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Mass Media, Feelings of Attractiveness, Investment in Body-Image and Disordered Eating in Cyprus

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Abstract

The purpose of the current study was to assess for possible relationships between the internalization of the thin ideal by the media, disordered eating attitudes and behaviors, feelings of attractiveness and investment in one's appearance in a Cypriot sample of university students. Two hundred and twenty six undergraduate and graduate-level university students answered the four measures used in the study assessing the variables of interest. Results indicated that more internalization of the thin ideal was significantly related to more feelings of unattractiveness, more investment in one's appearance and higher incidents of disordered eating attitudes and behaviors. In addition, results indicated that the internalization of the thin ideal, feelings of unattractiveness and investment in one's appearance were significant predictors of disordered eating attitudes and behavior. Possible explanations for these results as well as implications for the education and the health-related fields are discussed. Suggestions for future research around these topics are also suggested.

Keywords: Media Effects, Internalization of the Thin Ideal, Attractiveness, Investment in Appearance, Disordered Eating Attitudes.

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Introduction

Media Influences

Even though many influences have been found to contribute significantly to the development and maintenance of shape- and weight-related disorders, the role of the media has recently received the most attention (Fallon, 1990; Heinberg, 1996; Thompson & Heinberg, 1999). It has also been suggested that the mass media are the most potent and pervasive communicators of sociocultural standards (Heinberg, 1996; Mazur, 1986), even though sociocultural pressures can be exerted by other sources such as peers, parents and partners (Thompson & Heinberg, 1999). The accessibility and universality of current print and electronic media has been highly criticized by researchers investigating body-image and eating disorders (Thompson & Heinberg, 1999). Current print and electronic media images are developed based on a “blend” between a fictionalized ideal and reality, creating an unrealistic, distorted representation of actual people that is, in most cases, unattainable. Moreover, research has continuously supported that the ‘thin ideal’ is promoted mainly by print media, and particularly magazines targeting teenage girls and adult women (Cusumano & Thompson, 1997; Nemenoff, Stein, Diehl & Smilack, 1994). In fact, Wolf (1990) argued that, women’s magazines specifically, served as advocates and promoters of the desirability of an unrealistic and dangerously thin ideal. In further support, the Renfrew Center Foundation for Eating Disorders (2003) stated that the body-type portrayed in advertising as the ideal is possessed naturally by only 5% of females.

Television is another important source of media affecting shape- and weight-related problems since the average home has their television turned on for more than 7 hours a day (Harris, 1994) and only less than 10% of women who are appearing on television are overweight (Gonzales-Lavin and Smolak, 1995; Heinberg, 1996). A study by Labi (1998) found that 71% of adolescent girls ages 16-17 believed that television female actors were unrealistically thin. In another study by Garner (1997), 23% of the respondents stated that movie or television celebrities influenced their body image and 22% endorsed the influence of fashion magazine models. In another study using middle-school students, Taylor et al. (1998) found that the “need” to look like girls or women on television and/or magazines was one of the strongest predictors of weight concerns.

The connection between media exposure and eating disordered behavior has also been demonstrated using structural equation modeling (Stice, Schupak-Neuberg, Shaw & Stein, 1994), as well as with a few controlled laboratory studies, which also found similar results (Waller, Hamilton, and Shaw, 1992; Irving, 1990; Stice & Shaw, 1994). Due to the above connection, it has been continuously argued that long-term, daily exposure to these unrealistic media images can be very damaging, even “toxic”, especially if levels of ‘internalization of the thin ideal’ are very high (Thompson & Heinberg, 1999).

Internalization of the Thin Ideal

Internalization of the thin ideal portrayed in media messages has also been suggested as a potential mediator between exposure to unrealistic media messages and shape- and eating-related disturbances and has received a great deal of attention in the literature (Durkin & Paxton, 2002; Stice & Shaw, 2002; Thompson & Stice, 2001). Thompson and Stice (2001) defined internalization as “the extent to which an individual cognitively buys into societal norms of size and appearance” (p. 181) and consequently leads individuals into modifying their behavior in an attempt to approximate these standards (Thompson et al., 2004). The internalization of the thin ideal of the media messages has been found to be a causal risk factor for the onset of eating- and shape-related disturbances (Thompson & Heinberg, 1999; Thompson & Stice, 2001) and was related to body dissatisfaction. This internalization has also been found to be a significant predictor of treatment success with anorexia nervosa sufferers (Heinberg, Guarda & Haug, 2001). Furthermore, there has been strong evidence to support that the internalization dimension of the Sociocultural Attitudes Towards Appearance Questionnaire – 3rd Edition (SATAQ-3), a well-validated measure developed to assess this construct, is predictive of the onset of eating disturbances and also seems responsive to intervention techniques (Levine & Harrison, 2004; Stice & Hoffman, 2004; Thompson & Stice, 2001). Based on the above information, the need for further study of this construct across cultures, especially non-westernized ones, and how this possibly influences shape- and eating-related disturbances, is essential.

Purpose, Need and Significance of the Study

The conceptualization and development of the current study was based on the suggestion from the literature by Thompson et al. (2004) who proposed an attempt to connect the Sociocultural Attitudes Towards Appearance Questionnaire – 3rd Edition (SATAQ-3) 'Internalization of the Thin Ideal' construct with body-image investment and appearance-related schemas and how these may lead to disordered eating behavior. The current study was also influenced by the current situation in Cyprus which has some unique characteristics as a culture that are worth noting.

The Cypriot culture seems to be more conservative, as influenced by its small size and limited acceptability towards something 'new', while simultaneously trying to conform to the increased need for 'Western-like' attitudes (Katsounari, 2009). Since eating disorders are influenced by cultural factors, this pressure to 'balance' the traditional with the 'western-like' attitudes should be taken into consideration. Meanwhile, the last few years, there has been a noticeable rise in body dissatisfaction and eating disorders in Cyprus as seen from an increase in articles dedicated to the topic and the absence of specialized treatment in the country (Katsounari, 2009). Very few research studies were conducted that assessed for body dissatisfaction and eating behavior of Cypriot adolescents and adults. Hadjigeorgiou, Tornaritis, Savva and Kafatos (2005) found that 42% of girls and 18% of boys aged 10-18 were not satisfied with their weight and would like to lose some. Furthermore, 34.4% of girls and 18.8% of boys scored higher than a 20 on the EAT-26 scale, suggesting a significant presence of abnormal eating attitudes and behavior. The same research team repeated their study in 2010 and found very similar results (Hadjigeorgiou, Tornaritis, Savva, Solea & Kafatos, 2012). Specifically, 35.9% of girls and 18.8% of boys once again scored higher than 20 on the EAT-26 scale suggesting abnormal eating attitudes. In another recent study by Katsounari (2009) using a university-age population, it was found that 28.6% of the female participants had a score higher than the proposed cut-off of the EAT-26 scale, also suggesting abnormal eating attitudes and behaviors.

However, to date, there is no known published study conducted in Cyprus attempting to assess for the contribution of the internalization of the thin ideal component by the media in relation to disordered eating attitudes and behaviors, feelings of attractiveness and extent of investment in one's appearance. Therefore, the purpose of the current study was to assess for possible relationships between the internalization of the thin ideal by the media, disordered eating attitudes and behaviors, feelings of attractiveness and investment in one's appearance in a Cypriot sample of university students. Two main research questions (RQs) were developed:

RQ1: Is the internalization of the thin ideal by the media related to body-image investment, feelings of attractiveness and disordered eating attitudes and behavior?

RQ2: Are the internalization of the thin ideal by the media, feelings of attractiveness and the extent of investment in one's appearance significant predictors of disordered eating attitudes and behavior?

Based on these two research questions, it was hypothesized that the internalization of the thin ideal by the media will be significantly related to body-image investment, feelings of attractiveness and disordered eating attitudes and behavior. Furthermore, it was hypothesized that the variables of internalization of the thin ideal, investment in body-image and feelings of attractiveness will be significant predictors of disordered eating attitudes and behaviors.

This study will aid significantly the literature concerning the Cyprus population on the variables of interest. Little is known about Cyprus concerning the above stated variables and the lack of specialized treatment centers in the country call for a need of an in-depth investigation of the factors contributing to disordered eating attitudes and behavior. Consequently, the results of the study can be used in order to develop targeted prevention strategies for reducing the aforementioned high rates of disordered eating.

Methodology

Participants

A total of 226 participants were recruited from a private university in Cyprus. There were 29 (12.8%) men and 197 (87.2%) women in the sample and included both undergraduate ($n = 33$, 14.6%) – and graduate-level students ($n = 193$, 85.4%). Participants varied in age from 18-34 with an average age of 26.2 (SD = 3.81). The average height of participants was 165cm (Range: 148-198cm) and the average weight was 60.15Kg (Range: 39-102). Based on their height and weight, the Body Mass Index (BMI) was calculated for each participant using the ratio of weight and height squared (Kg/cm^2) as well as their BMI Weight Category using the scale '0 – 18.49 = Underweight', '18.5 – 24.99 = Normal Weight', '25 – 29.99 = Overweight' and 'Higher than 30' was considered 'Obese'. This frequency distribution revealed that 23 participants (10.2%) fell in the 'Underweight' category, 166 (73.5%) in the 'Normal Weight' category, 30 (13.3%) in the 'Overweight' category and 7 (3.1%) in the 'Obese' category.

Measures

Eating Disorder Tendencies: The Eating Attitudes Test-26 (EAT-26; Garner, Olmsted, Bohr & Garfinkel, 1982) was used in order to assess for disordered eating attitudes and behaviors. The EAT-26 is a 26-item scale, probably the most widely used, which assesses "eating disorder risk" based on attitudes, feelings, and behaviors related to eating and eating disorder symptoms. Items are rated on a 6-point Likert-type scale ranging from "Always" to "Never", receiving a score of 1 to 6 respectively. Items were reversed scored and summed in order to obtain a total score of eating disorder tendencies which ranged from 0-78. Higher scores on the measure were indicative of higher levels of eating disorder tendencies and higher risk of developing an eating disorder. The EAT-26 has very good internal consistency scores ranging from .79 to .94, including the Greek version of the scale as well. For the present study, the internal consistency reliability of the total EAT-26 scale was very good (Cronbach's alpha = 0.87).

Media Influences: The Sociocultural Attitudes Toward Appearance Questionnaire-3 (SATAQ-3; Thompson et al., 2004) was used in order to assess participants' level of the internalization of the thin ideal by the media. The SATAQ-3 is a 30-item Likert-type scale measuring the multidimensional impact of sociocultural influences on body-image on four dimensions which include: Information, Pressures, Internalization-General, and Internalization-Athlete. Internal consistencies of the four factors are very good with alpha coefficients generally exceeding 0.80 (Thompson et al., 2004). Items are answered on a 5-point scale (1 = Definitely Disagree, 5 = Definitely Agree) and a total score is computed for each factor. The focus of the current study was the internalization of the thin ideal by the media therefore, the subscale of Internalization-General (general media influence related to TV, magazines or movies) was of interest. For the present study, the internal consistency reliability of the Internalization-General subscale was very good (Cronbach's alpha = 0.84).

Feelings of Attractiveness and Investment in Appearance: the Multidimensional Body-Self Relations Questionnaire – Appearance Scales (MBSRQ-AS) is a well-validated assessment of specific facets of the body-image attitudes (Cash, Morrow, Hrabosky & Perry, 2004). The shorter 34-item version of the measure was used, which assesses only appearance-related body-image aspects. The focus of the current study was: 1) feelings of attractiveness and importance of looks and 2) the extent of investment in one's appearance, which are measured by the Appearance Evaluation and Appearance Orientation subscales of the measure respectively. All items were Likert-type, ranging from 1 – 5 (1 = Definitely Disagree, 5 = Definitely Agree). The MBSRQ has valid psychometric properties across men and women of different cultural groups ranging in coefficients from .70 to .93. For the present study, the internal consistencies of the Appearance Evaluation and Appearance Orientation scales of the MBSRQ were very good (Cronbach's alphas 0.83 and 0.85 respectively).

Procedure

A questionnaire packet was distributed during a scheduled data collection time at the university. Each packet consisted of an informed consent form, a cover letter, a demographic data sheet, and the 3 questionnaires (SATAQ-3 Internalization Scale – measuring internalization of the thin ideal by the media; EAT-26 total score – measuring disordered eating attitudes and behaviors; and MBSRQ Appearance Evaluation – measuring feelings of physical attractiveness and importance of looks and Appearance Orientation – measuring the extent of investment in one's appearance). The importance of participation, the purpose, and the significance of the study were clearly stated in the cover letter and informed consent forms. All the data were then entered into the Statistical Package for the Social Sciences, Version 20 (SPSS v. 20), cleared of any outliers and statistical analyses were conducted. Specifically, descriptive statistics were calculated for participants' age, gender, height, weight, BMI and BMI category. In addition, total scores were calculated for the four measures. Pearson's r coefficients were calculated to identify relationships and stepwise regressions were used to identify predictors of disordered eating. All assumptions for using correlations and regressions were met. All levels of significance were set at $p < .05$.

Results

Disordered Eating Scores

Since Katsounari (2009), Hadjigeorgiou, Tornaritis, Savva and Kafatos (2005) and Hadjigeorgiou, Tornaritis, Savva, Solea & Kafatos (2012) found significantly elevated scores on the EAT-26 scale in adolescent and university-age samples, the author wanted to investigate whether similar findings were present in the current sample as well. Results indicated that 21.43% of the participants had a score equal to or higher than 20 on the EAT-26, suggesting somewhat similar findings with the previous studies.

Research Questions

RQ1: Is the internalization of the thin ideal by the media related to feelings of physical attractiveness, body-image investment and disordered eating attitudes and behavior?

To investigate if there were statistically significant associations between the internalization of the thin ideal by the media, feelings of physical attractiveness, body-image investment and disordered eating attitudes, Pearson product-moment correlational analyses were conducted. Statistically significant relationships in support of the hypothesis (internalization of the thin ideal related to feelings of attractiveness, body image investment and disordered eating attitudes and behavior) were found as indicated in Table 1. Specifically, the internalization of the thin ideal was negatively and significantly related to appearance evaluation ($r = -.254, p < .001$) indicating that the higher the levels of internalization of the thin ideal, the lower were the feelings of attractiveness and satisfaction with one's looks. In addition, the internalization of the thin ideal was positively and significantly related to appearance orientation ($r = .495, p < .001$) and disordered eating attitudes and behavior ($r = .479, p < .001$). These results indicate that higher levels of the internalization of the thin ideal by the media are related to more investment in one's appearance and more disordered eating attitudes and behaviors.

In addition, feelings of attractiveness were also negatively and significantly related to disordered eating attitudes and behavior ($r = -.287, p < .001$) indicating that the lower the levels of attractiveness and satisfaction with one's looks, the higher the incidents of disordered eating attitudes and behaviors. Lastly, levels of investment in one's appearance were positively and significantly related to disordered eating attitudes and behaviors ($r = .432, p < .001$). This result indicates that the higher the extent of investment in one's appearance and levels of importance in how they look is related to higher incidents of disordered eating attitudes and behaviors.

Table 1. Correlations between the Internalization of the Thin Ideal, Feelings of Attractiveness, extent of Investment and Disordered Eating Attitudes and Behavior

| Variables | 1 | 2 | 3 | 4 |
|---|---|----------|---------|----------|
| 1. SATAQ Internalization | — | -.254*** | .495*** | .479*** |
| 2. MBSRQ Appearance Evaluation | | — | .038 | -.287*** |
| 3. MBSRQ Appearance Orientation | | | — | .432*** |
| 4. Disordered Eating Attitudes (EAT-26) | | | | — |
| * = $p < .05$, ** = $p < .01$, *** = $p < .001$ | | | | |

RQ2: Are the internalization of the thin ideal by the media, feelings of attractiveness and the extent of investment in one's appearance significant predictors of disordered eating attitudes and behavior?

For the overall study group ($N = 226$), stepwise multiple regression analyses revealed that all three variables (Table 2) were significant predictors and accounted for 31.7% of the variance of the EAT-26 assessing disordered eating attitudes and behaviors ($F(3, 221) = 35.73, p < .001$) and made significant independent contributions: internalization of the thin idea ($\beta = .267, t = 3.988, p < .001$), feelings of attractiveness and satisfaction with looks ($\beta = -.229, t = -3.939, p < .001$) and extent of investment in one's appearance ($\beta = .308, t = 4.753, p < .001$). These three factors (internalization of the thin ideal, feelings of attractiveness and satisfaction with looks and extent of investment in appearance) are considered as predictive of disordered eating attitudes and behaviors.

Table 2. Stepwise regression on disordered eating attitudes and behavior by internalization of the thin ideal, feelings of attractiveness and extent of investment in one's looks

| Independent Predictor Variables | B | SE | β | t | Sig. |
|-------------------------------------|--------|------|---------|-------|-------|
| MBSRQ Appearance Evaluation | -0.604 | .153 | -.229 | -3.94 | <.001 |
| MBSRQ Appearance Orientation | 0.486 | .102 | .308 | 4.75 | <.001 |
| SATAQ Internalization of Thin Ideal | 0.363 | .091 | .267 | 3.99 | <.001 |

Discussion

This study aimed to investigate possible relationships between the internalization of the thin ideal by the media and feelings of attractiveness and satisfaction with one's looks, extent of investment in one's appearance and disordered eating attitudes and behaviors in a Cypriot sample of university students. Concerning the first research question which addressed these relationships, findings clearly indicated that the internalization of the thin ideal by the media is, indeed, an important construct. Specifically, findings showed that higher levels of internalization were related to lower levels of feelings of physical attractiveness, dissatisfaction with one's looks, more investment in appearance and engaging in grooming behaviors as well as higher incidents of disordered eating attitudes and behaviors. This finding is in line with existing research from non-clinical populations (Thompson & Heinberg, 1999; Thompson & Stice, 2001) which found internalization to be related to eating- and shape-related disturbances and body dissatisfaction.

Concerning the second research question which addressed the factors predicting disordered eating attitudes and behavior, findings showed that the internalization of the thin ideal by the media, the amount of investment in one's appearance and feelings of attractiveness and satisfaction with one's looks were significant predictors of disordered eating attitudes and behaviors. This connection was proposed in the literature by Thompson et al. (2004) who encouraged further research on connecting the internalization of the thin ideal construct with body-image investment and appearance-related schemas, as well as disordered eating behavior. Based on the current findings, there is strong support for this proposed connection. In addition, the results of the study replicate previous research supporting that the internalization dimension is predictive of the onset of eating disturbances (Levine & Harrison, 2004; Stice & Hoffman, 2004). However, and differently than previous research, the current study replicates the results in a non-pure-western-like culture but one that is in constant struggle in balancing the traditional with the western-like (Katsounari, 2009).

In the introduction section, there were two references made to data from Cyprus concerning abnormal eating attitudes and behaviors. Even though most surveys of adolescents and/or university-age females report an approximate 15% scoring higher than the cut-off on the EAT-26 (Calderon, 2006), Hadjigeorgiou, Tornaritis, Savva and Kafatos (2005) who used children and adolescents found that 26.6% of girls and 13% of boys scored higher than the cut-off and Katsounari (2009) who used a university-age population also found that 28.6% had a score higher than the cut-off on the same measure, both indicating significant abnormal eating attitudes and behaviors. The findings from the present study give further support to the preexisting findings in Cyprus in that once again, a significant number of participants of the current sample (21.43%) also had scores indicating abnormal eating attitudes and behavior.

The findings are open to a certain amount of interpretation, which could explain the relationships between the above stated variables. As Katsounari (2009) stated, Cyprus is a conservative society with strong interrelations among the various groups of influence, which attempts to balance the continuous struggle between holding onto its traditions and embracing the 'western-like' attitudes. The strong interrelations among its citizens may possibly explain some of the results of this study. Specifically, the internalization of the thin ideal may not be difficult to "penetrate" in a society where there are strong interrelations since one person may more easily influence another. The same applies for the effects of the media on a small nation like Cyprus, where, in combination with the strong interrelations, a message can be more easily conveyed. The tendency of Cyprus television is to adopt the Western look and style and is more evident in entertainment shows targeting a younger population (Katsounari, 2009). Silverstein, Perdue, Peterson & Kelly (1986) suggested that the use of unrealistic images will inevitably cause an evaluation of one's own body, especially women, as well as a judgment of their sense of acceptance and approval of their bodies. Consequently, the unrealistic thin ideal, as portrayed constantly by the media, is internalized more easily leading to inevitable comparisons between the self and the portrayed 'ideal'. This comparison, of course, will in turn lead to feelings of unattractiveness since what is portrayed in the media is unrealistic and in most cases unattainable (Thompson & Heinberg, 1999).

Thompson et al. (2004) proposed that the influences of the internalization of the thin ideal will also lead to higher investment in one's appearance, a proposal supported in this study. This relationship is understandable since higher levels of internalization of an *unrealistic* thin ideal will inevitably lead someone to investing great amounts of time and effort into their appearance in an attempt to match the ideal. Consequently, the continuous struggle to mimic an unrealistic thin ideal, combined with feelings of unattractiveness and great amounts of investment into one's appearance, will inevitably influence food intake, as shown in the current study. This seems to serve as a vicious cycle of these interrelated constructs that are causing significant distress.

Two more factors that can shed light to explaining the results are the Mediterranean weather of Cyprus and the economic development that started after the end of the 1974 war. Cyprus has a warm weather for most of the year, which typically results in Cypriots wearing lighter, more body-part exposing clothes. Sloan (2002) supported that people residing in warm weather climates will have more distorted body-image which results from wearing more revealing clothing. In combination with the internalized thin ideal by the media to have as a comparison to the self, this can explain why Cypriot participants seem to be more self-aware about their figure, thus, the body dissatisfaction and body-image investment scores.

Furthermore, the economic development of Cyprus after the 1974 war was not incremental but a boost with tremendous impact on social behavior (Katsounari, 2009). This transformation was so sudden, it has been argued that it was not 'healthy' and resulted in an emphasis on wealth in every aspect of life, but notably food consumption, designer clothes and ownership of expensive properties (Katsounari, 2009). This emphasis could inevitably result in comparisons at several levels, including body-image and disordered eating. Iancu et al. (1994) also found that with the increasing affluence of society higher incidents of disordered eating were observed.

Limitations, Further Research and Implications

One potential limitation of the present study is that the predominance of one gender group limits generalizability of the results of this study. Almost 88% of the participants involved in this study were females, and almost 84% fell within the normal to underweight range. For this reason, this study cannot be generalized to all university-attending individuals in Cyprus. Therefore, to improve generalizability, a more balanced gender and body-sizes population would be useful in exploring further the variables of interest.

Based on the above, it seems that the sequential connection between the internalization of the thin ideal, feelings of unattractiveness, investment in body-image and disordered eating can be explored further in future studies using structural equation modeling techniques. Of interest and need of further assessment is also the role of the educational level of participants. The majority (85.4%) of the participants of the current study were post-graduate university students with an average age of 26.2. Most research studies investigating disordered eating and body-image related attitudes usually have samples younger in age (13-25). Knowing that graduate-level education focuses on the expansion of critical thinking and rhetorical criticism, it is worth assessing whether individuals higher in educational level are also more immune to the internalization of the thin ideal, something not supported by the current findings.

The results have several implications since they shed some more light to a problem that is clearly present in Cyprus and should be of greater concern. In the current, and previous studies, it was found that disordered eating attitudes and behaviors were present in children, adolescents and adults, therefore the need for prevention strategies is essential at all levels of development. Elementary schools, gymnasiums, lyceums and universities should all develop prevention strategies and program implementations in order to challenge the thin ideal as portrayed by the media and develop a more critical thinking attitude towards the media. In addition, more prevention strategies and program implementations should be in place concerning disordered eating attitudes and behaviors, indicating the risk-factors that lead to disordered eating. These psychoeducational programs should be implemented immediately. Last but not least, the high frequency of high-risk or diagnosable eating disordered individuals across all younger ages indicates the need for the development of specialized treatment centers in the country.

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