

# Influence of Perceived Stress on Eating and Dressing Behaviors of Male University Students

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## RESEARCH

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## ABSTRACT

Stress is a common health issue that affects physical and emotional well-being. Stress often causes unhealthy behaviors, such as making unhealthy food choices and disregarding appearance. Several studies have examined stress and its impact on diet and dressing among females. The purpose of this study was to investigate the influence of perceived stress (PS) on eating and dressing behaviors of males. A validated and reliable survey was used to assess demographics, effort put forth to control healthy eating and dressing choices, patterns of eating and dressing when undergoing PS, and foods eaten and dressing behaviors when under non-perceived stress (NPS) and PS. Responses of 180 male university students revealed that during PS these men consumed more mixed dishes, made

diet modifications, and dressed casually. The results support psychological theory and research related to men's behaviors during PS and NPS, and it has practical implications in identifying interventions to improve healthy eating and dressing behaviors.

**Key Words:** Food Choices; Eating Habits; Dressing; Perceived Stress; Males; University Students.

## Introduction

The purpose of this research was to assess how perceived stress affects clothing and dietary choices of males. Stress is a common occurrence in adult populations, often resulting from one or a combination of psychological, emotional, interpersonal, or physical changes (1). Increased stress levels can lead to several deleterious outcomes including, but not limited to, depression, anxiety, excessive worrying, stomach distress, fatigue, chest pain, and high blood pressure (2). Stress can also result in behavioral changes such as eating patterns and food choices, as well as other self-care activities (3). Various studies in women have also provided evidence supporting the notion that stress is explicitly associated with changes in food choices and dressing habits (4, 5). In addition, The American Institute of Stress noted changes in appetite and appearance are signs of stress (6). These changes in dietary and dressing habits in response to stress may differ between genders (7).

Since management and intensity of stress varies between genders and most studies have been conducted in



women (8), it would be vital to identify men's coping mechanisms as it relates to selection of food and/or dressing during perceived stress. In a family or a multifamily household that includes both sexes the outcomes of this research would contribute to the body of knowledge particularly in recognizing the early implications of perceived stress and its impact on their overall health.

## Review of Literature

Men and women react and manage stress differently in both physical and mental capacities (8); reactions and management of stress may relate directly to the differences in levels of perceived stress and the perceived ability to manage stress. Relative to women, men generally report experiencing lower levels of stress (9); women often report higher levels of chronic stress as well as minor daily stressors compared to men (10). Men are also less likely to report physical and emotional symptoms of stress (8), making them less likely to change daily habits and behaviors. These differences may lie in the use of varied coping mechanisms between men and women. According to Matud (10), men are more likely to use rational and detachment stress coping strategies, and score higher on emotional inhibition tests, while women tend to use emotional and avoidance stress coping strategies. These coping differences between men and women correlate with the socialization hypothesis that men are accustomed to utilize active and instrumental coping strategies, while woman are socialized to use emotional and passive strategies (11, 12, 13). Differences in reactions to stress and the consequential coping mechanisms of stress between genders are not entirely from socialization, but are influenced by genetic, hormonal and other biological factors (12). Regardless of gender and differences in perceiving, reacting to, and managing stress, two of the 50 common signs named by the American Institute of Stress (4) are neglecting appearances and alterations in appetite and dietary habits.

Research reveals there is a likely relationship between clothing and/or food and an emotional impact they can have on an individual (4, 6). Perceptions of food

and clothing and the ability to comfort individuals emotionally are influenced by four aspects: physical, functional, physiological, and psychological (13, 14). These variables can have influences between each other individually or a combination of overlap may occur – (Figure 1).

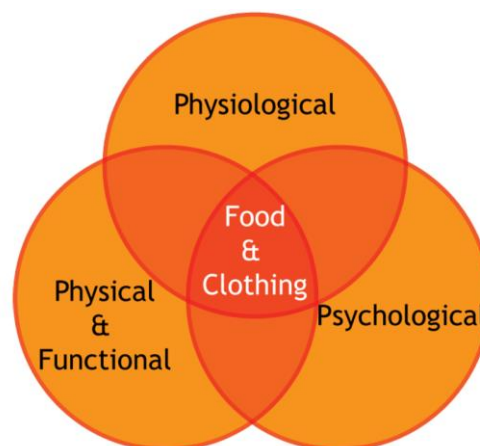


Figure 1 Overlapping of physiological, physical and functional, and psychological aspects of food and clothing

### Food and Clothing: Psychological Aspects

Psychological aspects of mood can have a powerful, predictable, persistent, and sometimes harmful or beneficial influence on individual's decision making; feelings, moods, and emotions influence our everyday judgments and choices (15). Feelings and emotions have been found to influence aspects of everyday life including dressing patterns, appearance, food selection, and food consumption behaviors. A study by Kandiah and Saiki (3) demonstrated that there are differences in dressing and food choices relative to stressful or non-stressful situations. The study observed that all of the 52 female participants were significantly influenced by levels of perceived stress. Stressful conditions decreased participants' preference to wear accessories, dress formally, maintain hair, apply make-up and use fragrance, while increasing preference to consume sugary beverages and sweet foods. These findings fall in line with the American Institute of Stress conclusion that stressing often leads to neglecting appearance and maintaining dressing habits. However, a later study on a female population by Saiki, Kandiah, and McCarthy (16) found that when stressed the majority of participants dressed formally (90.2%) and fashionably (67.3%). It would

be expected that males may garner differing results due to diverging of stress management between the sexes (8).

There are multiple factors that have been associated with stress affecting dressing habits, which include personality, ethnicity, and the previously mentioned factor of mood. Individuals with personality traits, such as high anxiety, and those who tend to consistently perceive increased stress levels may monitor their appearance more closely; this appears to also be true for individuals with composed personalities. However, research findings have pointed to different reasons for this attention to dress and appearance. Anxious personalities manage their dress and appearance to relieve stress, while composed personalities have this habit for social reasons (17).

Research indicates that stress and its effect on mood can also influence food choices and consumption. An American Psychological Association survey (8) found that roughly 4 in 10 Americans (43%) overate or consumed unhealthy foods to manage stress, while more than 3 in 10 Americans (33%) skipped a meal due to stress. Stress can also influence the types of foods consumed. A study by Wansink, Cheney, and Chan (18) observed that females consumed sweet snack foods, while males preferred warm, hearty comfort foods when stressed. Food consumption can also be influenced by other psychological factors. Legel, Lu, and Dube (19) observed that food consumption can be associated with negative feelings, concerns about weight gain, and filling an emotional void. The pleasurable aspects of food were attributed to being stress alleviators.

Stress greatly impacts an individual's health (e.g. 1) with regards to appearance and diet (8). Men and women approach stress differently (10) and females have been the focus of studies related to stress, eating and clothing (e.g. 16). Few studies have observed any effects of stress on male behaviors regarding dressing and dietary habits. Therefore, this research examines the effects of stress on eating and dressing behaviors among male university students.

## Methods

### Participants

The survey was made available through a research pool of business and psychology undergraduate students attending a Midwestern university. The survey was posted online on a SONA research system that allowed participants to receive course credit upon completion of the survey.

### Measures

A validated and reliable Men's Stress, Dressing, and Eating Survey (MSDES) was developed and adapted from the Stress, Dressing, and Eating Survey (SDES) created by the researchers, and utilized for this study. The survey was divided into four primary sections: Part A – generalized information on eating, dressing, and stress; Part B – Patterns of eating and dressing during perceived stressful (PS) situations; Part C – Patterns of eating and dressing during non-perceived stress (NPS) situations; Part D – Demographic characteristics. Part A contained five questions regarding eating and dressing habits, typical perceive stress levels and response to PS; the questions were either “yes/no” or were on a 5-point Likert scale. Baseline perceived stress level was assessed in the study population so that answers to survey questions could be understood in the context of respondents typical stress levels. Part B consisted of thirteen multiple choice questions regarding typical foods eaten and dress items worn during PS. Part C included twelve multiple choice questions regarding typical dress items worn and foods consumed when under NPS. Food options were grouped into categories - mixed dishes (e.g. casseroles, tacos, pizza, fast food, etc.), salty/crunchy foods, sweet foods, creamy foods, beverages, and habits (e.g. skipping meals, eating large portions, etc.). Dress options were grouped into categories- accessories, informal dress, formal dress, hair, scent (fragrances), and appearance enhancement (e.g. tanning, manicure, etc.). Part D encompassed twelve questions regarding reported demographics that included age, employment status, race, self-reported anthropometrics (e.g. height and weight), marital status, and living situation. Reported height and weight were collected in this section so



that body mass index (BMI) could be calculated; according to the CDC (20), a BMI of 18.5-24.9 is normal, 25.0-29.9 is overweight, and  $\pm 30$  is considered obese. Validity of the MDES was assessed by ten professionals, five in fashion and five in foods and nutrition. Using a test-retest method, reliability was verified by administering the instrument to a convenience sample of 30 male university students who were not part of the final study population.

## Procedure

After approval from the University's Institutional Committee on Investigations Involving Human Subjects, male students at a Midwestern university were invited to complete the MDES. The survey was made available through the Research Participation System (SONA). Participants were given two weeks to complete the survey and they received course credit for completion.

## Analysis

IBM SPSS Statistics Version 25 for Macintosh was used in all data analysis; the analyses conducted were descriptive/frequencies. Paired t-tests compared eating and dressing behaviors during PS and NPS. Cronbach's alpha was used to measure internal consistency. Significance was established at  $p < 0.05$ .

## Results

### Demographics

The number of participants that completed this study totaled one-hundred and eighty males (see Table 1). A majority of participants fell in the age range of 18-22 years ( $n = 171$ ; 95%). The remainder were 23-30 ( $n = 6$ ; 3.3%), 31-40 ( $n = 1$ ; 0.6%), and 41-50 ( $n = 2$ ; 1.1%) years old. An overwhelming majority of participants were Caucasian/White ( $n = 132$ ; 73.3%), with African American/Black as the distant second largest group ( $n = 20$ ; 11.1%). As expected with a university population, the majority of students reported being single ( $n = 169$ ; 93.9%), with few engaged/cohabitating ( $n = 8$ ; 4.4%) or married ( $n = 2$ ; 1.1%). Living status indicated that most participants

resided with a non-family member ( $n = 99$ ; 55%) or a family member ( $n = 49$ ; 27.2%), with few living alone ( $n = 32$ ; 17.8%). Employment status was typically of this population being that the majority reported being full time students ( $n = 146$ ; 67.3%) with some being employed part-time ( $n = 56$ ; 25.8%) and very few being employed full time- ( $n = 9$ ; 4.1%). From the total population pool, twelve (6.7%) reported being an active member of the military or a veteran. The majority of participants reported being either sometimes stressed, sometimes not stressed ( $n = 91$ ; 56%) or usually stressed ( $n = 43$ ; 23.9%). The study population had a mean BMI of  $25.54 \pm 5.10$ , classifying the group as slightly overweight.

### Efforts to control eating and dressing habits when stressed

Table 2 displays the responses of participants regarding their effort put forth for food and clothing choices on a typical day-to-day basis. Participants' effort to control what they eat garnered varied results with no overwhelming majority. It was reported that 23.2% ( $n = 42$ ) put little to no effort, 36.7% ( $n = 66$ ) put some effort, 29.4% ( $n = 53$ ) put considerable effort, and 10.6% (19) put great effort into controlling what they ate. The majority of the participants made healthy eating choices ( $n = 125$ ; 69.4%), dressed informally  $n = 120$ ; 66.7%), dressed fashionably- ( $n = 117$ ; 65%), and dressed casually ( $n = 168$ ; 93.3%). Furthermore, majority ( $n = 165$ ; 91.6%) reported putting "considerable" or "great" effort into maintaining their appearance; the same was true for planning and maintaining what they wore ( $n = 133$ ; 73.9%).

As noted in Table 3, when experiencing perceived stressed more than 50% reported making healthy eating choices (55%;  $n = 99$ ), stated that eating food relieved their stress (55.4%;  $n = 93$ ), typically spend less time preparing food ( $n = 124$ ; 68.9%), and experienced a change in appetite ( $n = 128$ ; 71.1%). Similar observations were noted in the dressing category during PS. Data showed that more than 50% enhanced their appearance ( $n = 116$ ; 64.4%), dressed fashionably ( $n = 91$ ; 50.6%), dressed casually ( $n = 163$ ; 90.6%),



and typically spent less time getting dressed ( $n = 104$ ; 57.8%).

Paired t-test analysis of NPS versus PS conditions demonstrated that there were various eating and dressing categories that were significantly influenced by the presence of PS. In reference to diet, PS significantly influenced an increase in choosing mixed dishes ( $t = 2.58$ ,  $p = 0.011$ ) and decreased diet modification ( $t = -3.21$ ,  $p = 0.002$ ). There was no statistically significant association between stress and influencing choices of salty/crunchy foods, sweet foods, creamy foods, or beverages. In regards to dressing, PS significantly influenced an increase in dressing formally- ( $t = 2.27$ ,  $p = 0.025$ ), using accessories ( $t = 2.59$ ,  $p = 0.010$ ), maintaining hair ( $t = 3.25$ ,  $p = 0.001$ ), and using fragrances- ( $t = 3.99$ ,  $p < 0.000$ ). There was no statistically significant association between PS influencing appearance enhancement or informal dressing (see Table 4).

## Discussion

The findings of this study demonstrated PS may have the greatest influence on selection of mixed dishes and decreased concern with controlling and modifying diet. Mixed dishes are associated with “comfort food,” making it logical to observe an increase in the consumption of mixed dishes in times of PS (21). A concern with modifying the diet in times of PS could be troublesome since this can have an adverse effect on health and wardrobe choices in times of weight fluctuations. During PS a reduction in diet modification can also be related to reported decline in men preparing food for themselves, which could result in an increase in dining out. They may be more likely to make poor dietary choices, which over time could lead to the onset of chronic diseases.

In addition, the findings suggest changes occurred in dressing habits. When comparing the number of eating and dressing categories during PS, men exhibited greater changes in dressing categories ( $n = 4$ ). PS had the most significant influence by increasing men’s use of accessories, maintaining hair, using fragrances, and dressing formally. These results implicate that selection of accessories, hair

care practices, scent products, and formal clothing may reveal stress prevalence in this population. These findings may be of value for the apparel and textiles industry to concentrate on the design and merchandising of accessories and formal clothing to assist young male consumers in find creative avenues to manage PS.

Theoretically, these findings support the psychological link between food and clothing behaviors particularly with regard to lifestyle (17, 18). Food and clothing can be visible signs for stress relief intervention. Specifically, health care professionals and caretakers can observe the type of foods (mixed dishes), changes in diet modifications, and decrease in wearing accessories, formal dress, and cologne to detect perceived stress. In addition, education sessions for men might focus on creative ways to make healthy alternatives to mixed dishes and efficient ways to dress formally during PS.

Identifying the association between PS, and the influence of food and dressing selection early in life would be beneficial in preventing the onset of chronic diseases (e.g. type II diabetes, obesity, heart disease, and certain cancers). Further, this would reduce health care expenditures early in life and increase the life expectancy of men. These findings related to health are important in enriching employment opportunities (e.g. stability and ability to seek and maintain jobs), and improvement of social psychological wellbeing (e.g. improved mental health and sustainability of positive, healthy relationships).

Future research will be needed to identify more diverse groups of males across a broader geographic location, age, ethnicity, and varied professions to better represent the overall U.S. population. The outcomes from additional research will expand results and have broader application to eating and dressing habits of males during NPS and PS.





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## Tables

**Table 1. Demographics of male university students (n=180).**

Variable	%	n
<b>Age</b>		
18-22	95	181
23-30	3.3	6
31-40	0.6	1
41-50	1.1	2
<b>Ethnicity/Race</b>		
African American/Black	11.1	20
Asian/Pacific Islander	3.3	6
Hispanic/Latino	6.7	12
Native American	1.1	2
Caucasian/White	73.3	132
Other	4.4	8
<b>Marital Status</b>		
Single	93.9	169
Married	1.1	2
Engaged/Cohabiting	4.4	8
Divorced	0.6	1
<b>Living Situation</b>		
Alone	17.8	32
With Family	27.2	49
With Non-Family Member/s	55	99
<b>Typical Stress Level</b>		
Never	1.7	3
Rarely	18.9	34
Sometimes Stressed, Sometimes Not	50.6	91
Usually Stressed	23.9	43
Always Stressed	5	9

**Table 2. Typical daily activity/efforts towards eating and dressing.**

	%	n
<b>How much effort do you put forth to maintain your appearance?</b>		
Little to None	0.6	1
Some	7.8	1
Considerable	52.2	9
Great	39.4	7
<b>control your eating and with managing calorie intake, food choice, reading food labels, etc.</b>		
Little to None	23.2	4
Some	36.7	6
Considerable	29.4	5
Great	10.6	1
<b>plan and maintain what you will wear</b>		
Little to None	3.3	6
Some	22.8	4
Considerable	53.3	9
Great	20.6	3

**Table 3. Participants response to eating and dressing habits during perceived stressed.**

Questions	Yes <sup>a</sup>		No <sup>a</sup>	
	%	N	%	n
Do you try and make healthy eating choices?	55	99	45	82
Do you try and enhance your appearance?	64.4	116	35.6	64
Do you dress up less frequently?	41.1	74	58.9	106
Do you dress fashionably?	50.6	91	48.9	88
Do you dress casually?	90.6	163	8.3	15
Does eating food comfort you or relieve stress?	54.4	98	45	81
Does changing your appearance comfort you or relieve stress?	51.7	93	48.3	87
Do you typically spend less time preparing food?	68.9	124	31.1	56
Do you typically spend less time getting dressed?	57.8	104	42.2	76
Do you spend less time enhancing your appearance?	49.4	89	50.6	91
Do you experience a change in appetite?	71.1	128	28.9	53
<sup>a</sup> Total n = 180; not all participants responded to all questions				

**Table 4. Paired Samples T-Test during PS versus NPS.**

Dressing and food variables	PS Mean	NPS Mean	Mean Δ	T-Test	Sig.
Accessories	2.52	2.71	-0.19	2.59	0.010*
Informal Dress	5.51	5.58	-0.07	0.64	0.525
Formal Dress	3.70	3.91	-0.21	2.27	0.025*
Hair	1.56	1.73	-0.17	3.25	0.001*
Scent	2.26	2.52	-0.26	3.99	0.000*
Appearance Enhancement	1.22	1.29	-0.07	1.58	0.118
Mixed Dishes	4.87	5.26	-0.39	2.58	0.011*
Salty/Crunchy	3.17	3.27	-0.10	1.04	0.300
Sweet Foods	3.10	2.98	0.12	-1.31	0.193
Creamy Foods	3.92	4.10	-0.18	1.68	0.095
Beverages	3.04	3.03	0.01	-0.13	0.897
Diet Modification	2.76	2.37	0.39	-3.21	0.002*

\*P &lt; 0.05;

Δ=change

**PEER REVIEW**

Not commissioned. Externally peer reviewed.