopathology.

In particular, we are aiming at understanding if the perception of the body image that children themselves have is the same as the real one and also how to intervene in a broader perspective by raising awareness and promoting a primary prevention aimed at solving the problems closely related to the perception of the image of the body. Adolescence represents a critical phase of the life cycle, especially as regards the formation of the self-image and the body pattern. The relationship with food in this age group is of fundamental importance not only for the growth and development of the body, but also as a symbolic value that contributes to defining personal identity and psychosocial autonomy. The risk factors for an early DCA debut are certainly increased:

the patterns of the thinness to which children are increasingly exposed through the mass media, but also through the family, the school, and the aggregation sites; Bad habits and less and less regular in the family.

This work, carried out by 100 students aged between 10 and 15 years of a first degree secondary school, used the body shape questionnaire or questionnaire on bodily dissatisfaction (BSQ) Uneasiness Test (BUT), the Scale Rating Scale (FRS) test, and finally the detection of the weight/height ratio as well as the Corporean Mass Index.

Methodology

The aim of this study was to analyze, through the administration of diagnostic tests, the perception and possible alteration of the body image, often a predictive factor for the onset of pathologies such as Eating Disorders.

Specifically, fundamental aspects have been considered: perceptual, cognitive and affective components of bodily representations. The use of tests (BSQ, BUT, FRS) has allowed us to measure the real difference that subjects have about themselves, how they are perceived now and how they would like to be.

The sample examined presents the characteristics of a true experimental design, but it is only explorative and entirely pioneering. Nevertheless, the following results have shown interesting reflection points, although further investigation and significant increase in the sample size are needed to conclude a generalization of the data so far extrapolated.

Description of Case Study Group

The sample used for this work is 100 teenagers, divided into 53 females, 47 males aged between 10 and 14, casually identified in high school. Subjects were given a test battery in the school during the course of a health project to which the school adhered to during the school year.

Testing Instruments

The instruments used are self-administered tests that measure the real difference that they have at their present time and what they would like to be, that is, which should be the actual or desired image. The usefulness of these tests is supported by the hypothesis that the greater the difference between the real and the ideal dimension, the greater will be the dissatisfaction of one's body and consequently the alteration of the mental image of oneself. It particular:

- **BUT (Body Uneasiness Test)**, Cuzzolaro M, Vetrone G, Marano G, Battacchi M. Body Uneasiness Test (2000): It is a self-assessment scale of body discomfort that provides a global index of severity (GSP) and a series of sub-scale scores exploring different areas: weight dissatisfaction and fear of fatigue (BUT scale (WP, weight phobia), excessive body-related concerns (BIC, body image concerns),

avoidance behaviors (But AA, avoidance) and compulsive control (BUT A CSM, compulsive Self-monitoring), experiencing detachment and extraneousness with respect to their body (scale AD, depersonalization); In the second part of the test (BUT B) specific concerns about certain parts, characteristics or bodily functions are summed up by two scores: BUT.B PST, positive symptom total and BUT. B PSDI, positive symptom distress index).

- **BSQ (Body shape questionnaire)**, Cooper PJ, Taylor MJ, Cooper Z, Fairburn CG (1987). Self-administered test that evaluates the concern that the subject has of the body image; Consists of 34 items investigating dissatisfaction with their body image in a 4-week timeframe and based on six levels of severity expressed by the frequency with which the thoughts, feelings and behaviors described in the individual items occur. As Cooper argues, the BSQ questionnaire can not be used to measure the occurrence of DCA cases, but rather to assess the mental attitudes of a DCA-free population compared to a DCA diagnosis with reference to their body image.
- **The Figure Rating Scale (FRS)**, Thompson, JK, Altabe MN (1991). Also known as the **Stunkard Scale** is a psychometric measurement developed in 1983 as a tool to determine body dissatisfaction in women and men. This scale has also been developed for measuring adolescent body image. This type of measurement was originally developed and validated to indicate the weight status of relatives of research subjects when other specific measurements or self-reported values were unavailable; is a visible measure of how an individual perceives his or her own physical appearance. Each figure presents nine male and nine female schematic silhouettes, ranging from extreme thinness to extreme obesity. For research purposes, participants are asked to self-select the silhouette that best indicates his or her current body size and the silhouette that reflects his or her ideal body size.

Results

From a general reading of the test, the concern about the physical appearance, the body dissatisfaction and the fear of gaining weight are present among the adolescents in the age between 10 and 15 years. There is no particular evidence of the difference between males and females. Particularly, the analyzed sample is on average 12 years old, the 50% has an IBM between 18.5 and 24.9 (normal weight), 45% has an IBM <18.5 (underweight) (Figure 1).

It seems that the IBM does not have a significance impact on the perception of the body image, both in the overweight subjects (even if just 2) and in the underweight ones; both resulted being dissatisfied in the same way, independently from the gender, such as demonstrated in the study of McCabe & Ricciarelli (2004).

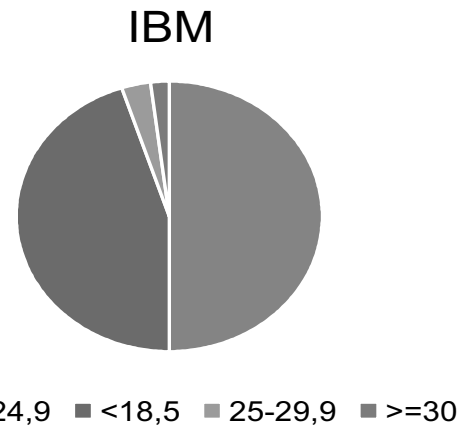


Figure 1. IBM

As table 1 shows, nonetheless the 45% of the sample is underweight, in the test "Figure Rating Scale" both males and females would rather being slimmer; the score related to the question "how I would like to be" are for both gender lower than the ones related to the question "How am I". The female gender feels to belong to the category "normal weight" (score=3.02) but desires being underweight (2.46); also the male gender feels to belong to the category "normal weight" and overweight (score=3.80) but desires belonging to the category underweight (score=2.89). In the global score between males and females there is the tendency of the two genders to feel to belong to the category of "normal weight" (score=3.38) but they would like to be in the category underweight (score=2.66).

What emerged is bewildering, because many studies agree on the fact that the lack of self-esteem, the desire for a different weight and so, a global dissatisfaction for the body is a predictive factor more reliable than the eating behaviors themselves (Cash 2002).

The BSQ results are quite clear because just 9 subjects reached a score equal to 34 (minimum score and not significant), the other 91 individuals reached a score higher than 34, therefore the major part of the sample present a strong concern for his/her own physical appearance. The maximum score reached by a male participant in the BSQ test is 148 and the maximum female score is 170. These scores confirm that also in the prepubescence phase there are thoughts, sensations and behaviors concerning the weight and the body shape.

In the table 2 half of the sample of males and females has a dissatisfaction score in the BSQ of 43 and 44 respectively, at p90 among the females the dissatisfaction stays at 79% whereas it grows up to 89% among males, therefore in this last distribution the male gender results more dissatisfied than the female gender.

Considering the distribution, I counted the individuals that had a score >70 and <70, setting a cut-off that can represent a significant body dissatisfaction; it results that the 15.4% has a score >70 in the BSq independently from the gender and represent a significant body dissatisfaction.

Table 1. BSQ results

Gender	Indicators	Scores		
		Media	Standard Deviation	Median
Females	BSQ	50.61	25.30	44
	like I am	3.02	1.12	3
	How I want to be	2.46	0.66	2
Man	BSQ	52.43	23.69	43
	like I am	3.80	1.28	4
	How I want to be	2.89	0.97	3
M+F	BSQ	51.45	24.47	43.5
	like I am	3.38	1.25	3
	How I want to be	2.66	0.84	3

Table 2. Dissatisfaction score in the BSQ

Gender	Media	Standard Deviation	max	min	p25	p50	p75	p90
F	50.61	25.30	170	34	37	44	53	79
M	52.43	23.69	148	34	37	43	57	89
M+F	51.45	24.47	170	34	37	43.5	54	84.5

Table 3. BUT test

Gender	Indicators	Scores		
		Media	Standard Deviation	Median
Females	WP	1.50	0.97	1
	BIC	1.50	0.97	1
	A	1.50	0.97	1
	CSM	1.48	0.95	1
	D	1.48	0.97	1
Man	WP	1.50	0.86	1
	BIC	1.50	0.86	1
	A	1.50	0.86	1
	CSM	1.48	0.86	1
	D	1.46	0.84	1
M+F	WP	1.50	0.92	1
	BIC	1.50	0.92	1
	A	1.50	0.92	1
	CSM	1.48	0.90	1
	D	1.47	0.90	1

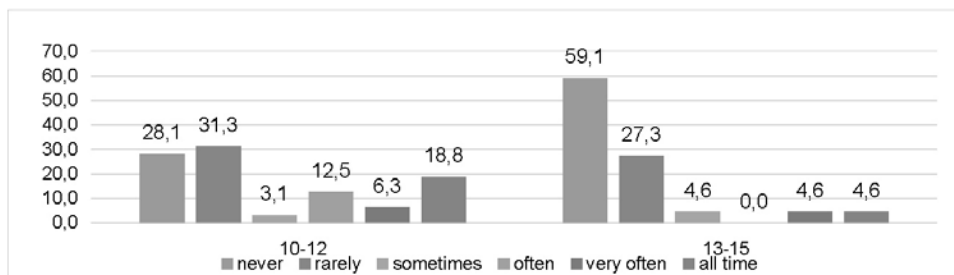


Figure 2. % Worries about getting fat by age classes - Females

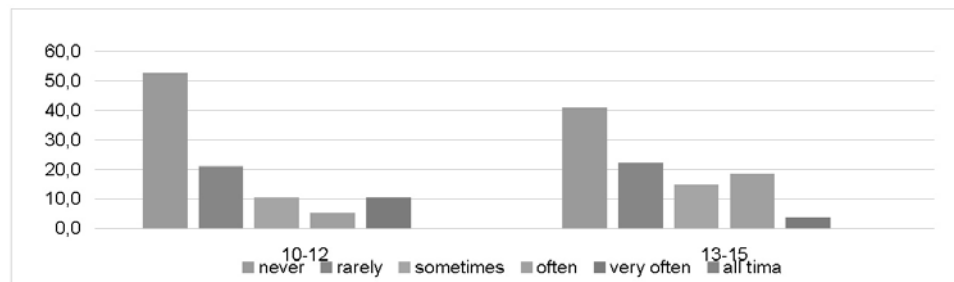


Figure 3. % Worries about getting fat by age classes – Men

The BUT test, reported in table 3, highlights the body discomfort experienced by the individuals. The score of the sub-scales that explore the different areas find place in scores lower than 2, therefore, independently from the gender, the concern for the body results being medium seized, specifically the total score of the two genders is so divided: the dissatisfaction for the weight and the fear to gain weight (scale BUT. A BIC, body image concerns, score: 1.50), avoidance behavior (scale But. A A, avoidance, score: 1.50) and the compulsive control (BUT. A CSM, compulsive self-monitoring, score: 1.48).

The sample is split into two age classes, respectively 10-12 years and 13-15 years. As Figure 2 shows the females of the class 10-12 result in being more concerned of gaining weight, with a score of 18.8, whereas in the class 13-15 4.6% is scared of gaining weight. The 28% of the class 10-12 has never fear of gaining weight, whereas, we observe a score of 59.1% for the scare of gaining weight for the class 13-15 years. In the end, a score equal to 12.5% is highly concerned in the class 10-12 and a concerning with score 0 in the class 13-15.

Also the males, split in the same age classes as the females, present the following percentage:

- Figure 3, in both classes no male subject present the concerning of gaining weight, always with a score 0.00.
- The percentage of males belonging to the 10-12 class answering often 5.3% results significant, whereas the ones of the class 13-15 years result more concerned with a 18.5%.

Discussion

The lack of satisfaction regarding the body image is represented by the personal sorrow for the shape of the body in general or for the size of some parts of the body. The psychological discrepancy between the perception that we have about our own body and the body considered as ideal can lead to a negative feeling about ourselves and to behaviors harmful to our health (Thompson 2004). Although the dissatisfaction about the body exists specially among young people, in its extreme condition it is considered an essential component for the start of pathological behaviors. Indeed, the dissatisfaction about the body can be associated with a distorted view of the body image that can be closely related to eating disorders. Currently we do not know exactly what is the role of body dissatisfaction in causing or promoting the onset of Eating Disorders and whether it is primary to the disorder or secondary to changes in cognitive functions determined by fasting (anorexia) or abusing (bulimia). However, several studies, including the one of Bruch H. (1978), highlight that there is a close correlation between the dissatisfaction about the body and the onset of eating disorders. Some research conducted by Granner (2002) and Stice (2010) shows a link between the low satisfaction for the body and many factors related to bad health such as depression, low

self-esteem, anxiety, substance abuse and alcohol abuse. As we have seen from the results we got, the dissatisfaction about the body and the problems related to the body image are becoming quite common also among men, therefore now the problem involves women and men without a big difference. This is happening due to the most popular magazines for men that show muscular bodies, in addition to movies where the same thing happens and to the spread of products that are able to increase the muscle mass. The first evidence of the incongruous correlation between the effective weight and the satisfaction about the body image appeared in the literature in the mid-eighties of the last century when Rodin J. et al (1985) and Cash TF (1986) found that among the women without any clinical issue, the percentage of those who did not show concern for their physical appearance was derisory. Over the last twenty years, thanks to numerous studies, the literature regarding this topic has confirmed the popular association between dissatisfaction about the body and eating disorders, showing that attitudes about the physical appearance are a more exact predictor of the development of Eating Disorders than distorted perception of the body. The studies conducted by Stice E. in 2002 show that the pressure coming from family members, friends and media create an ideal of "subtle beauty" and the tendency to give excessive importance to weight and body shapes when we evaluate ourselves. The author states that these behaviors represent the structural basis of a distorted view of our body which increases the probability of developing the three typical symptoms of food pathology: food restriction, over eating and affective deficiency. Therefore, it is necessary to support prevention programs involving schools, places of training and education in order to develop the creative potentialities of adolescents and pre-adolescents enhancing protective factors and increasing emotional and cognitive awareness in order to finally promote identity development.

Conclusions

As already said, pre-adolescence is characterized by body dissatisfaction, which is closely linked to a more general discomfort and insecurity regarding the identity, therefore it is not possible to work on these specific risk factors without relating them to the more global identity uncertainty.

Therefore, in order to be able to intervene concretely on "at risk" behaviors of young people, it is necessary to work in terms of primary prevention programs that consider the disorder as an expression of a wider psychic discomfort, developing a deeper path to spread the concept of "bio-psychological-social wellness" according to the definition of health promotion. Currently national and international studies on the effectiveness of primary prevention interventions are few and some analyses have highlighted the risks associated with an incautious prevention.

An important prerequisite is that practitioners are highly qualified as adolescences tend to see them as guides and references to imitate and the topics dealt with them can have a strong impact at this stage of life. In particular, it is important to talk about Eating Disorders prevention focusing on risk factors, especially strengthening protective factors.

Temperamental, traumatic, and family risk factors can be the basis for psychopathologies of various kinds (depressive disorders, anxiety disorders, dissociative disorders), especially when they are really strong. When they are combined with risk factors for dissatisfaction and discomfort for the body, then they can determine the onset of eating disorders (Dalla Ragione, 2005). Now many agree with the need of preventive interventions to increase protective factors already in early childhood. And it is also necessary to involve the parents of the children and to have the primary goal of creating a good ability to recognize internal motivations.

In the light of these considerations, it is necessary to define the prevention measures according to the guidelines of the National Health Plan of 2003: "A characteristic of the prevention of diseases linked to nutrition is the necessity to involve the majority of the population and not only the high-risk groups. The prevention strategy should be addressed to the entire population, where recommendations for healthy nutrition and healthy dietary choices, also consistency with cultural and socio-economic factors should be disseminated" (National Health Plan, 2003); and the recommendations are offered by Neumark-Sztainer (2009). In particular:

- Taking into consideration the disorder as expression of a wider adolescent psychic discomfort and organizing prevention as a large project for the dissemination of the concept of psycho-physical well-being according to the idea of promotion of the health from the WHO;
- Taking into consideration these disorders as correlated and enhanced by the current socio-cultural context and then defining a prevention plan that takes into account these external influences (mass media, modes), but without focusing only on this;
- Eating in a healthy way, promoting a healthy lifestyle and enhancing psychic, physical and social well-being. A balanced dietary style is also effective to avoid the onset of many pathological conditions.
- As part of a prevention project, it is essential to work on personal aspects (body stimuli, habits), physiological aspects related to nutrition, collective aspects as the sociocultural ones;
- We have to face together the problem that characterize human existence, ranging from insignificance to significance, from time lived to the one planned, from protection to disposition to risk.

The objectives of a prevention project for Eating Disorders should be:

- To provide information about the content and functions of food and about education regarding nutrition;
- To acquire a greater awareness of the relationship between food and emotions;
- To provide ideas to think about some risk factors and the maintenance of eating disorders (cultural factors, prejudices on obesity and anorexia);
- To stimulate a good acceptance of ourselves, of our body and our image.

This type of intervention should have the main scope to reinforce self-esteem and to counteract the negative impacts of the culture on health in general and can be included in a wider prevention project of disorder that involves young people that often, especially in cases of eating disorders, are also victims of some behaviors closely related (alcohol abuse, drugs, etc.). It is crucial that this kind of educational intervention stimulates knowledge, attitudes and behaviors that promote self-acceptance and psycho-physical well-being in the teenagers helping them to better understand the close relationship between food and emotions.

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References

1. American Accademy of Pediatrics, (2010). *Committe on Adolescence. Identification and management of eating disorders in children and adolescents*. Pediatrics.
2. Bianchini, P., DallaRagione L. (2008). *A cura di: Il vaso di Pandora. Guida ai DCA per pazienti, familiari ed insegnanti. Collana dei quaderni del volontariato Cesvol, Perugia*.
3. Bruch H. (1978). *Patologia del comportamento alimentare*. Feltrinelli, Milano, 1978
4. Cash T.F et al., (1986). *Body image suvery report: the great American Shape – up*. Psychology Today, 24.
5. Cash T. F., Pruzinsky T., (2002). *Body image: a handbook of theory, research, and clinicalpractice*. Guilford Press, New York.
6. Cooper P. J., Taylor M. J., Cooper Z., Fairburn C. G., (1987). *The development and validation of the body shape questionnaire*. *International Journal of Eating Disorders*.
7. Cuzzolaro M., Vetrone G., Marano G., Battacchi M. (2000): *Body Uneasiness Test, BUT*. In: Conti. L. (2000) *Repertorio delle scale di valutazione in Psichiatria*, vol. 3, Firenze.
8. Cuzzolaro M: *Anoressie e bulimie*. Il Mulino. Bologna, 2004.
9. Dalle Grave R., (2011). *Eating Disorders: progress end challenges*. *Eur J Int Med*.
10. Dalla Ragione L., (2005). *La casa delle bambine che non mangiano. Identità e nuovi disturbi del comportamento alimentare*. Il Pensiero Scientifico Editore, Roma.

11. Dalla Ragione L., Mencarelli S., (2012). *L'inganno dello specchio. Immagine corporea e disturbi del comportamento alimentare in adolescenza*. Edizioni Franco Angeli.
12. Favaro A., Santonastaso P. (2009). *Anoressia e bulimia. Guida pratica per genitori, insegnanti e amici*. Positive Press.
13. Franzoni E. et al, (2012). *Il coraggio di Guardare - Prospettive e incontri per la Prevenzione dei Disturbi del Comportamento Alimentare*, Collana Mettere le Ali, Presidenza del Consiglio dei Ministri, Dipartimento della Gioventù. Roma
14. Grammer et al (2002). *Levels of Cigarettes and Alcohol*. *International Journal of Psychology and Psychological Therapy*, 4.
15. Juli, M.R., (2016). *Childhood obesity: global issues*. *Psichiatria Danubina* vol, 28.
16. Neumark – Sztainer, D., (2009). *Preventing Obesity and Eating Disorders in Adolescents: What Can Health Care Providers Do?* *Journal of Adolescent Health*.
17. McCabe MP & Ricciarelli LA: *Body image dissatisfaction among male across the life span. A review of past literature*. *Journal of Psychosomatic Research*, 2004.
18. *Piano Nazionale della Prevenzione, Ministero della Salute*, (2010). Roma.
19. *Piano Sanitario Nazionale, Ministero della Salute*, (2003), Roma.
20. Rodin J. et al (1985). *Women and weight: a normative discontent*, in Sonderegger T.B. *Psychology and gender*, University of Nebraska Press, Lincoln.
21. Stice E., Shaw H.E. (2002). *Role of body dissatisfaction in the onset and maintenance of eating pathology. A synthesis of research findings*. *Journal of Psychosomatic Research*.
22. Stice E: *A meta-analytic review of eating disorder prevention programs: encouraging findings*. *Annual Review of clinical Psychologist*, 2007.
23. Schilder P., (1935). *Immagine di sé e schema corporeo*. Franco Angeli, Milano.
24. Thompson JK, Altabe MN: *Psychometric qualities of the figure rating scale*. *International Journal of Eating Disorders* 1991; 10:615-619.
25. Thompson John B: *Media e modernità: una teoria sociale dei media*. Stanford, 1995.
26. Thompson JK: *Handbook of eating disorders and obesity*, Wiley, New York 2004.

Correspondence:

Maria Rosaria Juli, MD
Clinical Psychologist, Psychotherapist, Specialist in Alimentary Behaviour Disorders
Family Counseling of Foggia
via C. Baffi, 1, Foggia, Italy
E-mail: mariarosaria.juli@libero.it