"It's (Just) Grad School": Effects of Normative Influence on the Healthy Eating Behavior & Intentions of Graduate Students

Sarah E. Pember, Stuart L. Usdan, Kelly W. Guyotte, David A. Birch, Jen Nickelson, & Adam P. Knowlden

Abstract

Graduate students are an ever-growing population in the United States that has historically lacked targeted health behavior research and promotion. This paper presents findings from a larger study based on a qualitative application of the Integrated Model of Behavioral Prediction to interpret the eating behaviors of graduate students. Through a series of thirty-two semi-structured interviews, data related to dietary intake, food choice, and eating behaviors were collected from graduate students at a large, public southeastern university. Thematic analysis was used to evaluate the transcriptions and develop an understanding of the food choice beliefs and intentions of graduate students.

Graduate students are well-educated individuals, with a general awareness and knowledge of nutrition and healthy eating practices. However, many graduate students do not consistently perform health-promoting behaviors, largely due to the perception that prioritizing health over school obligations is not culturally or institutionally supported during the graduate school experience. There is also difficulty in establishing consistent, healthy norms for behavior among graduate students, leaving them influenced by negative stereotypes.

The findings of this study help elucidate the strongest beliefs and barriers related to healthy eating practices and intentions within this population, which can later be targeted and tested for future health interventions.

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Introduction

Graduate students in the United States are a diverse and ever-growing population of adults for whom health intervention could potentially have dramatic nationwide impact. The latest reports from the National Center for Education Statistics (NCES) emphasize the vast number of students currently enrolled in graduate study in this country: total post baccalaureate enrollment increased by 38% from Fall of 2000 to Fall 2016, reaching 3.0 million students; that number is projected to reach 3.1 million by 2027 (McFarland et al., 2017).

Graduate schools and faculty are in the perfect position to promote health and well-being among their students (El-Ghoroury, Galper, Sawaqdeh, & Bufka, 2012). The strategies that graduate students develop to promote their own well-being may set them up for success in their program, and for future transitions into life and career post-graduate school (Stubb, Pyhältö, & Lonka, 2011). Yet, colleges and universities, as well as health educators and researchers, have historically neglected to target graduate students as a distinct group in need of separate, tailored health services, despite a call for improvements in graduate student support (Benshoff, Cashwell, & Rowell, 2015; Brus, 2006; Polson, 2003) and the expansion of health promotion research and programs designed specifically for them (Bulmer, Irfan, Barton, Vancour, & Breny, 2010; Oswalt & Riddock, 2007; Wyatt & Oswalt, 2013). It is likely that the primary reason for a lack of targeted graduate student health behavior research is the longstanding belief that graduate students are simply an extension of their undergraduate counterparts (Polson, 2003).

A vast amount of epidemiological evidence shows that healthy diets can reduce the physically, psychologically, and financially devastating burden of many chronic diseases in the United States- including obesity, heart disease, and hypertension- above and beyond the influence of exercise alone (Bazzano, 2006; Bouchonville, et al., 2014; Dietary Guidelines Advisory Committee, 2015; Johns, Hartmann-Boyce, Jebb, & Aveyard, 2014; Luke & Cooper, 2013; Sala-Vila, Estruch, & Ros, 2015; Siervo, et al., 2015). As such, health education and promotion efforts at all levels must increase attention to healthier dietary patterns and eating behaviors, across all segments of the population, including graduate students. However, very little is known about the specific eating behaviors of graduate students, and how their experience in graduate school might affect their intentions for healthy eating.

While studies of graduate students' mental health have identified the intense stress (Hyun, Quinn, Madon, & Lustig, 2006) and social isolation (Ray, Coon, Al-Jumaili, & Fullerton, 2018) of graduate school, little research has specifically focused on the physical health of graduate students, despite nearly two-thirds of graduate students reporting legitimate fears about both their mental and physical health (Sowell, Allum, & Okahana, 2015). One study showed that 33.7% of graduate students report their physical health as a primary stressor in their lives (El-Ghoroury, Galper, Sawaqdeh, & Bufka, 2012). Rummel (2015) found a significant relationship between the total number of hours spent engaged in school-related work and negative effects on physical health. Many of these negative effects related to nutrition and eating behavior: 50% of the students reported an increased appetite, 38.4% reported some change in weight, and every student (100%) reported experiencing some sort of digestive distress during their program (Rummel, 2015). Oswalt & Riddock (2007) also found that 24.7% of the graduate students reported overeating as a result of stress; eating comfort foods was reported as the second highest (68.5%) coping strategy for graduate students overall.

In Fall 2017, only 8.9% of graduate women and 6.9% of graduate men reported eating 5 or more servings of fruit and vegetables each day (ACHA, 2017). As many as 4.1% of graduate students report having no servings of fruits and vegetables at all (ACHA, 2017). When comparing undergraduate and graduate women's

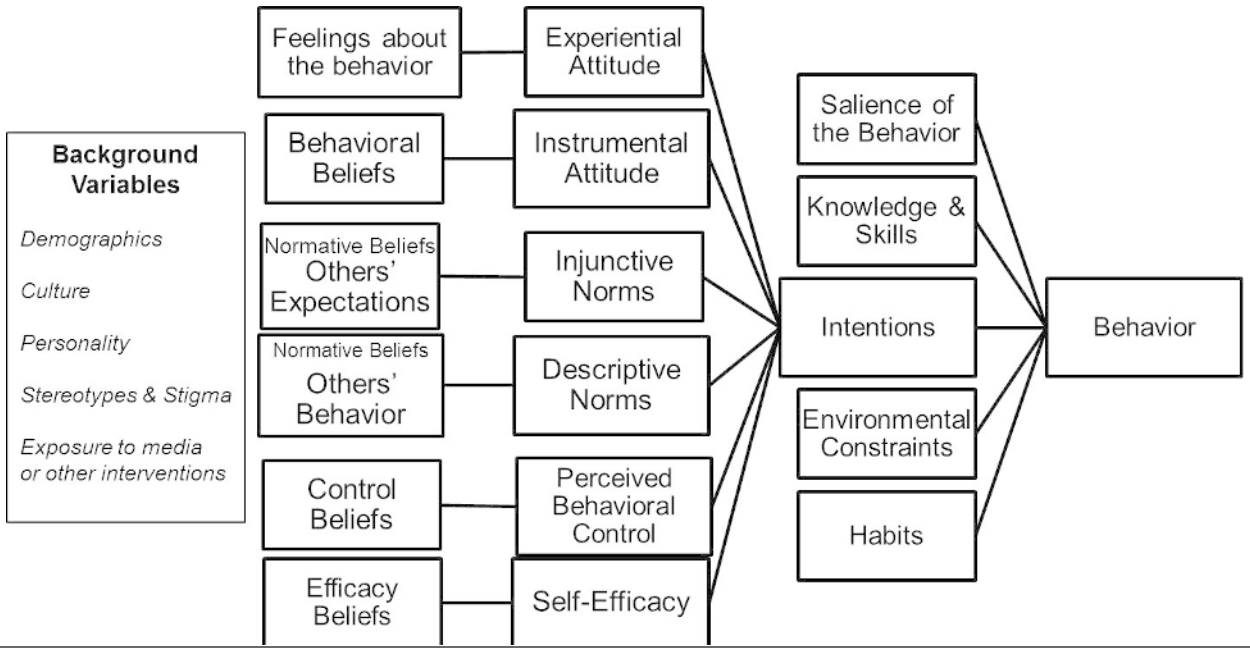
health status and behaviors, Bulmer et al. (2010) found no significant differences in health status or behaviors between undergraduate and graduate women after controlling for demographic variables. Despite the lack of statistical significance, however, they concluded that larger, more diverse groups of graduate student women needed to be surveyed to learn more about their unique needs and circumstances. The authors also supported the idea of intensive qualitative research regarding graduate women's health behaviors.

The purpose of this study was to add to the minimal body of literature focused on the graduate school experience and its concurrent health effects, specifically those related to healthy eating behaviors. The authors hoped to determine the strongest held beliefs influencing eating behavior intentions among graduate students, as well as any barriers that prevent or assets that promote the performance of positive eating behaviors. Using a qualitative research design would allow for the collection of a nuanced base of knowledge that could drive future health communications and interventions for this populations.

The Integrated Model of Behavioral Prediction & Phenomenological Hermeneutics

The Integrated Model of Behavioral Prediction (IMBP) (Figure 1) is a valuable theoretical framework to use in determining the content of targeted health communication messages and educational health interventions (Fishbein, 2008; Yzer, 2012). IMBP is based on the premise that there are a relatively small number of variables determining a large proportion of the variance in individual health behavior (Fishbein 2000, 2008). IMBP is a model of reasoned action, signifying that people's actions are driven by developed intentions (Fishbein, 2000, 2008). However, intentions alone cannot ensure behavior (Gollwitzer, 2009), and there are a number of influences that can increase or decrease the likelihood of an individual performing the desired behavior and acting upon their intentions (Fishbein & Capella, 2006). IMBP includes a socio-ecological perspective, recognizing that even with the strongest intentions, there may be a lack of requisite skills or the existence of environmental constraints that make actual performance more difficult or impossible.

Figure 1. The Integrated Model of Behavioral Prediction. Adapted from Fishbein & Yzer (2003) and Glanz, et al. (2008).



IMBP has been referred to as the "two-component Theory of Planned Behavior" (Elliot & Ainsworth, 2012), because it takes the three main constructs of TPB—attitude, subjective norm, and perceived behavioral control (PBC)—and divides them into two parts. Attitudes stem from specific evaluation about the behavior itself, as well as beliefs about the likelihood that performing the behavior will have certain outcomes. Subjective norm includes both an injunctive norm, or whether people within one's social group will approve or disapprove of the behavior, and descriptive norm, or how common individuals perceive the behavior is within the social group. Measurement of subjective norm sometimes includes an element of an individual's motivation to comply with the norms of relevant social networks. PBC's two components are self-efficacy and controllability (Azjen, 2002). Self-efficacy is not only an indicator of confidence in being able to perform the behavior, but also the perceived capability to perform despite barriers or difficult circumstances (Yzer, 2012). Controllability relates to the extent an individual is responsible for that behavior (Azjen, 2002).

Because of the attention placed on the unique backgrounds, attitudes, and perceptions of defined target populations, IMBP is a perfect fit with phenomenological hermeneutic methodology. Both theory and methodology are grounded in the belief that true understanding of phenomena—in this case, healthy eating behaviors in graduate school—can only come with an awareness of the individuals' perceptions and experiences of that phenomenon. The purpose of phenomenological research is grounded in the need to make morals (internalized norms, values, and attitudes) visible by focusing on "the understandable meaning" of lived experiences, not approaching these experiences as something factual (Lindseth & Norberg, 2004). In phenomenological hermeneutics, awareness and understanding of a phenomenon is the result of analysis and interpretation by the researcher of written texts created from shared stories of human experience.

Methods

This study utilized the IMBP to evaluate the strongest attitudinal, normative, and control beliefs, as well as the influence of both individual skills and environmental factors on intention for healthy eating behaviors in a socio-demographically diverse population of graduate students. The specific behaviors under study in this investigation were: 1) cooking and consuming meals at home; 2) meal planning; 3) eating a variety of fruits and vegetables; and 4) limiting the intake of added sugar, sodium, and saturated or trans fats. These behaviors were selected based on research supporting their correlation with healthy eating patterns and lower rates of obesity and other diet-related chronic disease (DeSalvo, Olson, & Casavale, 2016; Dewar, Lubans, Plotnikoff, and Morgan, 2012; Freeland-Graves & Nitzke, 2013; Morin, Demers, Turcotte, & Mongeau, 2013; Robles, Smith, Ponce, Piron, & Kuo, 2014). The determination of the strongest beliefs and most influential variables may serve as potential candidates for future health communication messaging interventions related to promoting healthy eating for this group in the future. This study was approved by the Institutional Review Board of the researchers' academic institution.

This study included a series of semi-structured interviews with a diverse cross-section of graduate students. During these interviews, students shared their beliefs and perceptions about eating behavior intentions, barriers to healthy eating behavior, and facilitators for carrying out the specified behavior's performance. Because these interviews were semi-structured, the interviewer was at liberty to ask any follow-up, clarification, or other spontaneous questions that were triggered by the discussion and participants' responses.

Thirty-two graduate students were interviewed for this study. Table 1 contains all pseudonyms and demographic information for the participants. Purposive recruitment techniques were used to assemble the most diverse group

Table 1. Participant Demographics

Pseudonym	Gender	Age	Race	Degree	Department	Marital Status	Relationship	Kids at Home
Timothy	M	23	Black	Masters to PhD	Psychology	Single	None	0
Polly	F	22	White	Masters to PhD	Computer Science	Single	None	0
Mallory	F	23	White	Masters to PhD	Psychology	Single	None	0
Celia	F	36	Black	PhD	Health Science	Married	Living Together	2
Tom	M	30	Hispanic	PhD	Physics & Astronomy	Single	Living Together	0
James	M	28	Black	PhD	Health Science	Single	None	0
Steve	M	25	White	PhD	Physics & Astronomy	Married	Living Together	0
Laura	F	25	Asian	Masters to PhD	Engineering	Single	Not Living Together	0
Zac	M	26	White	PhD	Physics & Astronomy	Married	Living Together	0
Jules	F	26	White	PhD	Health Science	Single (Engaged)	Not Living Together	0
Donna	F	38	White	PhD	Education	Married	Living Together	2
Joe	M	28	White	PhD	Health Science	Married	Not Living Together	0
Brittany	F	24	White	Masters to PhD	Psychology	Married	Living Together	0
Joan	F	32	Asian	PhD	Health Science	Married	Living Together	2
Justin	M	31	White	PhD	Health Science	Single	None	0
Michael	M	22	White	Masters	Health Science	Single	Living Together	0
Holly	F	31	White	PhD	Nutrition/Health Science	Married	Living Together	1
Mila	F	24	White	Masters to PhD	Chemistry	Married	Living Together	0
Jessica	F	27	Asian	Masters to PhD	Psychology	Single	None	0
Anthony	M	23	Black	Masters to PhD	Engineering	Single (Engaged)	Not Living Together	0

Pseudonym	Gender	Age	Race	Degree	Department	Marital Status	Relationship	Kids at Home
Marisa	F	27	Hispanic	PhD	Psychology	Single	None	0
Natalie	F	27	Hispanic	PhD	Psychology	Single	Not Living Together	0
Monica	F	41	Asian	PhD	Education	Married	Living Together	0
Jonah	M	30	Black	PhD	Engineering	Married	Living Together	0
Adhit	M	28	Asian	PhD	Physics & Astronomy	Single	None	0
Kate	F	25	White	Masters to PhD	Psychology	Single	None	0
Alice	F	23	White	Masters	Education	Single	None	0
Manvik	M	41	Asian	PhD	Engineering	Married	Living Together	2
Preston	M	24	White	Masters	Education	Single	None	0
Keisha	F	28	Black	PhD	Engineering	Single	None	0
Stacy	F	24	White	PhD	Chemistry	Married	Living Together	0
Angela	F	24	White	PhD	Health Science	Single	Not Living Together	0

of graduate students possible (Suzuki, Ahluwalia, Arora, & Mattis, 2007). The characteristics of diversity considered in regard to participants in this study included gender, race, ethnicity, relationship and family status, discipline of study, age, and whether students entered graduate school directly after earning an undergraduate degree or spent time in the workforce in the interim. The interview guide was based upon previous work with formative focus group elicitation in public health education and intervention (Kidd & Parshall, 2000; Middlestadt et al., 1996; Ryan, et al., 2014) and specific projects using IMBP constructs for prediction or message development (Boudewyns & Paquin, 2011; de Bruijn, 2010; Dillard, 2011; Hughes & Lewinson, 2015; Robbins & Neiderdeppe, 2015).

Participants were asked general questions about their eating patterns and food choices in graduate school, as well as any noticeable changes in patterns and behaviors related to meal planning, purchasing, and consumption since beginning graduate school. Participants were asked to explain what healthy eating means to them, and how well they are able to meet their personal definitions. This information provided relevant contextual and population information as well as insight into the strength and form of both intentional and habitual eating behaviors. Using the predetermined definition of healthy eating for this study, which may or may not have been similar to each individual's own definition, the interviews then focused on specific belief constructs from the theoretical model.

To assess behavioral beliefs, participants answered questions about the potential positive and negative outcomes to eating healthfully in

general, as well as for each discrete food or eating behavior (de Bruijn, 2010; Middlestadt et al., 1996). For example, "What are the benefits to cooking and eating meals at home?" and "What do you dislike about cooking and eating meals at home?" Normative beliefs were gathered through questioning about which people in the participants lives would be supportive and approving or unsupportive and disapproving of specific behaviors (Middlestadt et al., 1996; Robbins & Neiderdeppe, 2015). For example, "Who in your life is, or would be, encouraging of eating a healthy diet?" and "Who would be affected by your decision to reduce your intake of processed foods?" Control beliefs were gathered through questions about the situations in which performing those behaviors would be hard to do, and the factors that would make each easier to perform, as well as those that would make it more difficult (de Brujin, 2010; Middlestadt et al., 1996; Robbins & Neiderdeppe, 2015). For example, "What situations arise that make it more difficult to consume a variety of fruits and vegetables?" Finally, the interviewer asked questions that addressed the IMBP variables of behavioral salience ("How important is it to you that you are eating a variety of fruits and vegetables ?"); knowledge and skills ("Do you know how to choose foods that are lower in added sugar and sodium?" and "Do you feel like you have adequate cooking skills to prepare meals from scratch at home?"), and environmental barriers and enablers ("What makes it difficult for you to plan meals in advance?" and "What makes it easy for you to limit commercially processed snacks?").

All interviews were transcribed verbatim and analyzed using thematic analysis (Braun & Clarke, 2006), a flexible method of qualitative data coding and analysis that has been used with previous studies applying IMBP constructs to health behaviors (Dillard, 2011; Hughes & Lewinson, 2014; Robbins & Neiderdeppe, 2015). Thematic analysis is a type of "top down" qualitative analysis driven by the theoretical framework of interest to the researcher (Braun & Clarke, 2006). For this study, the transcriptions were read thoroughly, coded, and then grouped into categories based upon the IMBP constructs and variables: attitudes, norms, control, environmental barriers and enablers, individual skills and knowledge, and background variables Codes were compared and corroborated across cases until themes emerged. The process of thematic analysis used for this study is outlined more explicitly in Table 2.

Throughout the study, new data was compared with previously recorded and transcribed interviews; this process provided potential areas of focus or additional questions for subsequent interviews. Rather than determining an adequate sample through theoretical saturation, which implies any further data will result in similar findings, Marshall & Rossman (2016) suggest using the concept of theoretical sufficiency, in which the data fit with, and sufficiently describe, the theoretical constructs or categories. Following this recommendation, participants were recruited and interviewed until the results adequately explained the behavior within the IMBP framework.

In qualitative research, member checking is a fairly common practice whereby participants in an interview are given the opportunity to review the results once they are completed as a validity check. Informal member checking of any potentially unclear comments or ideas that were expressed during the interview were revisited by the researcher during or at the close of the session (Kidd & Parshall, 2006). Additionally, the synthesized results were sent to each of the participants for review. One student asked for a pseudonym to be removed from association with a specific quote to add an extra level of anonymity; other students who responded simply expressed their support for the project and excitement about its completion.

Results

Within the scope of the overall study, themes related to all constructs of the IMBP did emerge.

Table 2. Thematic Analysis for IMBP-Based Elicitation Research

Phase of Analysis	Brief Description
Become familiar with the data	Transcribe interviews; read and re-read, noting initial ideas
Generate initial codes	Code interesting features and information across data set
Categorize codes	Collect codes into categories based upon theoretical constructs, gathering relevant data for each
Review categories	Make sure codes are accurately categorized and relevant data has been gathered across the entire data set
Define and name themes[2]	Generate list of themes[2] within each category; check for consistency
Select themes[2] for questionnaire	Determine which themes[2] to use for questionnaire development, according to prevalence and importance

[1]Adapted from Using thematic analysis in psychology (Braun & Clarke, 2006) and The Coding Manual for Qualitative Researchers (Saldaña, 2013).
[2]Themes may be related to any construct or variable within the IM framework: beliefs, direct attitudes or perceptions of norms and personal agency, skills and knowledge; environmental barriers or enablers

Because of the well-established influence of social norms on eating behavior (Higgs, 2015; Pelletier, Graham, & Laska, 2014; Pliner & Mann, 2004; Robinson, Thomas, Aveyard, & Higgs, 2014), and because of the strong influence of the perceived norms related to graduate school described by students in this study, themes related to the influence of social norms are presented here alone. These include: 'typical' graduate student behavioral perceptions, peer pressure in contrast to isolation, and the lack of a culture of health in graduate school.

'Typical' Graduate Students

To better understand descriptive norm perceptions, students were asked during their interviews how important each target behavior was to other graduate students. In general, the perception of those interviewed was that most graduate student could not, and did not, make healthy eating or cooking and planning for meals a priority over other roles and obligations.

However, many participants recognized that other graduate students may fall on a wide spectrum with regards to how much they valued health and their nutrition, not everyone being, as Justin described it, a "ramen noodle graduate student," with some students packing snacks or meals, while others ran to the vending machine before class. Mallory said "*...so there's definitely a huge, huge divide even between who thinks it's really important and people that are like "meh" mildly, as long as I don't die, I'll be OK*." Most students agreed that consciously trying to eat a variety of fruits and vegetables was not a very pressing issue amongst their peers. However, like many of the participants interviewed, it was likely something they may recognize they should be doing, but not necessarily achieve. When asked if other graduate students were as unconcerned about eating a variety of fruits and vegetables as he was, Joe said: "*I'm sure they think about it. I'm sure they know they should, but I don't necessarily, I don't necessarily know that they're*

so concerned they need to be doing it or want to be doing it."

Peer Pressure and Isolation

The differences in departmental climate resulted in different perspectives on normative peer pressure. When Steve was asked if there was anything more he would like to share in the interview about eating as a graduate student, he replied that he "experienced virtually zero peer pressure in this area," that "you're allowed to kind of do what you want to do." While he may be inclined to go out to lunch with others simply for the opportunity to socialize, he said that there was none of the pressure you might feel in either high school or undergrad: "*...you know you hear high school is all about peer pressure and even undergraduate is peer pressure, I don't, I don't experience any of that. At all*."

Yet, there were some students who did feel ostracized by their peers if they made healthier food choices. Joan said she "usually get[s] attacked for [her] food choices" and that "it's really hard to eat with them [her cohort] sometimes." Jules said quite a few times during her interview that she didn't want to stand out, "*I don't wanna be the one person that doesn't wanna eat something*."

Mallory recognized that this "peer model effect" could potentially also exist in the "communal lunch spaces" in her department, as she and her cohort ask each other questions about their food and witness each other's eating behavior, both good and bad. This type of positive pressure, sharing of information, and modeling could only happen, however, in a social department and for students who felt included. Celia said that positive peer pressure might exist in her department, but with her multiple roles and responsibilities outside of school, she didn't feel like she was truly a part of the department; she didn't have time to participate in that social support even if it did exist.

This sense of singularity was common among most students. Students without families said that there was no one affected by their eating or cooking decisions, and that they didn't feel influenced by anyone else to eat a particular way. Even students with partners did not always immediately think of their boyfriends or girlfriends as being an influence on their food choices and eating or cooking behavior until prompted with questions regarding who chose what to eat for dinner in the relationship or who did most of the grocery shopping. It seemed that, for the most part, students were more influenced by the people with whom they lived and less by the people with whom they worked.

Cultural Norms

When it came to influential cultural norms, it seemed that graduate students were most influenced by cultural norms for eating behavior associated with graduate school itself.

There was a general perception across all students that graduate school lacked a culture of health, despite no one specifically demanding students to prioritize school over their own health:

> I don't necessarily think there's pressure to not take care of your health....but I also think that there is sort of a culture among graduate students....and that's not really like a top-down enforced sort of thing, it just feels sort of cultural. (Preston)

Graduate school has its own unwritten rules and norms for behavior, and to cook healthy meals, to exercise, or to simply step away from the books or the office could be seen by some students as going against the graduate student norm. Ascribing to that culture meant putting academics first and oneself last, sometimes based simply on a need to prove one's worth as a graduate student. This evolving and increasing prioritization of school over self was something that was a common undercurrent in most students' interviews. As James described it, added obligations and responsibilities from school continued to be added to "the list" of daily tasks, so that eventually self-care, once a "central thing," was too far down to even worry much about:

> It's like....getting manuscripts done, I need this mentorship, I need this work experience,

> do I gotta get some other income, you know those are like there's at least fifteen or twenty things on the list before you get to OK the central things, like the things that used to be essential like getting fruits and vegetables, getting exercise, getting enough sleep, things like that, like that's out the window once you start, especially a doctoral program.

This changing salience, and the resulting behavior, appeared to be the result of the larger cultural norms of the graduate school experience.

Many students viewed their declining health habits as just part of the experience, because "it's, it's grad school" (Michael) or "what grad school is supposed to be" (Preston). Other refused to conform to the culture out of concerns for their own well-being and the decision not to comply with those set norms. Justin refused to allow positive eating habits to become less important in the face of school obligations, "*If I'm less competitive when I graduate, then what that's telling me is that I don't want a job where they're gonna expect that either*." Keisha was not going let the negative health effects she experienced in her Master's program impact her life this time around, despite what she saw as less success academically:

> I don't think I'm doing as well in my PhD program... 'cause in your graduate program they, they want you to die for it right?....when I came back to school I made a conscious decision that I'm not, I'm not letting this program kill me.

Mila spoke of gaining around twenty pounds in one semester and starting a cycle of antidepressants, until one day she decided enough was enough. She felt very strongly that graduate students needed more support to stay healthy, because the norm in graduate school is not to talk about health, not to worry about it, and not to follow through on commitments to healthy behavior change:

> To be honest it's almost like it's swept under the rug… 'cause I mean you hear about it in undergrad like I mean, freshman fifteen is a real thing, and, you hear about how you can combat it and whatever but grad school's like a completely different ball game…I mean it was different in undergrad. Like. Everything was different, our bodies were different our mindsets were different, you know, and it's like you're starting school all over again on an up, upped level and no one talks about it, like, no one talks about how they do it, or what they do... I guess it's like this unspoken rule, we don't talk about how unhealthy we actually are type thing.

Mila references another common undercurrent of the graduate student perceptions: that their lives are different than they were as undergraduates, whether they had only just moved beyond their bachelor's degree or were returning to school after years working other jobs. They had different physical, social, and emotional concerns, as well as different life experiences and transitions, than most undergraduate students, and the pressure to perform and the culture to succeed at all costs was much stronger in graduate school than in previous years of higher education.

An absent culture of health in graduate school was perhaps in part due to a lack of modeling from faculty and lack of support at the university level. Students felt there were no models for how to balance health behaviors with work load. As one student described: "[this professor is] very good at what they do...I wonder how much, how many personal sacrifices are they making in terms of …health, and… behaviors." With one or two exceptions, students didn't feel that there was anyone in supervisory or leadership positions, either faculty or administration, who was concerned about their health, or showing them how to balance a life in academia:

> I think one way is almost like we have these close relationships with mentors as faculty but we see them not taking care of themselves either so it's, it's almost like that's what's expected of you, so if you're you know, in this type of a doctoral program … I don't really see healthy behaviors being practiced by, the faculty, so it's almost like that's what's expected that comes along

with, um, this profession to work, you know, unending hours, um, and, yeah, really, poor health behaviors... (Celia)

Overall, it seems, graduate school is viewed as a culture unto itself, with its own norms for behavior. Unfortunately, these norms tend not to promote healthy eating, or overall wellness.

Discussion

Even if they are not parents or partners, graduate students are more likely to feel that they are filling multiple roles on campus, as teachers, researchers, mentors, students, and colleagues (Haynes et al., 2012) than they might have as an undergraduate. Because of these multiple roles, consistent social norms may be difficult to establish in graduate school. Students are often siloed in their departments, or even within their departments (Gardner, 2008; Grady, LaTouche, Oslawaski-Lopez, Powers, & Simacek, 2014), so they see fewer peers on a daily basis, making it difficult to establish or recognize any true descriptive norm. Stereotyping of the 'typical graduate student' creates a descriptive norm that is detrimental to establishing healthy normative influence. Most students ascribe extremely negative eating habits to other graduate students, and therefore are able to believe they are no different, if not better, than the standard set by other students. Some students even felt that they were expected to live up to the graduate student stereotype, or had been warned about declining health behaviors as a graduate student even before they entered their programs. Yet, the students in this study found themselves at different points on a wide spectrum of behavior, and most were inconsistent, but making an effort to be healthy. Perhaps an initial step in improving graduate students' intentions for behavior is to falsify the stereotype and educate students about the reality of behavior among other students.

The stereotype of graduate students' poor eating behaviors is one part of a larger graduate school culture that, according to these students, creates normative expectations for achievement and success that lead to declines in both mental and physical health, a finding supported by previous research into the health impacts of the graduate school experience (Sowell, Allum, & Okahana, 2015). There was an overwhelmingly negative view of graduate school as detrimental to one's health. Students felt very distinctly the pressure to prioritize their research and duties as a graduate student over any other personal obligation, need, or desire, an internal battle that has been recognized in previous studies of graduate students (Brus, 2006; Martinez, Ordu, Della Sala, & MacFarlane, 2013). Even students who claimed to reject that mindset sincerely believed that their status as graduate students and future success would suffer because they took the time to step away from their desks and exercise, eat well, spend time with family, or sleep

There is a strong need for role models among graduate students, administrators, advisors, and senior faculty members who support and encourage self-care and wellness while encouraging academic achievement. Graduate schools must specifically address all aspects of health and wellness with their students, not just eating behavior, and also with faculty who interact with graduate students. The students in this study are working to make changes or maintain positive health habits, but without the social support from the institution, they may be unable to succeed.

Limitations

This study was bound by some limitations. Although thoughtful, purposive recruitment was used to assemble a diverse group, the inherent limitation of purposive recruitment is the restriction on generalizability based upon participant selection (Patton, 1999). The experiences of the thirty-two participants interviewed may not be completely transferrable to other graduate students on the campus, nor to graduate students at different colleges or universities.

Additionally, data collection was completed

during the summer months, a time when most graduate students feel less pressure and obligation in their schedules. This timing benefitted the study by making it more likely that students were willing to commit to an interview, but also may have affected their responses because many discussions involved reflections upon previous semesters, not life as they were currently living it.

Conclusion

This study aimed to investigate how the graduate school experience may influence students' food choices and eating behaviors within the theoretical framework of the Integrated Model of Behavioral Prediction [IMBP] (Fishbein, 2000), a health behavior theory useful for understanding a target population's intentions for behavior, and also the possible barriers to its performance. The results of this study offer health educators, public health practitioners, and higher education professionals and administrators a deeper understanding of graduate students' beliefs and perceptions of food choice, eating, and cooking within the context of graduate school, and provide strong justification for graduate students as a distinct population for targeted health communication, education, and promotion.

One of the most important findings in this study regards the extremely negative perception of graduate school both from the inside and the outside. Students enter with the belief that they will be embarking on a strenuous academic experience, but also one that will take a toll on their physical health. Not only does this seem to be a self-fulfilling prophecy, the experience has ramifications on students' mental and emotional health and interpersonal relationships as well. Faculty must be role models, and begin to address their own potentially unhealthy behavior, while encouraging their graduate students not to put their health and well-being "on the backburner" in order to achieve academic goals. Both departments and broader university support services should work to focus on graduate student health initiatives as separate and distinct from those of undergraduates, catering to specific needs of each population. There are many assumptions about graduate school, including the normative belief that this experience is just the way it is, that all graduate students are unhealthy, they struggle, and it is a difficult, physically and emotionally taxing experience. With an ingrained culture that promotes this perception, positive changes for graduate students will be difficult, but they are necessary.

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"It's (Just) Grad School": Effects of Normative Influence on the Healthy Eating Behavior & Intentions of Graduate Students

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1. What may be a reason for the historic lack of health promotion tailored for graduate students?
    a. A longstanding belief that graduate students are just an extension of undergraduate students
    b. College and university faculty and staff do not care about the health and well-being of graduate students
    c. Graduate students are expected to already be knowledgeable about health
    d. None of the above

2. What are the two components of the subjective norm, as posited by the Integrated Model of Behavioral Prediction (IMBP)?
    a. Descriptive norm and cultural norm
    b. Injunctive norm and descriptive norm
    c. Injunctive norm and cultural norm
    d. None of the above

3. Which of the following best describes phenomenological hermeneutic methodology?
    a. Meaning is constructed from an individual's own perceptions and experience, but those cannot be understood by others
    b. Meaning is constructed from an individual's own perceptions and experience, and understanding comes through interpretation of written texts created from shared stories
    c. Meaning is constructed from an individual's own perceptions and experience, and understanding comes through analysis of conversation
    d. None of the above

4. During the interviews, why were students first ask to describe their definition of healthy eating and how well they met their personal definition?
    a. The responses provided supplemental information about salience, intention, and behavior
    b. The researchers wanted participants to create their own definition of healthy eating to be used throughout the interview
    c. The researchers wanted to distract from the real meaning of the study
    d. All of the above

5. Why was thematic analysis chosen for this study?
    a. Thematic analysis is the gold standard of qualitative analysis
    b. Thematic analysis is a rigid method of coding and analysis that works well within established theoretical frameworks
    c. Thematic analysis is a flexible method of coding and analysis that works well within established theoretical frameworks
    d. None of the above

6. What is likely the primary contributor to the changing salience of healthy eating (and other health-enhancing behaviors) among graduate students?
    a. The overall culture of graduate school
    b. Students not earning enough money
    c. Peer pressure from other students to adopt unhealthy habits
    d. None of the above

7. Why might it be difficult for graduate students to establish an accurate descriptive norm for behavior?
    a. Graduate students are too different from one another to have normative behavior
    b. Graduate students often work in isolation and do not regularly witness the health behaviors of other students
    c. Graduate students would rather model the behavior of their faculty mentors
    d. All of the above

8. What type of support is needed to promote improved healthy behaviors among graduate students?
    a. Role models across campuses who simultaneously encourage self-care and academic achievement
    b. Targeted health promotion for graduate students and the faculty who work with them
    c. Changing the culture of graduate school that emphasizes school over self
    d. All of the above

9. Which of the following was NOT a limitation of this study?
    a. Purposive recruitment restricts generalizability based upon participant selection
    b. The study took place during the summer, so responses were based upon reflection, not necessarily current experience
    c. The number of participants was insufficient for this type of study
    d. None of the above

10. What do the authors conclude to be a self-fulfilling prophecy of graduate school?
    a. The extremely negative perception of graduate school as a place where students sacrifice their own well-being for the sake of academics and research leads to a culture where this is true
    b. Graduate students believe they are incapable of succeeding and most ultimately fail in their coursework and drop out
    c. Professors believe their students do not care about health and students live up to that expectation
    d. None of the above