

International Journal of Communication and Public Relations (IJCPR)

**INFLUENCE OF CULTURAL DYNAMICS ON THE RELATIONSHIP
BETWEEN MEDIA FRAMING AND THE PERCEPTION OF OBESITY AMONG
MIDDLE-AGED WOMEN IN NAIROBI COUNTY, KENYA**

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WOMEN IN NAIROBI COUNTY, KENYA**

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Abstract

Purpose: To assess the moderating influence of cultural dynamics on the relationship between media framing and the perception of obesity among middle-aged women 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 administered was a television program titled *Slimpossible*, which showcased middle-aged Kenyan women suffering from the stigma of obesity who were participating in a competition to lose their weight. The multi-stage cluster sampling technique was applied in this study. Out of the target population of 1848 participants, the study sample was 317 academic female staff found in three public universities in Nairobi County, Kenya. In this research study, the analysis applied descriptive statistics and the 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 study sought to assess the moderating influence of cultural dynamics on the relationship between media framing and the perception of obesity among middle-aged women in Nairobi County, Kenya. Therefore, the finding also brought about interactions between cultural dynamics and the independent media frames in connection to the perception of obesity. It was concluded that the perception of obesity from the African culture and Western culture was different. The respondents had positive outlook on middle-aged obese women opposed to the dictates of Western culture.

Unique contribution to theory, practice and policy: In terms of contribution to theory, this study emanated from the cross-cultural communication theory. The theory recognizes the value of culture and how it relates to people’s perception on obesity. Hurn and Tomalin (2013) opined that some of the most strategic researchers in the field of cross-cultural communication include Edward Hall, Mildred Hall and Geert Hofstede in the 1950s.

Keywords: *Cultural Dynamics, Media Framing, Perception of Obesity, Obesity, Middle-aged women.*

1.0 INTRODUCTION

According to Kashima (2016) cultural dynamics is characterized as the stability and the change in how cultural information is distributed in a human population, and this is in relation to customs, traditions, sexuality and family patterns. Notwithstanding the fact that Penkler et al. (2015) argued that the Western culture from the Austrian media point of view is an alien that has invaded the Austrian culture. On the other hand, the British media reported that obesity is a sign of cultural degradation, which has amount to Britain losing its former glory as a leading sports country. Moreover, we find that in America the situation is a bit different because of racial segregation between the African American citizens and the White community. Thompson (2015) pointed that the challenge of obesity can be attributed to cultural practices and differences. However, the worst scenario is when obesity is tagged to a particular community just because they are African Americans, yet obesity is a global epidemic. Furthermore, a media article from the New York Times Magazine, framed culture as a major determinant to the causes of obesity in America. The article further revealed that obesity was not only affecting one culture, but the entire race, for example, obesity was highest among African American women and Hispanics women compared to White women. However, Thompson (2015) noted that if you dig deeper into these claims one will noticed a significant belief pattern that can support the element of culture. For instance, the African American woman loves their hair and they would rather spend money on hairdos than on physical fitness programs. Right there, we see cultural differences play a role in terms of values, they value taking care of their hair compared to taking care of their physical bodies.

Three experiments were conducted to assess how cultural frames influence attitudes around health, in particular on obesity, which is reflected as a public health predicament and is instilled with symbolic significance (Frederick et al., 2016). The study employed between-subjects and mixed design experiments. Therefore, the three experiments engaged college students to participate in the study, with total number distributed as follows: ninety-nine, one hundred and fourteen, and two hundred and ninety-three in each of the three experiments. The participants were supposed to read news articles that shown obese body sizes and they content included the following: public health crisis, individual responsibility, health at all sizes and fat rights content (Frederick et al., 2016).

The results of the three experiments revealed that those who read Health at all Sizes and Fat Rights news stories compared to those who read articles on Public Health Crisis and Individual responsibility showed more trust in the health threats of being obese. They results also showed they believed obese people must contribute more money for their insurance covers and they agreed discrimination against obese persons was right. In addition, they were less willing to celebrate obese body sizes and they were unwilling to

say women who were overweight and not obese were healthy. However, those who participated in experiment three were of the opinion that obesity was no longer a threat and obese persons should not be charged more for insurance. It was noted; only those participants who were exposed to news articles on Fat Rights were against anti-fat campaigns and were more inclined to celebrate body size diversity (Frederick et al., 2016). The conclusions drawn from the findings suggested that spreading information that people can be both obese and healthy will not do much to reduce the negative perception about obesity. It is assumed that anti-fat rhetoric is a health risk and an obstacle towards decreasing obesity cases. However, fat rights perspectives can safeguard against the negative effects brought about by the anti-fat stigma campaigns, and foster a culture of good health that advocates for social justice and sympathy (Frederick et al., 2016).

The framing concept was first mentioned by Gregory Bateson in 1972, but he sought them as psychological frames that allowed the 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) noted that in psychology; the origins of framing are traced back to experimental work by Kahneman and Tversky in 1973. They investigated how different presentations, which had similar decision-making scenarios, affect people's evaluations of the several options given to them and eventually affect 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 framing in the communication sphere and expressed that people are in constant struggle to understand the world they live in, and to interpret their individual life experiences. On the other hand, Abreu (2015) noted that one of the most significant contributors of research in framing theory was an American political scientist known as Robert Entman in 1993. Entman defined media framing as selection of a few aspects that are distinguished from the reality to make them more noticeable in a media text. Furthermore, Abreu (2015) stated that Entman warned of the fact that without a unifying theory of framing one cannot 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 in regards to identifying frames, for instance media frames, audience frames and socio-cultural frames, including measuring the influence it has on audiences.

Problem Statement

Moreover, Scott et al. (2013) posits that different cultures define obesity differently. For instance, in the Westernized world obesity is an epidemic, a serious disease, however from the African perspective obesity is a sign of wealth, contentment and power. A good

example is in Central Africa, obesity is a positive thing because an obese woman is celebrated as one who is beautiful and lovely in body shape. Another example given by Scott et al. (2013) is one related to Somalia, where Somali obese women are acknowledged as women with good form and lovely flesh. Furthermore, the author also mentioned that Kenyan obese women are depicted as admirable, while slender women are looked at as if they are poor or they lack resources. It is clear that the African middle-aged obese woman is celebrated and perceived positively with the society. Despite the different cultures represented across the African continent culture is significant and plays a huge role in how obesity is viewed entirely. In Nigeria's traditions, a young woman was taken in a place of fattening to prepare her for marriage. Unless the woman becomes obese, she would not be married off. When the obese woman was married off to her husband, the community perceived her husband as a man who cares for her, and he is a very wealthy and powerful man in the society. Therefore, this study sought to assess the moderating influence of cultural dynamics on the relationship between media framing and the perception of obesity among middle-aged women in Nairobi County, Kenya.

2.0 LITERATURE/THEORETICAL FRAMEWORK

Cross Cultural Communication Theory

Hurn and Tomalin (2013) opined that some of the most strategic researchers in the field of cross-cultural communication include Edward Hall, Mildred Hall and Geert Hofstede in the 1950s. Edward and Mildred Hall, American psychologists analyzed the cultural differences between the American and the European companies and employees. They later published a book entitled "The Silent Language" in 1959, which extended its scope to understanding the cultural differences, in the year 1990. More specifically, Hurn and Tomalin (2013) established that the scholars examined the various communication styles and the effect of behaviour on the way in which people interact or work with people from different cultural backgrounds. Their contribution aimed at establishing cross-cultural communication as a research discipline.

The researcher introduced two principles into the cross cultural communication; first principle was related to communication itself and second principal associated to the organization of time. Moreover, Hurn and Tomalin (2013) discussed two major constructs, also known as styles of communication in the business world. The first was high-context communication, and second was low-context communication. In high context communication, it assumed that all have the required information they need. In such cultures, relationships tend to last longer, while people assume that everyone has most of the essential information they need. For instance; the obese women in Nairobi

County could have the essential information that to prevent obesity watch the foods you consume. However, Hurn and Tomalin (2013) established that written information is not regarded by high-context communicators. They are a bit rigid to change. They are comfortable in close and personal relationships. They learn from each other and criticize other cultures.

Quite the contrary is the low-context communication, whereby it is assumed that not all people have the required information. Therefore, communication should be a bit more explicit. Written information is considered important by low-context communicators. They pay more attention to details. The cross cultural communication theory informs this study in this manner. Firstly, Hurn and Tomalin (2013) claimed that high-context communicators represent Africans, Arabs, Japanese, and Koreans. The reason is that these cultures are more engrained into traditions, beliefs and language as a means of belonging and acceptance in a specific family or community. Hence, in this study, when one is dealing with obesity, they must first understand the cultures represented before developing healthy eating interventions. According to Scott et al (2013) an obese woman is considered wealthy and desirable compared to a slender looking woman, this is how obesity is perceived in Kenya and other African countries. Therefore, the perception on obesity is rather positive but it does not solve the underlying health problems that may be caused by obesity.

Second, Hurn and Tomalin (2013) opined the low-context communicators consist of Americans, Germans, and the Dutch. The cultures represented by these communities are different from that of high-context communicators. This is because they seek for information so that they can be knowledgeable about an issue. In this study, the communicators read more books and media content to get knowledge about obesity. In addition, they understand that obesity is a disease that needs to be tackled with serious interventions. They believe that obesity is an individual's responsibility. Rodrigo (1999) asserted that the role of language in cross-communication has played an important part in explaining culture and its interpretation. Wittgenstein (1953) is one such scholar who had a separate viewpoint about cross-cultural communication by arguing that language is planned through rules that arise from cultural interactions. It is because of his viewpoints that the structure provides meaning to gestures and oral communication. Though, Erickson (1989) was of the opinion that people interpret, a specific piece of information based on the premise of experience in which their culture takes a critical position. Culture is the reason why given behaviours are given diverse meanings based on the source of culture of the individual translating the process.

Research Gaps

These findings agree with authors Scott et al. (2013) where, the research has established that culture is important, particularly when the African media is responsible for framing

obesity. This is because culture can be a hindrance to tackling obesity in Africa, despite the consequences. For instance, Scott et al. (2013) presented a beautiful and desirable image of obese women from a Kenyan perspective making it difficult to treat obesity cases. Moreover, this study strived to fill the gap of cultural dynamics and its relationship between media framing and the perception of obesity. From the conceptual gap strives to establish the influence of cultural dynamics, as a moderating variable and its relationship between media framing and the perception of obesity among middle-aged women in Nairobi County, Kenya.

3.0 METHODOLOGY OF THE RESEARCH

Research Design

Consequently this study applied the one-group pretest-posttest experimental design. As Allen (2017) posited regarding one-group pretest-posttest experimental design all study participants required to be provided with the same treatment and assessment. The researcher administered both pre-and posttest questionnaires to the participants. This study used television program titled *Slimpossible* as treatment. *Slimpossible* is a television show that was designed to combat the issue of obesity among middle-aged women in Kenya. Moreover, it also drew young ladies in their 20s and above years. The show ran for 15 weeks and it attracted middle-aged obese women living in Nairobi and other environs. In the show 21 ladies are evaluated on their consistency in losing weight, where the winner was revealed officially once the 15 weeks were completed. It was hosted by Royal Media specifically Citizen TV. Table 1.1 provided the visual illustration of the one-group pretest-posttest experimental design. The illustration indicates how the pretest questionnaire was administered to respondents before they watched the *Slimpossible* television show. After the participants watched it, they filled the posttest questionnaires. The following was the structure of the experimental design:

Table 1: One-Group Pretest-Posttest Experimental Design

Pretest	Independent Variable	Posttest
O1	Treatment (<i>Slimpossible</i> TV program)	O2

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

The justification of using the one-group pretest-posttest design was the aspect of comparing results of the pretest questionnaires and the posttest questionnaires.

Furthermore, the design gave better control over the experimental mortality, maturation and regression threats (Fraenkel, Wallen & Hyun, 2012).

Target Population

Bless, Smith and Kagee (2006) defined population as the whole set of people or items that were determined using some characteristics such as age, gender and education levels. The target population comprised of 1848 participants who were women, academic staff found 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), University of Nairobi (2018), Technical University of Kenya (2019), and Kenyatta University (2019). The rationale of using academic staff was based on Nkwoka et al. (2014) research study that showed all academic staff had higher levels of education. Similarly, the Kenya National Bureau of Statistics and the Ministry of Health (2015) reported that the proportion of obesity cases in women increases with increase in the level of education and wealth. Consequently, in this research study higher level of education correlated with higher prevalence of obesity among the academic staff in universities.

Therefore, the rationale of Nairobi County was informed by the Kenya National Bureau of Statistics and the Ministry of Health (2015) studies that showed Nairobi was leading as it has the highest proportion (48 percent) of women who were obese compared to all other Counties in Kenya. The report further confirmed that obesity levels increases with age. Hence, in this study, the age group was between 30-55 years old was informed by Lenneis and Pfister, 2017. This research focused on public universities in Nairobi County since the proportion of obesity cases in women increased with the level of education and wealth. The public universities comprised of University of Nairobi, Technical University of Kenya, and Kenyatta University. The reason for choosing public universities over private universities was informed on existing statistical data at the Kenya Bureau of Statistics report findings for the three public universities. Furthermore, the Commission of University Education (2016) research reports showed chartered public universities having the highest number of academic staff at 69 percent compared to chartered private universities at 19 percent, while the rest of the 12 percent obtained from constituent colleges. Moreover, there was insufficient evidence or any statistical data that could represent private university.

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 will be:

$$n = \frac{1.96^2(0.5 \times 0.5)}{(0.05)^2} = 384$$

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) defined sampling as the process that requires the researcher to select a number of individual elements from a large population. The study employed multi-stage cluster sampling. Babbie (2011) posited that multistage cluster was frequently used when the list of the members of a given population did not exist. Ideally, the researcher balanced the number of clusters and its size to attain a given sample size. Stratification

was used to minimize the sampling error by establishing relatively homogeneous strata before sampling, which included the gender, age, income levels and education levels. The purpose of this was to improve representativeness of the sample size by reducing the degree of sampling error.

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 women were qualified through an interview process to participate in the *Slimpossible* challenge, a popular weight loss television program aired by Citizen Television Network. The researcher edited the video to take 30 minutes. The justification of choosing the season *six* episode *one* television program was based on the assessment of the cultural dynamics according to cross-cultural communication (Hurn and Tomalin, 2013), where the scholar mentioned the cultural dynamics.

Data Collection Instrument

This study used questionnaires as the primary data collection instrument. Furthermore, Babbie (2011) asserted that the advantage of using a questionnaire keeps the respondents free from the bias of interviewers, who may want to manipulate their answers. The questionnaire incorporated the *Likert-type* scale, which measures the respondents' perception by asking them the extent in which they agree or disagree with an issue. Hence, the respondents are given a chance to answer the questions in their own way. Section one of the questionnaire comprised of social-demographic details such as age group, education and income levels. Section three tested questions related to cultural dynamics. Furthermore, some of the items would be on the 5-point *likert-type* scale, with level of agreement 1=strongly agree to 5= strongly disagree; level of likelihood 1=very likely to 5=very unlikely. However, other items would also be on the 3-point *likert-type* scale.

Data Collection Procedure for Conducting the Experiment

The researcher used several steps to describe the procedure for conducting the experiment in detail. They are as follows: In the first step, the researcher recruited and trained two research assistants who assisted in the whole process of the experiment. The researcher scripted the instructions of participating in the experiment. The researcher, with the help of the two research assistants made phone calls to the respondents requesting them to participate in the experiment. The research assistance sent the scripts to the participants on email and on *Whatsapp Messaging App*. In the second step, the respondents filled the pretest and posttest questionnaires through the Google form link. The Google form link required them to add their email addresses. The researcher could easily monitor the

responses because the responses were automatically redirected to the Google sheet through the Google form link provided. The research assistant followed up and reminded the respondents to fill the forms appropriately, and to watch the *Slimpossible* TV program through a link sent to them. In the third step, the respondents filled the posttest questionnaire through the online link. The researcher monitored all the responses on the backend using Google sheets. The research assistants made follow-up calls to enhance communication and achieve smooth process during the experiment.

Data Processing and Analysis

Data processing was done. It entailed the process of data cleaning, where the researcher checked for errors in the filled data and checked for completeness of data. Data cleaning also required screening and organizing of data before analyzing them. Hence, the researcher cleaned data by checking completeness of data and whether all questions were answered. Somekh and Lewin (2005: p.215) stated that “statistical methods consist of a wide range of tools and techniques that could be used to describe and interpret data that were quantitative in nature. This meant they should be measured numerically.” In this study, the data obtained was analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0. Therefore, the researcher conducted several levels of analysis. Firstly, this study presented the 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 assess the moderating influence of cultural dynamics on the relationship between media framing and the perception of obesity among middle-aged women in Nairobi as indicated in Table 2.

Table 2: Model of Specification

Objectives	Level of Measurement of Data	Statistical Tools
To assess the moderating influence of cultural dynamics on the relationship between media framing and the perception of obesity among middle-aged women in Nairobi County, Kenya.	Interval/Ratio	Regression Analysis, Pearson’s correlation, KMO test

Regression Model for the Objective

H₀₅: Cultural dynamics has no significant influence on media framing and the perception of obesity among middle-aged women in Nairobi County, Kenya.

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_{1z}x_1z + \beta_{2z}x_2z + \beta_{3z}x_3z + \beta_{4z}x_4z + z\epsilon$$

Whereby:

Y= Perception of obesity

β_0 = Constant

β_i = Coefficient of X_i for $i= 1,2,3, 4$

x_1 = Human interest frame

x_2 = Consequences frame

x_3 = Morality Frame

x_4 = Responsibility frame

z = Hypothesized moderator (Cultural dynamics)

β_z is the coefficient of x_i and the influence between cultural dynamics and each of the independent variables for $i= 1, 2, 3, 4$

ϵ = Error term

Table 3: Response Rate

Response	Frequency	Percent
Returned	252	79.5%
Unreturned	65	20.5%
Total	317	100%

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

Descriptive statistics summarizes the observations made after data analysis.

Table 4: Descriptive Statistics

N	Age	Education	Income
Missing	0	0	0
Mean	2.46	2.61	1.57
Median	2.00	3.00	2.00
Mode	2	3	1
Std.Deviation	1.160	1.082	.595

The age group was as follows: 30-34 years were 19.8%; 35-39 years were 42.8%; 40-44 years were 14.4%; 45-49 were 17.1%; and 50-55 years were 5.9%. This finding agrees with Nkwoka, Egua, Abdullahi, Sabi and Mohammed (2014) studies that obesity increases with increase in age. In addition, Nkwoka et al. (2014) studies support the findings that, increase in obesity was related to increase in education and this was reflected in the findings obtained from a study carried out in Usmanu Danfodiyo University in Nigeria. Further, Khan et al. (2013) studies bring about discussion on income levels. Here the increase of obesity levels among high income middle-aged female academic staff to high intake of fatty contents. The high intake could be attributed also to the individuals because they have the responsibility to ensure what they consume is healthy.

The table shows the descriptive statistics of the cultural dynamics on the relationship between media framing and the perception of obesity among middle-aged women in Nairobi County, Kenya.

Table 5: shows average scores on cultural dynamics

		Pre-test			Post-test		
		agree	neutral	disagree	agree	neutral	disagree
1	Western media reports obesity as a sign of cultural degradation.	157 70.7%	48 21.6%	17 7.7%	176 79.3%	12 5.4%	34 15.3%
2	Western culture advocates for the use of slimming pills to reduce obesity.	162 73%	60 27%	0 0.0%	176 79.3%	46 20.7%	0 0.0%
3	Western culture portrays obese women as unhealthy.	176 79.3%	46 20.7%	0 0.0%	188 84.7%	34 15.3%	0 0.0%
4	Western media paints obesity as an epidemic.	129 58.1%	79 35.6%	14 6.3%	147 66.2%	63 28.4%	12 5.4%
5	Western culture has a preference for slim women compared to obese women.	176 79.3%	46 20.7%	0 0.0%	188 84.7%	34 15.3%	0 0.0%
6	Western culture discourages obesity, preferring to eradicate it.	148 66.7%	61 27.5%	13 5.9%	171 77%	51 23%	0 0.0%
7	Western culture have come up with health interventions to reduce obesity from within their population.	117 52.7%	65 29.3%	40 18%	151 68.9%	46 20.7%	23 10.4%
8	African culture believes middle-aged women who are obese are attractive and desirable.	176 79.3%	18 8.1%	28 12.7%	152 68.5%	46 20.7%	24 10.8%
9	African culture glorifies obesity as a sign of wealth and good health.	164 73.9%	31 14%	27 12.2%	164 73.9%	46 20.7%	12 5.4%
10	African cultural practices adore obese women because their physical appearance depicts care by their husbands.	176 79.3%	32 14.4%	14 6.3%	152 68.5%	58 26.1%	12 5.4%
11	African culture celebrates body size diversity.	181 81.5%	40 18%	1 0.5%	186 83.8%	24 10.8%	12 5.4%
12	Cultural traditions & practices are an impediment to reducing obesity among middle-aged women.	109 49.1%	99 44.6%	14 6.3%	130 58.6%	80 36%	12 5.4%
13	African culture blames Western influences for the causes & consequences of obesity in women.	128 57.7%	77 34.7%	17 7.7%	135 60.8%	46 20.7%	41 18.5%
14	Past African cultural traditions offered best solutions for combating obesity as a disease by promoting traditional foods.	156 70.3%	66 29.7%	0 0.0%	166 74.8%	56 25.2%	0 0.0%
15	The present Western cultural practices offer the ideal solution for reducing obesity among women.	90 40.5%	81 36.5%	51 23%	64 28.8%	79 35.6%	79 35.6%

From the table above, we make the following observations: A high proportion of respondents agreed with most of the statements on obesity based on cultural dynamics. The following statements registered highest proportions in both pre and post-tests: “*African culture celebrates body size diversity*” with **81.5%** and **83.8%** for pre-test and

post-test respectively. *“Western culture portrays obese women as unhealthy”* with **79.3%** and **84.7%** for pre-test and post-test respectively. *“Western culture has a preference for slim women compared to obese women”* with **79.3%** and **84.7%** for pre-test and post-test respectively. Thompson (2015) studies tend to support this finding because obesity cases were interlinked to cultural practices and differences, for instance in the West, obesity is denoted as an epidemic affecting mostly the African American and Hispanic communities than the White Americans. Hence their perspective was obese women are generally unhealthy.

A high proportion of respondents disagreed with the following statements on obesity: *“The present Western cultural practices offer the ideal solution for reducing obesity among women”* with **23%** and **35.6%** for pre-test and post-test respectively. *“Western culture have come up with health interventions to reduce obesity from within their population”* with **18%** and **10.4%** for pre-test and post-test respectively. *“African culture believes middle-aged women who are obese are attractive and desirable”* with **12.7%** and **10.8%** for pre-test and post-test respectively. *“African culture blames Western influences for the causes & consequences of obesity in women.”* with **7.7%** and **18.5%** for pre-test and post-test respectively.

A high proportion of respondents neither agreed nor disagreed with the following statements on obesity: *“Cultural traditions & practices are an impediment to reducing obesity among middle-aged women”* with **44.6%** and **36%** for pre-test and post-test respectively. *“The present Western cultural practices offer the ideal solution for reducing obesity among women”* with **36.5%** and **35.6%** for pre-test and post-test respectively. *“Western media paints obesity as an epidemic”* with **35.6%** and **28.4%** for pre-test and post-test respectively. This finding supports Thompson (2015) that Western media frames obesity as an epidemic to create an alarmist story around it. However, racial stereotype comes to play, where women in African American and Hispanic communities were among the most obese compared to White American women.

The table shows the paired sample statistics and corresponding T-tests.

Table 1.6 of paired sample statistics and corresponding T-tests

		Pre-test		Post-test		T-test	
		Mean	SD	Mean	SD	t-stat.	p-value
1	Western media reports obesity as a sign of cultural degradation.	3.78	0.795	3.79	0.883	-0.148	0.883
2	Western culture advocates for the use of slimming pills to reduce obesity.	3.97	0.714	4.18	0.75	-3.9*	0
3	Western culture portrays obese women as unhealthy.	4.1	0.711	4.18	0.677	-1.551	0.122
4	Western media paints obesity as an epidemic.	3.73	0.87	3.82	0.822	-1.288	0.199
5	Western culture has a preference for slim women compared to obese women.	4.09	0.709	4.18	0.675	-1.765	0.079
6	Western culture discourages obesity, preferring to eradicate it.	3.82	0.822	3.97	0.659	-2.922*	0.004
7	Western culture have come up with health interventions to reduce obesity from within their population.	3.5	0.964	3.79	0.889	-4.566*	0
8	African culture believes middle-aged women who are obese are attractive and desirable.	3.92	1.092	3.81	0.914	1.422	0.157
9	African culture glorifies obesity as a sign of wealth and good health.	3.94	0.973	3.97	0.842	-0.405	0.686
10	African cultural practices adore obese women because their physical appearance depicts care by their husbands.	4.1	0.871	3.86	0.831	3.329*	0.001
11	African culture celebrates body size diversity.	4.18	0.731	4.02	0.749	2.636*	0.009
12	Cultural traditions & practices are an impediment to reducing obesity among middle-aged women.	3.49	0.71	3.59	0.679	-1.831	0.069
13	African culture blames Western influences for the causes & consequences of obesity in women.	3.66	0.835	3.63	1.011	0.411	0.681
14	Past African cultural traditions offered best solutions for combating obesity as a disease by promoting traditional foods.	4	0.77	4	0.715	-0.2	0.842
15	The present Western cultural practices offer the ideal solution for reducing obesity among women.	3.21	1.14	2.73	1.093	5.299*	0

From the table of mean and standard deviation, we make the following observations: Firstly, generally high means (above average) was registered by all the variables of

cultural dynamics in both the pretest and post test scores. Secondly, high means were registered across the groups in the following variables: “*Western culture advocates for the use of slimming pills to reduce obesity*”; **3.97** and **4.18** for pre-test and post-test respectively. “*Western culture portrays obese women as unhealthy*”: **4.1** and **4.18** for pre-test and post-test respectively. “*Western culture has a preference for slim women compared to obese women*”: **4.09** and **4.18** for pre-test and post-test respectively. “*Past African cultural traditions offered best solutions for combating obesity as a disease by promoting traditional foods*”: **4.0** and **4.0** for pre-test and post-test respectively. “*African culture celebrates body size diversity*”: **4.18** and **4.02** for pre-test and post-test respectively. The findings on Western culture agree with the Thompson (2015) studies that found the variation of the Western cultures relating it to the different races represented, for instance in America, there are White Americans, Black Americans, Hispanics and other migrants. These represent different cultures and their different feelings towards obesity in women depend on their cultural orientations.

Thirdly, relatively low means is registered across the groups by the variable below: “*The present Western cultural practices offer the ideal solution for reducing obesity among women*”; **3.21** and **2.73** for pre-test and post-test scores respectively. The t-test results show that the pre-test and post test results were significantly different at 5% level of significance in only the following variables: *Western culture advocates for the use of slimming pills to reduce obesity; Western culture discourages obesity, preferring to eradicate it; Western culture have come up with health interventions to reduce obesity from within their population; African cultural practices adore obese women because their physical appearance depicts care by their husbands; African culture celebrates body size diversity; The present Western cultural practices offer the ideal solution for reducing obesity among women.* Frederick et al. (2016) support the findings that in Western media and its society things, like slimming pills and other controversial methods of losing weight were greatly encouraged. The products are sold over-the-counter, some without prescriptions to aid in weight loss. On the other hand, Scott et al. (2013) supports the findings on Africa’s perspective on obesity as a good cultural practice, depicting obese women as beautiful, wealthy and well-cared for by their husbands.

Factor Analysis

The factor analysis was successful in extracting three independent components in relation to cultural dynamics.

Table 7: Factor Analysis Results

	African cultural practices	Values & beliefs	Western cultural influences
Cultural traditions & practices are an impediment to reducing obesity among middle-aged women.	0.762*	0.078	0.3
Western culture portrays obese women as unhealthy.	0.754*	0.212	0.291
African culture glorifies obesity as a sign of wealth and good health.	0.723*	0.45	0.144
African cultural practices adore obese women because their physical appearance depicts care by their husbands.	0.65*	0.567	0.155
African culture blames Western influences for the causes & consequences of obesity in women.	0.623*	0.192	0.492
The present Western cultural practices offer the ideal solution for reducing obesity among women.	-0.558*	-0.335	0.425
Western culture advocates for the use of slimming pills to reduce obesity.	0.153	0.891*	0.245
African culture believes middle-aged women who are obese are attractive and desirable.	0.196	0.874*	0.238
Western culture has a preference for slim women compared to obese women.	0.264	0.842*	0.208
African culture celebrates body size diversity.	0.452	0.541*	0.184
Western media paints obesity as an epidemic.	-0.11	0.292	0.808*
Western media reports obesity as a sign of cultural degradation.	0.378	0.201	0.782*
Western culture discourages obesity, preferring to eradicate it.	0.436	0.051	0.759*
Western culture have come up with health interventions to reduce obesity from within their population.	0.371	0.313	0.755*
Past African cultural traditions offered best solutions for combating obesity as a disease by promoting traditional foods.	0.118	0.161	0.515*

The Keiser-Meyer –Olkin (KMO) test of adequacy (KMO=0.600; Chi-square=8474.6, d.f =105, p=0.000) was significant implying factor analysis using principal component method was appropriate. The four components cumulatively explain 71.2 % of the total variability. Factor 1 described mostly about the African cultural traditions and practices on obesity such as sign of wealth and good health, adoring obese women because their

physical appearance depicts care by their husbands and accusing Western influences for the causes & consequences of obesity in women. Therefore factor 1 can be referred to as “African cultural practices.” Factor 2 described mostly about the values and beliefs from both African and Western culture. For example, Western culture advocates for the use of slimming pills to reduce obesity and having a preference for slim women. Similarly, African culture celebrates body size diversity and believing that obese women are attractive and desirable. Therefore factor 2 could be referred to as “values and beliefs.” Factor 3 mostly measured aspects of western cultural influences on obesity. These include painting obesity as an epidemic, a sign of cultural degradation, discouraging it and coming up with interventions to reduce it. Therefore factor 3 can be referred to as “Western cultural influences.”

Inferential Statistics

Hypothesis: Cultural dynamics has no significant influence on media framing and the perception of obesity among middle-aged women in Nairobi County, Kenya. The selected variables, including African cultural practices, Values & beliefs, Western cultural influences of cultural dynamics were all significantly correlated with perception at 1% level of significance except the western cultural influences. However, these selected variables are uncorrelated among themselves.

Regression Analysis

Interaction of Human Interest and Cultural Dynamics

Fitting all extracted variables of cultural dynamics interacting with human interest and perception yields the following results.

Table 8 : Parameter Estimates and their standard errors

Parameter	Estimate, β	std. error	Wald	df	sig.	exp(β)
constant(least negative)	-3.968	.470	71.281	1	.000	.0189
constant(moderate)	1.020	.274	13.919	1	.000	2.773
Media sensationalism *African cultural practices	2.102	.394	28.516*	1	.000	8.183
Media sensationalism * Values & beliefs	-2.711	.515	27.716*	1	.000	.0665
Media sensationalism * Western cultural influences	-3.980	.403	97.728*	1	.000	.0187
Media justification*African cultural practices	-1.055	.317	11.061*	1	.001	.348
Media justification * Values & beliefs	.545	.396	1.899	1	.168	1.725
Media justification * Western cultural influences	.863	.511	2.859	1	.091	2.370
Feelings of satisfaction*African cultural practices	-.698	.394	3.132	1	.077	.498
Feelings of satisfaction * Values & beliefs	-.251	.360	.486	1	.486	.778
Feelings of satisfaction * Western cultural influences	-4.322	.607	50.713*	1	.000	.0133
Feelings of dissatisfaction *African cultural practices	-.162	.733	.049	1	.825	.850
Feelings of dissatisfaction * Values & beliefs	-3.921	.517	57.531*	1	.000	.0198
Feelings of dissatisfaction * Western cultural influences	1.407	.362	15.082*	1	.000	4.084

Link function: Logit.

The first interaction was between media sensationalism, which was the first factor of the Human Interest Frame and cultural dynamics. The interaction between media sensationalism with all aspects of cultural dynamics was significant in influencing perception of obesity among middle aged women at 5% level of significance. The second interaction was between media justification, which the second factor of the Human Interest Frame and cultural dynamics. The interaction between media justification with African cultural practices was significant in influencing perception of obesity among middle aged women at 5% level of significance. However, interaction between media justification with either values and beliefs or western cultural influences was not significant at 5% level of significance.

The third interaction was between feelings of satisfaction and cultural dynamics. The interaction between feelings of satisfaction with western cultural influences was significant in influencing the perception of obesity among middle aged women at 5% level of significance. However, interaction between feelings of satisfaction with any other form of cultural dynamics was not significant. The fourth interaction was between feelings of dissatisfaction and cultural dynamics. The interaction between feelings of dissatisfaction with either values and beliefs or western cultural influences was significant in influencing the perception of obesity among middle aged women at 5% level of significance. However, interaction between feelings of dissatisfaction with

African cultural practices was not significant.

Interaction of Consequence Frame and Cultural dynamics

Table 9 : Parameter Estimates and their standard errors

Parameter	Estimate, β	std. error	Wald	df	sig.	exp(β)
constant(least negative)	-3.606	.415	75.659	1	.000	.027
constant(moderate)	1.631	.235	48.116	1	.000	5.109
Psychological consequence*African cultural practices	-3.173	.578	30.095*	1	.000	.042
Psychological consequence* Values & beliefs	1.608	.712	5.102*	1	.024	4.993
Psychological consequence* Western cultural influences	-.394	.287	1.883	1	.170	.674
Social consequence*African cultural practices	4.345	.528	67.815*	1	.000	77.09
Social consequence *Values & beliefs	5.998	1.099	29.807*	1	.000	402.6
Social consequence* Western cultural influences	-.314	.220	2.031	1	.154	.731
Economic consequence *African cultural practices	.211	.535	.156	1	.693	1.235
Economic consequence * Values & beliefs	-3.261	.600	29.500*	1	.000	.038
Economic consequence * Western cultural influences	-4.158	.466	79.738*	1	.000	.016
Physical consequence *African cultural practices	2.250	.327	47.251*	1	.000	9.49
Physical consequence * Values & beliefs	-4.067	.829	24.084*	1	.000	.017
Physical consequence * Western cultural influences	-1.960	.299	43.083*	1	.000	.141

Link function: Logit.

The table shows that the interaction of fairly a large number of components of consequence frame and cultural dynamics significantly influenced perception of obesity among middle aged obese women at 5% level of significance except for the following interactions: psychological consequence and cultural dynamics; social consequence and cultural dynamics; and economic consequence and cultural dynamics. The interaction of psychological consequence with either African cultural practices or values/beliefs significantly influenced perception of obesity among middle aged women at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis is rejected because there was a significant correlation between psychological consequence with either African cultural practices or values/beliefs and the perception of obesity among middle-aged women in Nairobi County. However, the interaction between psychological consequence and western cultural influences was insignificant at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis is accepted because there was no significant correlation between psychological consequence with western cultural influences and the perception of obesity among middle-aged women in Nairobi County.

The interaction of social consequence with either African cultural practices or values and beliefs significantly influenced perception of obesity among middle aged obese women at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis is rejected because there was a significant correlation between social consequence with either African cultural practices or values/beliefs and the perception of obesity among middle-aged women in Nairobi County. However, the interaction between social consequence and western cultural influences did not significantly influence the perception of obesity among middle aged women at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis was accepted because there was no significant correlation between social consequence with either African cultural practices or values/beliefs and the perception of obesity among middle-aged women in Nairobi County.

The interaction of economic consequence with either western cultural influences or values and beliefs significantly influenced the perception of obesity among middle aged women at 5% level of significance. However, the interaction between economic consequence and African cultural practices was insignificant at 5% level of significance. The interaction of physical consequence with any form of cultural dynamics was significant in influencing perception of obesity among middle aged women at 5% level of significance.

Interaction between Morality Frame and Cultural Dynamics

Fitting all extracted variables of cultural dynamics interacting with human interest and perception yields the following results.

Parameter	Estimate, β	std. error	Wald	df	sig.	exp(β)
constant(least negative)	-.260	.114	5.174	1	.023	.771
constant(moderate)	1.660	.145	131.865	1	.000	5.26
Personal moral opinion* African cultural practices	-.328	.091	13.076*	1	.000	.720
Personal moral opinion *values & beliefs	.689	.115	36.166*	1	.000	1.992
Personal moral opinion * Western cultural influences	-.666	.107	38.664*	1	.000	.514
Morality & western media * African cultural practices	-.168	.095	3.098	1	.078	.845
Morality & western media * values & beliefs	.707	.096	53.859*	1	.000	2.03
Morality & western media * Western cultural influences	-.582	.113	26.536*	1	.000	.559
Morality & African media * African cultural practices	-.840	.120	48.921*	1	.000	.432
Morality & African media * values & beliefs	.465	.113	16.998*	1	.000	1.59
Morality & African media * Western cultural influences	-.354	.083	18.008*	1	.000	.702

Link function: Logit.

Firstly, the interaction between personal moral opinion and all forms of cultural dynamics significantly influenced perception of obesity among middle aged obese women at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis was rejected because there was a significant correlation between personal moral opinion and all forms of cultural dynamics and the perception of obesity among middle-aged women in Nairobi County. Secondly, the interaction of morality & western media with either western cultural influences or values and beliefs significantly influenced perception of obesity among middle aged women at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis was rejected because there was a significant correlation between morality & western media with either western cultural influences or values and beliefs and the perception of obesity among middle-aged women in Nairobi County.

However, the interaction between morality & western media and African cultural practices was insignificant at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis was accepted because there was no significant correlation between morality & western media with either western cultural influences or values and beliefs and the perception of obesity among middle-aged women in Nairobi County. Thirdly, all the interactions between morality & African media with all forms of cultural dynamics significantly influenced perception of obesity among middle aged women at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis was rejected because there was a significant correlation between morality & African media with all forms of cultural dynamics and the perception of obesity among middle-aged women in Nairobi County.

Interaction of Responsibility Frame and Cultural Dynamics

Table11 : Parameter Estimates and their standard errors						
Parameter	Estimate, β	std. error	Wald	df	sig.	exp(β)
constant(least negative)	-3.167	.413	58.779	1	.000	.042
constant(moderate)	1.816	.220	67.948	1	.000	6.15
Government responsibility* African cultural practices	1.646	.205	64.684*	1	.000	5.19
Government responsibility *values & beliefs	-.313	.280	1.244	1	.265	.731
Government responsibility * Western cultural influences	3.054	.350	76.103*	1	.000	21.20
Individual responsibility* African cultural practices	-.090	.401	.051	1	.822	.914
Individual responsibility * values & beliefs	-3.679	.362	103.398*	1	.000	.025
Individual responsibility *Western cultural influences	-4.988	.501	99.058*	1	.000	.0068
Social responsibility* African cultural practices	2.716	.289	88.400*	1	.000	15.12
Social responsibility * values & beliefs	-4.069	.383	112.862*	1	.000	.017
Social responsibility * Western cultural influences	-2.716	.323	70.629*	1	.000	.066

Link function: Logit.

Firstly, the interaction of government responsibility with either western cultural influences or African cultural practices influenced perception of obesity among middle aged obese women significantly at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis was rejected because there was a significant correlation between government responsibility with either western cultural influences or African cultural practices and the perception of obesity among middle-aged women in Nairobi County. However, the interaction between government responsibility & values and beliefs was insignificant at 5% level of significance. This was the test for the hypothesis and it means that the null hypothesis was accepted because there was no significant correlation between government responsibility with either western cultural influences or African cultural practices and the perception of obesity among middle-aged women in Nairobi County.

Secondly, the interaction of individual responsibility with either values & beliefs or western cultural influences significantly influenced perception of obesity among middle aged women at 5% level of significance. However, the interaction between individual responsibility and African cultural practices was not significant at 5% level of significance. Thirdly, the interaction of social responsibility with all the aspects of cultural dynamics significantly influenced perception of obesity among middle aged women at 5% level of significance.

Summary of Findings

The purpose was to assess the moderating influence of cultural dynamics on the relationship between media framing and the perception of obesity among middle-aged women in Nairobi County, Kenya. The descriptive statistics revealed that Western culture played a major role in influencing how people perceive obesity in women, as opposed to the African culture practices and beliefs, where body size diversity is celebrated. The respondents disagree with Western cultural influences about reducing obesity using slimming pills.

The following were extracted from the factor analysis in relation to cultural dynamics: African cultural practices, values and beliefs, and western cultural influences. Moreover, inferential statistics brought about the interactions between cultural dynamics with media sensationalism were significant in influencing perception of obesity at five percent apart from the following interactions: interaction between media justification with either values and beliefs or western cultural influences was not significant, interaction between feelings of satisfaction with any other form of cultural dynamics was not significant, as well as between feelings of dissatisfaction with African cultural practices was not significant. Interactions related to human interest frame and cultural dynamics did not

influence perception of obesity. Previous studies highlight the effect of human interest frame from the individual's point of view because it is related to human emotions/feeling, thus cannot be generalized from a cultural perspective, hence supporting these finding.

On the other hand, interactions between consequence frame and cultural dynamics was significantly correlating with perception of obesity except for the following interactions between psychological consequence and western cultural influences, which were insignificant. In addition, interaction between social consequence and western cultural influences were also not significant. The findings showed the interaction between economic consequence and Western cultural influences or values/and beliefs were significantly influencing perception of obesity. The literature review and studies provides that economic consequences are factors influencing obesity in the Western cultural setting; hence this is in support of the finding. However, interaction between economic consequence and African cultural practices was insignificant. The interaction between morality & western media and African cultural practices was insignificant. The interaction between government responsibility & values and beliefs was insignificant. The interaction between individual responsibility and African cultural practices was not significant. Previous studies provide that individual responsibility plays a role in the increase of obesity because the individual is to blame for being in that state, but this does not support this study finding.

Conclusion

The findings showed a correlation between cultural dynamics and media sensationalism meaning, media has a sense of influencing culture, the way in which people think. Often than not, the same feeling could positively or negatively influence those with obesity. Based on the quantitative analysis, it can be concluded that positive or negative messages on obesity could easily impact the feelings of the people who interact with obese individuals. Therefore designing media messages with special consideration of cultural differences could be significant in obtaining positive healthy eating behaviours and patterns. The results indicate that obesity affects the society as a whole and if Government/public health bodies were involved in curbing obesity then there could be reduced number of obese cases in Nairobi County, Kenya.

Recommendation to Academicians

The study recommends the involvement of academicians, in the area of nutrition and dietary to encompass cultural dynamics in tackling the perception of obesity and come up with peer-reviewed journals and academic publications providing insight into positive behaviour change and adoption of healthier eating habits among middle-aged obese women.

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