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Impact of television advertisement on unhealthy weight control behaviors and eating disorders: Mediating role of body image

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Abstract: *This research is conducted to analysis the impact of Television Advertisement on Unhealthy Weight Control Behaviors and Eating Disorder with the mediating role of Body Image. The research is conducted to analyze the mediating impact of body image satisfaction on the relation of other variables. This research is conducted from the urban population of Rawalpindi and Islamabad. A Total of 280 questionnaires were floated in the population, out of which 267 were received back. The data was analyzed by employing correlation dn regression analysis. The results showed that body image partially mediates the relationship between Television Advertisement and Unhealthy Weight Control Behaviors and fully mediate the relationship between Television Advertisement and Eating Disorder. This research will help marketers to analyze the dynamics of advertisement and also in understanding the negative outcomes of their certain practices.*

Keywords: Television advertisement, eating disorder, anorexia nervosa, bulimia, unhealthy weight control behaviors and body image

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1. Introduction

Media has become an integral part of our daily life (Watson, Lecki & Lebcir, 2015). With the increased exposure of media, the psychological and physiological problems associated with media exposure have also multiplied (Grabe, Ward & Hyde, 2008).

Television displays an exaggerated version of reality and lately it is also criticized for using thin very thin female models (Fay & Price, 1994) and very muscular male models (Agliaia & Tantleff-Dunn, 2004), changing perception of ideal beauty (Thompson & Hirschman, 1995; Cash, Morrow, Hrabosky & Perry, 2004; Leung & Williams, 2012). When this ideal image conflicts with actual image of consumers it causes disruption in their body perception (Gerbner, Gross, Morgan, Signorielli & Shanahan, 2002).

Psychological problems associated with the disrupted body perception are depression, body image dissatisfaction, low self-esteem and body image consciousness (Grabe et al., 2008). Whereas, the Physiological problems associated with it are eating disorder (Waller, Hamilton & Shaw, 1992; Myers & Biocca, 1992; Karsli & Karsli, 2015), and indulgence in unhealthy weight control behaviors (Neumark-Sztainer, Story, Dixon & Murray, 1998; Neumark-Sztainer, Story, Hannan, Perry & Irving, 2002; Mayer-Brown, Lawless, Fedele, Dumont-Driscoll, & Janicke, 2016).

Advertisements by far are the most influencing program on television (Shrum, 1999). The key function of advertisement is to persuade, sway peoples' opinion and urge them to consume (Shrum, 1999; De Jesus, Ricciardelli, Frisen, Smolak, Yager, Fuller, & Gattario, 2015). Advertisers use thin female models as illustration of true feminine beauty and urge females to conform to those beauty standards by using their product or services (Jacobson, 2004; De Jesus et al., 2015) similarly for males the ideal concept of muscularity has undergone several changes in past decade (Agliaia & Tantleff-Dunn, 2004; De Jesus et al., 2015).

This study explores the two problems that are linked with the advertisement that is a potential concern for the marketers. These problems are eating disorder and unhealthy weight control behaviors. These changes in attitude of customer's can lead to negative perception about the brand.

The study provides both theoretical and practical information regarding the two adverse effects of the television advertisement i.e. eating disorder and unhealthy weight control behaviors. These variables are not previously researched in Pakistan. This study has specific importance for the advertising agencies because they must understand all the dynamics and outcomes of advertisement.

2. Literature Review

Media is argued to be the most influential factor in shifting the perceptions of beauty (Thompson & Hirschman, 1995; Gerbner et al., 2002; Cash et al., 2004; Leung & Williams, 2012). In the recent years, the controversy of using very thin female models (Fay & Price, 1994) and very muscular male models (Agliata & Tantleff-Dunn, 2004) in advertising campaigns and popular media programs is ever increasing. While most of the people recognize that these images are not real and practically unattainable, they compare themselves with these ideal images hence increasing their body image dissatisfaction and resulting in many psychological and physiological problems (Cash et al., 2004; Leung & Williams, 2012).

Analyzing the content shown by media at present whether it is entertainment media, sports media or advertisement, beauty standards have become increasingly thin especially for women (Garner, Garfinkel, Schwartz & Thompson, 1980; Silverstein, Perdue, Peterson & Kelly, 1986; Wiseman, Gray, Mosimann & Ahrens, 1992; Bissell & Zhou, 2004). Also this had been predominantly a “western” dilemma, but it is becoming an emerging issue in “eastern” cultures as well because of increasing infiltration of western media, culture and fashion in eastern countries (Parker, Haytko & Hermans, 2011) like Pakistan. Physical traits; body size, shape and color, vary with geographic location but people fail to understand this diversity and strive to achieve the unachievable (Wiseman et al., 1992). When an individual is dissatisfied with his or her physical appearance he/ she tend to engage in activities that alter their physical appearance (Mayer-Brown et al., 2016). These activities may include cosmetic surgery in case of dissatisfaction of facial features (Eisend & Moller, 2007) or unhealthy weight control behaviors (UWCB) in case of dissatisfaction with body size and shape (Mayer-Brown et al., 2016).

2.1 Television Advertisement

Whether we like advertisement or not we witness advertisement everywhere. When we read newspaper in the morning, or listen to radio while driving to workplace/ school, banners and billboards on roads, fliers distributed at squares, pop-ups when we log on to social media sites or on TV at night. Advertisements are everywhere but what advertisement essentially is? Advertisement is any paid form of promotional activity (Brierley, 2005; Blankson, Kalafatis, Coffie & Tsogas, 2014). In oxford dictionary Advertisement is defined as the image, text, song or short video clip used to inform or persuade people to take action.

Previous researchers disputed about the impact media exert on people, its tendency to sway opinions. While many believe that media can strongly influence an individual’s opinion (Shrum, 1999; De Jesus et al., 2015) others argued the exact opposite (Ross, 2015). Traditionally, advertising is considered to be major factor in influencing consumers’ purchase behaviors (Brierley, 2005; Blankson et al., 2014). Conversely, with time consumer’s thinking patterns have changed they are shrewder while making their purchase decisions so we can say that inducement of ads is tested (Ross, 2015).

Advertisement is a marketing tool used for centuries but it became omnipresent industry in late 19th century (Botta, 1999). Often the chief targets of advertisement are women (Halliwell & Dittmar, 2004). Advertisement is generally divided into three types Electronic, print and territory Advertisement (Engeseth, 2009). Electronic Advertisement includes Television, radio, online and mobile advertisement etc. Print advertisement includes newspaper, magazines, brochures, fliers etc. Territory advertisement includes retail, local, national and international advertisement (Brierley, 2005).

Though advertisement has many types but we are focusing only on the television advertisement in this study because research shows that due to combined effect of sound and sight television advertisement have more persuasion power any other form of advertisement (Shrum, 1999; McCreary & Sadava, 1999).

2.2 Body image satisfaction

Body image is conceptualized as; the illustration shaping the bodily knowledge (Garner & Garfinkel, 1982; Watson et al., 2015), the mental picture a person has of his or her body (Traub & Orbach, 1964), as the feelings one has about his/her body (Secord & Jourard, 1953) and as a personality construct (Kolb, 1959).

Body image is a complicated concept explained, defined, and calculated from different perspectives. Its origin can be traced from early imagery of abnormal thinking of patients with mental disorder or appendage amputations (Kolb, 1959). Body image is a physiological construct which is born from self-schemas of the person (Myers & Biocca, 1992). It is the bodily knowledge (Garner & Garfinkel, 1982) Sigmund Freud an Austrian psychologist/neurologist says that body image is subjective projection of self, which is important in development of ego (Freud, 1923). The ego is the id tailored by external (social) forces, whereas id is a person's instinct (Freud, 1923; Garner, & Garfinkel, 1982).

Young people are very conscious about their looks; they are highly sensitive towards any stimulus relating to their body image (Karsli, & Karsli, 2015), disruption in body awareness is not an unusual concern during adolescence. Disruption occurs when there is difference between actual self-image and idealized self-image (Higgins, 1987; Abdullah & Al-Holy, 2013; Plewa & Palmer, 2014). Some researchers stated that body image is developed when actual self-image is compare to the ideal self-image (Karsli, & Karsli, 2015). Many researchers have linked actual self-concept with "real self", "basic self", or just "self". Whereas actual self is the perception one has of oneself (Birdwell, 1968; Sirgy, 1982). While the "ideal self-image" or "ideal self" or "idealized image" or "desired self" is related to person's self-esteem (Sirgy, 1982). As opposed to actual self-ideal self is what a person likes to become (Schenk & Holman, 1980; Sirgy, 1982).

2.3 Unhealthy Weight Control Behavior (UWCB)

Unhealthy weight control behavior is defined as the actions or measures taken to restrict weight that are harmful for health (Neumark-Sztainer et al., 2002). Unhealthy weight control behavior engrosses behaviors such as skipping meals, fasting, too much

exercise, induced vomiting, laxatives (food supplement) and diet pills (Cheung et al., 1999; Mayer-Brown et al., 2016).

When weight concerns of people increase they tend to take matter into their own hands and attempt to control their weight. People struggling to control their weight is a common sight now days (Mayer-Brown et al., 2016). Youth that are estimated to be dieting is growing since the past 20 years (Mayer-Brown et al., 2016). They may engage in many healthy and unhealthy behaviors in an attempt to manage their weight. Restricting the intake of fat, including fruit and vegetables in regular diet, daily walks and exercise are few of the healthy weight reducing behaviors (Neumark-Sztainer et al., 2002). HWCBs include moderate exercise and consuming more fruits and vegetables, regular but slow loss of weight (Cheung et al., 1999).

Although some use HWCB's to reduce weight other participate in unhealthy weight control behaviors (UWCBs) to control their weight, which is more rapid method to reduce weight (Mayer-Brown et al., 2016). UWCB involve skipping meals, fasting, too much exercise, and induced vomiting, laxatives (food supplement) and diet pills (Cheung et al., 1999). Where skipping meals fasting and extreme exercising are moderately unhealthy weight control behavior; induced vomiting, laxatives and using diet pills are extremely unhealthy weight control behaviors.

Both girls and boys engage in the UWCB's (Neumark-Sztainer et al., 2002), though, the patterns of use of unhealthy weight control behaviors for boys and girls are dissimilar (Mayer-Brown et al., 2016). The National Youth Risk Surveillance study of 2011 revealed that female respondent engaged more in fasting, induced vomiting, taking diet pills and other UWCB's than males respondents (Mayer-Brown et al., 2016).

2.4 Eating Disorder

Eating disorder is defined as abnormal or irregular eating behavior (Karsli & Karsli, 2015). Although eating disorders are of many forms but there are two main types of eating disorders that are frequently coupled with body image concerns, which are anorexia nervosa and bulimia (Tiggemann, 2003). Anorexia nervosa is restrictive consumption of food (Myers & Biocca, 1992), eating a smaller amount food that is inadequate to retain the minimal body weight for their age group (Harrison, 1997). Conversely bulimia is benign or un-controlled eating or eating extra food than required (Karsli & Karsli, 2015; Mayer-Brown et al., 2016). So in general eating disorder is losing control of one's eating habits (Myers & Biocca, 1992).

The societies in which ideal body image is thinner than usual women tend to over scrutinize their weight and size (Myers & Biocca, 1992; Dolan, Birtchnell & Lacey, 1987; Leung & Chan, 2014). The effects of thinning of the ideal image can be observed by increased number of people dieting, as loss of weight depicts person's control and dexterity over his body (Garner & Garfinkel, 1982). Polivy and Herman (1987) developed a model of "Dietary Restraint" that shows persistent dieters cognitively explain their limitation of eating to reduce their weight (Polivy & Herman, 1987). And complete ineptness to control one-self when it comes to food and eating resulting in

eating disorders (Garner & Garfinkel, 1982; Myers & Biocca, 1992; Abel, Buff & O'Neill, 2013).

2.5 Hypotheses Development

2.5.1 Impact of Television Advertisement on Consumers' Body Image

Television is reported to be the most powerful media because of the combined effect of sound and sight (Shrum, 1999). Excessive users of television rely on whatever they view on television, to develop their cognition (Eisend & Moller, 2007). Television shapes their social perception (Gerbner et al., 2002). The content telecasted on television is an exaggeration of reality so the social perception of viewers distorted or disrupted (Eisend & Moller, 2007).

In early 20th century advertisers changed their tactic for persuasion, capitalizing on people's guilt to convince them to purchase their products and services (Jacobson, 2004). Advertisers use thin female models as illustration of true feminine beauty and urge females to conform to those beauty standards by using their product or services (Jacobson, 2004; De Jesus et al., 2015) similarly for males the ideal concept of muscularity has undergone changes in past decade (Agliata & Tantleff-Dunn, 2004; De Jesus et al., 2015). These deceptive advertisements heighten the beauty concerns, fear for social approval, and conformity to socially set beauty standards (Shrum, 1999; Jacobson, 2004). The body size and shape of actors and actresses in television advertisement differs from the average populations' body size and shape (Silverstein et al., 1986), hence creating a biased general belief of the desirable/ ideal body image (Hendriks, 2002).

According to self-discrepancy theory an individual feels discontent when there is inconsistency between their actual self-image and ideal self-image (Higgins, 1987; Abelson & Rosenberg, 1958). Where actual image is the person's attributes as viewed by person himself and ideal image is the attributes person wants to attain (Higgins, 1987). This gap between ideal body image and actual body image contributes to body image concerns of consumers (Fardouly, Diedrichs, Vartanian & Halliwell, 2015).

H1: Television advertisement has negative impact on consumer's body image.

2.5.2 Impact of Television Advertisement on Eating Disorder

Exposure to media is reported to trigger many the physiological problems caused by the disruption in body perception (Stice et al., 1994; Botta, 1999; Harrison & Cantor, 1997; Tiggemann & Pickering, 1996). Body perception is subjected to change due to social effect (Karsli & Karsli, 2015). Eating disorder (anorexia nervosa and bulimia) is one of many physiological problems caused by the disruption in body perception (Stice et al., 1994; Botta, 1999; Harrison & Cantor, 1997; Tiggemann & Pickering, 1996; Karsli & Karsli, 2015). The patients of anorexia nervosa think themselves fatter than they really are (Grogan, 2001). Their self-evaluation result of body mass index is showed to higher than normal even if they were normal or even below normal for their age group (Karsli & Karsli, 2015). This over perception of body weight of anorexia nervosa patients

remains even after psychiatric therapy (Garfinkel & Garner, 1982). Research literature proved that most people with eating disorders think that other people judge them only on their physical appearance (Garfinkel & Garner, 1982; Cooper and Gunter, 2004).

Research showed that when clinical sample of anorexia and bulimia patients were exposed to thin models and actors they displayed a visible disruption in their bodily perception (Waller et al., 1992). Similar results were found for the normal population (Grabe et al., 2008). Exposure to television advertisement causes anorexia and bulimia i.e. eating disorder (Waller et al., 1992; Bissell & Zhou, 2004; Grabe et al., 2008; Karsli & Karsli, 2015).

H2: Television Advertisement has positive impact on eating disorder

2.5.3 Impact of Television Advertisement on Unhealthy Weight Control Behaviors (UWCB)

Media exposure is one of the key variables linked to Unhealthy weight control behaviors (UWCB) (Neumark-Sztainer et al., 1998; Neumark-Sztainer et al., 2002; Mayer-Brown et al., 2016). Media, more specifically electronic media is implicated to raise weight concerns in people by portraying thin as ideal body image (Stice et al., 1994; Harrison & Cantor, 1997; Tiggermann & Pickering, 1996; Botta, 1999; Mayer-Brown et al., 2016). People struggling to reduce their weight is a common sight now days (Mayer-Brown et al., 2016). Youth that are estimated to be dieting is growing for the past 20 years (Mayer-Brown et al., 2016).

The influencing power of television advertisement is argued to be more than any other form of advertisement (Shrum, 1999; De Jesus et al., 2015). When model with a low BMI (Body Mass Index) are portrayed as desirable in advertisement they influence people to engage in weight control behaviors (Neumark-Sztainer et al., 2002). Excessive exposure to television advertisement leads to distortion in actual self and ideal self (Higgins, 1987; Sirgy, 1982). Discrepancies between the actual self and ideal self-states lead to dejection-related emotions, e.g., disappointment or dissatisfaction (Higgins, 1987). Hence, dissatisfaction with personal body image leads people to take deliberate actions to alter their body size and shape (e.g. UWCB) (Markus & Nurius, 1986; Richins, 1991; Neumark-Sztainer et al., 2002; Mayer-Brown et al., 2016).

H3: Television advertisements have positive impact on UWCB

2.5.4 Impact of Consumers' Body Image on Eating Disorder

Body images are formed on cultural ideologies that determine body satisfaction, sense of ideal or desirable bodies and their resultant behaviors (Thompson & Hirschman, 1995). Body image is a physiological construct born from self-schemas of the person, so dissatisfaction with the body image leads to many physiological problems (Myers & Biocca, 1992). The two main eating disorders, that are associated with body image concerns, are anorexia nervosa and bulimia (Karsli & Karsli, 2015). Eating disorder (anorexia nervosa and bulimia) is one of many physiological problems caused by the

disruption in body image (Stice et al., 1994; Botta, 1999; Harrison & Cantor, 1997; Tiggemann & Pickering, 1996; Karsli & Karsli, 2015).

When these disruptions about their body images cross certain levels people eating attitude is modified (Tiggemann & Pickering, 1996) which leads to eating disorders (Karsli, & Karsli, 2015).

H4: Consumers' body image has negative impact on Eating attitude

2.5.5 Impact of Consumers' Body Image on Unhealthy weight control behaviors (UWCB)

The disruption in actual and ideal body image motivates people to take action to minimize this disruption (Jacobson, 2004). This action can be in the form of healthy or unhealthy weight control behaviors (Mayer-Brown et al., 2016). Youth that are estimated to be dieting is growing for the past 20 years (Mayer-Brown et al., 2016). Healthy weight control behaviors (HWCB) are regular but slow loss of weight (Gortmaker et al., 1999). Although some use HWCB's to reduce weight most participate in unhealthy weight control behaviors (UWCBs) to control their weight, which is more rapid method to reduce weight (Neumark-Sztainer et al., 2002).

H5: Consumers' body image have negative impact on UWCB

The model of the study is shown in the Figure 1.

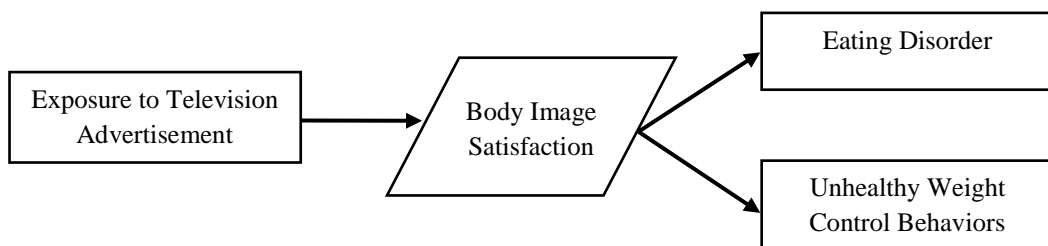


Figure 1: Model of the Study

We can find bases of the proposed relationships in two theories that are Cultivation Theory and Social-Comparison Theory.

Leon Festinger (1954) developed a theory of social comparison which stated that people observe images that they think are achievable and realistic and then they compare it with themselves, other people, and their idealized images (Festinger, 1954; Goethals, 1986; Bissell & Zhou, 2004). Several researches employed social comparison theory to link peoples' attitudes, suggesting that images people see on media that they like and want to achieve, they tend to internalize it and make comparison of their actual body image with

their idealized body image, it than effect their attitude and they actively engage in activities to attain the idealized body image (Goethals 1986; Kruglanski & Mayselless, 1990; Botta, 2000; Bissell & Zhou, 2004).

Theory suggest that people when compare themselves with their idealized images their thinking that being thin is important is established, and they are compelled to conform to these beliefs (Festinger, 1954). That is why when people are exposed to thin ideal body images in television advertisements, they tend to compare their looks with the characters in television, and when they recognize the discrepancy between these two images, they take physical measures to eradicate this discrepancy.

Social comparison theory attest that the prevailing thin ideal images in advertisement, young people might try to reproduce what they observe on television as they are exposed to the ideal thin body shape which they compare with their body shape to what is observed on television (Goethals, 1986; Bissell & Zhou, 2004). Moreover, young people might get motivated to take part in dieting and might be exposed to information on how to achieve this ideal body through the various articles and blogs related to health and fitness (Festinger, 1954; Kruglanski & Mayselless, 1990; Botta, 2000; Bissell & Zhou, 2004).

The Cultivation theory explains the long-term exposure to television and resultant impacts on people (Fardouly et al., 2015). The theory suggested that the impacts of long term contact with television are slow in showing but they are continuous. Exposure to Television for longer duration modifies or changes the social reality of the people (Eisend and Möller, 2007). The degree to compare with the ideal images varies from individual to individual, that is, not everyone has same impact of exposure to television (Fardouly et al., 2015). Also studies show that women have more tendencies to compare themselves with the ideal image in comparison to men (Keery, Van den Berg & Thompson, 2004).

Television reality is exaggerated version of the real world that is more close to the fiction than the real world (McCreary & Sadava, 1999). So it can be said that with the increase in media exposure individuals' reality changes as with the increased exposure they will find more similarities between the real world and the media world. Excess television exposure will also change beliefs, which, in turn, can affect behaviour (McCreary & Sadava, 1999).

Likewise, Media cultivate people's belief about body image (i.e. body appearance specifically height, weight and colour etc.) (Tiggemann, 2004; Eisend & Moller, 2007). Previous research on mass media exposure and its influence on body images have stressed several outcome variables (e.g., body perception, body dissatisfaction). Body images are formed on cultural ideologies that determine body satisfaction, sense of ideal or desirable bodies and their resultant behaviors (Thompson & Hirschman, 1995). Nowadays a specific socialized body image is manifested by mass media. Popular Television programs include attractive male and female models whose body image is different from average population's body image (Silverstein et al., 1986; Thompson & Hirschman, 1995). This results in biased opinion of what average body looks like and increased efforts for achieving that image (Thompson & Hirschman, 1995). The people

receiving these stimuli (backed by social beliefs) may internalize thin or tall as desirables which may modify their beliefs (Silverstein et al., 1986; Milkie, 1999; Murray, Touyz & Beumont, 1996), pressurizing them to conform to these set standards of beauty hence increasing cosmetic consumption (Fardouly et al., 2015; Thompson, Heinberg, Altabe & Tantleff-Dunn, 1999) and/ or alteration of food consumption (Hendriks, 2002).

Cultivation effects have been mostly investigated with respect to the perception of the social reality (i.e., what is “normal” behavior in the social environment, and what we describe as “social perceptions”), but may also apply to perceptions and beliefs related to the self. The broad topic of self-concept refers to the collection of beliefs that people hold towards themselves. The self-concept has many dimensions but is mostly reflected in two ways, an actual self and an ideal self that serves as a guide for the self (Higgins, 1987; Sirgy, 1982). The ideal self is the reference point that the actual self is compared to. Out of the self’s many dimensions, the body holds an important position, both psychologically and culturally, so that the body image can be regarded as an important component of the self-concept. Cultivation effects that lead to biased social perceptions may also lead to an increased gap between real and ideal self-concepts. Discrepancies between the actual self and ideal self-states lead to dejection-related emotions, e.g., disappointment or dissatisfaction (Higgins, 1987). Hence, dissatisfaction with personal body image leads to extreme fluctuations in food consumption and or deliberate actions taken to alter body size and shape (e.g. UWCB) (Markus & Nurius, 1986; Richins, 1991).

3. Methodology

The present study is of quantitative nature and is a causal study. Primary data was collected through questionnaire survey. Convenient sampling technique is used for data collection. To achieve the desired results the data was collected from respondents belonging to various age groups of both genders. Individual unit of analysis was selected for the study. Cross-sectional time horizon was selected for this research and the setting was non-contrived.

Total 280 questionnaires were floated in the population, out of which 267 were returned and analysis was conducted on 255 questionnaires. Survey questionnaire was used as a research tool. The questionnaire was adopted from different sources as shown in the table 1.

Table 1: Sources of Instrument

Variable	Source
TV Advertisement	Shrum et al., (1998)
Body Image	Cash et al., (2010)
Unhealthy weight control Behaviors (UWCB)	Neumark- Sztainer et al., (2002)
Eating Attitude	Mizes, (1992)

The collected data was analyzed using SPSS v.19. First, to understand the profile of data demographic analysis was conducted. The demographics of the study are age, gender and BMI (body Mass Index). Majority of the respondents belong to the age limit of 20-30 which is covering 40.8% of the entire population. 71.2% of our respondents were female while 28% were male. There are 3 classes in which age is divided i.e. less than 18.5 which show underweight, 18.5-24.9 which show normal weight and over 25 which show overweight. Majority of the respondents have normal weight i.e. 53.18% but it is important to note that 22.47% of population did not share either weight or height or both so their BMI cannot be calculated.

To ascertain the internal consistency of items, Cronbach alpha reliability was conducted. The obtained Cronbach's Alpha of all variables is > 0.70 except for Unhealthy Weight Reducing Behaviors so we deleted one item of UWCB to make it reliable with $\alpha = 0.721$. This indicates that scale now has high internal consistency (reliability). To test the normality of data normality analysis was conducted and value of skewness and kurtosis lies in the acceptable range. Correlation analysis is a prerequisite of regression analysis. Result shows that there exist a relationship between dependent and independent variable.

4. Results and Discussion

Regression analysis has to be performed after all the pre-requisites of regression. The proposed model of this research has a mediator i.e. Body Image so mediation analysis is conducted. The theoretical framework is divided into two basic frameworks:

- I. Exposure to TV Ads \rightarrow Body Image \rightarrow Eating disorder.
- II. Exposure to TV Ads \rightarrow Body Image \rightarrow Unhealthy weight control behavior.

Regression analysis is conducted separately for both models. Mediation analysis is conducted in four separate steps to analyze whether the proposed mediator has any mediating impact on the relationship or not.

Model I:

Exposure to TV Ads \rightarrow Body Image \rightarrow Eating disorder

The regression is done in four steps. The results are shown in table 2.

Table 2: Mediation Analysis of Framework 1

Step	Model	Un-stand. Coeff.		Stand. Coeff.	T	P	R ² Change
		β	SE	β			
1	Constant	3.002	0.078	-	38.622	0.000**	0.020
	EXP → ED	0.071	0.032	0.142	2.201	0.029*	
2	Constant	3.703	0.078	-	48.056	0.000**	0.028
	EXP → BI	-0.089	0.033	-0.168	-2.730	0.007**	
3	Constant	3.605	0.239	-	15.194	0.000**	0.016
	BI → ED	-0.127	0.065	-0.125	-1.948	0.035*	
4	Constant	3.207	0.222	-	11.835	0.000**	-
	EXP } ED	0.064	0.033	0.130	1.939	0.454	
	BI } ED	-0.051	0.067	-0.050	-0.750	0.000**	

**P value is significant at 0.01 (2-tailed)

Same 4 steps of mediation analysis were conducted in model II and the results of each step are as follows;

The results of first step proves the H3 i.e. exposure to television advertisement has positive impact on UWCB. The results of second step proves the H1 i.e. exposure to television advertisement has negative impact on Body Image. The results of third step prove the H5 i.e. Body Image has negative impact on UWCB. The results of fourth step proves the H7 i.e. Consumer’s body image mediates the negative impact of television advertisement on Unhealthy Weight Control behaviors.

The proposed framework is focused on the mediation of variable “body Image” hence mediation analysis is conducted to verify the mediation impact of Body Image. For conducting the mediation analysis the model was split into two sub models and mediation was conducted on these sub models separately. In first model Exposure to TV Ads is taken as independent variable, Body Image as mediator and Eating disorder as dependent variable, the analysis showed that relation between Exposure to TV Ads and Eating Disorder is fully mediated by Body Image. On the other hand in the second model Exposure to TV Ads is the independent variable, Body Image is the mediator and Unhealthy Weight Control Behavior is the dependent variable, the analysis revealed that relation between Exposure to TV Ads and Unhealthy Weight Control Behavior is partially mediated by Body Image.

The data collected, using questionnaire as research tool, was analyzed through SPSS software. The tests conducted on the collected data were; Reliability analysis for the

internal consistency, factor analysis for the validity of variables, demographic analysis, descriptive analysis for the normality of data, correlation analysis for the relationship among the variables and lastly the mediation analysis following the four steps of mediation as defined by Baron and Kenny (1986).

The results of these tests, although within acceptable range, show weak relation between the variables, for example the values of correlation analysis lies between 0.125-0.315 (i.e. all variables have weak correlation among each other). In the mediation analysis the beta value shows the strength of impact of one variable on another. In the analysis the beta value lies between 0.050-0.315 also showing weak impact. This can be explained by factors such as ethnicity and BMI.

Studies revealed that ethnicity has an influence on and is influenced by body image. Literature showed that Hispanic and black women are more satisfied with their body image as compared to white women (Cheung, Gortmaker & Colditz, 1999; Jackson, 2002; Karsli & Karsli, 2015).

Also, demographic analysis revealed that 53.18% population of this study have normal weight, 16.48% are underweight and only 7.87% are overweight. Previous studies showed that BMI manipulate the weight control behaviors of people (Mayer-Brown et al., 2016). Thus, it can be said that people are less likely to engage in unhealthy weight control behaviors because of low and normal BMI score.

This research is important for managers for understanding the dynamics and practical outcomes of advertisement. While designing an advertisement managers must foresee all the implications of that advertisement. This research brings two such implications of advertisement into focus. These implications are a result of thin female models and muscular male models in advertisement; though advertisers argue that using thin female models and muscular male models in advertisement increases the allure and attractiveness of the advertisement. This study calls to attention two negative impacts of employing thin female models and muscular male models in advertisement. These negative impacts are the inducing unhealthy weight control behaviors and eating disorder in consumers. These may not seriously impact the purchase, consumption, perception and brand image of all the consumer goods but they will seriously impact the purchase, consumption, perception and brand image of food and beverages brands. As on one hand the advertisement is promoting the consumption of food and beverages and on the other hand it is indirectly inculcating eating disorder and unhealthy weight control behaviors.

The study recommends advertisers to employ male and female models of normal Body Mass Index i.e. 18.5 to 24.99 BMI. This will minimize the body image concerns of people as well as discourage the unhealthy weight control behaviors and eating disorder.

The limitations of this study are that; first, the sample size of this research was very small i.e. 267 respondents all collected from the urban population of Rawalpindi and Islamabad.

Another limitation of this research was that as it was a correlation study so we relied on the self-provided data for respondents' weight and height (for the calculation of BMI)

which may not be accurate and is prone to be under or over estimation. But as BMI is used only as demographics of data not as a variable under study so it is not a major limitation.

5. Conclusion

The study aimed at analyzing the “Role of Television Advertisement in inculcating Unhealthy Weight Control Behaviors, emanate Eating Disorder in consumers and the mediating impact of the consumers’ Body Image” in Pakistani context. The study proved that increased exposure to media specifically television advertisement leads to two physiological problems that are, Eating Disorder and Unhealthy weight control behaviors. Further data analysis showed that body image fully mediates the relationship between Television Advertisement and Eating Disorder and partially mediates the relation between Television Advertisement and Unhealthy Weight Control Behaviors. These results are consistent with previous studies (Karsli & Karsli, 2015; Mayer-Brown et al., 2016) as the literature reviled that increased exposure of television advertisement leads to disruption in the body image perception of the consumers which stimulate the consumers to engage in unhealthy weight control behaviors or develop eating disorders. In Pakistan almost every household have a television set and people are exposed to advertisement no matter which television programs they prefer. Also, advertisement aims are capturing attention and inducing action in the audience. Another attribute of advertisement is that it forges the brand perceptions. So if the advertisement is creating disruption in consumers’ bodily perceptions i.e. body image by using underweight models that do not truly portrays the society and thus resulting in the negative consequence in consumers such as eating disorders and unhealthy weight control behaviors than advertisement rather than creating positive brand perceptions will negatively impact consumers’ perceptions of the brand.

The study emphasizes that advertisers should use models with normal weight having the BMI between $18.5-24.99\text{kgm}^{-2}$ that represent the general population of the society and not the exaggerated version of modern beauty so as to develop positive feeling among consumers regarding the brand.

The present study has many limitations as discussed above these constraints can be overcome in future studies. Any future study can broaden the sample size, scope and area of study by collecting the data from other cities of Pakistan as well as by including other psychological and physiological problem resulting from disrupted body perception with increased exposure of television advertisement. Also, the other Medias are neglected in this study can be added in future researches for thorough and complete information.

Future research can use the same or similar framework and conduct a comparative study between different genders or BMI levels. However, the same or similar framework can be used to conduct an experimental study.

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