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## The Health Habits of Women Ages 18 to 23 Years and Its Effect on Body Image



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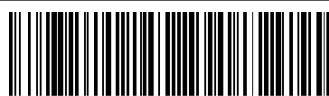
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### ABSTRACT

**Background:** An emerging topic currently amongst the female population involves body image. The society women live in is full of factors that can impact body image negatively, which in turn influences health habits. The purpose of this research study was to determine the health habits of female students ages 18-23 years and its effect on body image. **Method:** This was a study of 120 female students using a cross-sectional survey method. The literature review addressed health habits such as exercise, sleep, nutrition, spirituality and body image. The study involved female students at a midwestern university in the United States. A 20-question survey consisting of Likert-type statements were used. Participants were asked 4 demographic items along with 10 statements on their health habits and then 10 statements regarding the perception of their body image. The health promotion model (HPM) was used to guide the study. **Findings:** The mean scores indicated that the health habits of female student participants included having a support system, eating daily breakfast and exercising to enhance physical appearance. Most participants agreed that a well-rounded personality is more important than how one looks. The participants also agreed that eating healthy, regular exercise and spiritual emphasis enhances the physical appearance and a feeling of positive body image.



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## 1. INTRODUCTION

Body image has become a prevalent topic, specifically the influences popular culture has toward a woman's perception of her body image. Body image influences how women evaluate themselves along with their social rank. It influences whether they feel they are invaluable, undesirable or inferior when compared to others [1]. Women are constantly trying to fit into the standards society has laid out for them; in doing so; women develop habits that can endanger their health. The purpose of this study was to assess if the health habits of female students affect their body image.

### Background

Madden and Breny [2] stated that body image concerns among young women remain high in the 21st century. Popular culture is seen in the countless advertisements that bombard daily lives through magazines, billboards, radio announcements, social networking, and so forth. Popular culture is also reflected in the times, also referred to as zeitgeist, the spirit of the era [3]. Popular culture not only can reflect it, but it can also distort the image reflected, working in similar ways as a “Funhouse Mirror” [3]. The power of popular culture is certainly strong.

Advertisements and media in this century make up part of a culture. The foundation of mass media is advertisements. Wherever one turns, an advertisement is present; there are rarely any areas in society where media has not reached. Several studies have pointed out strong correlations between media and body image concerns for women [2]. Mainstream society urges young women, across cultures and ethnicities, to embody one pervasive standard: skinny, tall, sexy, and often, light-skinned or White [2]. Society can objectify women, define beauty, and determine how people view themselves, as well as others, and it can determine the course of action many people take. It has a large impact on women's health habits. In previous research, even confident women have concerns about the image of their own bodies [2]. Similarly, the health habits of women impact their body image. Interchangeably, a woman's desire to obtain a specific body image because of the pressures of their surroundings impacts their health habits.

## Research Questions

RQ1: What are the health habits of female students ages 18-23 years?

RQ2: What are the perceptions of the body image of female students ages 18-23 years?

## 2. REVIEW OF THE LITERATURE

The Cumulative Index of Nursing and Allied Health Literature (CINAHL) and One search were used to gather peer-reviewed studies for this literature review. The databases used were made accessible on the library website. The literature review is comprised of peer-reviewed studies published between 2013 and 2016. Key phrases used to find studies included exercise in women, health habits in women, nutrition of women, sleep habits of women and women's body image. The health habits of women, including exercise, nutrition, body image, mental health, sleep, spiritual and nutrition choices are included in this literature review.

### Exercise

Nearly 70% of the U.S. adult population is overweight [4]. Being overweight contributes to many chronic diseases, such as hypertension, heart disease, diabetes, certain cancers and can cause psychological difficulties [4]. Exercise is a modifiable risk factor for some of the top leading causes of death in women. Exercise can assist in the prevention of cardiovascular disease (CVD), diabetes, depression, hypertension, and some cancers [5]. Physical activity is shown to increase one's quality of life and decrease the chances of developing four of the top ten chronic diseases that result in death. Regular physical activity is linked to losing weight, increasing bone mineral density, increasing strength, decreasing insulin levels and increasing insulin sensitivity. Other benefits include an increase in one's high-density lipoproteins while decreasing low-density lipoproteins [5]. According to the National Health Interview Survey, more than 55% of women do not meet the recommended physical activity guidelines including 150 minutes of moderate, aerobic exercise or 75 minutes of intense, aerobic exercise each week [5].

### Nutrition

Kim, Debate, and Daley [6] discussed how oral health was related to medical conditions, such as cardiovascular disease, hypertension, diabetes, and hepatitis. In three states of the US, out of 265 randomly selected dentists, 61% affirmed that it was important for the dentist

to address diabetes [6]. Although 86% of dentists advised patients with diabetes about the risk of periodontal disease, only 47% reported that they knew how to assess for diabetes [6]. Screening for medical conditions, such as diabetes, at dental offices, was believed by a majority of dentists to be a necessary assessment at an appointment.

Kim et al. [6] mentioned that unhealthy food habits and behaviors contributed to too many problems in society. During the past 3 decades, Americans have dramatically increased their consumption of sugar-sweetened beverages, including soda, fruit drinks and punches, and sports drinks [6]. Certain medical conditions have resulted from the consumption of sugary foods and drinks. The rates of weight gain, obesity, type 2 diabetes mellitus, and CVD have risen. Certain dietary habits, such as skipping breakfast and snacking on unhealthy foods, have also contributed to the rise of medical conditions, like CVD [6].

### **Sleep**

Alvaro, Roberts, and Harris [7] insisted, sleep problems are closely linked to psychological well-being. There is a bidirectional relationship between mental health and sleep habits; rates as high as 50-85% of sleep complaints were associated with major depression. There was a relationship between sleep disturbances and lack of motivation, bad moods, and irritability.

Bei, Coe, Baker, and Trinder [8] stated that insufficient sleep and/or insomnia lead to adverse medical and psychological consequences and poorer quality of life. No matter the phase of life, women reported needing more sleep, more time in bed and more sleep problems than men across the board. Sleep can be assessed through subjective and objective measures. Subjective measures include the patient's self-assessment, questionnaires, and sleep diaries. Factors that may play into subjective descriptions of sleep could be psychological factors such as mood, and physical factors like autonomic nervous system activity. The objective measures may include frequency and duration of awakenings during sleep. There may be discrepancies between objective and subjective measures due to the patient's own attitudes and perceptions of sleep. There is a relationship between the perception of poor sleep quality and one's anxiety level. An additional factor to be considered for women's sleep behaviors is the impact of her menstrual cycle. The National Sleep Foundation report indicated that approximately 70% of women testified that their sleep is negatively impacted by menstrual symptoms on average 2.5 days every month [8].

## **Mental**

Psychological health has an impact on one's body image. Having good mental health habits aids in a positive outlook on a woman's body image. The association between negative social judgments and feelings of inferiority regarding discontentment with one's body image and eating psychopathology evidence shows it may be revolutionized by self-compassion [1]. Self-compassion is the ability to be kind to oneself in the face of setbacks. Especially when suffering, rather than being hard and self-critical to oneself. Self-compassion entails a sense of common humanity, that is, the recognition that all humans are imperfect, face important life challenges and may fail or make mistakes, rather than adopting an isolating perspective [1].

Duarte et al. [1] conducted a study exploring the impact body dissatisfaction had on the quality of life. The study examined the impact self-compassion had on body dissatisfaction and one's quality of life. The study involved 662 college females between the ages of 18-26 years of age. Results showed that the quality of life was negatively associated with body dissatisfaction and a woman's body mass index (BMI), but had positive correlations with self-compassion and social comparison. BMI was found to have a high association with body dissatisfaction. Having a compassionate attitude towards one's body and oneself can help realize that each individual body is unique. In doing so it fosters a perspective that accepts their body's limitations and flaws and belief that such limitations do not define one's wellbeing or self-worth [1].

## **Spiritual**

A relationship that fosters unconditional positive regard has numerous benefits towards a woman's body image. It is the starting point of a positive body image [9]. In contrast, women who do not foster this sense of unconditional acceptance tend to turn to the ideal's society has laid out for them; in most cases, they are not healthy. Homan and Cavanaugh [9] said women who lack a sense of acceptance by others are more likely to internalize the cultural thin ideal and to focus on their appearance. Religious individuals believe that they receive this constant unconditional love and acceptance with a relationship with God, working in the same manner as a human attachment relationship [9].

Homan and Cavanaugh [9] researched 104 women, ages 18 to 22 years old. The purpose was to investigate a relationship with God and a positive relationship with parents and the effects

on body appreciation and well-being. Results indicated a positive relationship with parents has long-term effects on body appreciation and well-being. If women felt respected and accepted by their parents, it was reflected in their bodies. It appears that parental acceptance fosters an environment in which women do not perceive or are less sensitive to external social pressures to conform to cultural body ideals, and this effect continues into the college years [9].

Homan and Cavanaugh's [9] findings were consistent in showing a secure relationship with God perceives a better body image. Women with secure God attachments are more appreciative of their own bodies, are not overly concerned with their external appearance, and are attuned to their bodies' physical capabilities and internal states [9]. Having a positive relationship, that allows women to feel accepted and loved, reduced risks for eating disorders, internalizing the thin ideal, the dissatisfaction of their bodies, dieting and the need to lose weight.

### **Body Image**

Smith-Jackson, Reel, and Thackeray [10] discussed strategies that can create a positive body image for students on a university campus. Multiple body image prevention strategies were recommended based on the study. One image prevention strategy that was presented by a student suggested that the university provide activities and opportunities for female students to get out of the dorms and socialize. Along with socialization, another prevention tip was to make friends. A different student suggested that having more confident friends to tell you that you're beautiful the way you are and not to worry about how you look but how your personality is and how you treat others can promote a positive body image [10].

Self-acceptance and size acceptance were also topics discussed by students as ways to promote positive body images. Lastly, one major concern of the female students was the limited availability of healthy foods. In their study, Smith-Jackson et al. [10] showed that there were healthy options available at college campuses, but often there were long lines to obtain healthier options.

Halliwell and Diedrichs [11] developed a questionnaire that was given to females aged 12 or 13 years old to follow-up on the study conducted. The purpose of the study examined whether a cognitive dissonance intervention had the capacity to increase girls' resilience to thin-ideal media, in addition to reducing self-reported dietary restraint, thin-ideal



internalization, and body dissatisfaction [11]. The study consisted of having the participants attend 20-minute weekly sessions for a total of 4 weeks while working in groups of six to eight. Concluded in the results was that the cognitive dissonance intervention was successful because it provided fewer negative perceptions of body image and increased resilience to what the media portrays [11].

Corning, Bucchianeri, and Pick [12] described how “fat talk” amongst women is a normal occurrence. Fat talk can be defined as, self-abasing, mutual banter about food, weight, or the body in which adolescent girls and women normatively engage [12]. This study found there was a significant correlation between fat talk and body image. The study involved a situation where a thin and overweight speaker presented information on positive and negative body image. Interestingly, when the thin speaker was presenting her information, the rate of body dissatisfaction was the highest [12].

The environment and pressures constantly affecting women's thoughts in this society are quite overwhelming and at times very perplexing for women. Madden and Breny [2] conducted a qualitative study photovoice. Photovoice allowed participants to illustrate their real-life experiences through photos, with the purpose of empowerment and hopeful change in society. The study chose 10 female participants aged 13-20 years at random and gave them a camera. Participants came from different ethnic backgrounds. They were instructed to snap photographs to body image questions as to where they received messages about their body image and what effects their cultural backgrounds had on body image, were a few to name [2].

In summary, the mainstream media that the women came in contact with on a daily basis were telling women to look one way and be a certain way, resulting in women constantly finding ways to create a “new” version of themselves [2]. In most of these advertisements, they urged women to embody one pervasive standard; a standard that consisted of tall, thin and seductive women. Each culture defined its expectations on what is accepted. The driving power behind issues regarding body image was the influence of social norms on the female body image. Participants found that having a good support system, including one's parents and school, aided in decreasing the pressures society has placed on their body image [2].

Physical health habits and spiritual health habits are in direct correlation with women's own perception of body image. Exercise is a modifiable risk factor for many chronic diseases,

including some of the top diseases that lead to female mortality. It is known that over half of American women do not meet the suggested amount of physical activity each week [5]. Women are disproportionately affected by eating disorders, and there is a lot of social pressure surrounding women to be a certain weight and have a certain image. This influences their own body image [6]. Many studies suggested sleep is closely associated with psychological well-being and that at a minimum 50% of complaints are linked to depressive disorders [8]. Mental health is known to have a positive correlation with body image. Duarte et al. [1] showed there was a negative correlation between self-compassion, body image and quality of life. Those who had a spiritual foundation, that allowed for unconditional love and acceptance tended to be more willing to accept who they were and be content with their own body image, rather than looking to society. This was not only true when women had a relationship with God, but with their parents [9].

### 3. CONCEPTUAL FRAMEWORK

In 1982, Nola Pender became the founder of the health promotion model (HPM). The HPM was rooted in Albert Bandura's social learning theory and also greatly influenced by Fishbein's theory of reasoned action [13]. The HPM consists of the individual, their experience and interactions with the self and the environment. The elements that interact and make up the HPM include prior related behavior and personal factors, both influencing future behavior. Personal factors consist of psychological factors, biological factors, and sociocultural factors. The most modifiable factors include factors linked to motivation such as perceived self-efficacy, perceived benefits to action, perceived barriers to action, and activity-related effect [13]. Interpersonal and situational influences, immediate competing demands, a commitment to a plan of action, and the health-promoting behavior all factor into the HPM [14].

The aim of HPM was to demonstrate the different factors influencing an individual while seeking out health behaviors. The prior behaviors of a person and personal factors directly affect if they choose to repeat that action again. To continue, a person considers the barriers, the perception of their capability, the benefits, as well as their feelings during the process [14]. The person will determine their actions based on how they perceive the above.

Important factors to assess when making a health-related decision include situational factors and interpersonal influences. Positive interpersonal influences include family, friends, and



healthcare providers. Situational influences include available options and that which is aesthetically pleasing. When taking these influences and the person's prior behaviors into consideration, a commitment is set in place to carry out the health-promoting behavior. This should be carried out unless competing demands arise. In this case, the person's preferences will get in the way [14].

Pender's HPM has been applied to female students' health habits and perception of their body image with the healthy behaviors and habits being positive ways to cope with body image. Each survey statement has been connected with a way that negative health habits and negative body image affect a person's entire being-physical, mental, and spiritual. The behaviors of female students have been assessed to determine if their health habits affected their body image. Identifying the factors of Pender's HPM may help determine ways to encourage the health-seeking behavior of learning to cope with their body image.

### Definition of Terms

**Conceptual definitions.** *Health-promoting behavior* is a healthy behavior that positively impacts one's health (Pender et al., 2006). This is related to the *perceived benefit of action*, which is the individual's perception that health-promoting behavior will be of benefit. A *real or perceived barrier* to action is defined as the individual's reluctance to complete a health-promoting behavior because of their perceived or real barriers. *Self-efficacy* is defined as "the judgment of personal capability to organize and carry out a particular course of action" (Pender et al., 2006, p. 53). Pender et al. (2006) defined *activity-related effect* as the feelings an individual has throughout the health-promoting behavior. *Interpersonal influences* regarding good health choices include family, peers, and healthcare workers, those who have influence over the individual (Pender et al., 2006). *Situational influences* include what is available and pleasing to the eye from the environment surrounding the person. *Immediate competing demands* are other options a person considers or issues that cannot be avoided before they complete the planned health-promoting behavior. Pender et al. (2006) defined *commitment to a plan of action* as a commitment to complete the health-promoting behavior.

**Operational definitions.** As an operational definition, *fat talk* can be defined as, "self-abasing, mutual banter about food, weight, or the body in which adolescent girls and women normatively engage" (Corning et al., 2014, p. 121). *Exercise* is defined as purposeful physical activity. *Body image* is defined as what one thinks of their own body and how they

picture their body. *Health habits* are defined as habits women partake in that affect their overall health, such as exercise, diet, sleep, applying make-up, building themselves up and more. *Participants* in this study are defined as female students age 18 to 23 years.

#### **4. METHODOLOGY**

##### **Design**

This non-experimental, descriptive, quantitative study includes a cross-sectional design. A range of 20 statements pertaining to health habits and body image were presented with four, pre-selected responses. A Likert-type scale was used for the level of agreement with 10 of the statements and frequency with the remaining statements. These were the most appropriate to use, as these statements were systematically organized and simple to complete.

##### **Sample**

The sample size consisted of 120 female students who varied by year in school. Participation in this research study was voluntary, anonymous and random. All participants were between the ages of 18-23 years to ensure that they were of legal age to participate in the study. Only female students participated in this survey, excluding faculty and staff.

##### **Setting**

Data were collected on the campus. The survey location was at the Dining Commons during lunch, dinner, and outside of the library lobby. Permission to use the premises to conduct the survey was received. The researchers handed out surveys to those voluntarily willing to answer the surveys.

##### **Statistical Analysis**

After each completed survey, an analysis was performed. All the surveys were compared to one another, noting any similarities and/or differences. The analysis was performed in a way where the researchers remained unbiased and kept the participant's confidentiality. The analysis occurred on an excel spreadsheet that used statistics such as percentage, frequency, mean and standard deviation. After the data was calculated, a final analysis was interpreted.

## **Survey Instrument**

The survey instrument used was a Likert-type scale comprised of 20 items. The survey instrument was created by the researchers after careful inspection. This was carefully reviewed by peers and faculty and the tool was developed based on a review of the literature. The Likert-type scale was chosen because many participants are accustomed to this type of survey and it is a frequently used scale. It enabled the participants to agree or disagree with the statements. The beginning of the survey contained a section dedicated to collecting the demographics of the survey participants, including age, gender, year of study, and ethnic origin.

The survey determined female students' health habits related to its effect on their body image. RQ1 corresponded to the first 10 statements of the survey and RQ2 corresponded to the second set of 10 statements of the survey. The participants had the option of choosing answers to the statements presented in the survey ranging from strongly disagree to strongly agree, and from never to often. For the first set of 10 statements, often is valued at 4 points, sometimes is 3 points, seldom is 2 points, and never is 1 point. For the second set of 10 statements, strongly agree is valued at 4 points, agree is 3 points, disagree is 2 points, and strongly disagree is 1 point.

The survey instrument contained statements that pertained to the research topic of assessing women students' health habits related to its effect on body image. The survey instrument was original and not previously used. The content of the survey did not alter during the process of the study and the results remained free from any biased conclusions.

## **Informed Consent and Confidentiality**

The researchers obtained approval from the Institutional Review Board prior to conducting the survey. Participants signed informed consent prior to their participation in the survey. The data collected from the participating students were kept anonymous by excluding participants' names on the surveys. Surveys and consents were kept in separate envelopes to protect confidentiality. The data collected from the surveys were submitted to the School of Nursing to be kept for up to three years. The staff scanned the data onto the computer to be kept on discs in a locked cabinet in a secure filing room. The researchers went through the Web-based training course named Protecting Human Research Participants. The National

Institute of Health (NIH) Office of Extramural Research granted each researcher with certification.

## **5. RESULTS**

Surveys were gathered, and the results were tallied. Among the surveys collected there were 10 incomplete surveys. The incomplete surveys were discarded leaving 120 usable surveys. The frequency and percentage of results were calculated for the demographic data. With the remaining data from the surveys, the mean and standard deviation were calculated. The values from the results revealed the current health habits of women ages 18 to 23. A higher mean value indicated a stronger agreement with a survey statement. Some statements were positive, while others were negative. For instance, just because there was a high level of an agreement did not indicate it was always a positive habit or perception. The standard deviation was calculated for each item to validate the proper variability of data values as exemplified within an expected normal distribution. The literature review previously conducted aided in the analysis of the results. The results were examined in relation to HPM to reach conclusions regarding women's health habits and perceptions of their body image.

### **Data Collection**

The vast majority of surveys were answered in the lobby of the Dining Common's location. Surveys were handed out at lunch and dinner time and gathered immediately. A table was set up with the surveys and informed consent to fill out, along with pens. Participants were requested to complete informed consent. A copy of the informed consent was available for them. Participants were instructed that the survey would take a few minutes, that there were 20 questions on the back and front of the paper to be completed. The questionnaire had not been previously used or published.

### **Demographics**

In Table 1, the frequency and percentage of the participants' demographics are displayed. All participants were female (100%) and the age range of the participants was between 18 and 23 years of age. The age range of 20-21 years of age was the highest (54.2%), with the second-highest being the age range of 18-19 years of age (35.8%).

Just over one-third of the surveys were completed by sophomores (36.7%), with the rest dispersed between freshman (21.7%), juniors (27.5%), and seniors (14.2%). The majority of the participants were white (82.5%), while other ethnicities, such as African-American (3.3%), mixed (5.0%) and other ethnicities other than white, African-American, and mixed (9.2%) were noted.

**Table No. 1: Descriptive Statistics for Participant Demographics and Background**

Variable	F	%
Female	120	100
Age range		
18-19	43	35.8
20-21	65	54.2
22-23	12	10.0
Year of Study		
1 <sup>st</sup>	26	21.7
2 <sup>nd</sup>	44	36.7
3 <sup>rd</sup>	33	27.5
4 <sup>th</sup> +	17	14.2
Ethnic Origin		
White	99	82.5
African American	4	3.3
Mixed	6	5.0
Other	11	9.2

Note. (N = 120).

### Female Students' Health Habits

The first question obtained in the study was, “What are the health habits of female students age 18 to 23 years?” This question pertained to the first section of the survey (Health Habits), which contained 10 statements. Topics incorporated were exercising three times a week (Q1), whether they exercise to enhance physical appearance (Q2), have a consistent bedtime schedule (Q3), eat a minimum of two cups of vegetables daily (Q4), get at least eight hours of sleep every night (Q5), eat breakfast daily (Q6), eat when self-esteem is low (Q7), spend about 30 minutes a day doing devotions (Q8), have a support system in place (Q9), and drink at least one can of pop a day (Q10). Based on a 4-point Likert-type scale, the participants evaluated their answer to each statement rated from 1 (never) to 4 (often).

In Table 2, the mean and standard deviation are ranked from the highest to the lowest. The mean value shows the participants' intensity of agreement with each of the statements. The statement that the participants have a support system in place was ranked as the most strongly agreed statement (M [SD], 3.35 [0.85]). The participants also strongly agreed that they exercise at least three times a week (M [SD], 3.03 [1.01]) and eat breakfast daily (M [SD], 2.91 [1.09]). Additionally, the student participants exercised to enhance physical appearance (M [SD], 2.83 [0.85]) and ate a minimum of two cups of vegetables daily (M [SD], 2.73 [0.93]).

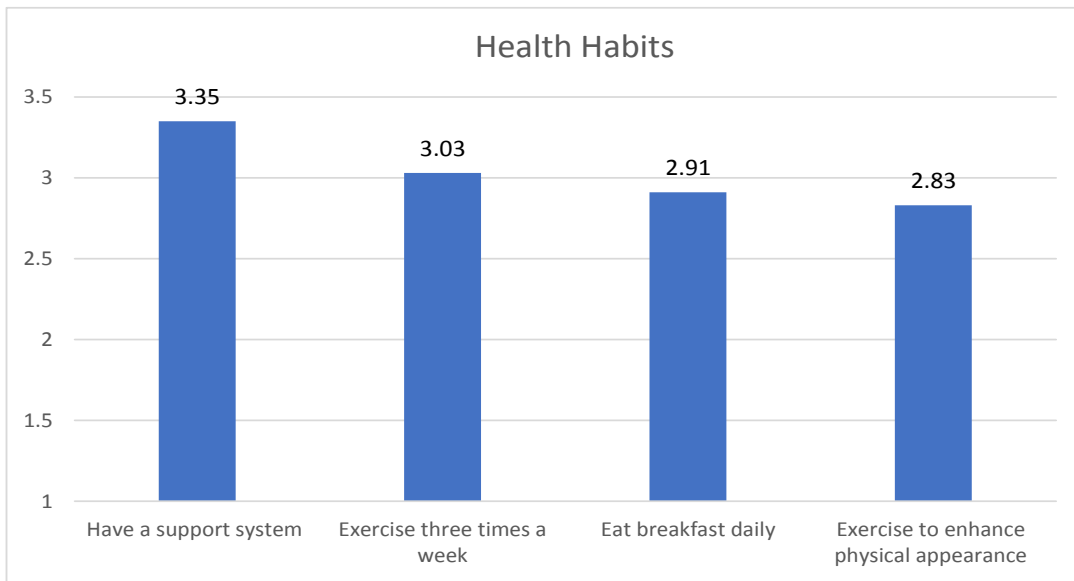
**Table No. 2: Health Habits of Female Students Ages 18 to 23 Years**

Variable	M	SD
I have a support system in place that I use	3.35	0.85
I exercise at least 3 times a week	3.03	1.01
I eat breakfast daily	2.91	1.09
I exercise to enhance my physical appearance	2.83	0.85
I eat a minimum of two cups of vegetables daily	2.73	0.93
I have a consistent bedtime schedule	2.63	1.04
I get at least 8 hours of sleep every night	2.53	0.98
I spend about 30 minutes a day doing devotions	2.32	0.91
I eat when my self-esteem is low	2.23	0.86
I drink at least one can of pop (12 fluid ounces) a day	1.62	0.95

Note. (N = 120).

Three statements were below the mean value of 2.5. The most strongly disagreed statement answered by the student participants was that they drank at least one can of pop a day (M [SD], 1.62 [0.95]). Furthermore, the student participants disagreed that they eat when their self-esteem is low (M [SD], 2.23 [0.86]) and they spend about 30 minutes a day doing devotions (M [SD], 2.32 [0.91]). A graph with the top four means is shown in Figure 1.





**Figure No. 1: Highest Means for Health Habits of Female Students Perceptions of Body Image**

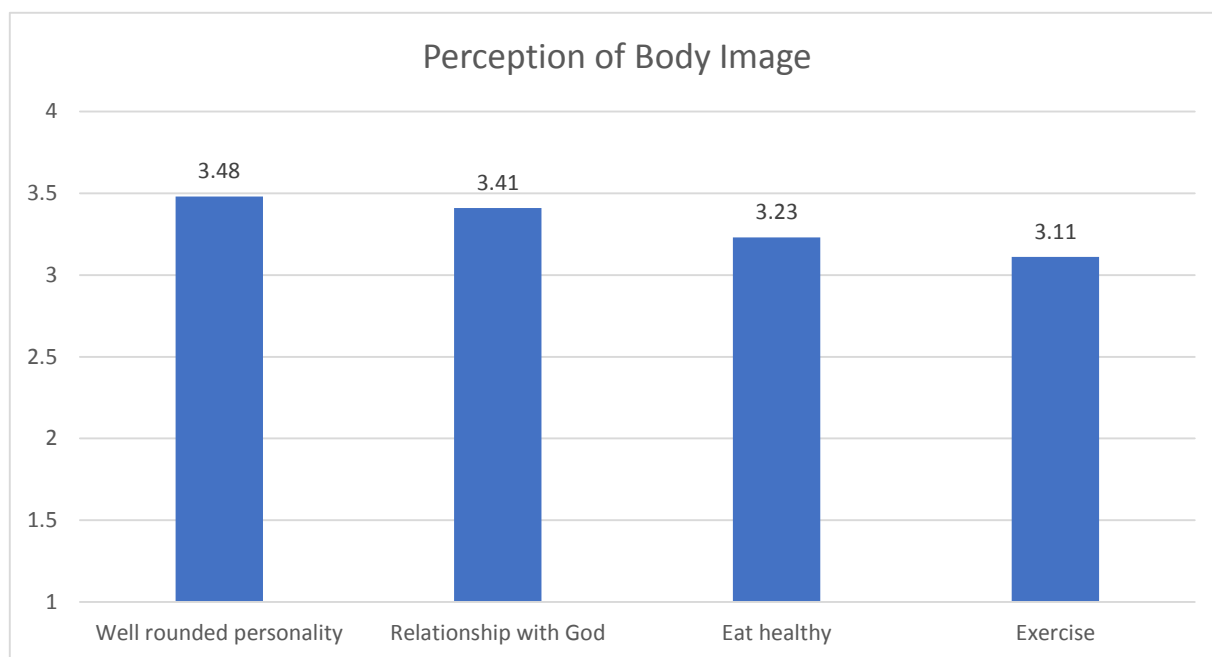
The second question in the study was, “What are the perceptions of body image of female students ages 18 to 23 years?” This question comprised the second part of the survey (Perception of Body Image). To address this question 10 statements were created. The topics incorporated were getting sufficient sleep and whether it enhanced their appearance (Q11), whether eating healthy aided in a positive body image (Q12), being concerned how others viewed them (Q13), perceiving a well-rounded personality is more valuable than looks (Q14), belief physical looks of woman outweigh all other characteristics (15), looking the way one wants as long as they work towards it (Q16), the belief that exercise enhances physical appearance (Q17), being self-conscious of one’s body image (Q18), having a support system helps body image positively (Q19) and a relationship with God aiding in a positive body image (Q20). The results regarding the perception of body image are recorded in Table 3.

**Table No. 3: Perceptions of Body Image of Female Students Ages 18 to 23 Years**

Variable	<i>M</i>	SD
I feel that a well-rounded personality is more important than how one looks.	3.48	0.52
My relationship with God aids in a positive body image	3.41	0.63
When I eat healthily, it aids in positive body image	3.23	0.56
Exercise enhances my physical appearance	3.11	0.50
I can look how I want if I am willing to work towards it	3.05	0.52
My support system helps my body image positively	3.03	0.59
When I get sufficient sleep, it enhances my appearance	3.00	0.62
I am often concerned with how other people view me	2.75	0.77
I am self-conscious of my body image	2.68	0.76
I believe that the physical looks of a woman outweigh every other characteristic	1.73	0.66

*Note.* (*N* = 120).

The mean and standard deviation are ranked from highest to lowest. The statement the student participants agreed with most was that a well-rounded personality is more important than how one looks (*M* [*SD*], 3.48 [0.52]). The student participants strongly disagreed that the physical looks of women outweigh every other characteristic (*M* [*SD*], 1.73 [0.66]). They agreed that a relationship with God aided in their positive image positively (*M* [*SD*], 3.41 [0.63]). The second statement the student participants disagreed with the most was being self-conscious of their body image (*M* [*SD*], 2.68 [0.76]). Figure 2 shows the top four means for the perceptions of body image as agreed by female students.



**Figure No. 2: Top four means for female students' perception of body image**

## 6. DATA ANALYSIS AND DISCUSSION

The data were collected and entered into an Excel spreadsheet. Each question was entered separately for all 120 surveys. The standard deviation and mean of each question were found using Excel functions. From the results and statistical analysis, tables and figures were created in Microsoft Word to represent the results found.

### **RQ 1: What are the health habits of female students ages 18-23 years?**

Based on the Likert-type scaled used for the surveys, the student participants in this study reported having a support system in place. This was seen in the research conducted by Madden and Breny [2], who stated that having a good support system in place was beneficial in regards to decreasing society's pressure of body image. The student participants also reported that they exercise three times a week, which was a differing result from the study conducted by Tennant [5]. In this study, the mean value of 3.35 revealed a significantly higher value than the data collected in the study by Tennant [5], which revealed that over 55% of women do not meet the recommended physical activity guidelines.

Kim et al. [6] found that skipping breakfast had contributed to the rise in medical conditions. However, in the current study, more than half of the student participants eat breakfast daily according to the mean value of 2.91. With the mean value at 1.62, the most disagreed

statement that student participants reported was drinking at least one can of pop a day. However, in Kim et al [6] study, America's consumption of sugar-sweetened beverages, including soda, has dramatically increased.

**RQ2: What are the perceptions of the body image of female students ages 18-23 years?**

Duarte et al. [1] found that a compassionate attitude towards one's body overall aided in a positive image. A person's body image did not define their worth. Such results reinforced the results of the study with student participants. A well-rounded personality was more important than looks having the highest mean value of 3.48. Homan and Cavanaugh's [9] research focused primarily on the effects a positive support system and a relationship with God had on body image. The results of their study indicated a positive impact on body image. The participants in the current study agreed that their relationship with God aided in a positive image, with a mean value of 3.41 on a 4-point Likert scale.

**Limitations**

Even though the study provided valuable information, there were several limitations. One limitation of this study was that only women aged 18-23 years were surveyed. Women younger than 18 years could have different health habits and perceptions on body image than women aged 18 to 23 years and the same for those who are older than 23 years of age. Another limitation was that the study only involved female students in one Christian university, which could have led to limited diversity. The topic of the study was such that many women may have felt inferior, meaning they were afraid to admit how they truly felt or what they were actually thinking.

The way the survey statements were worded could be a limitation because certain women may have answered a certain way based on the wording of the statement. For example, the statement "I spend about 30 minutes a day doing devotions," could have been misinterpreted as to how often the participants do devotions. One participant may have only done 15 minutes a day doing devotion therefore, they disagreed with the statement. This could have led to inadequate data because the participant still does devotions, but because of the time limit in the statement, the participant chose to disagree with the statement. The survey consisted of questions the student researchers created and therefore could lead to invalidity.

The sample size was small consisting of only 120 female students. Most of the participants were white, creating a very homogenous sample. This can severely limit the generalizations of this study. Those who live unhealthy lifestyles may have been less inclined to admit to those bad habits.

### **Clinical Implications**

Many health-related diseases, such as diabetes, result from certain health habits that can be prevented. Recognition of self-health habits and perception of body image can prevent multiple diseases and conditions. Prevention of specific self-health habits, such as exercising, is an educational topic that needs to be taught. Educating patients that healthy habits will enable them to make wise decisions to live a healthy life. The promotion of health habits for women can solidify a healthy, long life. Unhealthy habits can lead to negative health conditions, such as osteoporosis. Preventative actions taken by nurses, such as promoting healthy habits at a health fair, can occur through the use of education. Identifying the health habits of female students and its effects on body image may help guide educational topics and goals for educational programming.

### **7. RECOMMENDATIONS/CONCLUSION**

Several of the new data collected varied in agreement with previous research. Participants agreed strongly with having a support system in place which was in line with research in the literature review. Participants also strongly agreed with exercising three times a week. This does not align with research, finding only half of women exercise the recommended amount. Further research should be conducted on a less specific population, for example, not just one campus, but several areas or universities with varying degrees of faith. In doing so, an accurate picture would be portrayed incorporating the diverse backgrounds of women. Having an incentive for the participants, such as candy, would attract more students to stop and take the survey. More specific survey questions and more survey questions, in general, would also be beneficial. Having a strong relationship with God fostered positive body image among the participants, and strengthened the information found in the literature. The location being a Christian campus may have strongly influenced that response.

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