
KADİR HAS UNIVERSITY
SCHOOL OF GRADUATE STUDIES
PROGRAM OF PSYCHOLOGY

# PREDICTING RESTRICTED EATING IN YOUNG WOMEN FRIENDSHIPS: DYADIC EFFECTS OF BODY DISSATISFACTION, PERCEIVED SOCIAL SUPPORT AND FRIENDSHIP QUALITY

EZGİ ÇOBAN

MASTER'S THESIS

ISTANBUL, JULY, 2019

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MASTER'S THESIS

Submitted to the School of Graduate Studies of Kadir Has University in partial fulfilment of the requirements for the degree of Master's in the Program of Psychology

ISTANBUL, JULY, 2019

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METHODS OF DISSEMINATION

I, EZGİ ÇOBAN, hereby declare that;

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# ACCEPTANCE AND APPROVAL

This work entitled **PREDICTING RESTRICTED EATING IN YOUNG WOMEN FRIENDSHIPS: DYADIC EFFECTS OF BODY DISSATISFACTION, PERCEIVED SOCIAL SUPPORT AND FRIENDSHIP QUALITY** prepared by **EZGİ ÇOBAN** has been judged to be successful at the defense exam held on **17.07.2019** and accepted by our jury as **MASTER'S THESIS**.

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PREDICTING RESTRICTED EATING IN YOUNG WOMEN FRIENDSHIPS: DYADIC EFFECTS OF BODY DISSATISFACTION, PERCEIVED SOCIAL SUPPORT AND FRIENDSHIP QUALITY

# ABSTRACT

The main purpose of this study was to investigate interpersonal correlates of cognitive restraint eating pattern in young women. The interpersonal correlates were specified as body dissatisfaction, friendship quality and social support specific to dietary intake. Participants were 131 female dyads including same-sex best friends aged from 18 to 25. Dyadic data was modeled via Actor-Partner Interdependence Model. Two models were proposed. The first model aimed to examine indirect associations between one's body dissatisfaction and restricted eating in women friendship dyads via friend's dissatisfaction about one's body. The second model aimed to evaluate the relationship between perceived social support and restraint eating where friendship quality was mediating this relationship. Findings for the first model highlighted the importance of friends' dissatisfaction with each other's bodies on the link between body dissatisfaction on restricted eating. Findings for the second model indicated dyadic effects of perceived social support on restricted eating in best friendships regardless of friendship quality. These findings have unique contributions to literature illustrating interpersonal correlates of restricted eating.

**Keywords:** restricted eating, body dissatisfaction, friendship, perceived social support, female best-friends, dyadic.

GENÇ KADIN ARKADAŞLIKLARINDA BİLİŞSEL KISITLAMA YEME DAVRANIŞINI YORDAYAN FAKTÖRLER: BEDEN MEMNUNİYETSİZLİĞİ, ALGILANAN SOSYAL DESTEK VE ARKADAŞLIK KALİTESİNİN KİŞİLERARASI ETKİLERİ

# ÖZET

Bu çalışmanın temel amacı genç kadınlarda bilişsel kısıtlama yeme davranışının kişilerarası ilişkisel değişkenlerle ilişkisini incelemektir. Bu çalışmada beden memnuniyetsizliği, sosyal destek ve arkadaşlık kalitesi ilişkisel değişkenler olarak belirlenmiştir. Bu çalışmaya yaşları 18 ile 25 arası değişen ve birbirlerinin en iyi arkadaşı olan 131 kadın arkadaş çifti katılmıştır. Elde edilen diyadik veri Aktör-Partner Karşılıklı Bağımlılığı Modeli yöntemiyle analiz edilmiştir. Bu bağlamda iki model test edilmiştir. Ilk model kadın arkadaş çiftlerinin beden memnuniyetsizliği ve bilişsel kısıtlama arasındaki ilişkide arkadaşların birbirlerinin bedenleri hakkındaki memnuniyetsizliklerin dolaylı etkilerini incelemektedir. Ikinci model algılanan sosyal destek ve bilişsel kısıtlama arasındaki ilişkide arkadaşlık kalitesinin aracı değişken rolünü incelemeyi amaçlamıştır. Ilk modelin analiz sonuçları kendi beden memnuniyetsizleri ve bilişsel kısıtlama yeme davranşları arasındaki ilişkide arkadaşların birbirlerinin bedenleri hakkındaki memnuniyetsizliklerinin önemini vurgulamıştır. Ikinci modelin sonuçları algılanan sosyal desteğin bilişsel kısıtlama üzerindeki kişilerarası etkisinin arkadaşlık kalitesine bağlı olmadığını göstermiştir. Bu çalışma bilişsel kısıtlama yeme davranışı üzerindeki kişilerarası etkileri diyadik bir yaklaşımla inceleyerek literature katkı sağlamıştır.

**Anahtar Sözcükler:** yeme davranışı, beden memnuniyetsizliği, bilişsel kısıtlama, arkadaşlık, sosyal destek, en yakın kadın arkadaşlar, diyadik analiz.

# ACKNOWLEDGEMENTS

First and foremost, I would like to express my deepest gratitude to my advisor, Assoc. Prof. Aslı Çarkoğlu for her sincere support and guidance through my graduate education. She provided me great opportunity to grow as a researcher in an ethical and a wise academic perspective. She has been an inspiration for me to enable further solutions to obstacles in this period. I appreciate all her valuable contributions of time, effort, and ideas to make my thesis a productive experience.

I also want to thank to other professors in my committee Assoc. Prof. Tarcan Kumkale and Assoc. Prof. Nilüfer Kafesçioğlu for their valuable advice and constructive criticism to my research.

I am truly grateful to my best friend and beloved fiancé Furkan Tosyalı. His everlasting support, patience and unconditional love helped me to get through the difficulties during this process. He had thesis experience before me and he has always encouraged me to accomplish my best. Life is full of joy with his involvement.

Special thanks go to my dear friends Habul, Betül, Hasibe, İlknur, Nuran, Hilal and İrem. This friendship spirit helped me to stay alive.

Last but not least, I am grateful to my family for their endless love, support and understanding through my education. I sincerely thank them from my heart and will be truly indebted to them throughout my life.

*To my love Furkan,*

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# CHAPTER 1

# 1. INTRODUCTION

Social relationships can take many forms that include both familial and nonfamilial relationships. Previous research has been focused on to investigate associations between familial relationships and physical health, however, in daily life a significant amount of time is spent with among friends (Gitelson, & McDermott, 2006). Having close friendships makes us happier (Demir, 2015), also, having friends around affects physical health. Indeed, not only quantity but also quality of social relationships may have an effect on health behaviors. Research revealed that fewer and lower quality social relationships is found correlated with poorer physical health and increased risk for early mortality; on the other side, having more and better relationships is associated with better physical health (Holt-Lunstad, Smith, & Layton, 2010; De Vogli, Chandola, & Marmot, 2007). The findings led to a greater attention on quality of friendship of one's social network and source of social support, which may have important implications for health.

Health statistics released by Health Ministry including the years between 2012-2016, proposed visible increase in rates of underweight and obese people and decrease in rates of normal weight people (T.C. Sağlık Bakanlığı, 2017). Percentage of individuals with underweight increased from 3.9% to 4.2%; obesity increased from 17.2% to 19.6%; in contrast, normal weight decreased from 44.2% to 42.1%. Both increased levels of underweight and overweight rates and also decreased levels of normal weight among individuals indicate that there are deficiencies and faults in the dietary habits in general. Therefore, it is very important to conduct scientific research and develop research-based intervention programs targeting eating behavior.

Healthy dietary habits are at the heart of the process of protecting and improving physical health (World Health Organization, 2017; T.C. Ministry of Health, 2017). There are many factors that affect the dietary habits of individuals in daily life. These factors include various stable factors such as the genetic characteristics and age of the individual, as well as social factors such as lifestyle forms (such as exercise and smoking), stress, living conditions, family support and friendship. As the dietary status of the individual is one of the most important determinants of health, not only insufficient nutrition but also over and excessive eating may have negative consequences.

The basis of eating habits is laid in childhood (Lake et al., 2006), but the transition period from adolescence to young adulthood constitutes an important developmental milestone in eating behavior (Larson et al., 2011). Factors such as eating time, meal frequency and food choice, which are mostly in parental control during childhood, begin to be controlled by the individual in young adulthood and those eating habits are internalized (Suggs et al., 2018).

Transition from adolescence to early adulthood contains important changes such as changing the social environment, decreasing family dependence, and increasing the connection with peers and friends to intimate relationships. Especially when considering the family ties in Turkey, young adults generally leave the family home for the first time to get into university and this separation makes visible difference in their lives. Demographic results of a study conducted with 1020 university students showed that 42% of young adults live with friends at home, 40% live in dorms and only 20% live with their families. Living apart from a family home, acquiring new social environments such as university and work environment, and the economic conditions associated with this lifestyle affect the eating behavior of young adults (El Ansari et al., 2012). In this transition period, the time that individuals spend with their family decreases while they spend more time alone and with their friends (Winpenny et al., 2017). This transition period allows the behavior of individuals to be leaded increasingly by their friends.

With respect to the situation where young adults stand in Turkey, university students usually skip their meals, even they frequently have only single meal, they prefer fast food more and they try to soothe their hunger in daily routine (Heşemini et al., 2002; Durmaz et al., 2002; Garibağaoğlu et al., 2006). In a study conducted by Arslan et al. (1993), 65.6% of university students consumed three meals a day, while this rate was observed to decrease up to 54.1% in the study of Özçelik et al. (2004), and in 2012 only 50.1% of the students were consuming three meals a day (Özdoğan et al., 2012). In other words, the majority of students consume less than three meals a day and skip meals. Morning breakfast and lunch are the most skipped meals (Onurlubaş et al., 2015). The students listed the reasons for skipping the meal as lack of time, lack of appetite, not getting up in the morning and lack of the person who prepares the meal (Vançelik et al., 2007; Onurlubaş et al., 2015). Moreover, in a study by Korkmaz et al. (2005) examining the fast food consumption habits of university students, 64.8% of the young people have come to

the conclusion that they prefer such ready foods. The most important point here is that the changes in eating habits in this process are carried to later periods of adulthood (Vançelik et al., 2007). In addition, unbalanced and unhealthy diet in this period facilitates the emergence of many diseases such as cardiovascular diseases, diabetes, hypertension and obesity (Vançelik et al., 2007; Demory-Luce et al., 2004).

In this study, we focused on function of best friendships on one of the health behaviors, restricted eating behavior. We investigated how quality of friendships provides social support to partners in a friendship at dyadic level and in turn, how social support of each partner predicts restricted eating scores. Specifically, we proposed that high quality friendships facilitate partners to perform higher social support specific to dietary intake, in turn this social support interferes restricted eating scores of partners in interpersonal level.

## 1.1 Friendship and Health

In daily life, people often use the term ‘friend’ to describe people whom they form relationship in the close environment such as family members, spouses, acquaintances, or colleagues. Whereas, scientific definitions of friendship describe unique aspects of friendships and separate these qualities from other relationships such as family and romantic partners. Friendships are defined as voluntary, mutual, informal peer relationships that based on reciprocity from both sides and pursue a positive quality (Blieszner & Roberto, 2004; Argyle & Henderson, 1985; Hartup & Stevens, 1997). Friendship is different from family relationship regarding having voluntary choice of the target friend. Also, as opposed to professional relationships with colleagues and supervisors, friendships lean on informal, personal without hierarchy and regulations as in the professional relationships.

Friends in early and later in life occupy unique and important place in not only social domain but also health related issues. Friendships are important at least for three reasons. First of all, friendships, in adolescent and adult years, are vital regarding social development. The flow of new social roles during the transition to adulthood leads to changes in the quality and availability of relationships with others. Relationships with parents may change as young people become more independent and look for other relationships apart from the family (Hawkins, Villagonzalo, Sanson, Toumbourou Letcher, & Olsson, 2012). As part of this transition from family, friendships become increasingly essential to well-being (Hawkins et al., 2012). Friendships promote well-being at different stages of development by giving individuals the sense that they are loved, understood and appreciated (Hojjat & Moyer, 2017). Also, friends provide support to one another when facing developmental challenges (Hojjat & Moyer, 2017). Relationship with friends provides a climate that individuals can help each other to improve their lives where they have faced with problems in previous ages. So, friendships have potential to serve mutual healing interactions (Hojjat & Moyer, 2017). In a study conducted by Goswami (2012), the variables that affect children’s social relationships were assessed in relation to well-being. Through a very large sample, children rated their relationship with their family, friends and adults in their neighborhood. Children also reported their subjective well-being, their experiences of being bullied and the experiences of being treated unfairly by adults. Specifically, this study found that,

primarily family, then friends and neighborhood adults were found as the ones that contributed positively to children's subjective well-being. The very important point in this study friendships are closely related to the well-being of individuals. Positive affect in these friendships was found to make the second highest contribution on children's well-being. Goswami (2012) concluded that the positive bonds between children and their peers can be treated as an important potential to support positive development and more importantly subjective perception of health.

Secondly, as researchers often state that humans are social animals. We have various kinds of relationships, but friendships occupy a significant place among others. A considerable amount of the time spent with friends in everyday life (Hojjat & Moyer, 2017). As stated in the study of Larson (1983), while high school students spent 18% of their time with family, they spent 30% of their time, that represents 5 hours per day, with their friends. Similarly, a sample of employed women estimated that they spent 2.6 hours per day with friends in comparison to 2.7 hours per day with their spouses and 2.3 hours per day with their children (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). Furthermore, Kahneman and his colleagues stated that participants experienced greater positive mood when they were with friends compared to with spouses, children, other classes of people, or alone. Larson, Mannell, and Zuzanek (1986) obtained similar results, happiness is reached its peak when people are with both their spouse and friends together. Last but not least point is that, eating practices established in childhood are often carried into adulthood (Lake, Mathers, Rugg-Gunn, & Adamson, 2006). Thus, it is important to establish healthy eating patterns in childhood and to support them during adolescence (WHO, 2011). Children are strongly influenced by parents' attitudes and behavior; parents are gatekeepers of their children's healthy eating (Birch & Fisher, 1998). As the child grows older, secondary social characters such as friends and school occupy a great deal of importance in their lives (Chan, Prendergast, Gronhoj, & Bech-Larsen, 2010). Parental influence is expected to change as the child grows up to adolescence (Gitelson & McDermott, 2006). Therefore, in this case friends seem to influence individuals more. Correlations between adolescents' and their friends' eating behavior were also found suggesting that friends influence each other (Ball, Jeffery, Abbott, McNaughton, & Crawford, 2010; Salvy, de la Haye, Bowker, & Hermans, 2012. Friends have been found to influence healthy eating negatively (Fitzgerald, Heary, Nixon, & Kelly, 2013) by

sometimes encouraging each other to consume unhealthy foods in adolescent years (Croll, Neumark-Sztainer, & Story, 2001). Friends may restrict each other's intake of unhealthy foods by socially support each other (Howland, Hunger, & Mann, 2012).

Furthermore, the study of Baheiraei, Khoori, Foroushani, Ahmadi, and Ybarra (2014) contributes to understand better the key role of friendships in health domain. Results indicated that adolescents reported the preferred source of health information as their mothers (51.11%) and same-sex friends (40.11%). Furthermore, while adolescents getting older, they relied more on their friends (Baheiraei et al., 2014). In another study conducted by Moremen (2008), older women were asked whom they were closest to and how they contributed to their health. Similar to the previous study, women reported that the closest people to them as their mothers and their friends. In addition, those women described the ways their mothers and friends kept them healthy, primarily offering *advice and encouragement about diet*, *exercise* and *providing meals* (Moremen, 2008). The main message here is that people see their friendships as one of the closest relation type and tend to rely on their advices about health, especially dieting.

### 1.2. The Role of Friendship On Eating Behaviors

Dietary habit occupies an essential place supporting healthy development among children and adolescents. What children eat is found to influence their physical and mental health (Greer, 2006; Patel, Flisher, Hetrick, & McGorry, 2007), as well as academic performance (Florence, Asbridge, & Veugelers, 2008). For instance, children who eat unhealthy diets are at a greater risk of becoming overweight or obese (Ebbeling, Pawlak, & Ludwig, 2002). Although children and their parents are aware how important healthy diet is, children do not follow diets recommended by health personnel (Ervin, Kit, Carroll, & Ogden., 2012). Children are exposed to many stimulants when deciding what to eat and the decision processes include biological (e.g., allergies), psychological (e.g., self-efficacy and food preferences), social environmental (e.g., parents and friends), physical environmental (e.g., access to school food), and policy (e.g., healthy school lunch programs) factors (Patrick & Nicklas, 2005). Moreover, these influences regarding diet and eating behavior depend on the child's life-stage and social context (Birch, 1999). In early years, children are attached to their caregivers in their food choice and diet plan because they are not capable of preparing meals (Patrick & Nicklas, 2005; Pearson,

Biddle, & Gorely, 2009; Scaglioni, Salvioni, & Galimberti, 2008). During the transition from childhood to adolescence, children start to go to school and while the time spent with parents is decreasing, they spend more time alone and with friends. This transition allows their behaviors to be influenced more by their friends. As an illustration, children's views of how much their friends consume fruit and vegetable positively influence a children's fruit and vegetable consumption (Rasmussen et al., 2006).

To continue with the associations between friends' healthy food consumption and individuals' healthy food consumption, two studies examined this association and found conflicting results (Ali, Amialchuk, & Heiland, 2011; Bruening et al., 2012). Ali et al. (2011) investigated fruit and vegetable intake of a large sample of adolescents and found no association between adolescents' healthy food intake and their friends' healthy food intake. Bruening et al. (2012) found *best* friend's fruit intake are not associated with adolescents' fruit intake; however, they found an association between *best* friend's vegetable intake and an individual's vegetable intake.

There is a study that have examined effects of having a friend on health and eating patterns suggesting indispensable nature of friendships apart from parent and sibling relationships (Sherman, Lansford and Volling, 2006). Young adults were surveyed about their friendships, their sibling relationships, and their psychological well-being. Participants with harmonious (high warmth, low conflict) sibling relations and same-gender friends had the highest well-being. Participants with affect-intense (high warmth, high conflict) sibling relationships had low well-being. However, participants who had low-involved (low warmth, low conflict) and affect-intense same-gender friendships did not differ in well-being. When examining joint effects, having a harmonious same-gender friendship compensated for having a low-involved sibling relationship, but having harmonious sibling relations did not compensate for having low-involved friendships (Sherman et al., 2006).

When it comes to compare mothers and friends, elementary school aged children have been found to consume less from unhealthy snacks when they were with their mothers compared to they were with their friends (Salvy et al.,2011). Another study conducted by Salvy et al. (2009) found that adolescents consumed more food when with a familiar friend than when with an unfamiliar peer. These studies provide evidence for influence of friends' on child's and adolescent's food choices.

Moreover, Fitzgerald, Heary, Kelly, Nixon, and Shevlin (2013) conducted a study that aims to compare relative contributions of parent and peer support on healthy and unhealthy eating. Findings of this study showed that higher peer support for unhealthy eating was associated with adolescents' unhealthy food consumption. Moreover, parent support for healthy eating predicted adolescents' healthy food intake. Also, authors suggested a mediational model proposing that the link between peer support for unhealthy eating adolescents' unhealthy eating is mediated by adolescents' self-efficacy. According to this study, it seems that parents influence healthy eating while peers influence unhealthy eating. This finding suggests that it is important for future research to examine the effect of friend support for eating in later ages.

# 2. RESTRAINED EATING

Dietary restraint generally refers to the conscious cognitive effort to limit and control over food intake aiming to reduce or maintain body weight (Stunkard, 1981). While dietary restraint seems to be correlated with energy intake, dieting and other eating patterns, they represent distinct constructs theoretically. Therefore, restricted eating will be evaluated regardless of behavioural outcome of this cognitive effort to restrict food intake. For example, dieting is defined as adherence to a specific eating plan for purpose of weight loss. The main difference between dieting and dietary restrained is that one can engage in restricted eating by eating less than expected without having a proper diet list. Also, although diet list may vary in the content, dietary restraint does not include specific instructions about one's eating plan to ensure weight control. Restrained eaters tend to stabilize this eating pattern over time (Klesges et al., 1991), while dieting includes short term practices to lose weight (French et al., 1999).

Importantly, one can restrict eating by high cognitive effort without restricting energy intake. When palatable food is present, people may intent to restrict their eating cognitively, however they may still eat enough to maintain weight (Stice, Cooper, Schoeller, Tappe and Lowe, 2007). Also, research suggests that restrained eaters consume similar energy from food in comparison to non-restrained eaters (Stice, Cooper, Schoeller, Tappe and Lowe, 2007; Martin, Williamson and Geiselman, 2005).

To continue with the distinctions between energy restriction and cognitive efforts of dietary restraint, researchers draw distinctions in the definitions of successful attempts to dietary restraint. At the one end, there is "rigid restraint" conceptualized as an extreme dietary restraint. At the other end, there is "flexible restraint" characterized by limitation of certain foods in quantities rather than quitting foods entirely. These two approaches may lead to different eating patterns and markedly different outcomes (Westenhoefer, Engel and Holst, 2013).

Other researchers draw attention to similarity between successful dietary restraint and healthy dietary restraint or attempts to restraint disordered eating or unhealthy eating behaviors (such as skipping meals; Gillen, Markey and Markey, 2012).

## 2.1. Dietary Restraint and Eating Pathology

As indicated above, dietary restraint is often conceptualized as eating patterns that lead to negative and unsuccessful outcomes in which researchers define them disordered eating and weigh gain.

Findings of many research showed that either positive or negative emotions can stimulate overeating episode in restrained dieters so that higher dietary restraint predicts higher food intake (Polivy et al., 1978; Frost et al., 1982; van Strien, 2000; van Strien et al., 2003; Chua et al., 2004). The consequences of triggered emotions result in different outcomes for restrained and unrestrained eaters. For example, early studies found that depression and anxiety lead to less food intake and weight loss for unrestrained eaters, however restrained eaters disinhibited their eating and gained weight in response (Herman et al., 1975b; Polivy et al., 1976). Another line of research related to other emotional trigger showed that in response to stress, snacking behaviour has been reported more frequently among young adults (Roemmich et al., 2002). The more food intake pattern in response to stress may seem as a toll that distracts one's attention from the stressful event and serves a psychological function (Polivy et al., 1999a). This function proposal has been supported by the result suggesting that distress leads to overeating among restrained eaters and this overeating emerges independent of the taste of food (Hawks et al., 2008; French, Epstein, Jeffery, Blundell and Wardle, 2012).

When cognitive restraint is violated, restrained eating may end up with overeating in the forms of disinhibition and counter-regulation (Herman et al., 1975a). Disinhibition is defined as impulsive eating or loss of control over inhibiting food intake. Counter-regulation of eating occurs when having unexpected increased food intake following a highly large food portion. It means that if restrained eaters believe their current level of food intake is a violation of their dietary restraint, they give up cognitive effort to restraint and continue to eat as more as they have eaten in the first place (Polivy, 1976; Spencer and Fremouw, 1979). In addition, high restraint eaters are more prone to the eating patterns of disinhibition and counter-regulation as compared to low restraint eaters. This kind of eating patterns remain significant after controlling for body size and actual food consumption.

## 2.2. Benefits of Dietary Restraint

Restraint eating has often been associated with pathological eating, however, not all dietary restraint patterns lead to eating pathology (Wadden, Foster and Sarwer, 2004; Wadden and Stunkard, 1986). Successful dietary restraint has potential to result in positive effects for energy restriction and weight management.

For people who suffer from overweight and obesity, restricted eating can provide beneficial health outcomes (Garvey, Ryan and Look, 2012; Wadden and Stunkard, 1986). Attempting restriction of food intake may provide gradual weight loss in successful restraints for obese people (Wing, Lang and Wadden, 2011). Different from overweight and obesity, normal weight individuals who engage in long-term cognitive restriction benefit from reduced triglycerides, fasting glucose and insulin in blood (Fontana, Meyer, Klein and Holloszy, 2004; Racette, Weiss and Villareal, 2006).

Ample research also suggests that obese people are not at high risk for binge eating when they are on weight loss programmes (Porzelius, Houston, Smith, Arfken and Fisher, 1996; Sherwood, Jeffery and Wing, 1999). Due to the reason that availability of restriction during pre-treatment, dietary restraint helps to reduce binge eating episodes (da Luz, Hay and Gibson, 2015). Furthermore, as highlighted by recent reviews of literature dietary restraint in daily life can be conceptually different from restriction provided by obesity treatments. Therefore, in order to reach target population by inclusive suggestions, it is recommended that health researchers should include issues related to social aspects of the eating patterns (Star and Hay, 2014).

As a result in the scope of cognitive restraint in eating, some restrained eaters do not lose control and achieve successful restraint. Therefore, those restrained eaters do not show disinhibition and counter-regulation patterns in eating (Stotland et al., 1991; Westenhoefer et al., 1994; van Strien, 1997b; van Strien et al., 2000; Ouwens et al., 2003). Some people have a greater tendency toward impulse overeating, which is described as disinhibition, and this tendency may lead them to behave disinhibited and counter-regulated in eating practices compared to people who have equal restraint scores (Ruderman et al., 1979). These findings highlight the inadequate measurement of restraint scales in which cannot detect intentions and actual behaviour. For example, one study provided evidence that restrained eaters who initially rated their self-control high in eating, ended up with disinhibition more than people with low self-control

(Kirschenbaum et al., 1991). In addition to this inadequacy, it is important to point out other reasons to keep people engaging in restraint eating such as social correlates.

### 2.3. Restricted Eating and Friendship Quality

There is some evidence for the protective effect of social relationships on eating behaviors. Relationship quality was associated with eating disorders and overeating behavior in the literature by a limited number of studies (Schutz and Paxton, 2007; Gerner and Wilson, 2005). According to the participants' reports eating pathology was found as negatively correlated with positive qualities of friendships, indicating that friendships including higher positive characteristics is related to decreased eating disorders (Schutz and Paxton, 2007). In addition, it has been reported that friends behave similarly in terms of restricted eating behaviors (Woelders et al., 2012).

More specifically, during adolescence and early adulthood, friendship ties are so important to individuals that eating disorders have been found more prevalent in individuals with poor friendship (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004). Furthermore, there are few studies examining the role of social relations in shaping eating behavior in terms of quality of friendship and there is no consensus on the findings yet. In Gerner and Wilson's (2005) study, although the quality of friendship was related to the concerns about body image, it was not found related to restricted eating behaviors. In contrast, Schutz and Paxton (2007) found negative qualities of friendship to be associated with restricted eating behavior. For instance, higher friendship alienation, conflict and competitiveness has been positively correlated with higher scores on dietary restraint. This inconsistency in results leads researchers to suggest that further studies are needed to explain the relationship among social support, friendship quality and eating patterns (Gerner and Wilson, 2005; Holsen et al., 2012).

Even if same sex or opposite sex friendships, and romantic relationships occur highly relevant in young women’s life, restrained eating patterns may not be equally affected from these relationships. A study examining the effects of relationships on eating behavior associated with pathological eating, especially bulimic symptoms, found that lower levels of satisfaction with male relationships, but not female relationships, were found as related to higher levels of bulimic symptoms (Thelen, Kanakis, Farmer, and

Pruitt, 1993). Whether this kind of interpersonal influence applies to cognitive restraint of dietary intake needs further investigation (Cain, Bardone-Cone, Abramson, Vohs and Joiner, 2010).

### 2.4. Friendship Quality and Social Support

In the transition period of adolescence and adulthood, the social support from the family decreases while the social support from friends is increasing in the social support literature (Cheng and Chan, 2004). Due to the fact that starting to university is one of the milestones that young adults encounter, they become more independent of parents' influence through separation from home and they socialize more with their friends. However, the data and findings about the social support of university students about nutrition and eating behavior are limited (Stanton et al., 2007). In particular, unlike other age groups, university students are expected to gradually be influenced by their close friends based on friendship quality.

The best friends are separated from other peer groups as one-to-one mutual friendships with intimacy and trust, and therefore the quality of relationship with the best friend makes a difference in perceived social support (Sharpe et al., 2014; Gerner et al., 2005). This is because friendship develops through a series of stages and based on the positive and negative results of these stages, the relationship evolves in a positive or a negative direction. Friendship initiation begins an acquaintance period in which individuals think that they are similar to one another in a variety of subject and they try to know each other better. The first initiation stage prepares necessary conditions to get into the next two stages: being close friends or best friends. In those transitions periods, friend partners begin to see each other more frequently, they communicate more often, open and in detailed. These points help friendships to be closer through trust. While developing this kind of feelings, life events become more important between partners because they care about each other more than ever. This caring also includes reciprocal social support. Once partners become intimate, they disclose both positive and negative life events and nature of reciprocity in friendship encourages further communication and disclosure. As the disclosure and communication process continue, social support begin to accompany friendship. Higher friendship quality seems to precede social support between partners,

because individuals tell each other everything and disclose their most private thought and feelings once they become best friends (Berndith, 2002). Moreover, as friendship grows, people share personal concerns and troubles with each other depending on perceived trust. The consideration that partners trust to one another strengths the magnitude, availability and reliability of social support.

The general social support takes place in friendships as mentioned above, increases the likelihood of receiving specific type of social support when needed. At the later stages of close friendships, potential embarrassment is reduced and partners can request for help in times of crisis (Barnes and Duck, 1994). So, partners remain ready to help each other even without presence of out-loud request. This effect basically takes its root from that friends know the challenges in each other's lives and they have already been talking about the crises.

### 2.5. Restricted Eating and Social Support

Friends can contribute to each other's health development by providing social support (Sharpe et al., 2014). In the literature most studies have focused on explaining social support from the perspective of *receiving* the social support. However, *providing* social support to close others is also related to one's own health outcomes (Sias and Bartoo, 2007; Schroeder, Penner, Dovidio and Piliavin, 1995).

Social support is an important variable in the acquisition and maintenance of healthy eating behavior in the literature (Stanton et al., 2007). The finding that social support for healthy dietary intake is related to dietary habits has been reported in many studies (Campbell et al., 1998; Sallis et al., 1987). It was also emphasized that eating-specific social support rather than general social support was associated with eating behavior (Sallis et al., 1987).

Findings from the study conducted by Uchino (2009) stated that perceived social support is one of the most important contributions provided by relationships. Increased friend support has often been found to contribute to reductions in psychological distress (Cohen, 2004). In this regard, higher levels of friend support leads to greater self-esteem, companionship, social integration, and in turn, lower levels of psychological distress (Thoits, 2011; Cohen, 2004). Also, links between friend support and psychological

distress have been established; for instance, individuals who perceive friend support, reported decrease in psychological distress ratings (Ritsner, Modai, & Pozynosky, 2000). There is an inconsistency in the literature on the social support of friends in eating patterns. Some studies have found that support for healthy eating is associated with adolescents consuming healthy foods (Larson et al., 2009; Stanton et al., 2007). On the other hand, other studies reported no relationship (Steeves et al., 2015; Fitzgerald et al., 2013; Finnerty et al., 2009). Qualitative research suggests that peers encourage adolescents to eat healthy foods (Croll et al., 2001; Watt and Sheiham, 1997), but there are very few studies investigating the effect of friends on the eating habits of young adults (Sawka, McCormack, Nettel-Aguirre and Swanson, 2015). In all kind of relationships, every issue is two-sided. However, in these studies we only see how receiving aspect of social support is related to eating outcomes. The main absent point, that we include in this study, is that how providing social support affects one's eating outcomes in friendships Sawka et al., 2015).

### 2.6. Restricted Eating, Friendship and Body Dissatisfaction

Even though individuals' dietary intake is strongly influenced by cognitive strategies such as restricted eating, individuals also care about body image while regulating food intake. The way people see their bodies goes through a multidimensional way including physical, cognitive, emotional and social aspects (Megalakaki, Mouveaux, Hubin-Gayte and Wypych, 2013). Related to other variables in this study we also focused on social aspects in which we include not only personal imagines and feelings towards one's body, but also best friend's views about one's body. Body dissatisfaction refers to a discrepancy between perceived and ideal body images. This desired body image is constantly affected by feedbacks coming from social environment (Thompson et al., 1999). Previous studies devoted considerable amount of time to evaluate roles of family, media and peers (Rodgers and Chabrol, 2009; Groesz et al., 2002), however they skip to investigate views of best friends on body dissatisfaction. Some studies found correlation between eating patterns and body dissatisfaction, some others reached no significant results. For example, two cross-sectional studies presented that adolescent girls behave similar in dieting and have similar body image with their female friends (Paxton, Schutz and Wertheim, 1999; Hutchinson and Rapee, 2007). On the other hand, Gerner and Wilson (2005) investigated

a study where they examined friendship quality on restricted eating and body dissatisfaction and found no significant effect of friendship. Besides, in these studies strong correlations found among BMI, restricted eating and body dissatisfaction regarding one's attributions about one's body.

This study leaded two contributions to understand interpersonal associations among restricted eating, friendship quality and body dissatisfaction. Firstly, body dissatisfaction seems to be an intrapersonal factor that lies inside a person and affects only own outcome, however body dissatisfaction was defined as not only an individual concept but also interpersonal factor in this study. Friend dyads not only evaluated their own body dissatisfaction but also they reported their dissatisfaction with their friends' body. Secondly, friendship concept specified to same-sex best friends. This condition allows us to examine how body dissatisfaction evolves specifically in best friendship.

### 2.7. The Current Study

The main purpose of this study was examining social correlates of restricted eating including, friendship quality, social support and body dissatisfaction. In this regard, we proposed two dyadic models. The first model included a dyadic mediational link in which friend's dissatisfaction with one's body mediates the link between one's body dissatisfaction and restricted eating. The second model included a dyadic mediational link where friendship quality mediates the link between perceived social support and restricted eating of female best friends in emerging adulthood.

The current study has several contributions to existing literature related to friendship and health-related behaviors of individuals. First of all, we wanted to clarify the importance of friendship quality, body dissatisfaction and social support variables in the context of restricted eating behavior. Secondly, while looking at social correlates of dietary restraint, the social environment has been defined as parents or general friendships and peer groups in the literature. In this study, we took a step further and included friendship variable as *best friend* of young women. Measuring friendship functions in detail would help to decide whether best friends had a role in restricted eating behavior, rather than just measuring global positive and negative companionship characteristics. Additionally, the clarified definition of friendship would help to identify needs of target group for future

intervention programs. Thirdly, previous studies collected friendship related data at individual level. The most important contribution of this study was collecting data from best friend dyads at perceptual level. We specifically asked participants' views of dissatisfaction about their friends' bodies in addition to their own body dissatisfaction ratings. Thus, it could be seen how the restraint eating among young women can be related to dual social variables. In this regard, data coming from best friend dyads allowed us to comprehend proposed model through Actor-Partner Interdependence Mediational Model (APIMeM; Cook and Kenny, 2005; Kenny and Cook, 1999).

# CHAPTER 2

# 3. METHOD

## 3.1. Participants

Participants were 262 women (131 same-sex best friend dyads) aged from 18 to 25 years ($M_{age}$ = 20.93, *SD* = 1.44). Relationship duration of 131 same-sex best friend dyads was ranging from 7 to 216 months ($M_{duration(month)}$ = 41.90, *SD* = 38.69).

65% of the participants reported that they live with their family at home, 13% live with friends at home, 12% live with friends at dormitory, 8% live alone at home and 2% live alone at dormitory.

Participant best friends were reported that they see each other ranging 1 to 7 times a week (*M* = 4.07, *SD* = 1.53). In those meetings, they eat together 1 to 10 times a week (*M* = 3.80, *SD* = 2.29).

## 3.2. Procedure

Ethical approval was obtained from Kadir Has University Human Participants Ethic Committee. The measures used in this study uploaded in an online survey via Qualtrics. To guarantee both friends' participation to the survey without telling the nature of the survey questions to each other, we invited same-sex women best friends to office at the same time in Kadir Has University. One of the friends took the online survey in one office, the other one filled the online survey in another office. The best friends participated the same online survey in separated rooms simultaneously. This study announced in Kadir Has University via posters and class notifications. Some participants voluntarily participated, some others were given course credit for participation as announced. We used proximity of participants so that convenient sampling strategy was employed.

To ensure confidentiality of the information gathered, each participant had an individual identification number that matched one's best friend. The survey consisted of two parts that took 15 minutes to complete. In the first part, participants were asked to report demographic information (age, weight and height), health status (having chronic illness

or being on a diet) and best friend-related questions (name of the best friend, relationship duration and meeting frequency). In the second part, scales that measure friendship quality, social support, body dissatisfaction and restricted eating were administrated.

### 3.3. Measures

#### 3.3.1. Cognitive restraint

Cognitive restraint of dietary intake was assessed by using cognitive restraint subscale of Three Factor Eating Questionnaire-21 (TFEQ-21) developed originally by Stunkard and Messick (1985) and the scale further revised by Tholin, Rasmussen, Tynelius and Karlsson in 2005 as used lately. Turkish adaptation of the scale was provided by Karakuş, Yıldırım and Büyüköztürk in 2016. The scale is widely used as a tool in studies aiming to identify the extent that people engage in dietary restraint.

The scale consists of six items and first five items are responded on 4 item Likert type scale ranging from 1 (definitely false) to 4 (definitely true). The last item is scored on 8 item Likert type scale where 1 stands for eat whatever you want, whenever you want it and 8 stands for constantly limiting food intake, never 'giving in'. As recommended by Tholin et al. (2005) last item's 8 item Likert type scale was turned into 4 item Likert type scale. The final score was calculated based on following formula; Cognitive Restraint = [(Sum of the six items - 6) / 18] * 100 (Tholin et al., 2015; Karakuş et al., 2016). Higher scores indicate higher cognitive restraint pattern in eating.

The Turkish adaptation of the cognitive restraint subscale indicated good reliability ($\alpha$ = 0.81) as it does in the current study ($\alpha$ = 0.87).

Confirmatory factor analysis (CFA) of restricted eating was conducted. The covariance matrix was employed as input and maximum likelihood estimation was conducted in confirmatory factor analysis. In the assessment of model fit, goodness-of-fit indices including comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) were evaluated for CFA. Since chi-square value of the model is quite sensitive to sample size, Bentler comparative fit index was considered as an additional goodness of fit indices. Combination of cutoff values CFI > .90, RMSEA < .10, and SRMR < .10 is considered as good and CFI > .95,

RMSEA < .05, and SRMR < .05 is considered as indicator of excellent fit (Hu and Bentler, 1999).

The model fit indices showed a good fit for restricted eating scale [$\chi^2$ (9) = 34.860, $p$ < 0.001), CFI = 0.966, RMSEA = 0.105, SRMR = 0.033]. Factor loadings (shown in Table 3.1) ranged from 0.59 (item 4) to 0.84 (item 3).

**Table 3.1. Factor Loadings of Restricted Eating Scale**

| Item No | Items | Factor Loadings |
|---|---|---|
| 1 | Kilomu kontrol etmek için bilerek küçük porsiyonlarda yemek yemeği tercih ederim. | 0.760 |
| 2 | Bazı yiyecekleri beni şişmanlattığı için yemiyorum. | 0.773 |
| 3 | Kilo almaktan kaçınmak için öğünlerde yediğim yemek miktarını bilinçli olarak kısıtlıyorum. | 0.844 |
| 4 | Her zaman çekici yemekleri/besinleri fazla satın alarak evde bulundurmaktan kaçınırım. | 0.587 |
| 5 | İstediğimden daha azını yemek için caba sarf etmeye yatkınım. | 0.749 |
| 6 | Yemek yerken kendimi her zaman kısıtlarım. | 0.750 |
| | Mean | 35.79 |
| | Standart Deviation | 25.60 |
| | α | 0.87 |

*Note*. Standardized regression coefficients were reported.

### 3.3.2. Perceived social support specific to eating

Perceived social support specific to eating was assessed by social support scale developed by Sallis, Grossman, Pinski, Patterson and Nader in 1987. Those researchers found existing scales as inappropriate for use in studies of dietary intake, so that there was a need for new scales allowing the measurement of different types of social support from different social sources, specifically related to eating patterns. The scale includes 5 items responded on 5 item Likert type scale ranging from 1 (*never*) to 5 (*very often*). Higher scores indicated higher social support perceived by best friend. The original scale was tested with family and friends, and found as reliable ($\alpha = 0.81$). In this study, the scale had good reliability ($\alpha = 0.86$).

The Turkish adaptation was conducted for this study and the scale was back-translated in Turkish by two other researchers. Confirmatory factor analysis of social support scale was conducted on single factor as it was used in same way in the original inventory. The model fit indices showed a good fit [$\chi^2$ (5) = 28.287, $p < 0.001$), CFI = 0.959, RMSEA = 0.133, SRMR = 0.033]. Factor loadings (shown in Table 3.2) ranged from 0.70 (item 1) to 0.78 (item 2).

**Table 3.2. Factor Loadings of Perceived Social Support Scale**

| Item No | Items | Factor Loadings |
|---|---|---|
| 1 | Canım çektiği zamanlar sağlıksız yiyecekleri (kek, tuzlu cips) yememem için beni teşvik etti. | 0.700 |
| 2 | Değişen yeme alışkanlıklarım hakkında benimle konuştu. | 0.780 |
| 3 | Çok yağlı ve çok tuzlu yiyecekler yememem gerektiğini hatırlattı. | 0.759 |
| 4 | Yeme alışkanlıklarımı değiştirmem konusunda iltifat etti. | 0.734 |
| 5 | Eski yeme alışkanlıklarıma geri döndüğümde, bu konuda eleştiride bulundu. | 0.768 |
| | Mean | 2.32 |
| | Standart Deviation | 1.06 |
| | α | 0.86 |

*Note*. Standardized regression coefficients were reported.

### 3.3.3. Friendship quality

Friendship quality was assessed by McGill Friendship Questionnaire-Friend's Functions (MFQ-FF; Mendelson & Aboud, 1999). The 30-item questionnaire was used to measure same-sex as well as opposite-sex best friendship quality. The MFQ-FF originally consist of six subscales including stimulating companionship, help, intimacy, reliable alliance, emotional security, and self-validation, however we used scale means to compute and overall friendship quality score as allowed by the nature of the scale (Mendelson & Aboud, 1999). Items are rated on a nine-point Likert scale where 0 represents never and 8 represents always. A final and single score was calculated as the mean of the 30 items. The questionnaire was translated into Turkish by Özen, Sümer and Demir (2010). The questionnaire was found as reliable for the same-sex friendship quality ($\alpha$ = 0.98). Similarly, findings from this study pointed out reliability of MFQ-FF ($\alpha$ = 0.96).

Confirmatory factor analysis of co-regulation scale was conducted on a single factor that was intended to measure friendship quality between best friends as indicated in original study. The initial model did not present good fit to the data [$\chi^2$ (405) = 1837.114, $p$ < 0.001), CFI = 0.746, RMSEA = 0.070, SRMR = 0.067]. Modification indices were examined for further analysis. After following theoretically suitable modification indices (shown in Table 3.3 step by step), results indicated adequate fit to the data for friendship quality [$\chi^2$ (396) = 941.378, $p$ < 0.001), CFI = 0.903, RMSEA = 0.046, SRMR = 0.053]. Factor loadings (shown in Table 3.4) ranged from .42 (item 21) to .83 (item 30).

**Table 3.3. Modification Indices on Friendship Quality Questionnaire**

| Model | $\chi^2$ | *df* | *p* | CFI | SRMR | $\Delta\chi 2$ | $\Delta df$ |
|---|---|---|---|---|---|---|---|
| Initial | 1837.114 | 405 | <.001 | 0.746 | 0.067 | | |
| (Item 15 with 14) | 1613.580 | 404 | <.001 | 0.785 | 0.065 | 223.534 | 1 |
| (Item 24 with 23) | 1465.993 | 403 | <.001 | 0.811 | 0.062 | 147.587 | 1 |
| (Item 4 with 3) | 1350.157 | 402 | <.001 | 0.832 | 0.061 | 115.836 | 1 |
| (Item 9 with 7) | 1289.177 | 401 | <.001 | 0.842 | 0.059 | 60.980 | 1 |
| (Item 13 with 11) | 1232.510 | 400 | <.001 | 0.852 | 0.059 | 56.667 | 1 |
| (Item 19 with 18) | 1187.015 | 399 | <.001 | 0.860 | 0.058 | 45.495 | 1 |
| (Item 20 with 17) | 1149.440 | 398 | <.001 | 0.867 | 0.057 | 37.575 | 1 |
| (Item 14 with 12) | 1122.528 | 397 | <.001 | 0.871 | 0.055 | 26.912 | 1 |
| (Item 15 with 12) | 941.378 | 396 | <.001 | 0.903 | 0.053 | 181.150 | 1 |

*Note*. Correlation between error terms were added between items of friendship quality questionnaire.

**Table 3.4. Factor Loadings of Friendship Quality Questionnaire**

| Item No | Items | Factor Loadings |
|---|---|---|
| 1 | Eğlenceli şeyler yapmakla ilgili iyi fikirleri vardır. | 0.596 |
| 2 | Beni güldürür. | 0.730 |
| 3 | Onunla konuşmak heyecan vericidir. | 0.724 |
| 4 | Onunla beraber olmak heyecan vericidir. | 0.729 |
| 5 | Oturup sohbet etmek eğlencelidir. | 0.771 |
| 6 | İhtiyaç duyduğum zaman bana yardım eder. | 0.721 |
| 7 | Bana bazı şeyleri yapmamda yardımcı olur. | 0.598 |
| 8 | İhtiyacım olan şeyleri bana ödünç verir. | 0.564 |
| 9 | Bir şeyleri bitirmekte zorlandığımda bana yardımcı olur. | 0.556 |
| 10 | Bana bazı şeyleri nasıl daha iyi yapacağımı gösterir. | 0.570 |
| 11 | Üzgün olduğum zaman bunu bilir. | 0.675 |
| 12 | Sırlarımı anlatabileceğim birisidir. | 0.729 |
| 13 | Bazı şeyler canımı sıktığı zaman bunu bilir. | 0.727 |
| 14 | Özel konular hakkında kolayca konuşabileceğim birisidir. | 0.683 |
| 15 | Özel konuları anlatabileceğim birisidir. | 0.712 |
| 16 | Birbirimizi bir kaç ay görmesek bile benim arkadaşım olarak kalacaktır. | 0.677 |
| 17 | Kavga etsek bile benimle arkadaşlığını devam ettirmek isteyecektir. | 0.603 |
| 18 | Başkaları beni eleştirse bile benimle arkadaş kalacaktır. | 0.684 |
| 19 | Başkaları beni beğenmese bile benimle arkadaş kalacaktır. | 0.670 |
| 20 | Tartışsak bile benim arkadaşım olarak kalacaktır. | 0.661 |
| 21 | Kendimi onun yanında akıllı/zeki hissederim. | 0.425 |

| | | |
|---|---|---|
| 22 | Kendimi onun yanında özel hissederim. | 0.697 |
| 23 | İyi bir şeyler yaptığımda beni över. | 0.580 |
| 24 | Başarılı olduğum şeyleri vurgular. | 0.655 |
| 25 | Bana bazı şeyleri iyi yapabileceğimi hissettirir. | 0.795 |
| 26 | Yeni/farklı bir ortamda beni rahat hissettirecektir. | 0.657 |
| 27 | Korktuğum zamanlarda etrafımda olması iyi olur. | 0.691 |
| 28 | Endişelendiğim zaman beni iyi hissettirecektir. | 0.813 |
| 29 | Sinirlendiğim zaman beni sakinleştirecektir. | 0.714 |
| 30 | Üzgün olduğum zaman beni iyi hissettirecektir. | 0.831 |
| | | |
| | Mean | 6.95 |
| | Standart Deviation | 0.98 |
| | α | 0.96 |

*Note*. Standardized regression coefficients were reported.

### 3.3.4 Body dissatisfaction

Body dissatisfaction scores was assessed by a visual scale developed by Stunkard, Sørensen and Schulsinge (1983). This scale includes nine female body figures scored from 1 (indicating extreme underweight) to 9 (indicating extreme overweight). There are two questions regarding visual scale asking participants their view of current body figure and ideal body figure. Body dissatisfaction is calculated by the discrepancy between current and ideal figure. Participants initially rated dissatisfaction for their own bodies, then they evaluated their dissatisfaction with their best friends' bodies.

### 3.4. Data Analysis Strategy

First of all, descriptive and correlation analyses were administered to specific relationships between study variables. Then, dyadic model analysis was conducted through dyadic variables including body dissatisfaction, friendship quality and social support on outcome variable as restricted eating.

We recruited same-sex best friend women as our sample. There was no distinguishing variable to assign women best friends as first and second friend in friendship dyads. For this reason, distinguishability pattern of the data was required to be investigated for further analysis. Some dyads are considered as *interchangeable* when there is no way to distinguish two members of given dyads (Kenny and Ledermann, 2010). In our case, there was no variable to assign dyad members of women best friends. To statistically test for indistinguishability a method developed by Olsen and Kenny (2006) was used to estimate the APIMeM using SEM.

The first step in dyadic model analysis was assessment of indistinguishability within dyads. To test for indistinguishability within APIMeM 12 equality constraints were required (Olsen and Kenny, 2006). For complete indistinguishability: six constraints were imposed on all direct effects as $a_{A1} = a_{A2}$, $b_{A1} = b_{A2}$, $c_{A1} = c_{A2}$, $a_{P1} = a_{P2}$, $b_{P1} = b_{P2}$, $c_{P1} = c_{P2}$; one constraint was set in between predictors' means; two constraints for intercepts were set for mediator and outcome variable dyads and three constraints were set equal for variances of predictor, mediator and outcome variables.

Secondly, to overcome complexity of assessing mediation in dyadic data with indistinguishable dyads, the technique simplifying the APIMeM were used as recommended by Ledermann, Macho and Kenny (2011). The simplification method suggests testing four patterns in APIM including the actor-only, the partner-only, the couple and the contrast pattern. The actor-only pattern indicates that the actor effect is nonzero and the partner effect is zero. The partner-only pattern indicates that the partner effect is nonzero and the actor effect is zero. The couple pattern happens when the actor and the partner effects are different than zero and their magnitude is equal. The contrast pattern occurs when the actor and the partner effects are different than zero and equal in magnitude, however they have opposite signs. These dyadic patterns were estimated and tested by a parameter called *k*, which was defined as the ratio of the partner effect to the

actor effect (Kenny and Ledermann, 2010). If *k* equals to 0, the actor-only pattern takes place; if *k* includes 1 couple pattern is supported; and if *k* is -1, the contrast pattern is accepted.

Kenny and Ledermann (2010) recommended the computation of a bootstrap CI to statistically test the *k* patterns. CI computation presents direct information on occurrence of the specific dyadic patterns. When CI includes 0, but not 1 or -1, the actor-only pattern is indicated; when CI includes 1, but not 0, the couple pattern occurs; when CI includes -1, but not 0, contrast pattern takes place. After testing for dyadic patterns, *k* values were fixed to the patterns in which *k* verified.

In the next step, APIMeM was conducted on the proposed model with Mplus version 8.2 (Muthen and Muthen, 1998-2010). Model estimation was conducted using maximum likelihood estimation. To determine statistical significance of direct and indirect effects, p-values derived from a bias-corrected bootstrap 95% CI, based on 5000 bootstrap samples were used. While interpreting adequacy of goodness of fit indices, chi-square was used as an indicator, however, due to its sensitivity to sample size and normality assumption (Barrett, 2007), Comparative Fit Indices (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Residual (SRMR) were evaluated as additional goodness of fit indices (Hu and Bentler, 1999).

To summarize, data analysis strategy for APIMeM consist of three steps in the case of indistinguishable dyad members. First, indistinguishability of dyad members was estimated individually. Second, k value between predictor and mediator and k value between mediator and outcome were estimated and determined their confidence intervals (CI). Third, constraints on k values were placed to test whether CIs support specific dyadic patterns.

# CHAPTER 3

# 4. RESULTS

This chapter includes bivariate relationship among variables, indistinguishability assessment, k value interpretation to evaluate dyadic patterns and APIMeM results. To express dyadic pathways concretely, we labeled variables "you" and "your friend" in the dyadic models.

## 4.1. Descriptive and Correlation Analyses

As indicated in Table 4.1, correlation analyses across female best friends showed that restricted eating score of friend A and friend B were not associated with each other ($r$ = -.010, $p$ = .751). Similarly, perceived social support scores of friend A and friend B were not associated with each other ($r$ = .165, $p$ = .059). Friendship quality scores of both members in the friendship were also positively associated with each other ($r$ = .308, $p$ < .001). Self-reported body dissatisfaction scores of friends were found as not correlated with each other ($r$ = .160, $p$ = .059).

Within and between-person correlations also yielded significant associations. Specifically, restricted eating scores of friend A were found as significantly associated with both their own ($r$ = .374, $p$ < .001) and partner's perceived social support ($r$ = .216, $p$ < .01). Similarly, restricted eating scores of friend B were found as significantly associated with both own ($r$ = .168, $p$ < .05) and partner's perceived social support ($r$ = .268, $p$ < .01). Friendship quality scores of friend A were not correlated with their own ($r$ = -.046, $p$ = .516) and partners' restricted eating ($r$ = .042, $p$ = .597). Similarly, friendship quality scores of friend B were not associated with their own restricted eating ($r$ = .101, $p$ = .290), however significantly correlated with partners' restricted eating ($r$ = -.176, $p$ < .001). Friendship quality scores of friend A were positively associated with both their own social support ($r$ = .269, $p$ < .01), however not correlated with partner's social support ($r$ = .145, $p$ = .099). Friendship quality scores of friend B were positively associated with their own social support ($r$ = .238, $p$ < .05), however not correlated with partner's social support ($r$ = .082, $p$ = .354).

Moreover, higher body dissatisfaction reports of friend A were significantly correlated with their increased levels of restricted eating ($r = .332$, $p < .01$), higher BMI ($r = .645$, $p < .01$) and friend B's higher dissatisfaction with friend A's body ($r = .579$, $p < .01$). Similarly, higher body dissatisfaction reports of friend B were significantly correlated with their increased levels of restricted eating ($r = .281$, $p < .01$), higher BMI ($r = .599$, $p < .01$) and friend A's higher dissatisfaction with friend B's body ($r = .504$, $p < .01$).

**Table 4.1. Bivariate Correlations Among Variables**

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Restricted Eating of Friend A (you) | . | | | | | | | | | | | |
| 2 | Restricted Eating of Friend B (your friend) | -.010 | . | | | | | | | | | | |
| 3 | Perceived Social Support by Friend A from Friend B (you) | .374*** | .268** | . | | | | | | | | | |
| 4 | Perceived Social Support by Friend B from Friend A (your friend) | .216** | .168* | .165 | . | | | | | | | | |
| 5 | Friend A's Friendship Quality with Friend B (you) | -.046 | .042 | .269** | .145 | . | | | | | | | |
| 6 | Friend B's Friendship Quality with Friend A (your friend) | -.176* | .101 | .082 | .238** | .308*** | . | | | | | | |
| 7 | BMI of Friend A (you) | .284** | -.016 | .211** | -.053 | -.059 | .005 | . | | | | | |
| 8 | BMI of Friend B (your friend) | .052 | .210* | .003 | .075 | -.141 | -.072 | .324*** | . | | | | |
| 9 | Friend A's Body Dissatisfaction (you) | .332** | .072 | .218* | -.022 | .077 | .006 | .645** | .196* | . | | | |
| 10 | Friend B's Body Dissatisfaction (your friend) | .127 | .281** | .198* | .120 | .059 | -.122 | .215* | .599** | .160 | . | | |
| 11 | Friend A's Dissatisfaction about Friend B's Body (you) | .027 | .260** | -.042 | .122 | -.039 | -.021 | .119 | .690** | .074 | .504** | . | |
| 12 | Friend B's Dissatisfaction about Friend A's Body (your friend) | .269* | .102 | .264** | -.041 | .012 | -.051 | .701** | .216* | .579** | .331** | .121 | . |

Note. *$p < .05$; **$p < .01$; ***$p < .001$ two-tailed, (Friend A and B represent two partners who are in mutual best friendship).

**Table 4.2. Descriptive Statistics**

| | | M | SD | Min | Max |
|---|---|---|---|---|---|
| 1 | Restricted Eating of Friend A (you) | 35.072 | 26.113 | .00 | 100.00 |
| 2 | Restricted Eating of Friend B (your friend) | 46.514 | 25.158 | .00 | 100.00 |
| 3 | Perceived Social Support by Friend A from Friend B (you) | 2.393 | 1.045 | 1.00 | 5.00 |
| 4 | Perceived Social Support by Friend B from Friend A (your friend) | 2.251 | 1.090 | 1.00 | 5.00 |
| 5 | Friend A's Friendship Quality with Friend B (you) | 6.901 | 1.030 | 2.80 | 8.00 |
| 6 | Friend B's Friendship Quality with Friend A (your friend) | 7.013 | .947 | 3.37 | 8.00 |
| 7 | BMI of Friend A (you) | 21.352 | 3.813 | 15.59 | 37.25 |
| 8 | BMI of Friend B (your friend) | 21.297 | 3.016 | 16.61 | 31.99 |
| 9 | Friend A's Body Dissatisfaction (you) | .741 | 1.244 | -3.00 | 6.00 |
| 10 | Friend B's Body Dissatisfaction (your friend) | .763 | 1.233 | -3.00 | 4.00 |
| 11 | Friend A's Dissatisfaction about Friend B's Body (you) | .397 | .883 | -2.00 | 3.00 |
| 12 | Friend B's Dissatisfaction about Friend A's Body (your friend) | .344 | 1.087 | -2.00 | 4.00 |
| 13 | Age of Friend A (you) | 21.251 | 1.966 | 18 | 25 |
| 14 | Age of Friend B (your friend) | 21.038 | 1.993 | 18 | 25 |
| 15 | Relationship Duration (in months) | 41.891 | 38.692 | 7 | 240 |

(Friend A and B represent two partners who are in mutual best friendship), M = Mean, SD = Standard Deviation.

### 4.3. Assessment of Indistinguishability

To test for indistinguishability within APIMeM 12 equality constraints were required (Olsen and Kenny, 2006). For complete indistinguishability: six constraints were imposed on all direct effects as $a_{A1} = a_{A2}$, $b_{A1} = b_{A2}$, $c_{A1} = c_{A2}$, $a_{P1} = a_{P2}$, $b_{P1} = b_{P2}$, $c_{P1} = c_{P2}$; one constraint was set in between predictors' means; two constraints for intercepts were set for mediator and outcome variable dyads and three constraints were set equal for variances of predictor, mediator and outcome variables.

Testing for indistinguishability of the direct effects, variances, means and intercepts for the data, none of the effects within dyads were significantly different $\chi^2(12) = 15.173$, $p = .232$.

After setting actor effects equal within dyad members and also partner effects equal within dyad members, the dyads were found as indistinguishable. This result proposed that actor effects and partner effects in friend dyads were treated as equal in proposed model. More parsimonious model with empirically indistinguishable a, b and c effects was used for further analysis.

### 4.4. The First Model: One's Body Dissatisfaction Predicting Restricted Eating Via Friend's Dissatisfaction About One's Body

APIMeM was run estimating the role of one's body dissatisfaction on restricted eating via friend's dissatisfaction about one's body. Initial model with 12 equality constraints between indistinguishable dyadic variables proposed perfect fit to the data, $\chi^2$ (12) = 12.01, $p$ = 0.445), CFI = 1.000, TLI = 1.000, RMSEA = 0.002, SRMR = 0.076.

#### 4.4.1 Actor effects

Actor effects from one's own body dissatisfaction to one's dissatisfaction with one's friend's body yielded significant associations (*beta* = .130, *SE* = .0567, $p$ = .050). Your own body dissatisfaction predicted your increased dissatisfaction about your friend's body.

One's dissatisfaction about friend's body did not significantly predict restricted eating (*beta* = -.021, *SE* = .062, $p$ = .733) suggesting that your thoughts about your friend's body was not directly related to your restricted eating.

One's own body dissatisfaction was directly related to one's restricted eating (*beta* = .236, *SE* = .070, $p$ < .001). Higher dissatisfaction with the body predicted higher restriction in eating.

#### 4.4.2 Partner effects

Partner effects from one's body dissatisfaction to friend's dissatisfaction with one's body indicated significant results (*beta* = .522, *SE* = .047, $p$ < .001). Increased levels of your body dissatisfaction leaded increase in your friend's dissatisfaction with your body.

Friend's dissatisfaction with one's body was found significantly associated with one's restricted eating (*beta* = .139, *SE* = .069, $p$ < .050). Your restricted eating was directly affected by your friend's views about your body.

Partner effects of own body dissatisfaction on restricted eating was not significant (*beta* = .043, *SE* = .065, $p$ = .510). One's own body dissatisfaction was not directly related to friend's restricted eating.

### 4.4.3 Dyadic patterns of the APIMeM

After conducting dyadic data analysis with indistinguishable dyads, k values were computed to evaluate the dyadic patterns between predictor, mediator and outcome variables. According to the actor and partner estimates between variables, *k* values for a effects, for b effects and for c were computed.

For *k* value computed as the ratio of the actor effect to the partner effect for a effects, CIs not included "0 or 1" (*beta* = .2493, CI = 0.024, 0.492), suggesting that dyadic pattern was either partner-only or couple pattern in the relationship between one's body dissatisfaction and friend's dissatisfaction with one's body.

For *k* value computed as the ratio of the actor effect to the partner effect for b effects, CIs included "0" (*beta* = -.151, CI = -1.791, 0.724), meaning that only partner effect was found in the link between friend's dissatisfaction with one's body and one's restricted eating.

For *k* value computed as the ratio of the partner effect to the actor effect for c effects, CIs included "0" (*beta* = .182, CI = -0.268, 0.839), suggesting that actor-only pattern was accepted in the relationship between one's body dissatisfaction and one's restricted eating.

### 4.4.4 Indirect associations between body dissatisfaction and friend's dissatisfaction with one's body

The APIMeM findings yield one significant mediational pathway between own body dissatisfaction and restricted eating. In predicting restricted eating, partner-partner indirect pathways (*beta* = .072, *SE* = .036, *p* = .046) significantly predicted restricted eating. Increase in your body dissatisfaction predicted your friend's increased dissatisfaction about your body and in turn this link predicted your higher restricted eating.

**Table 4.3 Actor Partner Interdependence Results**

| *Effect* | *b* | *SE* | *p* |
|---|---|---|---|
| a effects (One's Body Dissatisfaction → Friend's Dissatisfaction with One's Body) | | | |
| Actor effect ($a_a$) | **.130** | **.067** | **.050** |
| Partner effect ($a_p$) | **.522** | **.047** | **<.001** |
| b effects (Friend's Dissatisfaction with One's Body → Restricted Eating) | | | |
| Actor effect ($b_a$) | -.021 | .062 | .733 |
| Partner effect ($b_p$) | **.139** | **.069** | **.044** |
| c effects (One's Body Dissatisfaction → Restricted Eating) | | | |
| Actor effect ($c_a$) | **.236** | **.070** | **<.001** |
| Partner effect ($c_p$) | .043 | .065 | .510 |

*Note*. Standardized regression coefficients were reported. Direct effects were set equal across dyad members. Significant findings are illustrated in bold.

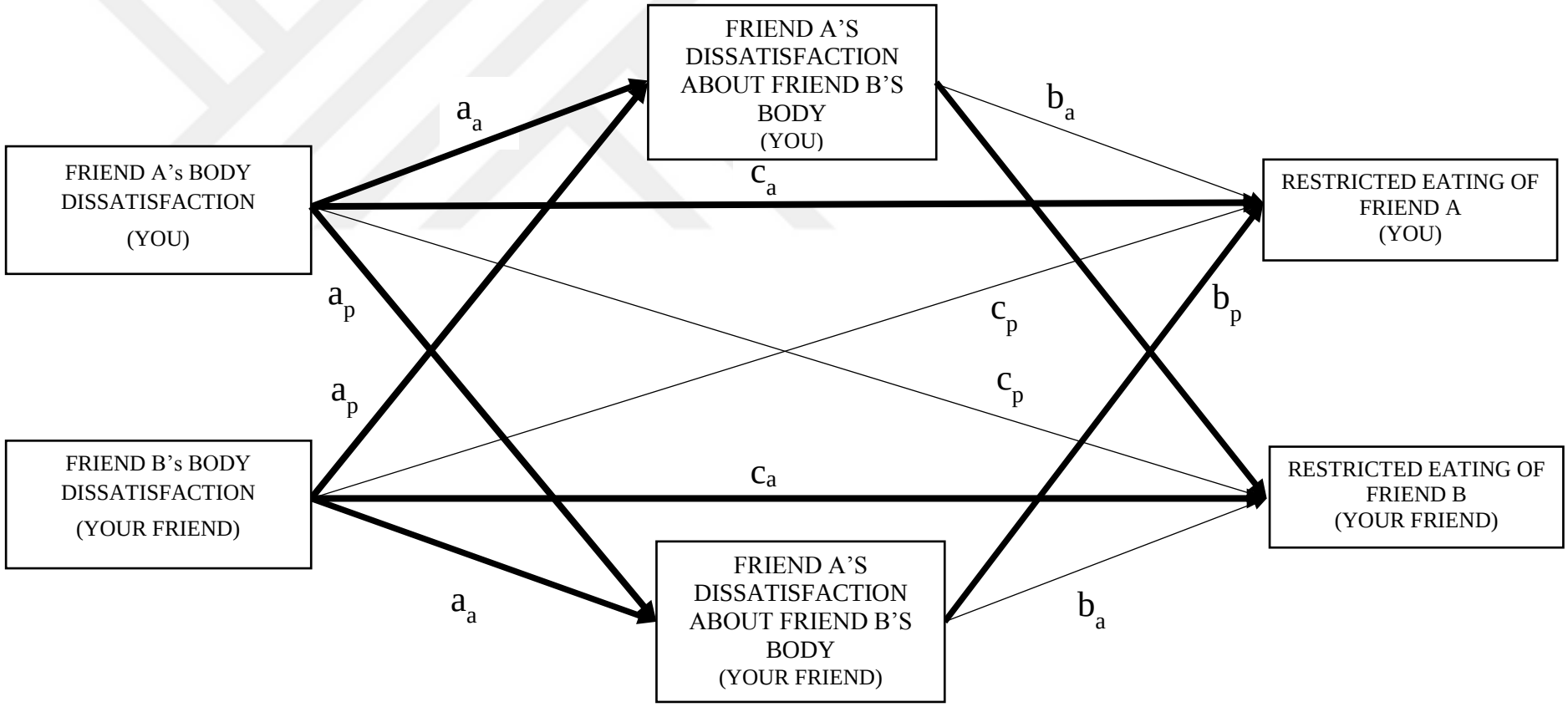


**Figure 4.1. Mediation Results**

*Note.* Significant pathways for the model are shown in boldface type.

### 4.5. The Second Model: Social Support Predicting Restricted Eating Via Friendship Quality

APIMeM was run estimating the role of social support on restricted eating via friendship quality. Initial model with 12 equality constraints between indistinguishable dyadic variables proposed a good fit to the data, $\chi^2$ (12) = 15.27, $p$ = 0.227), CFI = 0.952, TLI = .943, RMSEA = 0.046, SRMR = 0.117.

#### 4.5.1 Actor effects

Actor effects from perceived social support to friendship quality were found significant (*beta* = .235, *SE* = .055, $p < .001$). One's perceived social support predicted one's friendship quality suggesting that higher social support perceived from best friend was associated with increased quality in best friendships.

Friendship quality did not significantly predict restricted eating in actor effects (*beta* = -.022, *SE* = .067, $p$ = .746), suggesting that one's perception of friendship quality was not linked with own restricted eating.

Actor effects from social support to restricted eating were found significant (*beta* = .252, *SE* = .069, $p < .001$). The finding suggested one's perceived social support in best friendships directly correlated with one's restricted eating.

#### 4.5.2 Partner effects

We also tested if partners' report was associated with participants' own evaluations. Partner effects from perceived social support to friendship quality indicated non-significant results (*beta* = .081, *SE* = .055, $p$ = .144), suggesting that in best friendships, partner's perceived social support was not linked with actor's perception of friendship quality.

On the link between mediator and outcome, partner's friendship quality significantly predicted actor's restricted eating, (*beta* = -.149, *SE* = .076, $p$ = .051), meaning that in best friendships partner's increased perception of friendship quality was associated with actor's decreased restricted eating. As your friend's perceived friendship quality increased, your restricted eating decreased.

Partner effects of social support on restricted eating were also significant (*beta* = .241, *SE* = .066, $p < .001$). Your restricted eating was directly predicted by your friend's perception of social support in best friendships.

### 4.5.3 Dyadic patterns of the APIMeM

After conducting dyadic data analysis with indistinguishable dyads, k values were computed to evaluate the dyadic patterns between predictor, mediator and outcome variables. According to the actor and partner estimates between variables, *k* values for a effects (from perceived social support to friendship quality), for b effects (from friendship quality to restricted eating) and for c effects (from perceived social support to restricted eating) were computed.

For *k* value computed as the ratio of the partner effect to the actor effect for a effects, CIs included "0" (*beta* = .343, CI = -0.061, 0.780), suggesting that actor-only pattern was accepted in the relationship between perceived social support and friendship quality. In predicting one's friendship quality, only one's own perception of social support was significant and meaningful.

For *k* value computed as the ratio of the actor effect to the partner effect for b effects, CIs included "0" (*beta* = .145, CI = -0.553, 2.429), meaning that only partner effect was found in the link between friendship quality and restricted eating.

For *k* value computed as the ratio of the partner effect to the actor effect for c effects, CIs included "1" (*beta* = .956, CI = 0.386, 2.185), suggesting that couple pattern was accepted in the relationship between perceived social support and restricted eating.

In this calculation, *k* value is also useful to assess predictive power of dyadic associations. Due to the reason that c path revealed both actor and partner effects and *k* value indicated couple pattern meaning that actor and partner paths are equal in magnitude, none of them exceeds the other.

We placed model constraints on $k_a$, $k_b$ (as equal to 0) and $k_c$ (as equal to 1) to test whether CIs supported those specific patterns. The model with $k_a = 0$, $k_b = 0$ and $k_c = 1$ constraints yielded good fit [$\chi^2$ (15) = 17.252, $p$ = 0.304, CFI = 0.967, TLI = .969, RMSEA = 0.034, SRMR = 0.119]. Also, the chi square difference test suggested no significant difference between the parent model and the nested model [$\Delta\chi 2$ (3) = 1.98, $p$ = 0.789]. Therefore, the more parsimonious model with specific dyadic patterns was accepted.

### 4.5.4 Indirect associations between perceived social support and restricted eating

The APIMeM findings did not yield any significant mediational pathways between perceived social support and restricted eating via friendship quality as shown in Figure 4.2.

In predicting restricted eating, actor direct effects of perceived social support (*beta* = .252, *SE* = .069, $p < .001$) and partner direct effects of perceived social support (*beta* = .241, *SE* = .066, $p < .001$) significantly predicted restricted eating in best friendship.

These direct relationship patterns highlighted the importance of dyadic patterns of perceived social support within best friendships in predicting restricted eating without friendship quality.

**Table 4.4. Actor Partner Interdependence Results**

| *Effect* | *b* | *SE* | *p* |
|---|---|---|---|
| a effects (Social Support → Friendship Quality) | | | |
| Actor effect ($a_a$) | **.235** | **.055** | **<.001** |
| Partner effect ($a_p$) | .081 | .055 | .144 |
| b effects (Friendship Quality → Restricted Eating) | | | |
| Actor effect ($b_a$) | -.022 | .067 | .746 |
| Partner effect ($b_p$) | **-.149** | **.076** | **.051** |
| c effects (Social Support → Restricted Eating) | | | |
| Actor effect ($c_a$) | **.252** | **.069** | **<.001** |
| Partner effect ($c_p$) | **.241** | **.066** | **<.001** |

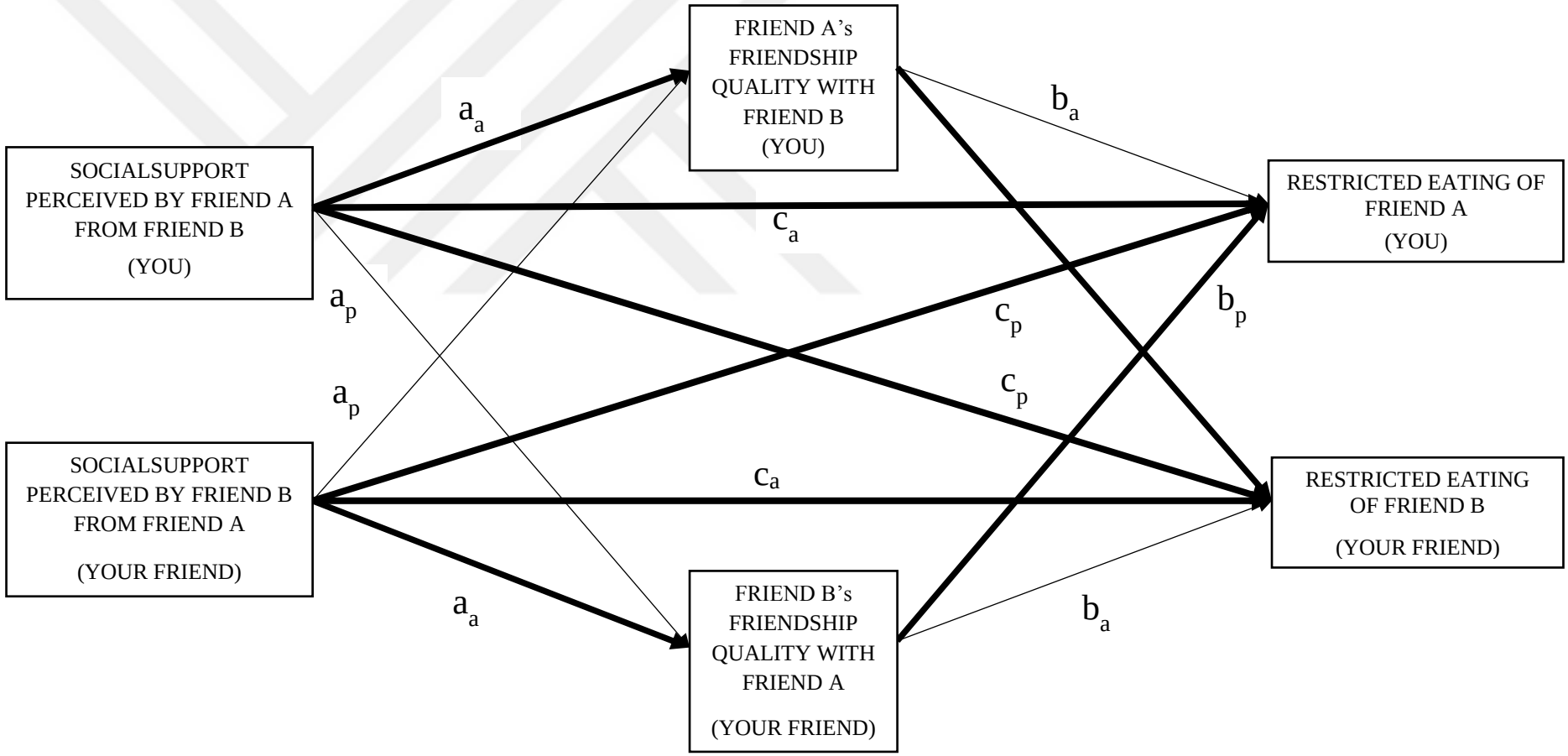


**Figure 4.2. Mediation Results**

*Note.* Significant pathways for the model are shown in boldface type.

# CHAPTER 4

# 5. DISCUSSION

Due to the reason that people spent considerable amount of time interacting with friends in young adulthood, friendship, apart from other kinds of relationships, needs special attention for not only social effects but also health related behaviors. In this regard, present study showed the associations among friendship quality, social support, body dissatisfaction and restraint eating in young women best friendships. The dyadic pattern between friendship quality and restraint eating was investigated through APIMeM considering the mediational role of social support.

To begin with the one of the unique contributions this study provided through measurement of dyadic aspects of body dissatisfaction, strong correlations were found among body dissatisfaction, restricted eating and BMI. It has been showed that higher BMI, poor body satisfaction and body image concerns lead to dieting (Gerner and Wilson, 2005; Thompson, Heinberg, Altabe and Tantleff-Dunn, 1998). Strong correlations were also observed between women's self-reported body dissatisfaction and their female best friends' dissatisfaction with women's bodies. This finding implies that how their best friends view their bodies is strongly related to women's own views about their bodies. Supporting that finding we also concluded that increased levels of self-reported body dissatisfaction and friend dissatisfaction about one's body are linked to greater restricted eating. These findings suggest that high quality relationships provide intimate social climate that allows women to talk about worries about their bodies and think in a similar way on those issues. The shared understanding of body dissatisfaction coming from both partners also leads to greater levels of restricted eating patterns. So, body dissatisfaction is not one-sided issue related to eating patterns in young women; not only one's own thoughts but also one's best friend's point of view towards one's body are factors that direct women to engage in restriction in their dietary intake.

To continue with the first model, directs effects from women's self-reported body dissatisfaction and restricted eating reveal actor-only pattern suggesting that increased levels of dissatisfaction with one's body predict one's higher restraint eating in young women. This finding is supported by previous research suggesting that body image is one

of the variables responsible for adolescents' restricted eating (Megalakaki et al., 2013). One's body dissatisfaction shows a couple effect predicting one's dissatisfaction with friend's body and friend's dissatisfaction with one's body. As an illustration, you and your friend participated this study as best-friends. Your dissatisfaction with your friend's body is affected by your own body dissatisfaction and your friend's body dissatisfaction; and vice versa. Friends know the challenges in each other's lives and they have already been talking about the issues (Barnes and Duck, 1994; Berndith, 2002). So, increase in your friend's dissatisfaction with her own body affects the dissatisfaction you feel about your friend's body. In turn, friends' higher dissatisfaction about each other's bodies predict higher restricted eating. The indirect effects suggested a mediational link between one's body dissatisfaction and restricted eating through friend's dissatisfaction with one's body. In predicting one's restricted eating, not only direct effects of one' own body dissatisfaction, but also friend's dissatisfaction with one's body is important in women friendships. Desired body image, which leads to body dissatisfaction, is constantly affected by feedbacks coming from social environment especially from significant others (Rodgers and Chabrol, 2009; Megalakaki et al., 2013; Groesz et al., 2002; Thompson et al., 1999). In this case, feedback about body dissatisfaction is coming from women's best friends. So, what friends think of each other's bodies plays a key role contributing individual restricted eating as found in this study. Women are aware of what their best-friends' think of their bodies and this awareness plays a mediational role between women's own body dissatisfaction and restricted eating.

To continue with the second model, the direct paths from social support to restrained eating suggested that there is a couple dyadic pattern meaning that both actor and partner effects are statistically significant. This prediction means that women's perceived social support predict both their and their best friends' restricted eating behavior. Higher social support specific to dietary intake leads to higher restricted eating. This finding provides an evidence supporting that social support regarding dietary intake is not one sided in best friendships. Friends, as found in many studies, socially support each other's eating behavior (Larson et al., 2009; Stanton et al., 2007; Croll et al., 2001; Watt and Sheiham, 1997). This dyadic supportive relationship affects women's own restricted eating patterns. When a young woman gets healthy eating advice from her best friend, her eating pattern is affected by this advice. Similarly, when a young woman encourages her best

friend about healthy eating, she also begins to be affected by this encouragement. This finding also points out the statement that not only receiving social support, but also providing social support to best friends leads to increase in young women's restrained eating pattern. Increased levels of receiving and providing social support regarding dietary intake in best friendship predict higher restricted eating scores of young women. It seems that women share their thoughts about dietary restrictions with their female best friends and they support each other's restriction claims. Moreover, according to the findings of this study, provided social support is as important as perceived social support from best-friends when engaging in dietary restraint. Dyadic nature of the data enabled us to see two aspects of social support specific to dietary restraint.

In the dyadic relationship between perceived social support and friendship quality, actor effect was found significant, however, partner effect turned out non-significant. This finding suggests that one's perceived social support only predicts one's perception of friendship quality. The transition from childhood to young adulthood values friendship more than ever in young adults' lives (Cheng and Chan, 2004; Stanton et al., 2007). One of the most outstanding characteristics is reciprocal social support in best friendship compared to other kinds of relationships in every domain. As friendship quality grows, partners become closer and socially support each other (Sawka et al., 2015; Berndith, 2002). The actor effect found in this study is in line with the literature; one's perception of higher social support specific to dietary intake predicted higher friendship quality. However, one's perception of social support did not predict friendship quality perceived by one's partner. Since measurement tool was specific to evaluate perceived social support, partners' views might not contribute friendship quality perceived by other partner.

To continue with the effects of friendship quality on restricted eating, findings showed partner-only effects between friendship quality and restraint eating. The absence of actor effect is consistent with previous studies. In Schutz and Paxton's (2007) study, dietary restraint among adolescent girls was not found significantly correlated with positive and negative qualities in friendship. Similarly, Gerner and Wilson (2005) provided evidence on lack of the link between friendship intimacy and restricted eating. This consistency with the literature points out a further explanation; in predicting one's restraint eating, actor-only report of friendship quality is unable to explain restraint eating by itself

suggesting that partner's report of friendship quality is also important to reveal dyadic nature of friendship quality on restricted eating in young women friendships.

There was no pathway where friendship quality mediated the link between social support and restricted eating. In friendships, women talk about many issues from daily issues to most private thoughts (Berndith, 2002). However, quality of best friendships does not matter for perceiving or providing social support predicting restricted eating. Regardless of one's perceived friendship quality from one's friend, women socially support each other about their eating and they engage in restricted eating. More importantly, not only receiving social support from best friend, but also providing social support for best friend is associated with women's higher cognitive restraint.

Lastly, when we compared predictive power of actor and partner effects of social support on restricted eating, we found that partner effects are statistically as important and powerful as actor effects. Therefore, actor and partner estimates of social support are treated as equally powerful while predicting one's dietary restraint. As a result, we reached estimate powers as same size that is to say role of friends on a specific eating behavior was as crucial as role of women themselves.

In the literature review, we discussed downsides as well as upsides of the restrained eating. Since the measurement of restricted eating is based on self-report and data lack of real dietary intake in response to high restricted eating scores, it is difficult to say how best friends' social behaviors to each other affect their eating practices along with increased dietary restraint. People who engage in high cognitive restraint in their diet were found more prone to perform disinhibition and counter-regulation so that they ended up eating more than usual (Herman et al., 1975; Polivy, 1976; Spencer et al., 1979). In this case, while friends encourage each other to restraint their eating, they might be engaging in overeating episodes together, too. On the other hand, some restrained eaters do not lose control over eating and end up with successful restraint so that they do not need disinhibition and counter-regulation patterns in cognitive restraint (Stotland et al., 1991; Westenhoefer et al., 1994; van Strien, 1997b; van Strien et al., 2000; Ouwens et al., 2003). In this regard, best friends may serve a function as reminding each other to stay alert against high calorie food. Related to this discussion, in the findings we see a significant correlation meaning that that higher BMI is related to increase in perceived social support and restricted eating scores of young women (see Table 4.1). This finding

suggests that women who have higher BMI perceive increased social support, in turn engage in cognitive restraint more. This dyadic support towards restraint eating may be said to be beneficial for weight loss and control based on the findings of previous studies indicated that restriction of food intake provides successful weight loss for obese people (Wing, Lang and Wadden, 2011) and healthier blood test results for normal weight individuals (Fontana et al., 2004; Racette et al., 2006). Supporting this claim, a study indicated that dietary restraint is associated with increased levels of vegetable intake in young adults (Moreira, Almedia and Sampaio, 2005).

### 5.1. Strengths

Health behaviors, especially eating patterns have been evaluated through children and adolescents in previous papers. However, young adulthood is also an important developmental period for health behaviors. As early adulthood begins, individuals generally start to college or work, so that they leave their parents' home and they spent more time with their friends. The increase in social interaction with friends has an effect on health behaviors, too. Thus, the first strength of this study is specifying the target of social environment as best friends. Previous studies have defined friendship as peers that people interact casually in daily life. We specified this general friendship and investigated specific effects of close relationship. Secondly, we gathered data from two women in a best friendship and designed a dyadic model. This method allowed us to investigate social correlates of restricted eating in interpersonal level, as opposed to previous studies that studied in intrapersonal level. In addition, dyadic nature of both concepts and measurement tools allowed us to consider new significant paths in a more parsimonious model. Therefore, interdependence of the partners in friendship enabled us to investigate interpersonal paths going to eating patterns. Thirdly, there are number of studies that studied friendship variables on restricted eating behaviors and found no relationship. Through this study, we proposed a dyadic mechanism that explains interdependence in this line.

### 5.2. Limitations

Although this study has several strengths, results should be cautiously considered due to some limitations. First of all, recruitment method of the study was convenience sampling. Therefore, the nature of the sample may limit the generalizability of the findings. Secondly, we only recruited women friendship dyads so that the nature of the data does not all allow us to explain male friendship dynamics predicting male eating patterns. Thirdly, data collection was merely based on self-report measures. Thus, social desirability bias might take place when participants were reporting relationship dynamics specifically for friendship quality and social support. In addition, we evaluated eating patterns based on self-report measures. Participants reported the extend that they restrict their eating but the data do not cover real life dietary intake so that we cannot say for sure they restrict their food intake as much as they reported in real life. Lastly, the cross-sectional design of the study limits findings to make causal inferences. Longitudinal designs allow us to further investigate the course of friendships, in which points social support is needed and affect young women's eating patterns.

# 6. CONCLUSION

In this graduate thesis, literature review was conducted regarding restricted eating and its social correlates, importance of friendship in health related behaviors, social support specific to dietary intake, self-reported and friend reported body dissatisfaction. In this regard, two conceptual model was introduced along with unique contributions of the study. Subsequently, methodology including procedure, nature of the participants and measurement tools, and analysis plan was introduced. Lastly, findings were discussed while considering potential limitations in which we pointed out them as further suggestions.

This thesis work contributed existing body of knowledge by providing evidence to interpersonal correlates of restricted eating in a dyadic perspective. We specified interpersonal effect as same-sex best friend among young women and firstly found that friend reported dissatisfaction with women's body mediates the link between women's body dissatisfaction and restricted eating. Secondly, we found that couple effects of higher perceived social support directly predict higher levels of dietary restraint regardless of friendship quality. A visible contribution of the study occurs through dyadic perspective where social support predicts restricted eating by not only actor effects, but also partner effects. This methodology enabled us to highlight the importance of receiving and providing aspects of social support on restricted eating. This study also presented how presence of a best friend can alter eating behaviors.

These findings are worth pursuing to include intervention programs targeting eating disorders and weight control programs. Young women prone to behave in a way that how their female best friends behave, because they share their views about each other's' bodies and support eating patterns they want to commit. This interpersonal condition points out that interventions regarding eating outcomes may include not only target women but also their friends. It seems that women can control or regulate their dietary intake together with their female best friends. Further examinations of real time eating outcomes would help to broaden current interpersonal model of restricted eating behaviour.

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# CURRICULUM VITAE

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# APPENDIX A

## A.1 Informed Consent

Bu araştırma Kadir Has Üniversitesi Psikoloji Bölümü lisansüstü öğrencisi Ezgi Çoban tarafından Doç. Dr. Aslı Çarkoğlu danışmanlığında yürütülmektedir.

**Çalışmanın Amacı:** Bu çalışmada genç yetişkinlerin yeme davranışlarını şekillendiren ilişkisel etmenlere bakmayı amaçlıyoruz. Size de bu amaçla ulaştık.

**Çalışmada Nasıl Yardımcı Olacaksınız:** Eğer araştırmaya katılırsanız sizden

- en yakın arkadaşınızla birlikte çalışmaya katılmanızı,
- günlük yeme davranışınızı anlamaya yönelik ölçekler doldurmanızı isteyeceğiz.

**Katılımcı Olarak Bilmeniz Gerekenler:** Yeme davranışını şekillendiren ilişkisel faktörleri anlamak için çalışmaya **son zamanlarda en çok vakit geçirdiğiniz, aynı cinsiyetteki en yakın arkadaşınızla** birlikte katılmanızı istiyoruz. Bu anket çalışması ortalama 20 dakika kadar sürmektedir.

Bu araştırmaya katılımda gönüllük esastır. Katılmak istemiyorsanız belirtmeniz yeterlidir. Bize vereceğiniz tüm cevapların gizli kalacağını özellikle belirtmek istiyoruz.

Araştırma hakkında daha fazla bilgi almak isterseniz bize ezgi.coban@khas.edu.tr adresinden ulaşabilirsiniz.

**A.2 Demographic Information**

Yaş:_____ Boy:_____ Kilo:_____

- **Şu an yaşadığınız yer:**

a) Evde, yalnız b) Evde, ailemle c) Evde, arkadaşımla

d) Yurtta, yalnız e) Yurtta, arkadaşımla f) Diğer:_____

- **Yaptığınız özel bir diyet var mı?**

a) Hayır

b) Evet ( ) Zayıflamak için ( ) Vejetaryen ( ) Vegan ( ) Diğer (belirtiniz)_____

- **Teşhis aldığınız kronik bir hastalık var mı?**

a) Hayır b) Evet (belirtiniz)_____

- **Sürekli kullandığınız bir ilaç var mı?**

a) Hayır b) Evet (belirtiniz)_____

- **Düzenli yaptığınız (her hafta en az 1 kez) bir spor/egzersiz programı var mı?**

a) Hayır b) Evet (belirtiniz)_____

- **Bu araştırmaya katıldığınız en yakın arkadaşınızın adı: _____**
- **Bu arkadaşınızla ne zamandır birbirinizi tanıyorsunuz? (ay olarak yazınız) _____**
- **Bu arkadaşınızla haftada kaç kere görüşürsünüz? _____**
- **Bu arkadaşınızla haftada kaç kere birlikte yemek yersiniz? _____**

## A.3 Restricted Eating Scale

Aşağıdaki maddeler için size en uygun olan puanı işaretleyiniz.

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Kilomu kontrol etmek için bilerek küçük porsiyonlarda yemek yemeği tercih ederim. | | | | |
| Bazı yiyecekleri beni şişmanlattığı için yemiyorum, | | | | |
| Kilo almaktan kaçınmak için öğünlerde yediğim yemek miktarını bilinçli olarak kısıtlıyorum. | | | | |
| Her zaman çekici yemekleri/besinleri fazla satın alarak evde bulundurmaktan kaçınırım. | | | | |
| İstediğimden daha azını yemek için caba sarf etmeye yatkınım. | | | | |

| | ne zaman ne istersem yerim<br>1 | 2 | 3 | 4 | 5 | 6 | 7 | daima yemek alımımı sınırlıyorum, asla pes etmiyorum<br>8 |
|---|---|---|---|---|---|---|---|---|
| Yemek yerken kendimi her zaman kısıtlarım. | | | | | | | | |

### A.4 Friendship Quality Questionnaire

Bu bölümdeki maddeler, en yakın arkadaşınızın sizinle olan ilişkisinde nasıl bir arkadaş olduğuyla ilgilidir. Maddeleri bu çalışmaya birlikte katıldığınız en yakın arkadaşınızı düşünerek cevaplayınız. Bunun için aşağıda 0–8 arasında değişen ölçek aralıklarını kullanınız.

| | 0 Asla | 1 | 2 Nadiren | 3 | 4 Arada bir | 5 | 6 Oldukça | 7 | 8 Her zaman |
|---|---|---|---|---|---|---|---|---|---|
| 1. Eğlenceli şeyler yapmakla ilgili iyi fikirleri vardır. | | | | | | | | | |
| 2. Beni güldürür. | | | | | | | | | |
| 3. Onunla konuşmak heyecan vericidir. | | | | | | | | | |
| 4. Onunla beraber olmak heyecan vericidir. | | | | | | | | | |
| 5. Oturup sohbet etmek eğlencelidir. | | | | | | | | | |
| 6. İhtiyaç duyduğum zaman bana yardım eder. | | | | | | | | | |
| 7. Bana bazı şeyleri yapmamda yardımcı olur. | | | | | | | | | |
| 8. İhtiyacım olan şeyleri bana ödünç verir. | | | | | | | | | |
| 9. Bir şeyleri bitirmekte | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| zorlandığımda bana yardımcı olur. | | | | | | | | | |
| 10. Bana bazı şeyleri nasıl daha iyi yapacağımı gösterir. | | | | | | | | | |
| 11. Üzgün olduğum zaman bunu bilir. | | | | | | | | | |
| 12. Sırlarımı anlatabileceğim birisidir. | | | | | | | | | |
| 13. Bazı şeyler canımı sıktığı zaman bunu bilir. | | | | | | | | | |
| 14. Özel konular hakkında kolayca konuşabileceğim birisidir. | | | | | | | | | |
| 15. Özel konuları anlatabileceğim birisidir. | | | | | | | | | |
| 16. Birbirimizi bir kaç ay görmesek bile benim arkadaşım olarak kalacaktır. | | | | | | | | | |
| 17. Kavga etsek bile benimle arkadaşlığını devam ettirmek isteyecektir. | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 18. Başkaları beni eleştirse bile benimle arkadaş kalacaktır. | | | | | | | | | |
| 19. Başkaları beni beğenmese bile benimle arkadaş kalacaktır. | | | | | | | | | |
| 20. Tartışsak bile benim arkadaşım olarak kalacaktır. | | | | | | | | | |
| 21. Kendimi onun yanında akıllı/zeki hissederim. | | | | | | | | | |
| 22. Kendimi onun yanında özel hissederim. | | | | | | | | | |
| 23. İyi bir şeyler yaptığımda beni över. | | | | | | | | | |
| 24. Başarılı olduğum şeyleri vurgular. | | | | | | | | | |
| 25. Bana bazı şeyleri iyi yapabileceğimi hissettirir. | | | | | | | | | |
| 26. Yeni/farklı bir ortamda beni rahat hissettirecektir. | | | | | | | | | |
| 27. Korktuğum zamanlarda etrafımda olması iyi olur. | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 28. Endişelendiğim zaman beni iyi hissettirecektir. | | | | | | | | | |
| 29. Sinirlendiğim zaman beni sakinleştirecektir. | | | | | | | | | |
| 30. Üzgün olduğum zaman beni iyi hissettirecektir. | | | | | | | | | |

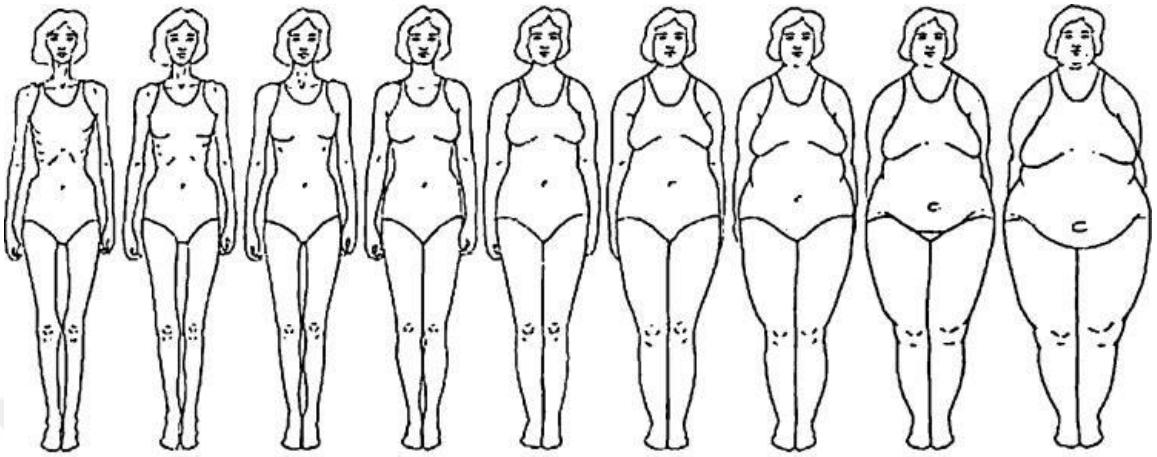
### A.5 Social Support Scale

Son bir ay boyunca en yakın arkadaşınızla aşağıdaki olayları ne sıklıkta yaşadınız?

| | Hiçbir zaman | Nadiren | Birkaç defa | Sık sık | Çok sık |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| **1.** Canım çektiği zamanlar sağlıksız yiyecekleri (kek, tuzlu cips) **yememem** için beni teşvik etti. | | | | | |
| **2.** Değişen yeme alışkanlıklarım hakkında benimle konuştu (Yemek yeme değişiklikleri konusunda nasıl gittiğimi sordu) | | | | | |
| **3.** Çok yağlı ve çok tuzlu yiyecekler **yememem** gerektiğini hatırlattı. | | | | | |
| **4.** Yeme alışkanlıklarımı değiştirmem konusunda iltifat etti (“seninle gurur duyuyorum”, “böyle devam et”) | | | | | |
| **5.** Eski yeme alışkanlıklarıma geri döndüğümde, bu konuda eleştiride bulundu. | | | | | |

## A.6 Body Dissatisfaction Scale

- **Aşağıda dokuz tane beden figürü gösterilmektedir.**



**A B C D E F G H J**

1. Buradaki beden figürlerine baktığınızda **kendinizin** şu andaki halini en iyi temsil eden figürü işaretler misiniz?

   A B C D E F G H J

2. Peki sizce **olmanız gereken/idealinizdeki** figür hangisi?

   A B C D E F G H J

3. Buradaki beden figürlerine baktığınızda bu çalışmaya beraber katıldığınız **en yakın arkadaşınızın** şu anda olduğu halini en iyi temsil eden figürü işaretler misiniz?

   A B C D E F G H J

4. Peki sizce **arkadaşınızın olması gereken/ideali** figür hangisi?

   A B C D E F G H J