Stigma control model of dysregulated eating: A momentary maintenance model of dysregulated eating among marginalized/stigmatized individuals

Tyler B. Masona,∗, Kathryn E. Smithb,c, Jason M. Lavenderd

a Department of Preventive Medicine, University of Southern California, United States
b Sanford Research, Fargo, ND, United States
c Department of Psychiatry and Behavioral Science, University of North Dakota School of Medicine and Health Sciences, Fargo, ND, United States
d Department of Psychiatry, University of California, San Diego, La Jolla, CA, United States

ARTICLE INFO

Keywords:
Stigma
Dysregulated eating
Binge eating
Emotional eating
Marginalized groups

ABSTRACT

Stigma is a factor commonly experienced by marginalized groups that may serve as a maintenance factor for dysregulated eating. In the current paper, we propose a momentary maintenance model, grounded in previous theoretical and empirical research, termed the stigma control model of dysregulated eating. Our model proposes that momentary experiences of stigma lead to emotional distress, which in turn is associated with engagement in numerous maladaptive stigma management strategies intended to curb future stigma. These stigma management strategies, however, serve to increase emotional distress, which in turn promotes dysregulated eating. This model has applications for understanding the maintenance of dysregulated eating among marginalized groups, as well as implications for developing novel treatments and refining existing treatments for dysregulated eating. Future studies should use methods that capture momentary experiences to evaluate the proposed stigma control model of dysregulated eating.

1. Introduction

There are many groups in society that are marginalized, oppressed, or treated negatively due to some aspect of their self. Some examples of oppressed groups (although not an exhaustive list) include racial and ethnic minorities, socioeconomically disadvantaged individuals, women, sexual and gender minorities (e.g., lesbian, gay, bisexual, and transgender [LGBT] individuals), and individuals with higher body weights. Dysregulated eating, which encompasses a number of maladaptive eating patterns that often occur in response to environmental and internal cues unrelated to hunger (e.g., affect, sight or smell of food), occurs to a similar or greater extent in marginalized groups compared to their non-marginalized counterparts (Diemer, Grant, Munn-Chernoff, Patterson, & Duncan, 2015; Hudson, Hiripi, Pope, & Kessler, 2007; Jennings, Kelly-Weeder, & Wolfe, 2015; Meneguzzo et al., 2018).

Two commonly studied forms of dysregulated eating are emotional eating (i.e., eating in response to emotions) and binge eating (i.e., eating an objectively large amount of food with a subjective sense of loss of control over eating). These behaviors are core components of eating disorders (Ackard, Fulkerson, & Neumark-Sztainer, 2011; American Psychiatric Association, 2013). In addition, dysregulated eating is associated with risk and maintenance of weight gain and obesity (Neumark-Sztainer, Wall, Haines, Story, & Eisenberg, 2007; Yanovski, 2003) and is strongly related to other psychiatric disorders—including mood and anxiety disorders, impulse control disorders, and substance use disorders (Hudson et al., 2007).

Research has shown that reductions in dysregulated eating over the course of cognitive behavioral therapy for binge eating (i.e., the gold standard treatment for binge eating; Fairburn, 2008) is associated with more weight loss and improvement in eating disorder psychopathology (Pacanowski et al., 2018), as well as reductions in caloric intake and improvements in depression and emotional eating (Masheb, Dorflinger, Rolls, Mitchell, & Grilo, 2016). However, even when individuals with binge eating receive efficacious treatments, many remain symptomatic (e.g., Grilo, Masheb, Wilson, Gueorguieva, & White, 2011; Masheb, Grilo, & Rolls, 2011).

Currently, standard treatments targeting dysregulated eating do not address the unique experiences of marginalized individuals. Therefore, developing appropriate and testable models that explain maintenance mechanisms of dysregulated eating among marginalized groups may help inform efforts to enhance treatment outcomes. In particular, the improvement of existing treatments or development of novel interventions for dysregulated eating has the potential to reduce the excess
mortality and health burden (e.g., obesity, eating disorders, other psychiatric conditions) experienced by marginalized individuals (Ngui, Khasakhala, Ndetei, & Roberts, 2010).

Notably, a long history of research utilizing multiple different methodologies has linked stress to dysregulated eating (Greeno & Wing, 1994; Razzoli, Pearson, Crow, & Bartolomucci, 2017). Individuals self-reporting more stressful events and perceived stress also tend to endorse greater binge eating (Rosenbaum & White, 2015; Zhu et al., 2016). In addition, experimental induction of a stress state in the laboratory is related to subsequent overeating (Epel, Lapidus, McEwen, & Brownell, 2001; Schulz & Laesle, 2012). Naturalistic studies using ecological momentary assessment (EMA) also have found that momentary feelings of stress predict dysregulated eating within a day (Goldschmidt et al., 2014). Overall, this body of research indicates that people experiencing more chronic stress in general report more dysregulated eating, and also that particular instances of stress may precipitate dysregulated eating. Thus, the unique stressful experiences that marginalized individuals experience (i.e., stigma and discrimination) may play an important role in dysregulated eating in these groups.

In an integrated momentary maintenance model, this paper posits mechanisms that may maintain dysregulated eating among marginalized individuals. Momentary models describe the interrelations between variables in daily life. That is, they are focused on proximal, in-the-moment associations between variables occurring within a relatively short timeframe (e.g., minutes, hours). We hypothesize a momentary model of stigma and dysregulated eating, termed the stigma control model of dysregulated eating. This model proposes several theoretical, momentary mechanisms that link everyday stigma experiences to dysregulated eating among stigmatized individuals. It is important to note that the purpose of this model is to explain the momentary occurrence of dysregulated eating and how it is maintained among those who engage in such behaviors; models of the onset of dysregulated eating and related negative health behaviors (e.g., why dysregulated eating happens in some individuals and not others) have been extensively studied both generally (Pennesi & Wade, 2016) and in marginalized populations (Brewis, 2014; Hatzenbuehler, 2009; Mason, Lewis, & Heron, 2018; Sikorski, Luppia, Luck, & Riedel-Heller, 2015).

2. Stigma

Stigma is conceptualized as a collection of stressors including labeling, stereotyping, separation, status loss, and discrimination that can (a) be embedded in institutions, governments, and the broader society (i.e., structural/institutional stigma); (b) be perpetrated by others including friends, family, co-workers, or strangers (i.e., external stigma); and (c) be internalized and enacted by the self (i.e., internalized stigma; Link & Phelan, 2001). Common examples of structural stigma include laws that fail to protect certain groups or unequal pay for certain groups; examples of external stigma include objective events such as discrimination, harassment, or victimization; and examples of internalized stigma include expectations of rejection, internalizing societal feelings towards one’s group, and concealing or hiding one’s identity (if possible). Stigma can also be vicariously experienced through knowledge about others’ stigma experiences, such as hearing about stigma or discriminatory events in the media or the stigma experiences of friends and family (Mason, Maduro et al., 2016).

Experiences of stigma and discrimination are rather common with a population-based survey finding that 33.5% of adults experienced major lifetime discrimination and 60.9% of adults experienced day-to-day discrimination (Kessler, Mickelson, & Williams, 1999). In addition, a recent review of daily life research suggests that discrimination may be more common than is reported in survey research (Potter, Brondolo, & Smyth, 2017). Further, intersectionality research suggests that individuals with multiple marginalized identities (e.g., black lesbian women, gay men with higher body weights) may experience greater levels of discrimination compared to individuals with only one marginalized identity (Seng, Lopez, Sperlich, Hamama, & Meldrum, 2012).

Threats to one’s social self (e.g., social esteem and identity, acceptance, and status), such as stigma, have been theorized to elicit negative emotions (Kemeny, Gruenewald, & Dickerson, 2004). Numerous studies have shown that stigma is damaging to both mental and physical health (Hatzenbuehler, Phelan, & Link, 2013; Krieger, 2000; Pascoe & Smart Richman, 2009), and an extensive literature has found stigma to be associated with increased emotional distress (Pascoe & Smart Richman, 2009; Quinn et al., 2014). Daily diary studies have also demonstrated that daily experiences of racist, heterosexist, and sexist stigma and discrimination are associated with poor mental health (see Potter et al., 2017 for a review). Further, laboratory research has found that individuals exhibit psychophysiological responses to racism and discrimination that are associated with negative emotions and distress (Harrell, Hall, & Taliaferro, 2003). Finally, intersectional research has reported that individuals with multiple marginalized identities experience greater negative distress due to compounded stigma (Grollman, 2012; Seng et al., 2012).

The psychological mediation framework (Hatzenbuehler, 2009; Sikorski, Luppia, Luck, & Riedel-Heller, 2015) conceptualizes both external and internalized stigma as fundamental causes of negative mental health, including psychological distress and substance use; however, this framework does not specifically address dysregulated eating. Several models have been developed in the weight stigma literature linking stigma to dysregulated eating (e.g., Hunger, Major, Blodorn, & Miller, 2015; Tomiyama, 2014). Hunger et al. (2015) provided a model conceptualizing weight stigma as a stressor that leads to negative health behaviors, including unhealthy eating, through motivation to avoid stigma (e.g., not going to the gym), motivation to escape stigma (e.g., dieting), and reduced self-regulatory capacity. Further, Tomiyama’s (2014) cyclic obesity-weight-based stigma (COBWEBS) model suggests that the physiological stress and emotional response stemming from weight stigma experiences promotes increased eating.

Similarly, the aforementioned models suggest negative emotion as an important mechanism that links stigma to negative health behaviors, although do not specifically address momentary relations between variables. However, the psychological mediation framework, which focuses on more long-term experiences over months/year, theorizes that interpersonal, cognitive, and emotional coping resources (i.e., stigma management strategies) mediate the association between stigma and negative mental health (Hatzenbuehler, 2009; Sikorski et al., 2015). It is important to consider stigma management strategies in momentary models linking stigma and dysregulated eating.

3. Stigma management

Individuals have a variety of personal and social identities that together comprise their self-concept, which is strongly influenced by the social environment in which they develop (Stryker, 1980). Identity control theory posits that self-regulation is activated when there are discrepancies between identities and social feedback, which may include rejection, bullying, and discrimination (Burke, 1991). Feedback that is inconsistent with one’s identities may lead to identity disturbance and the experience of stigma, which in turn motivates an individual to engage in identity control and self-regulatory behaviors (i.e., stigma management strategies) to manage negative emotional experiences associated with stigma. The extant research has implicated a number of maladaptive social/interpersonal, cognitive, and emotional factors as strategies that may be used to manage stigma (e.g., Hatzenbuehler, 2009):

Interpersonal stigma management strategies include withdrawal behavior in response to stigma (e.g., avoidance, isolation, not seeking social support, having difficulty talking to others; Himmlstein, Young, Sanchez, & Jackson, 2015; Sawyer, Major, Casad, Townsend, & Mendes, 2012). Individuals may also engage in other maladaptive interpersonal
behaviors, including excessive reassurance seeking (i.e., repetitive attempts to seek approval and support from others; Joiner, Metalsky, Katz, & Beach, 1999), negative feedback seeking (i.e., soliciting negative feedback from others; Pettit & Joiner, 2001), self-silencing (i.e., suppressing personal feelings and opinions when interacting with others; Jack, 1991), and co-rumination (i.e., excessive discussion of personal problems and stressors with others; Rose, 2002). Stigmatized individuals may also engage in maladaptive emotion-focused stigma management strategies (Hatzenbuehler, 2009; Sikorski et al., 2015), such as catastrophizing, rumination/brooding, blaming oneself or others, and avoidance and suppression of emotions (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Garneski & Kraaij, 2007).

Vigilance is another type of strategy involving extreme attention to one's surroundings in order to avoid possible stigma. Vigilance may also include attempts to display a perfectionistic self-presentation and excessive self-monitoring in order to combat possible negative feelings regarding one's identity and prevent harassment and discrimination from others. Finally, stigmatized individuals may engage in "passing" behaviors, which involve attempts to adhere to norms of the majority culture in order to better "fit in" to society and reduce the chance of future discrimination. For people with concealable identities (e.g., minority sexual orientation), passing often involves strong efforts to conceal one's identity to avoid stigma.

### 3.1. Stigma management strategies and negative emotion

While stigmatized individuals may engage in management strategies in an effort to cope with stigma experiences in the moment, such strategies are actually associated with negative emotional states—both prolonged negative emotional states and momentary/daily negative emotion (e.g., Lehavot & Simoni, 2011; Mason & Lewis, 2015; Potter et al., 2017). Recent reviews (Hatzenbuehler, 2009; Sikorski et al., 2015) have shown that maladaptive stigma management strategies are associated with a host of negative mental health problems, including depression, anxiety, and low self-esteem. In addition, isolating oneself and failure to seek social support are associated with negative emotions (Li, Lee, Thammawijaya, Jiraphongsa, & Rotheram-Borus, 2009; Mason, Heron, Braitman, & Lewis, 2016; Mason & Lewis, 2015).

Studies also show consistent associations between reassurance seeking, negative feedback seeking, and self-silencing and distress (Hurst & Beesley, 2013; Mason, Maduro et al., 2016; Pettit & Joiner, 2001). Moreover, maladaptive support-seeking behaviors often elicit a negative response from one’s social network, which may serve to further increase negative emotions (Joiner et al., 1999; Pettit & Joiner, 2001; Williams & Mickelson, 2008). This is in line with the psychological mediation framework, such that stigma may contribute to emotional distress and negative mental health through the use of maladaptive stigma management strategies (Hatzenbuehler, 2009; Sikorski et al., 2015).

Furthermore, the use of stigma management strategies may ultimately compound negative emotional experiences associated with stigma. This pattern of exacerbated negative affect resulting from maladaptive efforts to cope with aversive emotional states is consistent with the broader research literature demonstrating that maladaptive emotion regulation strategies often lead to increased negative affect rather than reductions in negative affect (Kirkegaard Thomsen, 2006; Selby, Anestis, Bender, & Joiner, 2009). For instance, the emotional cascade model (Selby et al., 2009) describes the proximal processes by which emotional distress and rumination (i.e., a maladaptive emotion regulation strategy) are associated with dysregulated behaviors. This model proposes an amplifying feedback loop in which rumination about negative emotions and events further intensifies negative emotions, which increases the likelihood of engaging in dysregulated behaviors as a means to distract oneself from the increasingly aversive emotional state. As such, while maladaptive coping strategies may provide temporary relief from rumination and negative emotions in certain circumstances, these strategies can subsequently exacerbate negative affect, thereby perpetuating this cycle.

### 4. Stigma, stigma management, and dysregulated eating

Perceived rejection and disapproval of one's identities may be an important factor related to dysregulated eating. For example, discrimination and stigmatization have been associated with binge eating and emotional eating among racial minorities (Harrington, Crowther, Payne Henrickson, & Mickelson, 2006; Higgins & Bardone-Cone, 2016; Johnson Risica, Gans, Kirtania, & Kumanyika, 2012), sexual minorities (Katz-Wise et al., 2015; Mason & Lewis, 2015; 2016), transgender individuals (Watson, Veale, & Saewyc, 2016), and individuals with higher body weights (Almeida, Savoy, & Boxer, 2011; Ashmore, Friedman, Reichmann, & Musante, 2008; Douglas & Varnado-Sullivan, 2016; Farrow & Tarrant, 2009; O'Brien et al., 2016; Wott & Carels, 2010). A number of studies have also linked weight teasing among children and adolescents to binge eating (e.g., Neumark-Sztainer, Falkner, Story, Perry, & Hannan, 2002; Suisman, Slane, Burt, & Klump, 2008). In addition to external stigma, internalized stigma (e.g., expectations of rejection, self-stigma) has been shown to be related to dysregulated eating among sexual minorities (Mason & Lewis, 2015; 2016) and individuals with higher body weights (Douglas & Varnado-Sullivan, 2016; Durio et al., 2012; O'Brien et al., 2016). Other identity-related factors such as acculturative stress have been found to be associated with binge eating as well (Higgins & Bardone-Cone, 2016).

In addition to stigma, evidence also suggests that stigma management strategies are related to dysregulated eating. Numerous studies show associations between maladaptive emotion regulation strategies and dysregulated eating (Aldao et al., 2010; Butler, Young, & Randall, 2010; Mason & Lewis, 2015). Furthermore, a variety of interpersonal stigma management strategies are related to dysregulated eating. For instance, dysregulated eating is associated with social isolation (Mason, Heron, Braitman, & Lewis, 2015; Mason & Lewis, 2015) and lower social support (Almeida et al., 2011; Mason, Maduro et al., 2016).

In sum, research suggests that the social and cultural environment is broadly related to dysregulated eating, as evidenced by relationships between stigma, stigma management, and dysregulated eating. However, there is a paucity of theoretical and empirical research examining the specific mechanisms by which stigma may promote dysregulated eating. Moreover, previous empirical research and theoretical models on stigma and health (including dysregulated eating) have been limited by primarily cross-sectional or macro-longitudinal and theoretical models (e.g., psychological mediation framework), which do not directly address the momentary processes that may play a critical role in the occurrence and maintenance of problematic behavioral patterns such as dysregulated eating.

We propose that momentary emotional processes function as underlying mechanisms in the process by which stigma contributes to dysregulated eating. As previously discussed, both the experience of stigma and the use of stigma management strategies are associated with negative affect and emotion dysregulation. Negative affect has also been consistently implicated in relation to eating disorder psychopathology. A prominent theory of dysregulated eating is the affect regulation model, which proposes that eating is a coping mechanism that is prompted by and regulates negative affect (Polivy & Herman, 1993). In support of this model, a number of studies examining momentary associations of negative affect and binge eating in the natural environment using ecological momentary assessment (EMA) have found that negative affect precipitates binge eating and subsequently decreases following binge eating (Berg et al., 2015; Engel et al., 2013; Smyth et al., 2007). That is, binge eating appears to regulate negative affect, which serves to negatively reinforce and maintain this behavior over time. Furthermore, evidence suggests that individuals who engage in dysregulated eating develop an expectancy that food will alleviate their negative affect (Pearson, Wonderlich, & Smith, 2015). Given this...
evidence, we posit that stigma management strategies lead to momentary increases in negative affect, which promotes dysregulated eating behaviors as maladaptive efforts to regulate that negative affect.

5. The stigma control model of dysregulated eating

Informed by identity control theory (Burke, 1991), the psychological mediation framework (Hatzenbuehler, 2009), and the emotional cascade model (Selby et al., 2009), we propose a stigma control model of dysregulated eating that posits that dysregulated eating is related to an individual’s attempts to manage experienced stigma via a momentary process occurring within a relatively brief timeframe (see Fig. 1). Specifically, this model suggests that when individuals experience stigma, they become emotionally distressed, which leads them to engage in stigma management strategies in an attempt to manage the negative emotions. Individuals may engage in stigma management strategies in the moment with the belief that they will help them cope with stigma experiences; however paradoxically, the strategies may ultimately promote further emotional distress that increases risk of subsequent dysregulated eating. Essentially, rather than alleviating prior emotional distress, maladaptive stigma management strategies exacerbate emotional distress, which in turn prompts dysregulated eating behaviors as efforts to manage the now intensified emotional distress.

We also propose that momentary emotional distress caused by stigma may be directly related to dysregulated eating behaviors. While individuals may first attempt to regulate stigma-related distress using stigma management strategies, in some instances, individuals may engage in dysregulated eating directly in response to emotion distress without first trying to regulate emotion with other strategies. Thus, the model also includes a path in which stigma leads to emotional distress, which is directly linked to dysregulated eating.

It is also important to note that the stigma control model of dysregulated eating conceptualizes stigma broadly. That is, the model proposes that there are a number of external and internalized forms of stigma that may occur in individuals’ everyday lives that may lead to distress and require the use of management strategies. Some forms of stigma may occur more commonly (e.g., teasing, shame toward oneself) while others may be comparatively less common (e.g., violence). Further, the model is universal with respect to groups, in that it can apply to all groups of marginalized individuals who engage in dysregulated eating. For example, our model would suggest that similar stigma-related mechanisms underlie the occurrence of dysregulated eating in individuals with higher body weights who experience stigma, African-American individuals who experience stigma, and LGBT individuals who experience stigma.

6. Existing evidence for mediational model

In our summary of evidence supporting the stigma control model of dysregulated eating, we primarily relied on empirical studies that examined bivariate relationships between variables in the model. However, the mediational links between variables we propose in our model have been supported by evidence from several studies, though most utilized cross-sectional data. Providing the strongest support for the proposed model to date, Mason and Lewis (2015) found that stigma was associated with increased binge eating via two consecutive mediating variables among lesbian and bisexual women. That is, stigma was associated with increased social isolation and emotional coping, which were in turn related to more emotional distress, and finally increased emotional distress was associated with more binge eating. In a similar model among lesbian women, Mason, Heron et al. (2016) reported that both sexual orientation- and weight-related discrimination were associated with decreased social support, which in turn were associated with more distress and social anxiety, which was finally related to increased disordered eating (including binge eating). Lastly, in one of the only studies of stigma and binge eating in the natural environment, increased reports of daily discrimination were related to increases in daily emotional distress and lowered self-awareness, and these were in turn related to more daily binge eating (Mason, Lewis, & Heron, 2017a, 2017b).

7. Conclusions and future directions

Dysregulated eating is an important health concern among marginalized groups, as it is related to a myriad of negative mental and physical health issues. However, theoretical models of dysregulated eating have typically not considered the unique experiences of these groups—most notably experiences of stigma. The goal of this narrative review was to develop and provide preliminary support for a momentary maintenance model that elucidates the processes by which experiences of stigma are related to dysregulated eating among marginalized individuals. Guided by a number of psychological theories of stigma and dysregulated behaviors, we proposed the stigma control model of dysregulated eating (see Fig. 1). This model posits that momentary experiences of stigma result in negative emotional reactions, which lead to the use of maladaptive strategies to manage the stigma-related negative affect. In turn, these maladaptive stigma management strategies lead to an increased emotional distress that promotes dysregulated eating as a means to regulate that distress.

The main tenets of the stigma control model of dysregulated eating have been generally supported by cross-sectional research. However, research examining the momentary relationships, both direct and indirect (mediational) pathways, proposed in this model is scant. In order to test the stigma control model of dysregulated eating, research using EMA methods (Stone & Shiffman, 1994) is needed. EMA involves data collection over multiple time points throughout the course of the day for a limited timeframe (e.g., one or two weeks), thereby remedying some of the limitations of cross-sectional studies (Bolger, Davis, & Rafaeli, 2003) and allowing for the evaluation of momentary relationships between variables, often at the level of minutes and hours.

The stigma control model proposes microtemporal processes, which unfold over a short period of time. Because EMA involves collecting data at repeated time points across the day, it is best-suited to test processes and associations with important momentary influences. In addition, EMA data provides for temporal ordering in examining...
microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.

As previously noted, EMA has been used in only a limited fashion in examining stigma as a maintenance factor of dysregulated eating. Previous research has relied heavily on cross-sectional designs, likely examining stigma as a maintenance factor of dysregulated eating. Ability to measure variables close in time to when they are experienced is critical in our microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.

As previously noted, EMA has been used in only a limited fashion in examining stigma as a maintenance factor of dysregulated eating. Previous research has relied heavily on cross-sectional designs, likely examining stigma as a maintenance factor of dysregulated eating. Ability to measure variables close in time to when they are experienced is critical in our microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.

As previously noted, EMA has been used in only a limited fashion in examining stigma as a maintenance factor of dysregulated eating. Previous research has relied heavily on cross-sectional designs, likely examining stigma as a maintenance factor of dysregulated eating. Ability to measure variables close in time to when they are experienced is critical in our microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.

As previously noted, EMA has been used in only a limited fashion in examining stigma as a maintenance factor of dysregulated eating. Previous research has relied heavily on cross-sectional designs, likely examining stigma as a maintenance factor of dysregulated eating. Ability to measure variables close in time to when they are experienced is critical in our microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.

As previously noted, EMA has been used in only a limited fashion in examining stigma as a maintenance factor of dysregulated eating. Previous research has relied heavily on cross-sectional designs, likely examining stigma as a maintenance factor of dysregulated eating. Ability to measure variables close in time to when they are experienced is critical in our microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.

As previously noted, EMA has been used in only a limited fashion in examining stigma as a maintenance factor of dysregulated eating. Previous research has relied heavily on cross-sectional designs, likely examining stigma as a maintenance factor of dysregulated eating. Ability to measure variables close in time to when they are experienced is critical in our microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.

As previously noted, EMA has been used in only a limited fashion in examining stigma as a maintenance factor of dysregulated eating. Previous research has relied heavily on cross-sectional designs, likely examining stigma as a maintenance factor of dysregulated eating. Ability to measure variables close in time to when they are experienced is critical in our microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.

As previously noted, EMA has been used in only a limited fashion in examining stigma as a maintenance factor of dysregulated eating. Previous research has relied heavily on cross-sectional designs, likely examining stigma as a maintenance factor of dysregulated eating. Ability to measure variables close in time to when they are experienced is critical in our microtemporal processes; thus, this method allows for the evaluation of the directionality of pathways hypothesized in the model. For example, does stigma predict an increase in use of stigma management strategies over the course of hours, and do stigma management strategies predict likelihood of dysregulated eating episodes? Further, assessments are delivered in a relatively unobtrusive manner in a participant's natural environment (Iida, Shrout, Laurenceau, & Blodorn, Major, & Kaiser, 2016), increasing the ecological validity of data and providing the ability to measure variables close in time to when they are experienced.