The Clash of Culture and Cuisine: Conflicting Expectations and Disordered Eating in Chinese Adolescent Women

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Abstract

Although eating disorders have commonly been considered to affect predominantly white female populations, they have found to be increasingly prevalent in Chinese contexts. Despite the well-established negative consequences of eating disorders and body image disturbances, there has been a significant lack of cross-cultural research conducted on these issues in Chinese populations to date. The purpose of the present study is to fill this research gap by 1) exploring the perception of conflicting expectations regarding cultural eating norms and ideal body standards as a culturally specific risk factor in the development of disordered eating and body image concerns in Chinese adolescent women, 2) using existing research to develop a conceptual model of strategies that women may use to resolve the distress resulting from the perception of these conflicting expectations and 3) identifying risk and protective factors contributing to the choice of adaptive or maladaptive strategies. Thirty-four Chinese adolescent women (aged 18-22) participated in semi-structured interviews involving questions about typical mealtime scenarios, their perceptions of conflicts between expected eating behaviors and body shape standards, and how these conflicting expectations affected their emotions and satisfaction with their bodies. The results of this study provide initial support for the proposed conceptual model of conflict resolution, by demonstrating that the conflict of cultural expectations was a significant reason for distress reported by a majority of participants, and that different strategies of conflict resolution resulted in adaptive or maladaptive emotional and behavioral outcomes. Risk and protective factors in the development of disordered eating behaviors and attitudes in the present sample of Chinese adolescent women were identified following an analysis of responses; implications of these findings for future prevention, treatment and research efforts were also reported.

Keywords: Chinese adolescent women, eating disorders, body dissatisfaction, qualitative, cultural expectations, cognitive dissonance.
Introduction

The message that “thin is in” is pervasive throughout modern day society, convincing many of us to follow diet after diet to achieve the ideal bodies that are plastered on magazine covers. But what happens when your family members and friends also emphasize the importance of eating more food as a sign of respect and social bonding? How do you choose to cope with the resulting sense of conflict? This is precisely the dilemma that many Chinese adolescent women have reported facing and experiencing negative mental, emotional and behavioral outcomes from. Although eating disorders and body dissatisfaction have commonly been assumed to be most prevalent in western contexts and current research efforts have largely focused on western populations (Bordo, 2009), a growing body of research suggests that disordered eating attitudes and behaviors have been appearing more frequently in Asian contexts (Pike & Dunne, 2015), as well as amongst Chinese individuals more specifically (Mak & Lai, 2011; Tam, Ng, Yu, & Young, 2007). More importantly, despite these concerning findings, there has not been a corresponding increase in efforts to address existing problems in China’s mental healthcare system, such as lack of resources and structural barriers (Liu et al., 2011), nor an increase in research efforts to explore culturally specific risk factors, diagnostic tools or treatment methods (Lai, 2000), impacting the prognoses of not just patients with eating disorders, but those with mental illnesses in general.

Defining the conflicting expectations

The present study proposes that conflicting expectations regarding cultural eating norms and ideal body standards may play a significant role in the development of disordered eating behaviors in Chinese women. The following section will elaborate on the nature of those conflicting expectations, describing how behavioral norms in eating situations and the
simultaneous expectation that individuals (and in particular females) remain thin may present a unique source of conflict for women living in Chinese contexts.

**Traditional Chinese food culture**

Eating is seen as a central part of an individual’s day, due to the history of famine in Chinese culture. Thus, food is considered a valuable commodity, and eating large amounts at social gatherings allows the hosts of the gatherings to “gain face” (Li, 1989), or acquire respect from their guests. Chinese cuisine treasures foods that are rich in fat content, and previous studies on the dietary patterns of local Chinese have reported that they tend to avoid diet foods (Lee et al., 1989, Lee 1991, 1993). Having a larger body size is often seen as a symbol of health and wealth, and it is not uncommon for Chinese individuals from the previous generation to comment that someone is “looking a bit fat” (Getz, 2013). Traditional Confucianism ideals emphasize moral behavior over appearance, such that self-starvation would be perceived as an offense to one’s parents and community (Getz, 2013) and forced vomiting would be considered a sin (Lee et al., 1989; 1992).

**Pressure to be thin**

While having a larger body size is valued in traditional Chinese culture, the perpetuation of the thin body ideal in Western media as well as certain factors specific to Asian communities undoubtedly elicit the pressure to be thin. For instance, most Chinese women generally weigh less than White counterparts of similar height (Lee et al. 1989, Lee 1991) such that not only do those from non-Asian cultures expect Asians to be thin (Handron, 2017), Asians themselves may feel the pressure to be thin in order to be acceptable amongst their social groups (Liou and Bauer, 2010). Females from Asian contexts may be particularly susceptible to this need to be thin due to societal expectations of women from traditional cultural contexts to be behaviorally submissive as well as physically “delicate and dainty” (Brady et al., 2017). The negative effects of the pressure to be thin are evident in the
susceptibility of the adolescent age group to developing eating disorders, with past research showing that the age of onset for the eating disorders, anorexia nervosa and bulimia nervosa, is 18 years (Volpe et al., 2016).

**Ways of facing dissonance**

The following section summarizes two existing theories predict how individuals may navigate situations where they are presented with conflicting thoughts or beliefs, which will inform the development of the conceptual model in the present study.

**Festinger’s theory of cognitive dissonance.** Based on Festinger’s (1957) classic theory of cognitive dissonance (see Figure 1), conflicting cognitions result in feelings of aversive arousal or dissonance, such that the individual becomes motivated to resolve these uncomfortable feelings. In fact, Festinger even proposed that resolving this cognitive dissonance may be a basic need - that is, as necessary to human wellbeing as fulfilling physiological needs, such as eating and sleeping. This idea is further supported by research on the role of value priorities in our lives - according to key theorists in the field, the value priorities of individuals, or the attitudes and beliefs that individuals endorse, play important roles in shaping their perceptions of reality and in making sense of the world around them (Rohan, 2000).

Thus, it is expected that Chinese women will be strongly motivated to resolve the emotional discomfort resulting from facing the aforementioned conflicting expectations.

There are several proposed ways in which this cognitive conflict can be resolved. First, individuals can change their attitudes, behaviors or beliefs in order to reconcile the two
conflicting cognitions. For instance, individuals who are addicted to drugs but are also aware of the negative health consequences of their actions may choose to stop believing that they ‘need’ drugs (belief change) or that they confer any positive benefits to their lives (attitude change) and make efforts to give up drugs (behavior change). Second, individuals can gather information that outweighs the dissonant cognitions. Using the same example, the drug-addicted individual may find research studies suggesting that drugs have not been proven to be harmful to the human body. Third, individuals can reduce the importance of one of the cognitions. In the case of the drug-addicted individual, he or she may decide that ‘life is too short’ to give up its pleasures, thereby decreasing the importance of health.

In application to the present study, it is expected that Chinese women may report behavioral, attitudinal and belief change in response to perceiving the conflicting expectations. The following section, regarding theories on biculturalism, will further inform the specific strategies that these women are hypothesized to use.

**Theories of biculturalism.** Theories regarding biculturalism, which aim to explain how individuals exposed to a new cultural context may attempt to navigate unfamiliar norms, values and assumptions, can serve to inform the hypotheses of the present study. Specifically, the cognitive conflict experienced by individuals in foreign cultural settings mirrors the ones that individuals may face when exposed to conflicting expectations. An individual who is adjusting to a new culture may find that previously habitual modes of behavior that were acceptable in his or her original cultural context are now unnatural or even unacceptable in the new cultural context, and may thus become increasingly aware of his or her behaviors, as well as the discrepancies between his or her old and new cultures. Similarly, Chinese women who are faced with conflicting expectations regarding eating behaviors and ideal body standards may become cognizant of the ways in which these expectations are incompatible, and be motivated to mitigate this disparity.
Berry’s acculturation framework (1980) proposes that there are 4 strategies of acculturation: assimilation, separation, marginalization and integration. In assimilation, individuals give up the values of their original culture and adopt the beliefs and behaviors of the new culture. In separation, individuals retain the beliefs and behaviors of their original cultures, without participating in the new culture. Marginalization involves ignoring the beliefs and behaviors of both cultures. Finally, integration describes the maintenance of one’s original cultural values while also adopting those of the new culture, with each identity remaining separate from each other and the activation of each identity in appropriate contexts (Hong, Morris, Chiu, & Benet-Martinez, 2000). The application of these strategies to the present study will be explored in the following section describing a hypothesized model for conflict resolution in the present sample.

So what factors have been found to predict an individual’s choice of acculturation strategy? According to Tadmor and Tetlock’s model of biculturalism (2006), accountability pressures that individuals are subjected to are key predictors of how they choose to respond to incompatible belief systems. Accountability refers to an individual’s need to justify his or her thoughts or behaviors to important others in his or her social network, in order to adhere to a shared set of norms and values. Humans are inherently social creatures and have a fundamental need for social approval (Tetlock, 2002), so individuals may not only feel accountable to significant others in their social networks, but may also internalize the expectations of significant social groups that they are part of (Tadmor & Tetlock, 2006) and come to perceive them as their own. As such, depending on how accountable Chinese adolescent women feel towards societal, peer or familial expectations, they may choose differing strategies of conflict resolution.
**Hypothesized model of conflict resolution in Chinese adolescent women**

Based on the extant literature, we hypothesize that the cognitive dissonance experienced by Chinese adolescent women resulting from conflicting expectations for eating norms and ideal body standards uniquely contributes to the development of disordered eating behaviors and body image disturbances in this population. The following section presents a conceptual model of potential pathways that individuals may take in order to resolve their sense of cognitive dissonance (Figure 2), and describes how the choice of each pathway may or may not predispose an individual to be at risk of developing disordered eating behaviors and attitudes.

![Figure 2. Hypothesized pathways to the development of disordered eating behaviors in Chinese women.](image)

**Perception of conflict.** Upon encountering the conflicting cognitions of cultural expectations versus thinness, Chinese women are expected to select one of three pathways (Figure 2).
**Pathway 1: Separation.** In order to resolve their sense of cognitive conflict, the women may choose to emphasize the importance of one expectation while de-emphasizing the importance of another.

**Pathway 1.1: Prioritizing thinness.** Individuals who prioritize thinness will report restrictive eating habits and negative attitudes towards putting on weight/fear of becoming fat. Moreover, they will report persevering in these behaviors and attitudes despite receiving criticism from family members (e.g. for refusing certain foods at family dinners) or experiencing negative physical outcomes (e.g. lightheadedness from dieting). The choice of this pathway is expected to result from familial and/or peer pressures, as well as from societal norms regarding the appearance and behaviors of the ‘ideal female.’

Because the pressure to be thin is emphasized through multiple avenues (media, family, peers) and because peer and media pressures have been shown to be especially salient during the adolescent years (Hughes et al., 2018), the choice of this pathway is expected to be the most common amongst participants. The prioritization of thinness is hypothesized to be correlated with body dissatisfaction, engagement in restrictive eating behaviors and general negative affect.

**Pathway 1.2: Prioritizing cultural expectations regarding eating.** Individuals who select this pathway will report feeling more accountable towards maintaining familial cohesiveness and thus adhere to cultural expectations regarding eating behaviors, while placing less importance on pursuing the thin ideal.

A possible reason why an individual would choose this pathway is that family members may strictly enforce adherence to social eating behaviors as a necessity for familial cohesiveness. In this scenario, the individual may decide that they are not willing to pursue the thin ideal at the cost of sacrificing familial relationships.
Another possible reason is that family members may actively reinforce the idea that adherence to familial/cultural expectations is more important than pursuing the thin ideal, or do not actively reinforce the idea that the thin ideal is important at all. In this scenario, individuals may perceive there to be an expectation to be thin from other avenues (such as peers and social media), but decide that the regard and acceptance of family members are ultimately more important.

The choice of this pathway is hypothesized to be correlated with body satisfaction (or at least neutral attitudes towards body shape) and positive affect. However, despite being adaptive, it is hypothesized that this pathway will not be commonly endorsed, due to the overwhelming nature of peer and media pressures amongst the adolescent age group, and the traits of risk-taking and rebellion that have been frequently documented amongst adolescents (Romer, Reyna, & Satterthwaite, 2017).

**Pathway 2: Integration.** Individuals who follow this pathway will report using disordered eating patterns to mitigate the conflict between expectations to be thin and expectations to eat large amounts of food at social gatherings. Individuals may learn about these behaviors from the modelling of peers or family members. These active reconciliation behaviors may include starving themselves prior to an upcoming social gathering, or engaging in compensatory behaviors (compulsive exercising or vomiting) after social gatherings. The selection of this pathway is expected to be correlated with body dissatisfaction and negative affect. It is expected that this pathway will not be frequently reported, due to the stigma attached to the endorsement of maladaptive attitudes and behaviors surrounding food.

**Pathway 3: Marginalization.** Individuals who pursue this pathway will report struggling with conflicting cognitions in the past, but discovering adaptive coping
mechanisms to disregard this sense of conflict. This decision can be attributed purely to the passing of time (i.e. learning coping mechanisms through past experience), or, as suggested by models of biculturalism, due to the inherent personality trait of being more integratively complex, which allows these individuals to more easily integrate disparate identities (Crockett, 1965). The choice of this pathway is hypothesized to be associated with body satisfaction or neutrality, and positive affect.

Conflict not perceived. Despite our expectations that conflicting cultural expectations will serve as a significant source of pressure for Chinese adolescent women, there is also the possibility that individuals do not perceive this conflict at all. There are several hypothesized reasons for this. Firstly, individuals may be biologically predisposed to be immune to this conflict (e.g. they can eat large amounts without gaining weight). Secondly, individuals may live amongst family members and friends who do not actively reinforce these conflicting cognitions (i.e. do not hold them accountable for being thin and/or expect them to eat large amounts at social gatherings). Thirdly, some women may possess inherent personality traits that render them immune to the perception of conflict (e.g. open-mindedness). Individuals who do not perceive there to be a conflict are expected to report body satisfaction or neutrality, and positive affect.

Current research gaps

Research on disordered eating and body image disturbances in Chinese populations to date has been sparse, used measures of questionable validity, or has otherwise been inconclusive. Studies on the effects of body dissatisfaction and eating disorders in the past have largely focused on the experiences of White women (Bordo, 2009), and there exist no official statistics of eating disorder prevalence rates in Chinese women to date (Qian et al., 2013).
Moreover, a review of the extant literature reveals that it is still unclear what factors underlie the development of disordered eating symptoms in Chinese populations and the ways in which they express these symptoms. On the one hand, studies have found that Chinese individuals suffering from anorexia nervosa differ fundamentally from White women with regards to their rationale for their self-starvation behaviors - instead of attributing these behaviors to fat phobia, these patients point to somatic causes, such as bloating or a lack of appetite (Lee et al., 1989). On the other hand, other studies have found restrictive eating behaviors, body dissatisfaction and unhealthy weight control behaviors in Chinese individuals to be associated with media pressures and thin-ideal internalization (Chang et al., 2013), much like their western counterparts. Through exploring conflicting expectations as a possible culturally specific risk factor for the development of disordered eating attitudes and behaviors in Chinese adolescent women, the present study aims to contribute to a better understanding of the mechanisms that contribute to the onset of or exemption from maladaptive outcomes in these women.

Large scale studies have been conducted on eating disorder symptoms in Chinese populations, but a closer look at the methodology reveals much to be wanted with regards to the validity of the measures used. For instance, although a large-scale study aiming to assess the relationship between symptoms of anorexia nervosa, depression and suicidal thoughts in Chinese adolescents appeared to report that they only “occasionally” experienced disordered eating thoughts (Lian et al., 2017), the methods section reveals that participants were only asked one question (“Have you ever experienced the feeling of disgust by the sight of food?”) rated on a Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = often, 5 = always) to determine whether they were suffering from anorexia. Not only is one question insufficient to detect the numerous symptoms that characterize eating disorders, but it is also insensitive to cultural factors such as mental health stigma (which might result in the underreporting of
maladaptive behaviors, such as a disgust with food) and differences in the rationales that Chinese individuals may provide for engaging in disordered eating behaviors.

Besides providing different explanations for why they engage in disordered eating behaviors, Chinese women may fail to fulfill diagnostic criteria for eating disorders as defined by commonly used diagnostic manuals, because of their genetic predisposition to be lighter in weight than Western women of similar height (Lee et al., 1989; Lee, 1991). As a lower BMI may be normative amongst Asian populations, individuals struggling with eating disorders may not necessarily lose what would be considered a clinically significant amount of weight before their mental condition reaches a critical stage. Of note, research has found that even a 5% loss in weight, when coupled with cognitive disturbances, can result in clinically significant eating disorder symptoms, such as elevated eating pathology and distress (Forney et al., 2017).

Moreover, prior research suggests that Asian women may not necessarily desire to lose a significant amount of weight, so long as they can maintain it within the culturally determined normative range. For instance, a study on a Japanese sample (Mase et al., 2015) found that women’s body image perceptions were more strongly shaped by comparisons to peers or their past selves, than by absolute numbers (such as objective weight and body fat percentage).

It is notable that the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders (5th ed., DSM-5; American Psychiatric Association, 2013) does include the diagnosis of “atypical anorexia nervosa”, which characterizes an individual who presents with all symptoms of anorexia nervosa (e.g. fat phobia and restrictive dieting behaviors), but not significant weight loss. However, this diagnostic specification still fails to account for cultural variations in explanations for food refusal, such as the lack of fat phobia, which is considered to be a defining feature in the diagnosis of anorexia nervosa. Moreover, despite
these observed differences in clinical presentation, there still lacks a clear consensus on the relationship between the regular diagnosis of anorexia and that of non-fat-phobic anorexia (i.e. it is yet unclear whether they are variants of the same illness, or completely different diagnoses altogether), which may result in an under-diagnosis of clinically significant distress (Becker, Thomas, & Pike, 2009). Through exploring a culturally sensitive model for the development of body dissatisfaction and disordered eating, this study aims to contribute to a better understanding of rationales for disordered eating attitudes and behaviors in Chinese women, and serve to inform improved diagnostic and treatment efforts.

    Considering the complexity and novelty of the issue explored in this paper, a qualitative approach is an ideal way to delve into the diverse themes that may arise in the experiences of the study population which may not be captured by current body image measures (Rahman, 2016). Additionally, key themes identified in participant responses may pave the way for the development of new measures or culturally sensitive adaptations of existing measures, which will facilitate an enhanced quality of research in these populations.

    **Summary of study aims and hypotheses**

    First, this study will integrate findings from past theories of cognitive dissonance to create an explanatory model of how Chinese women may choose to navigate conflicting expectations regarding cultural eating norms and ideal body standards, and whether these choices lead to adaptive or maladaptive eating behaviors and attitudes. Drawing from existing research on the nature of these expectations and on proposed strategies of conflict resolution, we hypothesize that a majority of participants in the present sample will report experiencing cognitive conflict as a result of perceiving these conflicting expectations.

    Based on past research suggesting that the age of onset for the eating disorders anorexia nervosa and bulimia nervosa is 18 years (Volpe et al., 2016), the second aim of this study is to conduct semi-structured interviews with Chinese adolescent women (aged 18-22)
to explore the validity of the hypothesized model of conflict resolution proposed in this study. As peer and media influences have been found to be particularly impactful during adolescence (Hughes et al., 2018), it is expected that a majority of participants will report prioritizing the expectation to be thin, which we propose will be associated with increased self-reported body dissatisfaction and disordered eating behaviors. On the contrary, we expect that the prioritization of cultural eating norms will result in body satisfaction or neutrality, but will be less frequently reported in the present sample, due to the enhanced salience of peer and media influences and rebellious and risk-taking tendencies that are evidenced in the adolescent age group. Additionally, it is expected that the pathway of integration (characterized by the use of bingeing and purging, and restricting before large meals) will be rarely reported, due to cultural eating norms that disapprove of food wastage. Instead, individuals who engage in these behaviors are expected to merely report a prioritization of thinness (thereby conflating the number of participants in that category), or to only report past (and not present) engagement in these behaviors. We also expect some women will report learning to disregard the sense of pressure altogether, using the pathway of marginalization. Finally, we hypothesize that some women will report not experiencing this sense of conflict at all, due to factors such as genetic predisposition to be thin regardless of what they eat, or low social pressure to uphold either set of expectations.

The third and final aim of the present study is to explore the reasoning behind different conflict resolution strategies, in order to identify risk and protective factors predisposing women to choose adaptive or maladaptive strategies. Through exploring the validity of the proposed conceptual model of conflict resolution, the present study seeks to inform culturally sensitive diagnostic, preventive and treatment efforts for the Chinese adolescent women.
Method

Participants

Thirty-four Chinese women between ages 18 and 22 (\(M_{\text{Age}} = 20.7\) years, \(SD = 1.06\) years) were recruited through advertisements on social media platforms, such as Facebook, Instagram and WeChat. Participants had to meet the following criteria in order to be eligible for this study: between ages 18 and 22, identify as female, and have two parents of Chinese descent. Interested participants emailed the researcher using the contact information provided in the recruitment text, which was disseminated on the social media platforms in both Chinese and English. Once participants had read and signed the consent form (which was available in Chinese upon request from the participant), they communicated with the researcher to set up an interview that was either conducted through Skype video call, or via email correspondence.

Assessments and Measures

This study was approved by the Duke University Institutional Review Board before data collection was initiated. Recruited women were interviewed on cultural rules surrounding eating, the perceived relationship between these rules and expectations of their body weight and shape, and how this relationship impacted their emotions. The interview included six questions, which were created by the author. The creation of these questions was based on the existing literature exploring the nature of each set of expectations (cultural eating norms and ideal body image standards) and theories regarding strategies for conflict resolution. Sample items included, “What do food and the act of eating symbolize in your culture?” and “Do you ever feel that there is a conflict between cultural expectations around eating and expectations about body shape? Why or why not? If you do perceive there to be a conflict, how do you manage/attempt to resolve this conflict?” (See Appendix A for the full
list of interview questions.) During the Skype interviews, members of the research team adhered to the wording of the questions, unless participants volunteered additional information, or explicitly asked to clarify the question that they were asked.

Data analysis

Research team

The author is a 21-year old female of Chinese descent, who was responsible for recruiting, scheduling and interviewing participants, identifying themes in the data, and writing up the final research paper. The other member of the research team is a 23-year old graduate student from the same lab as the author, who was responsible for recruiting, scheduling and interviewing participants, for helping refine the codebook and for helping to identify themes in the data. It is notable that both members of the research team are of Chinese descent and grew up in Chinese-speaking countries, and thus have personal experiences with Chinese cultural expectations and values. The ethnic match between the researchers and the participants likely also facilitated a sense of trust and mutual understanding, which may have encouraged increased honesty in the sharing of experiences during interviews.

Procedures

A total of 34 interviews were conducted. This number of interviews was considered to be sufficient based on the sample size of previous qualitative studies on Chinese populations (with sample sizes of 25 or less), and when the saturation of themes was reached, meaning that identifiable themes in the responses appeared to become redundant. 23 interviews were conducted in English and 4 interviews were conducted in Chinese, via email correspondence. 7 interviews were conducted in Chinese, through Skype call, and were transcribed and translated separately by the undergraduate and graduate researchers. After separate
transcription and translation, the researchers came together to discuss and resolve any differences before proceeding with the data analysis process.

Data management and participant privacy. A spreadsheet linking the name and assigned number of each participant was created and saved in a passcode-locked folder on the undergraduate researcher’s laptop. Interviews conducted via email correspondence were copied and pasted into a de-identified Microsoft Word file, named according to the participant’s assigned number, and saved in the passcode-locked folder. Audio files from interviews conducted via Skype and their text transcriptions and translations were named according to participant numbers and saved in the same folder. To ensure the privacy of participants involved in this study, the spreadsheet was the only place that linked the name and number of each participant, and no participant names were used in the final research paper.

Data analysis. Coding of interview data was completed on the qualitative coding software, NVivo. Since the goal of the analysis was to test the validity of the hypothesized model of conflict resolution, interview responses were coded according to their relevance to answering the key research questions proposed at the beginning of this study: 1) Presence/absence of perceived conflict (Does the perception of conflicting expectations regarding cultural eating norms and ideal body standards create a sense of cognitive conflict in Chinese women?); 2) Method of conflict resolution (Upon perceiving the conflicting expectations, do these women choose the strategies of separation, integration or marginalization?); 3) Reasons for choice of pathway (What factors lead these women to pursue each of these pathways?); and 4) Implications of pathway choice (What factors can lead to the choice of adaptive pathways, and what are the implications for future diagnostic, prevention and treatment efforts?)
The initial round of coding was conducted independently by the author, who read and coded all the interview responses, and the graduate researcher, who independently read and coded 17 (50%) randomly selected interview responses. Coding was completed structurally - that is, nodes (i.e. main themes) were created based on the questions included in the interview. For instance, the interview prompt, “Describe a typical mealtime situation with your family” was used to create a node called “Mealtime Situation.” Afterwards, sub-nodes were created, based on key themes that were identified from these responses (such as the sources that participants noted to be the most influential in shaping their ideas of the ‘perfect’ body).

After the completion of this initial round of coding, the graduate researcher and the author met to discuss similarities and differences in coding, and to revise the codebook to include any new themes that were discovered (See Appendix B for the full coding scheme). Following this meeting, the author and the graduate researcher completed a second round of coding, during which they separately coded responses based on the new scheme. In order to better answer the research question of which strategies led to adaptive or maladaptive outcomes, a new component was added to the coding scheme, where each coder rated how strongly the participant appeared to be impacted by negative body image perceptions (1 = Strongly affected, 2 = Moderately affected, 3 = Slightly affected, and 4 = Not affected at all), based on an evaluation of their overall response, with particular attention paid to 1) participants’ levels of reported body satisfaction and 2) the degree to which participants reported being emotionally affected by their body image perceptions (see Appendix C for detailed criteria of each rating category).

A final coding meeting was then conducted to discuss similarities and differences in coding, where 100% agreement was reached.
Results

Perception of conflict. As hypothesized, a majority (82%) of women perceived there to be a conflict between the expectations to adhere to ideal body standards and to follow cultural eating norms. To ensure that participants understood they were reporting perceived conflict between the expectations to abide by cultural eating norms and body shape ideals, we asked participants to first describe a typical mealtime scenario (to determine perception of expectation to eat more/finish food), as well as to report whether or not they felt the pressure to be thin, and if so, where these pressures mainly originated from.

Slightly more than half (52%) of the participants reported feeling the pressure to finish all the food on their plates or being explicitly asked by family members to eat more, while 67% of participants indicated that food wastage was unacceptable in their households. At the same time, 85% of participants indicated that they perceived a pressure to be thin, with pressures from family members being the most frequently cited source (18 participants), and pressures from the media as a close second (15 participants). Since a majority of participants reported experiencing both sets of expectations, it is likely that their perception of conflict is present.

Conflict resolution strategies. According to the proposed theoretical model developed based on the existing literature on each set of expectations and cognitive dissonance, participants who perceived a sense of conflict were expected to use one of the following three strategies: separation, integration or marginalization. The distribution of pathway choices is represented in Figure 3: Integration (20.6%), Marginalization (35.3%), Separation - Prioritization of thinness (26.5%), Separation - Prioritization of cultural eating norms (5.9%) and conflict not perceived (11.8%).
Our initial hypothesis was that the prioritization of thinness would be the most commonly endorsed pathway for conflict resolution, as it was expected that the pressures originating from such factors as peers and the media would be especially salient during the adolescent age range. However, we found that marginalization (choice to disregard the sense of conflict) was the most highly endorsed conflict resolution method. There are two proposed explanations for this finding. First, social stigma may prevent individuals who may still be struggling with disordered eating to report their present struggles, and to instead report that they have overcome these struggles. Second, several participants reported experiencing body image struggles during their early teen years, and were able to learn from past struggles with the conflicting expectations to successfully achieve an adaptive mindset.

One participant described how she learned to prioritize her subjective sense of happiness over her body shape, because she learned that it is impossible to satisfy all expectations:
Expectations will sometimes cause me to be more aware of my body but doesn't typically induce action. I'm satisfied with my body because I know that I can't do everything and I do what keeps my mind happy - which is eating my favorite foods and what I eat even if that includes lots of sugary snacks.

Our next hypothesis regarding conflict resolution strategies was that the prioritization of cultural eating norms would be rare. This hypothesis was supported by the fact that only 2 out of 34 participants (5.9%) endorsed this pathway. A potential explanation for this finding is that thin ideal pressures are more salient to the adolescent population, resulting in a de-prioritization of familial harmony. Moreover, adolescence is characterized by a sense of rebellion towards familial expectations, which is reflected in one participant’s response that she would binge and purge as a way to rebel against her parents after they argued.

We also hypothesized that the reporting of maladaptive eating behaviors as a conflict resolution strategy would be rare, due to the cultural stigma towards food wastage. As hypothesized, only a small percentage of participants (8.8%, 3 out of 34 participants) reported using maladaptive patterns of eating to integrate or reconcile the conflicting cognitions. For instance, participants mentioned skipping meals before familial dinner gatherings, as well as bingeing during these gatherings and purging afterwards. One participant also mentioned that she would not only use bingeing and purging in the context of reconciling her perceived sense of conflict, but also to relieve stress in general. Specifically, she would engage in bingeing and purging behaviors when she was under periods of high stress, such as when she was taking exams.

However, contrary to our hypothesis, 11.8% (4 out of 34) of participants also reported adaptive methods of integrating conflicting cognitions. Specifically, participants reported that learning methods of exercising and/or nutritional principles helped them feel in control of
their weight and body shape, which resulted in positive emotional outcomes and body satisfaction. For instance, one participant reported that despite perceiving a conflict between the ideal body shape and the pressure to eat more, she felt “a sense of security in knowing that [she has] control over the shape of [her] body” as she was able to manage her weight reliably through exercise and a balanced diet. Similarly, another participant spoke about how she did not find these conflicting expectations to be distressing, because she knew that she could maintain her weight through the incorporation of healthy habits, such as drinking water before meals and exercising regularly. The updated model of conflict resolution (see Figure 4) created after data analysis reflects the addition of adaptive methods of integrating the conflicting expectations.

Participants who endorsed the strategy of maladaptive integration were not necessarily bound to this pathway, however. Instead, participants’ responses indicated the possibility of switching from maladaptive integration patterns to adaptive ones. For instance, one participant reported being frustrated because she had “no control over what was served at mealtimes” and was often even actively prevented from entering the kitchen by her parents. To cope with the resulting sense of conflict between the lack of control over her eating patterns and the expectation to be thin, she initially ate less during the day to “allow for the extra calories at dinner.” Her discovery of weight training as a form of exercise that she enjoyed, however, changed her attitude towards her body, allowing her to aim for the pursuit of a “healthier life instead of any body type.” Additionally, her ability to show her parents that her weight training was positively impacting her scoliosis condition helped gain their approval of both her engagement in this form of exercise as well as changes in dietary habits to facilitate her activity, despite their previous resistance towards weight training due to its effects on her body shape (i.e. becoming “bulkier”). This participant also mentioned that her investment in weight training facilitated her interest in nutritional theories, which helped her
establish a greater understanding of the relationship between dietary intake and health, and to acknowledge that “it is best to stick to a diet that is feasible.”

Another participant described how, despite overemphasizing the importance of being thin and engaging in restrictive dieting behaviors in the past, certain educational opportunities allowed her to reinterpret the meaning of food and eating. She reported that a class on food and social justice helped her examine issues such as the environmental impact of food production and the association between socioeconomic status and the availability of healthy foods, which helped her focus on the broader goal of responsible food consumption and contributing to food donation programs, rather than obsessing over the effect that eating had on her body shape.

Due to factors such as a genetic predisposition to be thin, or a lack of social pressure to uphold either sets of expectations, we expected that a small number of women would report a complete lack of conflict perception. In support of this hypothesis, 4 out of 34 (11.8%) participants reported that they did not perceive a sense of conflict at all. Common themes arising from these responses were 1) genetic factors, such as being able to maintain a stable body weight no matter how much they ate and 2) receiving positive reinforcement from their social environment, such as family members emphasizing the importance of other realms of life, such as academic and career pursuits, over the need to maintain a certain body shape or to uphold certain eating norms.
Conflict resolution strategies and body image outcomes. Participants were asked whether they were satisfied with their bodies, and to report how their body image perceptions affected their emotions. Based on their responses, coders rated responses on a scale of 1 to 5 to indicate the degree to which participants were negatively impacted by their body image perceptions (see Appendix C for coding scheme).

The majority of participants were either “slightly affected” (12 participants) or “moderately affected” (13 participants) by negative body image perceptions, indicating that most participants were not actively engaging in disordered eating behaviors but still experienced a certain degree of insecurity as a result of these perceptions (see Figure 5).

We hypothesized that women who endorsed the pathway of prioritizing thinness would also report elevated levels of body dissatisfaction and/or more negative emotional outcomes compared to other groups. Of the five women categorized by coders as falling within the “strongly affected” by negative body image category, four endorsed the pathway
of thinness prioritization. This finding supports the hypothesis that individuals with the most maladaptive outcomes would primarily be those who placed an overemphasis on adhering to societally determined body image ideals.

Surprisingly, of the 13 women falling within the “moderately affected” by negative body image category (second most maladaptive), 7 individuals endorsed the pathway of marginalization. That is, despite reporting that they had developed coping mechanisms to resolve their sense of conflict, these women still reported experiencing unresolved body image insecurities or conditional acceptance of their bodies (i.e. could only accept their bodies under certain circumstances, such as when their weight was within a desired range).

**Figure 5:** Coder-rated impact of negative body image on emotional outcomes of participants.
**Risk factors.** Based on participant responses, the following risk factors contributing to the development of or exemption from disordered eating behaviors and attitudes were identified. An overview of these factors is shown in Table 1.

**Narrowly defined femininity and associated beauty standards.** Narrow definitions of femininity in Chinese culture may serve as a culturally specific risk factor for several reasons. Firstly, a number of participants mentioned that while there is a greater variety of body shapes in Western and European media, a majority of famous actresses in popular films and TV shows adhere to the “thin and delicate” body type, which is portrayed by the mass media as “the most attractive.” One participant even mentioned how she became afraid to exercise, because gaining muscle was perceived as too masculine and was frowned upon by relatives. Thus, anyone seeking to be thin is only left with the option of reducing food intake, which the participant described as “extreme and terrifying.” Secondly, the genetic predisposition for smaller bodies in Asian countries also serves as a culturally specific form of pressure. For instance, one participant described how she acknowledged that she was never, and is currently not overweight, but that being “fatter” relative to her past self triggered a sense of body dissatisfaction:

I never felt the pressure growing up, because I was always the skinny one. In fact, I was constantly told I was TOO skinny and had to gain weight. I first felt the need to

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<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Protective factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrowly defined femininity and associated beauty standards</td>
<td>Perceived control over weight/body shape</td>
</tr>
<tr>
<td>Emphasis on physical features as determinants of life fulfillment</td>
<td>Positive forms of social reinforcement</td>
</tr>
<tr>
<td>Perceived lack of control over weight/body shape</td>
<td>Past experience with an eating disorder or body image concerns</td>
</tr>
<tr>
<td>Conditional satisfaction with weight/shape</td>
<td>Genetic factors</td>
</tr>
<tr>
<td>Stress in other domains of life</td>
<td></td>
</tr>
</tbody>
</table>

*Table 1: Overview of risk and protective factors contributing to the development of disordered eating behaviors and attitudes.*
lose weight after a three-month exchange overseas, when I gained around 5lbs and topped 100 lbs. and a family member commented that I had gotten fatter for the first time in my life. I'd never heard the words before and they shocked me so much I decided to lose the extra weight.

A balance in the proportion of body parts was also noted to be an important aspect of what is perceived to be ideal or beautiful, which contributed to a sense of body dissatisfaction even in participants who acknowledged their own thinness. One participant noted that although she thinks that she is relatively thin, and has been told by family and friends throughout her childhood to eat more, she is dissatisfied with the “excess flesh” that she has on her stomach and thighs, and have been told by some family and friends that she should lose weight. Another participant highlighted a Chinese saying describing someone who has delicate facial features, “五官端正”, which translates to having a balance in the proportion of the five sense organs, namely the lips, nose, eyes, ears and the tongue.

**Emphasis on physical features as determinants of life fulfillment.** Besides feeling pressure from narrow definitions of femininity and beauty, several participants mentioned that Chinese sayings often posited physical features as determinants of present and future fulfillment in life. For instance, one participant noted a linkage between appearance and morality, quoting the Chinese saying: “A white complexion is powerful enough to hide seven faults”, while another expressed her fears about not being able to find a husband or a job because she was heavier than the “stereotypically attractive Chinese woman.”

**Perceived lack of control over weight/body shape.** A perceived lack of control over one’s body weight or shape, or over factors affecting these outcomes, was a consistent predictor of negative emotional outcomes and disordered eating. In the case of participants who were still living under the care of their parents, several of them mentioned that the lack
of control over what they were allowed to eat and the forms of exercise they were allowed to engage in, or a lack of understanding with regards to nutritional and exercise principles that would facilitate weight management resulted in the motivation to engage in maladaptive behaviors, such as restriction, compulsive exercise or binge-purge cycles.

**Conditional satisfaction with weight/shape.** Several participants reported that their attitudes and behaviors towards their bodies changed based on its physical state, and that despite being unaffected by body image concerns most of the time, they still experienced some degree of unresolved body dissatisfaction when they experienced fluctuations in weight or shape. One participant noted that for the most part, the sense of conflict did not strongly affect her emotions, but that once she started to “feel unhealthy” or found that she could not fit into her old pants, she would begin to consciously restrict her food intake.

**Stress in other domains of life.** Disordered eating behaviors or attitudes that originally stemmed from the sense of cognitive conflict could also be exacerbated by other life stressors in some women. As indicated above, one participant expressed that she binged and purged as a way to reconcile the conflicting expectations, but also to relieve stress in general, such as when she was taking exams.

**Protective factors.** Based on the analysis of participant responses indicating exemption from disordered eating behaviors or discovery of adaptive methods of navigating their sense of conflict, the following protective factors were identified. An overview of these factors is shown in Table 1.

**Perceived control over weight/body shape.** Participants who mentioned that they felt they had more control over their dietary choices (i.e. family members did not force them to eat foods that they did not want) and behaviors (e.g. allowed to pursue enjoyable forms of exercise) also felt more in control of their weight, and were less likely to develop disordered eating behaviors. For example, one participant mentioned that although she perceived there to
be a conflict between familial expectations to eat more and expectations to maintain a slim body shape, she did not feel the need to adopt extreme eating or exercising behaviors in order to mitigate this conflict. Instead, she was aware that appropriate levels and methods of exercising and moderation in eating most of the time would allow her to successfully control her weight.

**Positive forms of social reinforcement.** Participants who reported receiving little or no pressure from their social environment (family and peers) to adhere to either set of expectations, and who were encouraged to focus on other realms of life (e.g. academic achievement, career goals) were more likely to be satisfied with their bodies and to be less emotionally affected by body-related outcomes, such as fluctuations in body weight or shape.

**Past experience with an eating disorder or body image concerns.** Participants who confessed to struggling with body image concerns or eating disorders in the past reported that their past experiences helped them navigate body-related concerns in the present. For instance, one participant mentioned that the damage caused by her experiences with bulimia, both physically and mentally, helped her realize the importance that her body played in her being a “functioning human being”. She mentioned a specific negative experience that helped motivate her to pursue recovery:

> During recovery, I remember several times where I actively wanted to eat something (i.e. curry, steak, fried foods) but reacted extremely badly to when I did due to the physical damage. I remember failing to skate around the rink as fast as I used to be able to. Those changes frustrated me. It felt like I was losing parts of myself in stupid attempts to become somebody else.

**Genetic factors.** A small number of women reported that they did not experience a sense of conflict, due to their lower or at least stable body weight, regardless of what they ate.
Discussion

The main contributions of the current study are that firstly, it addresses the paucity of research conducted on eating disorders in Chinese individuals through the present investigation. Secondly, it addresses the inconclusivity of prior studies, by providing support for previous findings that Chinese women have different rationales for engaging in disordered eating behaviors compared to western women, and by proposing a conceptual model to explain culturally specific pressures that may contribute to these behaviors and attitudes. Finally, it addresses the issue of past studies using measures that may have been unable to capture the complexity of eating and body image disturbances (e.g. a single question rated on a Likert scale), by conducting semi-structured, in-depth, qualitative interviews with the present sample of Chinese women.

The first hypothesis of this study was that conflicting cultural expectations regarding eating behaviors and body shape ideals would be a culturally specific risk factor for Chinese women. In support of our first hypothesis that conflicting expectations regarding cultural eating norms and ideal body standards would serve as a significant source of distress, we found that a majority of participants (82%) indicated that being subjected to these opposing sets of expectations resulted in some degree of confusion and discomfort.

In partial support of our initial hypotheses, we also found that women choosing to prioritize thinness had maladaptive emotional and behavioral outcomes compared to other groups, but that this pathway was not the most frequently endorsed (26.5%). Instead, a greater number of women (35.3%) endorsed the pathway of marginalization.

We also discovered that despite the fact that women pursuing the prioritization of thinness strategy were more likely to experience negative outcomes (80% of the women in the “strongly affected” by negative body image category endorsed the pathway of thinness prioritization), those who pursued the marginalization strategy, which was initially expected
to be an adaptive pathway, did not necessarily fare much better (53.8% of the women in the “moderately affected” by negative body image category, which was the second most maladaptive category, endorsed the pathway of marginalization). That is, even though these women reported developing coping mechanisms to deal with their sense of conflict, they still struggled with lingering body image insecurities or expressed that they could only accept their bodies under certain circumstances. This is a concerning finding, as research has found unresolved body image issues to be predictive of worsening eating pathologies in the long-term (Cooley & Toray, 2001). Moreover, despite contributing to pervasive and longstanding psychological distress, subclinical levels of body dissatisfaction that do not result in clinically significant eating disorders may be difficult to treat because it is considered to be “normative” in today’s society for women to feel negatively about their bodies (Pearson, Follette, & Hayes, 2012).

Our hypothesis that the prioritization of cultural eating norms would be rare was supported by the fact that only 2 out of 34 participants endorsed this pathway, supporting prior research findings which point to the effects of key factors characterizing the developmental period of adolescence, such as the increased salience of media and peer pressures, and heightened rebellious and risk-taking propensities.

Our hypothesis that only a small number of participants would report engaging in disordered eating behaviors in the attempt to integrate the conflicting expectations was supported, in that this strategy was only endorsed by 8.8% of participants, but we also discovered that participants reported finding adaptive methods of integrating these expectations, such as by engaging in moderate exercise following larger meals. This finding reflects potential effects of personality differences – that is, individuals with a more anxious temperament may be more likely to panic when they observe fluctuations in weight, and decide to engage in maladaptive eating behaviors to lose the weight as quickly as possible.
On the other hand, individuals with a less anxious temperament may be more willing to engage in more moderate patterns of behavior, which would result in slower weight change, but healthier emotional and physical outcomes in the long term. It is also possible that individuals following the maladaptive integration pathway was actually much greater, but that they simply failed to report these behaviors due to feelings of shame or guilt. As such, these individuals may have reported past (rather than present) engagement in disordered eating, thereby conflating the ‘marginalization’ category, and serving to explain why we observed such high rates of unresolved body dissatisfaction within this category.

Finally, our hypothesis that a small number of women would report not perceiving a sense of conflict at all was supported by the fact that only 11.8% of women endorsed this pathway, due to genetic factors (e.g. fast metabolism). It is interesting to note that their body weight likely influenced the amount of pressure that they received (i.e. because of their lower body weight, others are less likely to comment that they need to lose weight), which may have resulted in healthier body image and exemption from disordered eating behaviors. The irony in this situation is that individuals who are genetically predisposed to have heavier bodies, and who would presumably be at a higher risk of feeling negatively about their bodies even without social reinforcement, would also have received more social pressure to lose weight, which would likely have exacerbated their desire to lose weight and increased their risk of developing disordered eating behaviors.

Clinical implications

An important finding of the present study was that disordered eating behaviors that are initially prompted by a perception of conflicting expectations can be exacerbated by other life stressors in some women. This is a particularly important clinical implication, because research has found that Chinese adolescents are subjected to increased levels of academic pressure (Chen, 2017), which may result in worsened long-term outcomes for this population.
Another notable finding is that lower body weight in itself was not a predictor of more positive outcomes. That is, some women reported that although they were not overweight by any means, weight gain above a normative standard, as defined by peers in their social environments was considered aversive, while others reported that they were not dissatisfied with their current bodies necessarily, but that they *would* be, if they were to gain weight in the future, or if they were unable to maintain their current eating and exercise behaviors.

Importantly, this fear of prospective weight gain may present itself as a significant risk factor in the development of disordered eating in the present population of Chinese women. Due to a history of food shortages and labor-intensive agricultural jobs that has resulted in perceptions of thinness as the societal norm, a fear of eventual weight gain may go largely undiscovered in these cultural contexts. However, in observance of the rapid economic development occurring in China, which have resulted in significant changes in dietary habits and activity patterns (e.g. increased consumption of processed foods and a shift from labor-intensive jobs to sedentary ones), it is likely that individuals in this population will experience an increase in weight (Gordon-Larsen, Wang, & Popkin, 2014). As such, previously unacknowledged weight biases combined with the lack of understanding on how to mentally and physically cope with weight changes may contribute to the development of disordered eating attitudes and behaviors in this population.

Finally, in support of previous research findings that Chinese patients may have different rationales for disordered eating behaviors, the present study found that body dissatisfaction in our sample of Chinese women did not always stem from the fear of becoming fat or a strong desire to lose weight, and that this finding was true even in a nonclinical population. For instance, many women stated that they were dissatisfied with the shape of their bodies (e.g. muscle tone, body proportions) rather than their weight specifically, and that this dissatisfaction was a key motivator in their disordered attitudes and
behaviors. These findings suggest that disordered eating attitudes and behaviors may not necessarily come hand in hand with fat phobia amongst Chinese women, suggesting a need for future editions of diagnostic manuals to consider including non-fat-phobic presentations of eating disorders.

**Proposed preventive interventions**

Considering that eating disorders and mental health concerns more generally are becoming increasingly prevalent in Chinese contexts, implications of current study findings for methods of prevention in the future are warranted.

As suggested above, perceived lack of control over dietary and exercise behaviors that contribute to body shape was often linked to higher susceptibility of engaging in disordered eating behaviors. Thus, implementing interventions that educate adolescents on concrete methods to promote mental and physical health through diet and exercise may be effective ways of preventing the onset of eating disorders. Accordingly, previous research supports the idea that structured weight control interventions that consider the holistic health of the patient (i.e. emotional, social, mental and physical) can decrease bulimic pathology, promote maintenance of healthy weight and increase positive affect (Stice, Presnell, Groesz, & Shaw, 2005).

Moreover, the emphasis should be placed on more subjective measures of wellbeing and on teaching adolescents to become more aware of internal bodily sensations, rather than on externally based outcomes such as weight or body shape. This approach to improved body image and relationship with food is supported by research conducted by Zucker et al. (2018), which found that teaching viscerally hypersensitive children to approach bodily sensations with a sense of curiosity rather than fear reduced the experience of pain and associated avoidance behaviors.
Acceptance and commitment therapy, which implements mindfulness practices to teach individuals to broaden their focus in life to be less weight-centric, and to accept rather than try to necessarily improve their bodies, has also shown promise in decreasing body-related anxiety and in increasing feelings of acceptance (Pearson et al., 2012). This form of therapy, which frames the intervention as a one that is functionally, rather than diagnostically driven, is also more likely to reach populations that may stigmatize seeking help for clinically significant disorders. As discussed in the results, women may not even be aware that their body-related distress is a notable reason to seek help, as this dissatisfaction is perceived to be so normal amongst their peers. In other words, they may not even have entertained the possibility that there exists a life in which weight or shape do not play a central part. Therefore, the framing of an intervention as a life enhancement, rather than a way to target a problem, can be helpful in recruiting participants who may not necessarily perceive there to be something ‘wrong’ with their current attitudes and behaviors.

Limitations and future directions

By investigating how conflicting expectations regarding eating and body shape may serve as culturally specific risk factors in the development of eating disorders in Chinese adolescent women, the present study contributes to a greater understanding of an underserved population.

However, there are several limitations of the present study that should be noted. Although the sample size of the present study exceeds that of most qualitative studies conducted on disordered eating in Chinese women in the past (n = 34, compared to n ≤ 25 in past studies that we are aware of), it cannot be assumed that the present study encompasses the experiences of all Chinese adolescent women. As there is still much to learn about the etiology and manifestation of eating disorders and body image disturbances in Chinese populations, qualitative studies should be the focus of future research to capture the lived
experiences of these individuals and to understand a broader range of risk and protective factors.

An increased understanding of culturally specific idioms of distress through the use of qualitative methods can also support the development of culturally adapted versions of validated quantitative measures. The key benefits of using existing measures are that this allows for enhanced credibility of research findings and allows for comparisons to be made between different groups. In turn, these studies can be used to highlight elevated levels of distress in previously under-researched populations, underlining the urgency to address these issues to government bodies and other organizations that can provide funding and large-scale support. In short, exploring these culturally specific idioms through qualitative studies can pave the way for the development of better measurement tools for underserved populations, and promote a better quality of research to be conducted in the future.

A second limitation is that the present study focuses on the specific contributions of conflicting expectations in the development of disordered eating. On the one hand, this narrowed focus is a key strength of this study, as it deeply explores the effects of these expectations. On the other hand, this also means that other risk factors brought up by participants during their interviews were not fully investigated. For instance, several participants mentioned that they often felt worse about themselves during high-stress periods of work or school, which prevented them from being able to exercise and resulted in body shape changes. Thus, it may be important for future studies to examine how familial pressure for high academic achievement, which may be especially strong in Chinese contexts given the greater accountability that individuals feel towards the expectations of their parents, as well as the stereotype of the ‘model minority’, may be correlated with increased eating disorder risk.
Another limitation of the present study is that even though the present study enforced the criteria of restricting the study sample to women who had two Chinese parents, it is worth considering whether factors such as having grown up in different regions of China, number of years living in a Chinese speaking country or number of years attending a school where English was the medium of instruction could have influenced the level of pressure that these women felt from each set of expectations. Future studies should aim to control for each of these factors, and to see if differential outcomes are conferred.

Due to the cultural stigma attached to the reporting of disordered eating attitudes and behaviors, and mental illnesses in general, it is likely that women hesitated to openly report these maladaptive attitudes and behaviors in response to interview questions. Thus, the present study may have been unable to capture the true extent of the negative impact conferred by the perception of conflicting expectations in these women. Future studies should therefore examine participants’ reactions in an experimental manipulation with the use of deception (i.e. not reveal the true intention of the study), or through observing participant behavior in naturalistic settings, such as social mealtime situations.

Finally, considering that the development of China in social, economic and political spheres has resulted in increased mental health concerns to date, it is clear that future studies should be conducted with increased urgency, in order to provide sufficient support for this population during a time of rapid transition and change.
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[https://doi.org/10.1177/0022022105284495](https://doi.org/10.1177/0022022105284495)


Appendix A: Interview questions

1. Describe a typical mealtime situation with your family. What are some cultural rules that you need to follow (e.g. Are you allowed to decline food from your elders)?

2. What do food and the act of eating symbolize in your culture? How is food wastage viewed?

3. Do you feel the pressure to be thin? If so, what sources does this pressure come from?

4. Describe what the ideal female in your culture looks and behaves like. What features or behaviors are considered “perfect” or “acceptable”? What features or behaviors are considered deviant?

5. Do you ever feel that there is a conflict between cultural expectations around eating and expectations about body shape? Why or why not? If you do perceive there to be a conflict, how do you manage/attempt to resolve this conflict?

6. How do these conflicting expectations influence your emotions? How do these conflicting expectations influence how you perceive your body? Are you satisfied with your body? Why or why not?
### Appendix B: Codebook used for data analysis

<table>
<thead>
<tr>
<th>Question</th>
<th>Coding method</th>
<th>Guiding questions for data analysis</th>
</tr>
</thead>
</table>
| 1. Describe a typical mealtime situation with your family. What are some cultural rules that you need to follow (e.g. Are you allowed to decline food from your elders)? | **Mealtime rules**  
  - *Choose one:* Strict or relaxed  
  **Pressure to finish food**  
  - *Choose one:* Present or absent | Do strict mealtime rules (especially those concerning the need to finish food) predict increased likelihood of conflict perception? |
| 2. What do food and the act of eating symbolize in your culture? How is food wastage viewed? | **Symbolic meaning of food/eating**  
  *Use “query” function in Nvivo to indicate frequency of certain themes*  
  - Social bonding  
  - Celebration/cultural traditions  
  - Wealth (respect for host)  
  - Eating as part of daily routine  
  - Sustenance of physical health  
  - Food as a product of hard work  
  **Food wastage**  
  *Choose one:* Accepted, not accepted or context dependent | Is food an integral part of Chinese culture? If so, what themes are emphasized and contribute to this sense of importance?  
 Do negative attitudes towards food wastage predict increased likelihood of conflict perception? |
| 3. Do you feel the pressure to be thin? If so, what sources does this pressure come from? | **Perceived pressure to be thin**  
  *Choose one:* Yes or no  
  **Sources of pressure**  
  *Use “query” function in Nvivo to indicate frequency of certain themes* | Does perceived pressure to be thin increase likelihood of perceiving conflict?  
 Does perceived pressure to be thin predict use of maladaptive methods of |
4. Describe what the ideal female in your culture looks and behaves like. What features or behaviors are considered “perfect” or “acceptable”? What features or behaviors are considered deviant?

<table>
<thead>
<tr>
<th>Expectations for ideal female</th>
<th>Are conflicting expectations present in cultural ideals of femininity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use “query” function in Nvivo to indicate frequency of certain themes</td>
<td></td>
</tr>
</tbody>
</table>

5. Do you ever feel that there is a conflict between cultural expectations around eating and expectations about body shape? Why or why not? If you do perceive there to be a conflict, how do you manage/attempt to resolve this conflict?

<table>
<thead>
<tr>
<th>Perception of conflict</th>
<th>Method of conflict resolution</th>
<th>What factors influence the increased likelihood of perceiving conflict?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose one: Yes/no</td>
<td>Choose one:</td>
<td>What factors predispose individuals to pursue each of the conflict resolution methods?</td>
</tr>
<tr>
<td></td>
<td>Prioritization of thinness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prioritization of relationships/culture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Active reconciliation of cognitions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marginalization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conflict not perceived</td>
<td></td>
</tr>
</tbody>
</table>

6. How do these conflicting expectations influence your emotions? How do these conflicting expectations influence how you perceive your body? Are you satisfied with your body? Why or why not?

<table>
<thead>
<tr>
<th>Body satisfaction</th>
<th>What factors predict body satisfaction versus dissatisfaction?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose one:</td>
<td>Satisfied/Not satisfied</td>
</tr>
<tr>
<td></td>
<td>Strongly affected, 2 =</td>
</tr>
</tbody>
</table>

Coder rated: How strongly does negative body image perceptions affect the participant’s overall quality of life?

Rate on a scale of 1 - 4 (1 = Strongly affected, 2 = Strongly affected, 3 = Moderate effect, 4 = No effect)
<table>
<thead>
<tr>
<th>Moderately affected, 3 = Slightly affected, 4 = Not affected at all.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(<strong>See Appendix C for extended coding criteria</strong></td>
</tr>
</tbody>
</table>
Appendix C: Criteria for coder-rated impact of negative body image perceptions

<table>
<thead>
<tr>
<th>Rating</th>
<th>Features of response</th>
</tr>
</thead>
</table>
| 1      | **Strongly affected by negative body image:**  
|        | • Currently engaging in disordered eating behaviors and/or attitudes (e.g. bingeing and purging, severe restriction; strong fear of becoming fat) |
| 2      | **Moderately affected by negative body image:**  
|        | • Not satisfied with body, but does not actively engage in disordered eating behaviors or attitudes.  
|        | • Triggered by specific situations (e.g. when unable to find clothing that fits in certain stores)  
|        | • Actively working towards improving body image perceptions/recovering from past disordered eating behaviors |
| 3      | **Slightly affected by negative body image:**  
|        | • Mostly satisfied with body, but indicates that they would like to change certain aspects (e.g. lower body fat percentage, less flabby arms) |
| 4      | **Not at all affected by negative body image:**  
|        | • Complete satisfaction with body and/or has never been concerned with body shape |