

Modelling Peer Group Dieting Behaviour

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Abstract—The aim of this paper is to understand how peers can influence adolescent girls' dieting behaviour and their body image. Departing from imitation and social learning theories, we study whether adolescent girls tend to model their peer group dieting behaviours, thus influencing their body image construction. Our study was conducted through an enquiry applied to a cluster sample of 466 adolescent high school girls in Lisbon city public schools. Our main findings point to an association between girls' and peers' dieting behaviours, thus reinforcing the modelling hypothesis.

Keywords—Modelling, Diet, Body image, Adolescent girls, Peer group.

I. INTRODUCTION

IMITATION and modelling have been studied by different sciences and different phenomena have been approached based on these theories – body image is one of them.

In this study we define body image as the body figure or representation we form in our mind. It is not, for us, innate but its different aspects are constructed through social relations, images we have of others and body relations with other objects.

Body image is thus a daily built project, through exposition to social models, with social pressures towards obtaining an ideal body mostly felt by women, from a very tender age. It is our purpose to test whether peer groups play an important modelling role. In this paper we discuss specifically how body image investment, through dieting behaviours, is influenced by other adolescent girls' behaviours.

II. IMITATION AND MODELLING

Within bodily issues, imitation has always played an important role, supplying a basis for accepted behaviours. This social phenomenon has been studied within Social Psychology ever since the work of [1] in the late 19th century. The author [1] made imitation the fundamental principal of social life and in his thought, it leads crowds to adopt similar behaviours. After this first interest on imitation, it is not until the 1960's decade that it is rediscovered. Meanwhile, imitation was considered "a non creative conduct, therefore unintelligent and unworthy of interest (...) which forgets the huge advantages of imitation, namely in the learning level" [2]. In fact, imitation plays a major role in social learning, a facilitating one. Nevertheless, it was only from [3] work on social learning that imitation was highlighted again.

Social learning theory [3] was developed on an empirical basis during the 1970's and launched a new interest on

imitation, in its relation to learning. As [3] points out, there are two stages in the imitation process: firstly, an acquisition stage, where the individual learns by observation a model's behaviour; secondly, the performance stage, where the individual reproduces that model's behaviour. The author still refers four intervenient sub-processes: 1. attention processes, which command sensorial registration of the behaviours to acquire; 2. retention processes that lead to a mnemonic representation; 3. reproduction processes, which help to integrate the model's behavioural sequences; 4. motivation processes, which can influence the previous processes, taking acquired behaviour to be reproduced or not. If attention and retention affect the first stage –acquisition – then reproduction and motivation interfere in the (second) performance stage [2].

Social learning theory relates behaviours and behavioural changes to the models individuals observe in their houses, in mass media and among their peers. Learning by observation works when models exhibit new behaviour patterns observers didn't possess but they are able to reproduce.

If we consider imitation as the dependency relation between subject and model behaviour, we can present four intervening variables, according to [2]. In the first place, the positive affection of the model-subject relation, which had been initially studied only on parent-child relation and had later an attempt to be generalized that concluded that a model will be more imitated if it is not distant and if it is seen with sympathy. A second variable is the initial resemblance between model and subject, which implies that behaviours will be more imitated if the model who produces them is, for instance, the same sex as the subject. Thirdly, we should consider the model status, which includes other variables as competence, prestige or power, which have shown to play an important role in reinforcing imitation. The last variables in imitation are the so called vicariant reinforcements, which are indirect but, being experimented by the model, have the same impact on the subject, who knows what can bring benefits or problems.

Having stated this, even though it is still difficult to understand why some models are chosen and the interactions between different choice factors, imitation surely plays an important role. Imitation is thus fundamental in social integration [4] and it is possible to summarize its three main functions: the first is related to learning, being able to accelerate it, especially when answers are not spontaneous and will hardly be positively reinforced. The second function is connected to the inhibition or disinhibition of certain already learnt and society sanctioned behaviours. Lastly, imitation may perform a general facilitation [5], leading to the appearance of already learnt and unsanctioned answers – for example, contagious laughter in audiences. We believe it is thus possible to understand how important the choice of

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certain behaviours to imitate may be, especially when they are connected to positive social reinforcements.

In our study, we believe that adolescent girls, in their quest for an ideal body, may try to imitate their peers' observed behaviours. This may also be due to a desire to belong to the group. Our choice of the adolescence period for analysis and the importance of dieting behaviours to body image construction will be discussed below.

III. ADOLESCENCE AND BODY IMAGE

We chose to perform this study in adolescence because all of these questions related to identity construction are particularly highlighted, since this is the stage of "surprise and insecurity regarding bodily transformations, which generates a huge insecurity in the adolescent, specially if we relate them to sexual changes and more body image concerns" [6].

In the encyclopaedic sense, adolescence is "a period of time extended from an epoch and characterized by a new order of things" [7]. The epoch here is puberty, marked by biological events that begin the sequence of physical, physiological and biochemical transformations of the child into the adult. In adolescence, the individual already has a quite formed image of his body, of himself, of the world and of the way he should behave: every social, psychological and physical change will take the adolescent to adapt his self-image to new situations. It is then in the crucial moment of puberty that major body image changes happen, with the transformation of the child's body into the adult's body, with implications on thought and self-consciousness adaptation to the phenomenon.

There is a confrontation between physiological changes and the adolescent's self evaluation, conditioned by his experiences. These are directly dependent on social factors surrounding the individual and moulding his behaviours. Experiences correspond to the adolescent's socialization process, where imitation plays, as we stated earlier, a relevant role, in the sense that there is a tendency to imitate socially available behaviours [8], whether in peer groups or in society as a whole. Nevertheless, taking into account what we stated before about resemblance and proximity between model and subject, peer groups supply important models. It is then at this moment of puberty that society stereotypes may affect the individual's self acceptance, because on the one hand the adolescent compares himself to what society transmits as the ideal and, on the other hand, he perceives himself through the feedback he gets from significant people, such as parents and the peer group [9].

This moment is often translated into a difference between the ideal self and the real self – what the adolescent wanted to be and what he thinks he is. Especially in adolescence early stages there is a major concern with what others think about them [10]. The problem arises when the way the adolescent perceives society expectations collides with his own self perception.

Body image is thus a central identity feature for adolescents. For many, the demanding body stereotypes are converted into a source of tension and suffering, when the adolescents feel they are not up to their models and can hence be refused or made fun of by their peers. Ultimately, they may either enter an eating disorders scenario, in the quest for

thinness, or an obesity scenario, in the sequence of unhealthy life styles [11]. Because "women are much more often subject to the scrutinizing look of others" [12], the question of body control takes them far from a healthy body notion. For this reason, most studies on body image social influences have been focused in females [13] and hence our decision to focus on adolescent girls as well.

To sum up, it is possible to state that adolescence first goal is to build a coherent and consistent identity, which supplies a solid platform for grown up responsibilities. Within this construction, one of the most potentially challenging tasks is the acceptance and integration of the body and the physical self in this emerging identity [14]. Therefore, this is a period when the adolescent girl is concerned with her appearance, trying to correspond to an idealized image that will grant her acceptance and eventually admiration by her peers, even if that implies behaving contrarily to adults' expectations. We believe this is the case with dieting behaviours, being diet of the most important and most studied variables regarding body image investment [15] [16] [17]. It is also our belief that the adolescents will tend to imitate their peers' perceived behaviours and to be influenced by their perceived body image evaluation.

Consequently, on these grounds we state our two hypotheses:

Hypothesis one: adolescent girls tend to diet more if their peers also go on diets;

Hypothesis two: adolescent girls' body image self-evaluation is influenced by their perception of the peer group's body image evaluation.

We will now discuss the methods and variables we used to test our hypotheses.

IV. METHODOLOGY

To test the above mentioned hypotheses, we conducted an enquiry to 466 teenage girls (95% confidence interval) attending six public schools from Lisbon area. The schools were selected randomly and cluster sampling was applied. In each selected school, two classes per year were sorted out, between the 9th and the 12th grade. Students completed self-report questionnaires in supervised compulsory subject classes.

The age of the subjects ranged between 13 and 20 years old with a mean of 15.7 years ($SD=1.46$).

Focusing on our hypotheses, we used different variables, as body mass index (BMI), weight self evaluation, and peer group perceived body evaluation, self diet, peer group diet and peer group recommendation to go on a diet and body satisfaction (the discrepancy between current and ideal figure). As it was impossible to take height and weight measurements to each subject and as in many studies [18] [19] [20] we sorted the self-reported information on height and weight into four body mass index groups, corresponding to thinness, normal weight, slight obesity and obesity.

After evaluating teenage girls' body type, it was important to determine body self-evaluation and also how they think they are evaluated by the peer group. We applied a 5 point-scale, from 1-very thin to 5-very fat. There were also asked about dieting – if adolescents are on diet, if the peer is on diet and whether anyone in the peer group has told them to diet. Finally, to measure body satisfaction, we used a set of 12 body figures that correspond to an adapted scale from a United States research in 1983 being used in different studies [20] [21]. We asked the girls to identify their current figure and then the ideal body figure. The discrepancy between them reveals body dissatisfaction.

We made use of the *Statistical Package for the Social Sciences – 15th version* to establish correlations between variables. In order to correlate variables, we use the chi-square test (at $p < .005$ for significance). We will proceed with the results and their discussion.

V. RESULTS AND DISCUSSION

We will begin to present our results with the descriptive statistics that enable us to have a overall picture of the girls dieting behaviours and body image, so that we can later present these variables associations to peer group related variables, so as to establish the confirmation or the refusal of our hypothesis.

In order to describe our sample in terms of body mass index, our study results reveal that the majority of girls have normal BMI (Table I) (49.6%) and many are included in the thinness girls group (42.4%). In fact, if we observe the accumulated percentage, 92% of the teenagers do not go above normal BMI. Only 6.9% indicates slight obesity and 1.1% show obesity.

In terms of dieting (Table IV), most girls (56.7%) claim they never dieted, but 12.1% say they have been on diets many times and 14.7% have been on diets two or three times, which is important if we remember that average age is 16 years old. For body satisfaction (Table VI), we established three levels, by subtracting current from ideal body figure: matching choices indicate body satisfaction, ideal body figure thinner than current figure and ideal fatter than current body figure. These two last cases indicate body dissatisfaction, but girls may feel thinner or fatter than they should be: only 22.3% of the teenagers showed body satisfaction, thus we have a total of 77.7% dissatisfied. What is striking about this finding is that 60.1% idealizes a thinner body figure.

In terms of correlations, we found a statistically significant association ($p = .010$) between self diet, and peer group diet (Table II): when peers are on diets, girls also tend to diet more, also increasing the frequency. Thus, girls diet more regularly when their peers go on diets (19.7% has been on diet twice or three times and 14.6% has dieted many times), which is a first step to confirm our first hypothesis.

Between peer group recommendation to go on a diet and self diet (Table III) there is also a statistically significant association ($p = .000$): when there is a recommendation to diet, the number of girls on diet rises (23.3%).

Girls dieting frequency (Table IV) is also correlated to peer group recommendation to diet ($p = .000$): the percentage of girls who never dieted rises from 34.1% to 61.9%; inversely,

the most regular dieters are those who have been recommended to diet (22.7% dieted twice or three times and 26.1% reported to have dieted many times). These last findings also seem to confirm our first hypothesis.

When relating peer group perceived body evaluation to weight self evaluation (Table V), there is also a statistically significant association ($p = .000$): 63.3% of girls evaluated by their peers as fat also self evaluate as having excessive weight which appears to confirm our second hypothesis, as well. A curious finding was that when the peer group evaluates adolescents as fine, thin or very thin, most girls self evaluate as having a satisfactory weight (respectively 76.7%, 80.7% and 75%), and not as being underweight, as it would be expected if there was a straight correspondence. There seems to be an idea that thin is good, also stated in other studies [22].

Finally, there is a correlation ($p = .000$) between peer group perceived body evaluation and body satisfaction (Table VI): most adolescent girls (66.1%) evaluated by their peers as thin is dissatisfied with their bodies for being too thin and girls evaluated as fat are dissatisfied for being too fat (92.7%) – data that is also in line with our second hypothesis. However, even those ranked fine in peer group perceived evaluation in many cases (58.1%) feel dissatisfaction for being fat, which points to the same above mentioned trend towards thinness.

TABLE I
BODY MASS INDEX

| Body Mass Index | Valid Percent | Cumulative Percent |
|-----------------|---------------|--------------------|
| Thinness | 42,4 | 42,4 |
| Normal | 49,6 | 92,0 |
| Slight obesity | 6,9 | 98,9 |
| Obesity | 1,1 | 100,0 |
| Total | 100,0 | |

N=462

TABLE II
PEERS DIET * SELF DIET FREQUENCY

| | | Self diet | | | |
|-----------------|-----|-----------|-------|-------------|------------|
| | | Never | Once | 2 / 3 times | Many times |
| Peer group diet | Yes | 51,0% | 14,6% | 19,7% | 14,6% |
| | No | 61,2% | 18,4% | 10,8% | 9,6% |
| Total | | 56,7% | 16,7% | 14,7% | 11,8% |

N=448

TABLE III
PEERS RECOMMENDATION TO DIET * SELF DIET

| | | Self Diet | |
|-----------------------------------|-----|-----------|-------|
| | | Yes | No |
| Peer group recommendation to diet | Yes | 23,3% | 76,7% |
| | No | 8,9% | 91,1% |
| Total | | 11,6% | 88,4% |

N=456

TABLE IV
PEERS RECOMMENDATION TO DIET * SELF DIET FREQUENCY

| | | Self diet | | | |
|-----------------------------------|-----|-----------|-------|-----------|------------|
| | | Never | Once | 2/3 times | Many times |
| Peer group recommendation to diet | Yes | 34,1% | 17,0% | 22,7% | 26,1% |
| | No | 61,9% | 16,6% | 12,9% | 8,6% |
| Total | | 56,6% | 16,7% | 14,7% | 11,9% |

N=461

TABLE V
PEERS PERCEIVED BODY EVALUATION*WEIGHT SELF EVALUATION

| | | Weight self evaluation | | | | |
|--------------------------------------|-----------|------------------------|--------|---------|--------|-------------|
| | | Very insuf. | Insuf. | Satisf. | Exces. | Very Exces. |
| Peer group perceived body evaluation | Very fat | ,0% | ,0% | ,0% | 33,3% | 66,7% |
| | Fat | ,0% | 2,0% | 25,5% | 63,3% | 9,2% |
| | Fine | ,0% | 3,7% | 76,7% | 18,9% | ,7% |
| | Thin | 1,8% | 15,8% | 80,7% | 1,8% | ,0% |
| | Very thin | ,0% | 25,0% | 75,0% | ,0% | ,0% |
| Total | | ,2% | 5,1% | 65,0% | 26,6% | 3,0% |

N=432

TABLE VI
PEERS PERCEIVED BODY EVALUATION*BODY SATISFACTION

| | | Body satisfaction | | |
|--------------------------------------|-----------|----------------------------|------------------------------|----------------------------|
| | | Dissatisf. (actual> ideal) | Satisfaction (actual= ideal) | Dissatisf. (actual< ideal) |
| Peer group perceived body evaluation | Very fat | 100,0% | ,0% | ,0% |
| | Fat | 92,7% | 5,2% | 2,1% |
| | Fine | 58,1% | 30,4% | 11,5% |
| | Thin | 14,3% | 19,6% | 66,1% |
| | Very thin | ,0% | 50,0% | 50,0% |
| Total | | 59,9% | 22,3% | 16,8% |

N=456

VI. CONCLUSION

Through our study, we could confirm both our hypotheses, that adolescent girls tend to diet more when their peers also go on diets and that the girls' body image self-evaluation is influenced by their perception of the peer group's body image evaluation. This way, there seems to be an imitation process

between girls and their peers concerning body image and dieting behaviours, which assures the peer group role as models and establishes their capability to model dieting behaviours, apparently validating [3] theoretical proposition.

In fact, we found a correspondence between the way the peer group classifies adolescent girls' body figure and the way they self-evaluate. Furthermore, we found a tendency that girls evaluated as thin by the peer group feel body dissatisfaction for being too thin and inversely, the evaluated as fat feel dissatisfaction for being too fat. Even when it comes to dieting behaviours, it is also in the cases when the peer group diets or tells girls to diet that they engage in these behaviours more regularly.

Nevertheless, according to other studies [20], the peer group did not arise as a major influence on girls' dieting behaviours – as media, for example, did - even though it is stated that role modelling and competition may encourage girls to diet. It is perhaps important to study more thoroughly peer group role in modelling identity construction and specifically in body image construction.

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