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The Cause and Effect of Morality Frame on the Perception of Obesity among 35-55 years University Female Academic Staff in Nairobi County, Kenya

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Abstract

Purpose: The purpose of this study was to investigate the cause and effect of morality frame on the perception of obesity among 35-55 years University female academic staff in Nairobi County, Kenya.

Methodology: This study applied the one-group pretest-posttest experimental design. In the one-group pretest-posttest experimental design all study participants provided with the same treatment and assessment. The researcher, therefore, collected data using the pre-and posttest questionnaires. The treatment applied is *Slimpossible* television program season *six* episode *one* was purposively selected out of seven seasons and ninety-eight episodes covered by the *Slimpossible* television program. The obese females were qualified through an interview process to participate in the *Slimpossible* challenge, a popular weight loss television program aired by Citizen Television Network. The justification for choosing the season *six*-episode *one* television program was based on assessing the media frames according to Entman (1993), where the scholar mentions the following: human interest, consequences, morality, and responsibility. Although this study is a quasi-experimental research design, the researcher attempted to use randomization to improve the validity of the pretest and posttest experimental study design. Furthermore, out of the randomly selected sample, a purposeful sample was selected for assessment based on a specific interest (Stratton, 2019). The data was analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0. This study presented descriptive statistics using tables with frequencies and percentages. Secondly, the research conducted inferential statistics using several types of inferential analysis tools such as the Factor analysis (The Keiser-Meyer –Olkin (KMO) test), Pearson's correlation coefficient, and regression analysis (logical regression).

Findings: The results showed that obesity and morality issues are more inclined toward Westernized perception than African perception. The inferential statistics using factor analysis was successful in extracting three independent components of the morality frame. The Keiser-Meyer –Olkin (KMO) test of adequacy (KMO=0.521; Chi-square=4254.5 d.f =66, p=0.000) was significant, implying factor analysis using the principal component method was appropriate. The three components, that is *personal moral opinion*, *morality & Western media*, and *morality & African media* cumulatively explain 71.3 % of the total variability.

Unique Contribution to Theory, Practice and Policy: This study emanated from the media framing theory, where it provided morality frame as one among five frames, mentioned by an American political scientist known as Robert Entman in 1993. Its contribution to practice, based on the findings, the respondents expressed that obesity is not subjected to moral decay/decline because their perspective was that obese females are healthy, beautiful and good people. The respondents felt that Africa faces more challenges with hunger and famine compared to obesity issues. The study recommends the involvement of academicians and health scientists to explore through research 'why' obesity is not a moral issue in tackling obesity. They could conduct visibility studies and experiments and publish them in peer-reviewed journals for access.

Keywords: *Morality Frame, Perception of Obesity, Obesity, Media Framing Theory*

INTRODUCTION

According to Abreu (2015), the framing concept was rooted in psychology and sociology. In psychology, the foundation was laid by Kahneman and Tversky in 1973. In addition, in sociology, the framing analysis was developed by Erving Goffman in 1974. Moreover, media framing was coined by an American political scientist named Robert Entman in 1993. The writer argues that media framing is a way in which information is presented to its audiences. Entman (1993) defines media framing as the selection of specific perspectives that people can communicate to create certain angles of perceived reality to make them more salient to endorse a specific problem. In addition, Entman (1993) posits that media frames are applied to define problems, ascertain causes, provide moral judgment, and suggest solutions. To summarize, media framing is simply the perspective from which a news story is told.

Meanwhile, Mishra (2017) states that recently, media framing of obesity has focused on creating an alarm by using words like an epidemic to create moral panic in the public sphere. It is because of this that several scholars have challenged the problem of obesity and criticized the present media framing of obesity as an epidemic. The author thus posits that framing obesity from a moral angle may create a negative perception of obesity and slow down the treatment processes. Furthermore, the author notes that other scholars had critiqued the media for framing obesity as an individual issue. The researchers argue that this places unnecessary pressure on the affected individual and create a negative perception of obesity in the public eye. Mishra (2017) further establish that media stories tend to over-dramatize that black females are more obese than white females. It results in a negative perception of obesity, where a community is stigmatized based on racial connotations, hindering positive interventions.

Statement of the Problem

Penkler et al. (2015) note that media attempts to frame obesity from a political and moral point of view. Thus, media reports on obesity ought to be debated in reflection of the political and moral orders considering both the affected individuals and the collective society. Penkler et al. (2015) also state that a few research scholars argue that journalists who report health and science issues need more specific training and experience difficult working conditions. Therefore, media professionals have no time to research or conduct sound interviews with health experts in obesity. Journalists need to gain knowledge in reporting health issues than relying on press releases to get new ideas. However, Penkler et al. (2015) note that media in developing countries award much blame to the moral degradation of westernization, which accounts for the significant increase in obesity.

However, Flint et al. (2015) argues that instead of demystifying the epidemic, obese persons are stigmatized and face public dismay and humiliation. For instance, television programs that use obese actors portray them as lazy or inactive in relationships and friendships. They are generalized and equated as non-performers and inactive citizens, which is often untrue. In addition, Flint et al. (2015) state that media audiences would assume that obese people are less informed and illiterate because of what the TV actors have shown.

On the other hand, Stanford, Tauqeer, and Kyle (2018) outlined that when obesity is approached from the dimension of moral panic in the context of increased body size, it delays further public health interventions to address obesity. The author added that if framed as a morality issue, the health policies tend to add to a negative perception of obesity and worsen the situation for the person affected and public health departments. Therefore, if obesity in Kenya is handled as a moral panic, good health interventions are delayed that could assist in reducing the epidemic, hence stigma for the disease increases.

Media Framing Theory

Gregory Bateson first mentions the framing concept in 1972, but he sought them as psychological frames that allowed interactive messages. Framing analysis has been rooted in both psychology and sociology. However, references to framing theory were also discussed in linguistics, discourse analysis and political science. Furthermore, Kahneman and Tversky (1973) note that in psychology the origins of framing are traced back to experimental work by Kahneman and Tversky in 1973. They investigated how different presentations with similar decision-making scenarios affected people's evaluations of the options given to them and eventually affected their choices. According to Goffman (1974), from the sociological perspective, the framing foundation was laid by Erving Goffman in 1974. Goffman (1974) was the first to focus on framing in the communication sphere and expressed that people constantly struggle to understand the world they live n and interpret their individual life experiences.

On the other hand, Abreu (2015) note that one of the most significant contributors to research in framing theory was an American political scientist known as Robert Entman in 1993. Entman defines media framing as selecting a few aspects distinguished from reality to make them more noticeable in a media text. Furthermore, Abreu (2015) state that Entman warned that without a unifying theory of framing, one could not explain how frames are developed, how they manifest in writing and how they influence the public's mind. This ideology brought about a different approach to identifying frames, for instance, media frames, audience frames and sociocultural frames, including measuring the cause and effect it has on audiences.

Entman (1991) establish five prevalent ways of framing news stories and highlights the following media frames; conflict frames, human interest frames, consequence frames, morality frames and responsibility frames. In addition, Semetko and Valkenburg (2000) concur with Entman (1991) description of the five frames: attribution of responsibility, human interest, conflict, morality and economic consequences. Entman's (1991) viewpoint about the conflict frame was to consider prioritising people engaged in a conflict to resolve it quickly because the conflict captures the audience's attention.

Conversely, Entman (1991) state that in the morality frame, media could attempt to give the moral implication of an issue or even politicize the issue; for instance, some policies can take a moral tone while using the responsibility frame, the media seeks for who to blame for the obesity issue. The media seeks to attribute responsibility for a cause or a solution to the problem.

Morality Frame

According to Entman (1991), the morality frame describes media as a tool that attempts to explain the moral implications of an issue, for instance, obesity. In this context, the media is responsible for setting the agenda and constructing frames that influence how people define a certain problem, including evaluating the moral tone. Here, Entman (1991) sought to construct frames that look at the moralization of obesity and seeks to establish who is responsible for the disease. According to Hooft et al. (2018), when obesity is framed as an epidemic sets moral panic in society. Since the media represents the disease as an epidemic, it may shape the public's perception and their belief systems. Obese persons tend to lack a voice, but their voices are only heard when they enter a weight loss program. It is note that when they share their experiences, it increases public participation and awareness of the disease, thus eliminating the moral suspicions around it.

Penkler, Felder, and Felt (2015) note that media usually reflects on the moral and political conditions surrounding the topic of obesity. The authors state that several studies have related obesity to morality as they condemn the use of weight-loss medicines sold over the counter in pharmacies. The media frames the disease as a consequence resulting from lifestyle decisions. Furthermore, health professionals view obesity as a form of moral decay and stigmatize obese individuals. More often than not,

Penkler et al. (2015) argue that people do not discuss the lack of policy that governs how the disease should be handled, diagnosed, and treated; instead, they discuss the lack of moral order surrounding obesity. The working female is blamed for neglecting their families and not providing the right eating behaviors for the children. However, Brun et al. (2015) believe that many of the alleged causes of obesity are initiated from medical and academic literature. Some of the countless claims cite that obesity is caused by imitating Western lifestyles, whereby the issue of moral decline is blamed on Westernization. Furthermore, these Western lifestyles are factored as the major causes and consequences of the epidemic.

Penkler et al. (2015) posit that the way media covers obesity stories can be politicized because the only way to sensualize the issue is by bringing out the consequence of the epidemic to the community. The media reporting style is dramatized to sensationalize obesity facts and findings, attempting to capture government and mass audience attention. Sometimes this kind of reporting works, but it does not always tackle the issue at hand wholesomely. The media becomes reactive rather than proactive in following up on the story to its successful completion. We would say that such media framing can produce either positive or negative reactions. However, the positive aspect can be traced from Barry, Brescoll, and Gollust (2013), where the writer supports including government agencies such as the health and nutrition departments in making and enforcing policies that can help fight obesity. Some of the proposed interventions include; building clinics for fast-tracking the treatment of obesity, pushing legislation to develop policies that support medical insurance for obesity treatment, and much more.

Research Gaps

The research establishes that culture is important, particularly when the African media frames obesity. Culture can hinder tackling obesity in Africa, despite the consequences. For instance, Scott et al. (2013) presented a beautiful and desirable image of obese females from a Kenyan perspective making it difficult to treat obesity cases. Secondly, the researcher observed that most of the existing studies done on media framing of obesity had concentrated majorly on the responsibility frame, followed by the human-interest frame and morality frame.

METHODOLOGY

Research Design

Consequently, this study applied the one-group pretest-posttest experimental design, which required all study participants to receive the same treatment and assessment (Allen, 2017). In this research experiment, the first step is to administer the pretest questionnaire to the participants to fill, then ensure that their responses are captured on the Google Excel sheet before sending the participants the treatment, which is a link to the *Slimpossible* YouTube video. Afterward, the researcher administers the post-test questionnaire for the respondents to fill in. *Slimpossible* is a television show designed to combat the issue of obesity among 35-55 years University female academic staff in Kenya. The shows ran for 15 weeks, attracting obese females from Nairobi and other environs. In the show, 21 ladies are evaluated on their consistency in losing weight, and the winner was revealed officially once the 15 weeks are completed. The host is the Royal Media Groups airing live on Kenya Citizen TV.

Table 1: One-Group Pretest-Posttest Experimental Design

Pretest	Independent Variable	Posttest
O1	Treatment (*Slimpossible* TV program)	O2

Source: Visual Illustration of the One-Group Pretest-Posttest Design (Allen, 2017).

Target Population

The target population comprised 1848 participants who were female academic staff in three public universities in Nairobi County, Kenya, as indicated in Table 3.2. This target population was derived from the Commission of University Education (2016), the University of Nairobi (2018), The Technical University of Kenya (2019), and Kenyatta University (2019).

The rationale for using female academic staff in public universities is informed by Nkwoka et al. (2014), where the authors establish that an increase in obesity correlates with an increase in education. The researchers' findings were based on a study at a public university called Usmanu Danfodiyo University in Nigeria. The study focused on both academic and non-academic staff. However, it reveals a higher prevalence of obesity among academic staff. In contrast, the non-academic staff had a lower prevalence rate of obesity because of their low-level education and low pay scale. On the other hand, Khan et al. (2013) expound that the reason why there is an increase in obesity among high-income female academic staff is contributed by the high intake

of fatty content. Similarly, the Ministry of Health Report (2015) opine that the proportion of obesity cases in 35-55 years females increases with education and wealth.

Also, the rationale of Nairobi County is informed by the Ministry of Health (2015) research findings that reveal Nairobi as the leading county with the highest proportion of obese females at 48 percent compared to all other counties in Kenya. The Ministry of Health (2015) further establishes that obesity increases with age. It establishes that those between 35-55 years had the highest prevalence of obesity level compared to those below 30 years.

The rationale for choosing public universities over private universities is informed by existing statistical data for the number of female academic staff in public universities in the Kenya Bureau of Statistics (2014) report. In contrast, the report also mentions that no statistical data supported the number of female academic staff in private universities. The researcher opted to work with three public universities: the University of Nairobi, Technical University of Kenya, and Kenyatta University because of the existing data supporting the three public universities.

Furthermore, the Commission of University Education (2016) opine that chartered public universities, like the University of Nairobi, Technical University of Kenya, and Kenyatta University have the highest number of academic staff at 69 percent compared to chartered private universities at 19 percent. The rest of the 12 percent were obtained from constituent colleges. Moreover, the Commission of University Education (2016) report state that there is insufficient evidence or even a lack of statistical data to support the number of female academic staff in private universities.

Sample and Sampling Technique

According to Babbie (2011) a sample was selected among the population that could be collected and studied. In this research study, the sample collected and studied comprised of 317 respondents. The sample size for this study was determined using Fisher et al (1998) formula (Israel, 1992). A 95% confidence level with $\pm$ 5% margin of error (E) would be desired in this research study. The unadjusted sample size (n') required for $\pm$ 5% using the conservative sample proportion (p) of p =0.5 (or 50%) is: $n' = \left(\frac{Z}{E}\right)^2 p(q)$

Where

n is the desired sample size

Z is the standard normal deviation at the required confidence interval.

E is margin of error.

p is the percentage of the target population with the desired characteristics.

q =1- p

Therefore, sample size for the respondents are:

$$n = \frac{1.962(0.5x0.5)}{(0.05)^2} = 384$$

Since the population was less than 10,000, the final sample estimated was calculated using the formula below:

$$nf = \frac{n}{1 + (n/N)}$$

Where: nf = The desired sample size (when the population is < 10,000)

n= Desired sample size when the population was more than > 10,000

N = Population with the desired characteristics

$$nf = \frac{384}{1+ (384/1848)} = 317$$

The sample size:

=317 Participants

Sampling Technique

Leavy (2017) defines *sampling* as the process requiring the researcher to select several elements from a large population. The study employed the stratified sampling design, a probability random sampling procedure, and then the study subjects were purposefully selected to form a sample group for the experiment. According to Etikan and Bala (2017), the probability random sampling procedure improves validity by ensuring representative sample selection.

In addition, Adwok (2015) opine that probability sampling deals with the quantitative study that requires the researcher to select from a moderately great number of populations systematically to ensure adequate representation of the total population. According to Taherdoost (2016) a stratified sample ensures that a subgroup, also known as the strata of a given population, is adequately represented within the whole sample population of a study. The sub-group can be based on gender, age, educational level, and income level. For example, in this study, we divide a sample of university female academic staff into subgroups by age, like 35-39 years, 40-44years, 45-49 years, 50-55years and above. The second strata looked at the level of education, like a graduate assistant, Master's degree graduate, Ph.D. student, doctorate, associate professor, professor, and any other. The third strata looked at the income levels:

- A minimum income per month between 80,000-99,999 Kenya Shillings
- A median income per month between 100,000-199,999 Kenya Shillings
- A maximum income per month between 200,000-399,999 Kenya Shillings

According to Stratton (2019), several research methods must be applied to improve the validity of a pre-test and post-test experimental design, that is, the application of randomly selected

groups of participants. Although this study is a quasi-experimental research design, the researcher attempted to use randomization to improve the validity of the pretest and posttest experimental study design. Furthermore, out of the randomly selected sample, a purposeful sample was selected for assessment based on a specific interest (Stratton, 2019).

Table 2: Proportionate Allocation of Participants

Public Universities in Nairobi County	Total population (Female Faculty)	To calculate the (%) Proportionate	Participant Proportionate
University of Nairobi	666	36 %	114
The Technical University of Kenya	222	12%	38
Kenyatta University	960	52 %	165
Total	**1848**	**100%**	**317**

Sample of *Slimpossible* Television Program

The *Slimpossible* television program season *six* episode *one* was purposively selected out of seven seasons and ninety-eight episodes covered by the *Slimpossible* television program. The obese females were qualified through an interview process to participate in the *Slimpossible* challenge, a popular weight loss television program aired by Citizen Television Network. The justification for choosing the season *six*-episode *one* television program was based on assessing the media frames according to Entman (1993), where the scholar mentions the following: human interest, consequences, morality, and responsibility. Furthermore, in season *six*, episode *one*, variables like the perception of obesity and the cultural dynamics are also present.

Data Collection Procedure

The researcher used several steps to describe the procedure for experimenting in detail. They are as follows: In the first step, the researcher engaged an administrator working in the human resources administrations block of the three Kenyan Universities with a spacing of two separate days for each. The researcher presented the letter of approval to research provided by the Board of Postgraduate Studies at Jomo Kenya University of Agriculture and Technology, Juja Kenya. The administrators accepted and provided a copy of a list of academic staff working at the university.

The list contained the names of all academic staff, their contact details, their email details, and the schools and departments represented. The researcher recruited and trained two research assistants to assist in the entire process of selecting the participants and in experimenting. Therefore, the researcher and the assistants purposefully selected the name representing female academic staff for each university and then used the simple random number method to assign every individual a number.

Using a random number table, the researcher randomly picked a subset of the population. Then the researcher divided the responsibility by assigning each research assistant to one university at a time; for example, the first research assistant was assigned to handle the University of Nairobi, the second one was assigned to tackle the Technical University of Kenya in Nairobi,

and the researcher handled Kenyatta University, Nairobi. The researcher provided airtime to each assistant to reach out to the respective university female academic staff through phone calls. In making the calls, we would introduce ourselves to the participant, briefly explain the experiment's purpose, and spell out the study expectations for conducting it. The process went on for one week. The response to the calls, for instance, the participants expressed interest in experimenting; some recommended the research tools and the treatment to be sent to their email box, while others preferred it via *Whatsapp Messaging App.*

Each participant was contacted individually by phone, therefore eliminating subjects' interactions. The researcher and the assistants could delimit experimental mortality, especially when some participants were notified of their busy schedules, by sending the pretest first on their chosen platforms, either by email or through the *Whatsapp* Messaging App per their request. After completing the pretest, the *Slimpossible*, a 45-minute youtube video, was forwarded to their respective platforms. Follow-up calls were made to ascertain whether the participants watched and completed the video. Once a participant completed watching the video, then the post-test questionnaire was either emailed or sent to the messaging app. The researcher monitored progress through the automatic pretest responses that came in from the Google forms onto the Google sheet. A follow-up call was made to respondents who had not done the posttest to encourage them to fill it out. The procedure took one week.

Data Processing and Analysis

Data processing was done. It entailed the data cleaning process, where the researcher checked for errors in the filled data and checked for completeness of data. Data cleaning also requires screening and organizing of data before analyzing them. Hence, the researcher cleaned the data by checking the completeness of the data and whether all questions were answered. Somekh and Lewin (2005: p.215) state that “statistical methods consist of a wide range of tools and techniques that could be used to describe and interpret quantitative data. It meant they should be measured numerically.” This study analyzed the data obtained using the Statistical Package for Social Sciences (SPSS) version 23.0. Therefore, the researcher conducted several levels of analysis. Firstly, this study presented descriptive statistics using tables with frequencies and percentages. Secondly, the research conducted inferential statistics using several types of inferential analysis tools such as the Factor analysis (The Keiser-Meyer –Olkin (KMO) test), Pearson’s correlation coefficient, and regression analysis (logical regression). These tools were used to examine the cause and effect of the consequence frame on the perception of obesity among 35-55 years University female academic staff in Nairobi.

Table 3: Model of Specification

Objectives	Level of Measurement of Data	Statistical Tools
To investigate the cause and effect of morality frame on the perception of obesity among 35-55 years University female academic staff in Nairobi County, Kenya.	Interval/Ratio	Regression Analysis, Pearson's correlation, KMO test

Regression Model

H_{o3}: Morality frame has no significant cause and effect on the perception of obesity among 35-55 years University female academic staff in Nairobi County, Kenya.

$$\mathbf{Y = ß_0 + ß_3x_3 + è}$$

Whereby;

Y= perception of obesity

ß₀= Constant

ß₃=Coefficients of determination

x₃= Morality frame

è= Error term

The study uses a multiple regression analysis (Stepwise method) for the moderating variable.

DATA ANALYSIS, RESULTS AND DISCUSSIONS

The results and findings of the study were based on the research objectives. The section links the various variables included in the model. It aims at establishing the cause and effect of media framing on the perception of obesity among 35-55 years University female academic staff in Nairobi County, Kenya. This chapter presents the data analysis, interpretation, and discussion. The analysis was done using SPSS software. Frequencies, graphs, and tables were used to display the results.

Response Rate

The researcher issued 317 questionnaires, of which 252 were received, translating to a response rate of 79.5%. Of the 252 questionnaires collected back from respondents, 30 were rejected because of incompleteness culminating in 222 usable questionnaires for analysis.

Descriptive Statistics

Descriptive statistics summarizes the observations made after data analysis.

Descriptive statistics for Morality Frame

Table 4: Average Scores on Morality Frame

		Pre-test			Post-test		
		Agree	**Neutral**	**disagree**	**Agree**	**neutral**	**disagree**
1	Western media dictates that obesity is a form of moral decline.	121 54.5%	70 31.5%	31 14%	114 51.4%	96 43.2%	12 5.4%
2	In the African media culture morality is not connected to obesity in female.	108 48.6%	80 36%	34 15.3%	110 49.5%	78 35.1%	34 15.3%
3	Western media dictates that obesity is same as greediness, same as immorality.	113 50.9%	108 48.6%	1 0.5%	123 55.4%	87 39.2%	12 5.4%
4	In the African media culture obese female are glorified as beautiful and healthy	140 63.1%	34 15.3%	48 21.6%	142 64%	34 15.3%	46 20.7%
5	Western media treats obesity as an epidemic.	155 69.8%	66 29.7%	1 0.5%	148 66.7%	62 27.9%	12 5.4%
6	African media states that hunger and famine are the major issues affecting Africa as a continent rather than obesity issues.	188 84.7%	34 15.3%	0 0.0%	188 84.7%	34 15.3%	0 0.0%
7	In my perspective, 35-55 years University female academic staff who are obese show indiscipline.	89 40.1%	36 16.2%	97 43.7%	93 41.9%	21 9.5%	108 48.6%
8	In my perspective, 35-55 years University female academic staff who are obese are beautiful and good people.	112 50.5%	110 49.5%	0 0.0%	143 64.4%	79 35.6%	0 0.0%
9	In my perspective, obesity is a sign of moral decay in the society.	32 14.4%	62 27.9%	128 57.7%	35 15.8%	33 14.9%	154 69.4%
10	In my perspective, 35-55 years University female academic staff who are obese lack self-control.	74 33.3%	36 16.2%	112 50.5%	69 31.1%	21 9.5%	132 59.5%
11	In my perspective, 35-55 years University female academic staff who are obese unattractive.	67 30.2%	30 13.5%	125 56.3%	67 30.2%	12 5.4%	143 64.4%
12	In my perspective, there is no relation between obesity and morality.	142 64%	29 13.1%	51 23%	177 79.7%	0 0.0%	45 20.3%

From the table above, we make the following observations:

Generally, a high proportion of respondents agree with most of the statements about obesity based on the morality frame. However, the following statements on obesity rated highly: "*African media states that hunger and famine are the major issues affecting Africa as a*

continent rather than obesity issues." **84.7%** and **84.7%** for pre-test and post-test respectively. *"Western media treats obesity as an epidemic.*" with **69.8%** and 66**.7%** for pre-test and post-test, respectively. *"In my perspective, there is no relation between obesity and morality,"* with **64%** and **79.7%** for pre-test and post-test, respectively. *"In the African media culture, obese females are glorified as beautiful and healthy,"* with **63.1%** and **64%** for pre-test and post-test, respectively. About the above, Penkler, Felder, and Felt (2015) study does not support the Western media point of view on morality about obesity in females. The Western media tends to associate morality with obesity, presenting obesity as a sign of moral decline in society. However, Scott et al. (2013) supports the finding of African media culture glorifying obese 35-55 years University female academic staff as beautiful, wealthy, and healthy.

A high proportion of respondents disagree with the following statements on obesity: *"In my perspective, obesity is a sign of moral decay in the society,"* with **57.7%** and **69.4%** for pre-test and post-test, respectively. *"In my perspective, 35-55 years University female academic staff who are obese unattractive."* with **56.3%** and **64.4%** for pre-test and post-test, respectively. *"In my perspective, 35-55 years University female academic staff who are obese lack self-control"* with **50.5%** and **59.5%** for pre-test and post-test, respectively. *"In my perspective, 35-55 years University female academic staff who are obese show indiscipline"* with **43.7%** and **48.6%** for pre-test and post-test, respectively. Several Western studies have attempted to explain obesity from a moral tone while criticizing the use of weight loss prescriptions sold over the counter. The findings disagree with Brun et al. (2015) because the Western perspective attributes obesity as moral decay connotes as gluttony or greed, which was considered immoral.

A high proportion of respondents neither agree nor disagree with the following statements on obesity: *"In my perspective, 35-55 years University female academic staff who are obese are beautiful and good people."* with **49.5%** and **35.6%** for pre-test and post-test respectively. "*Western media dictates that obesity is same as greediness, same as immorality,"* with **48.6%** and **39.2%** for pre-test and post-test, respectively. *"In the African media culture, morality is not connected to obesity in females,"* with **36%** and 35.1**%** for pre-test and post-test, respectively. *Western media dictates that obesity is a form of moral decline,"* with **31.5%** and **43.2%** for pre-test and post-test, respectively. Further, Hooft et al. (2018) state that when obesity is portrayed as an epidemic, it results in a moral panic. When the media presents obesity as an epidemic, public opinion shifts and creates a negative perception.

Analysis of Sample Paired Statistics

Table 5: Paired Sample Statistics and Corresponding T-tests

		Pre-test		Post-test		T-test	
		Mean	**SD**	**mean**	**SD**	**t-stat.**	**p-value**
1	Western media dictates that obesity is a form of moral decline.	3.56	0.914	3.61	0.809	-0.948	0.344
2	In the African media culture morality is not connected to obesity in female.	3.4	0.821	3.4	0.81	0	1
3	Western media dictates that obesity is same as greediness, same as immorality.	3.66	0.737	3.65	0.802	0.077	0.939
4	In the African media culture obese female are glorified as beautiful and healthy	3.64	1.058	3.72	1.091	-0.859	0.391
5	Western media treats obesity as an epidemic.	3.91	0.725	3.82	0.821	1.447	0.149
6	African media states that hunger and famine are the major issues affecting Africa as a continent rather than obesity issues.	4.16	0.666	4.23	0.697	-1.344	0.18
7	In my perspective, 35-55 years University female academic staff who are obese show indiscipline.	2.74	1.216	2.83	1.227	-0.898	0.37
8	In my perspective, 35-55 years University female academic staff who are obese are beautiful and good people.	3.65	0.725	3.81	0.695	-2.659*	0.008
9	In my perspective, obesity is a sign of moral decay in the society.	2.3	1.017	2.3	0.924	0	1
10	In my perspective, 35-55 years University female academic staff who are obese lack self-control.	2.5	1.265	2.55	1.235	-0.505	0.614
11	In my perspective, 35-55 years University female academic staff who are obese unattractive.	2.47	1.183	2.44	1.135	0.301	0.764
12	In my perspective, there is no relation between obesity and morality.	3.58	1.021	3.88	1.041	-4.326*	0

From the table of mean and standard deviation, we make the following observations: High means are registered across the groups in the following variables: "*Western media treats obesity as an epidemic"*; **3.91** and **3.82** for pre-test and post-test, respectively. *"African media states that hunger and famine are the major issues affecting Africa as a continent rather than obesity issues*": **4.16** and **4.23** for pre-test and post-test, respectively. Low means (below average) are registered across the groups in the variables below: "*In my perspective, obesity is a sign of moral decay in the society"*; **2.3** for both pre-test and post-test scores. "*In my perspective, 35-55 years University female academic staff who are obese lack self-control"*; **2.47** and **2.44** for both pre-test and post-test, respectively. The t-test results show that the pre-test and post-test results are significantly different at 5% significance in only the following variables: *In my perspective, 35-55 years University female academic staff who are obese are beautiful and good people; In my perspective, there is no relation between obesity and morality*. Flint et al. (2015) argue that instead of demystifying the epidemic, obese persons are stigmatized and face public dismay and humiliation. For instance, television programs that use obese actors portray them as lazy or inactive in relationships and friendships.

Factor Analysis

The factor analysis was successful in extracting three independent components of the morality frame. The Keiser-Meyer –Olkin (KMO) test of adequacy (KMO=0.521; Chi-square=4254.5 d.f =66, p=0.000) was significant, implying factor analysis using the principal component method was appropriate. The four components cumulatively explain 71.3 % of the total variability.

Table 6: Factor Analysis Results

	Personal moral opinion	Morality & western media	Morality & African media
In my perspective, 35-55 years University female academic staff who are obese lack self-control.	.903*	-0.034	0.132
In my perspective, obesity is a sign of moral decay in the society.	.872*	0.002	-0.017
In my perspective, 35-55 years University female academic staff who are obese unattractive.	.748*	0.357	-0.263
In my perspective, 35-55 years University female academic staff who are obese show indiscipline.	.681*	0.014	0.531
In my perspective, there is no relation between obesity and morality.	-.652*	-0.363	0.531
Western media dictates that obesity is same as greediness, same as immorality.	0.187	.875*	-0.059
Western media treats obesity as an epidemic.	0.088	.853*	-0.046
Western media dictates that obesity is a form of moral decline.	0.148	.849*	-0.065
African media states that hunger and famine are the major issues affecting Africa as a continent rather than obesity issues.	-0.187	.732*	0.252
In the African media culture obese female are glorified as beautiful and healthy	0.098	0.147	.832*
In the African media culture morality is not connected to obesity in female.	0.121	-0.157	.705*
In my perspective, 35-55 years University female academic staff who are obese are beautiful and good people.	-0.233	0.078	.612*

From above observations, factor 1 majorly was about personal opinion and could be referred to as *personal moral opinion*. Factor 2 mostly measured the aspects of morality from western media and therefore it could be referred to as *morality & western media*. Factor 3 had high loadings on African media and therefore it could be referred to as *morality & African media*.

Research Hypothesis:

Morality frame has no significant cause and effect on the perception of obesity among 35-55 years University female academic staff in Nairobi County, Kenya.

Correlation between Morality Frame and Perception of Obesity

Table 7: Correlations between Perception and Extracted Factors of Morality Frame

	Perception	Personal moral opinion	Morality & western media	Morality & African media
Perception	1			
Personal moral opinion	-0.176**	1		
Morality & western media	0.565**	0	1	
Morality & African media	-0.129**	0	0	1

**. Correlation is significant at the 0.01 level (2-tailed).

The table above shows that the selected variables of the morality frame are all significantly correlated with the perception of obesity at a 1% significance level and uncorrelated among themselves. These were the test for the hypothesis, which means that the null hypothesis is rejected because there was a significant correlation between selected variables of the morality frame and the perception of obesity among 35-55 years University female academic staff in Nairobi County.

Regression analysis

Fitting all extracted variables and the response in the logistic regression model, the results are as shown in table below:

Table 8: Parameter Estimates and their Standard Errors

Parameter	Estimate, β	Std. error	Wald	Df	sig.	exp(β)
constant(least negative)	-0.893	0.119	56.712	1	0.00	0.409
constant(moderate)	1.441	0.142	102.572	1	0.00	4.225
Personal moral opinion	-0.42	0.095	19.575*	1	0.00	0.657
Morality & western media	1.481	0.135	120.832*	1	0.00	4.397
Morality & African media	-0.4	0.124	10.457*	1	0.001	0.670

Link function: Logit.

The model fits well. Both Pearson (**799.9**) and Deviance (**757.3**) chi-square statistics for goodness of fit are significant (p-value=**0.00**). The results indicate that all the morality frame factors are statistically significant at a 5% significance level. The interpretations are as follows; Factor 1 described *personal moral opinion*, whereby the estimated odds ratio is **0.657**. Therefore, for every one-unit increase in personal moral opinion, a person is 34.3% less likely to have a lower negative perception towards middle-aged obese females than higher levels of negative perceptions.

Factor 2 described *Morality &Western media*, whereby the estimated odds ratio is **4.4**. Therefore, for every one unit increase in the morality & western media, a person is 4.4 times more likely to have a lower negative perception towards middle-aged obese females as opposed to higher levels of negative perceptions. Factor 3 described *Morality & African media*, whereby the estimated odds ratio is **0.67**. Therefore, for every one unit increase in the morality & African media, a person is 33% less likely to have a lower negative perception towards middle-aged obese females as opposed to higher levels of negative perceptions.

Regression Model for Morality Frame

This regression models without the moderator (cultural dynamics).

Ho_3: Morality frame has no significant cause and effect on the perception of obesity among 35-55 years University female academic staff in Nairobi County, Kenya.

The model is of the form.

$$y = ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \epsilon$$

Where;

$y =$ Perception of obesity

ln = Natural Logarithm

$p =$ Probability of having a negative perception

$x_1 =$ Personal moral opinion

$x_2 =$ Morality and western media

$x_3 =$ Morality and African media

$\epsilon =$ Error term

(i) Moderating variable (cultural dynamics) and morality frame

The model is of the form.

$$y = ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 x_1 z_1 + \beta_2 x_1 z_2 + \beta_3 x_1 z_3 + \beta_4 x_2 z_1 + \beta_5 x_2 z_2 + \beta_6 x_2 z_3 + \beta_7 x_3 z_1 + \beta_8 x_3 z_2 + \beta_9 x_3 z_3 + \epsilon$$

Where;

$y =$ Perception of obesity

ln = Natural Logarithm

$p =$ Probability of having a negative perception

$x_1 =$ Personal moral opinion

$x_2 =$ Morality and western media

$x_3 =$ Morality and African media

$z_1 =$ African cultural practices

$z_2 =$ Values and beliefs

$z_3 =$ Western cultural influences

$\in =$ Error term

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

The descriptive statistics show obesity and morality issues more inclined toward Westernized than African perception. The respondents also felt that hunger and famine were majorly affecting the African continent rather than obesity. In addition, the descriptive statistics recorded low means (below average) scores from the respondents because they could not associate obesity among 35-55 years University female academic staff as a matter of moral decay; instead, they find obese 35-55 years University female academic staff to be beautiful. This finding contrasted the literature review and studies that shows obesity as a moral decline in society. Western culture discourages fat body ideals or obesity because it is a sign of gluttony, an immoral outlook in their eyes. The interaction between morality & western media and African cultural practices is insignificant.

Conclusion

Based on the quantitative analysis, it can be concluded that the morality frame was not a significant factor that causes and affects the perception of obesity among 35-55 years University female academic staff in Nairobi County. The respondents expressed that obesity is not subjected to moral decay/decline because obese females are beautiful and good people. The respondents observed that Africa faces more challenges with hunger and famine compared to obesity issues. They also observed moral issues and obesity come from a Westernized perspective, therefore, are not relevant in the African setting.

Recommendations

The conclusions of the findings show that the morality frame was not a significant factor influencing the perception of obesity among 35-55 years University female academic staff in Nairobi County. The respondents expressed that obesity is not subjected to moral decay/decline because their perspective was that obese females are healthy, beautiful and good people. The respondents felt that Africa faces more challenges with hunger and famine compared to obesity issues. They also felt moral issues and obesity come from a Westernized perspective and are irrelevant in the African setting. The study recommends the involvement of academicians and health scientists to explore through research why obesity is not a moral issue in tackling obesity. They could conduct visibility studies and experiments and publish them in peer-reviewed journals for access.

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