

Assessing Relationship between Need for Affects and Eating Behavior

HilmiRafet YÜNCÜ¹, Ayşe HEPKUL²

¹(Faculty of Business Administration/ AnadoluUniversity, Turkey)

²(Faculty of Business Administration/ AnadoluUniversity, Turkey)

ABSTRACT:*The purpose of the study is to explore the relationship among eating behavior, gender, age and individual's need for affect level. A Dutch Eating Behavior Questionnaire (DEBQ) scale and short version of need for affect scale have been used for data collection. The current study's contribution to the literature can be stated as offering a new individual difference dimension in emotional eating by combining eating behavior and need for affect scales. Questionnaire were applied to 275 academicians of a university. It is not surprising fact that individuals are different in their preferred distance towards emotions. That difference is expected to have reflections in eating behavior of individuals. Findings can be summarized such as that people who approach their emotions have low level correlate with emotional eating and external 1, and external 2 eating.*

KEYWORDS—Needs for Affect, A Dutch Eating Behavior Questionnaire (DEBQ), Emotional Eating, Emotions

I. INTRODUCTION

Eating behavior is one of the basics in daily life with nurturing feature as a need for human vitality. However, it is accepted usually by its problematic issues, with unhealthy side rather than healthy side (Williams, Thornton, & Crawford, 2012). Even a fear for food attitude starting from nineteenth century with food preparation out of home has emerged (Levenstein, 2012) a scale has developed to measure it (Levinson & Byrne, 2015). Since most of the individuals have considerations for their eating behavior, researchers study eating behavior, develop scales to measure eating behavior and learn about the influential factors in it and learn how to manipulate the behavior so that individuals can find ways to intervene their food intake. Emotions can have different effects on individuals based on their avoidance of emotional experience or seeking out emotional experiences. Need for affect which is accepted as an individual's preferred distance to emotions, can be used an individual difference indicator for emotional eating. Need for affect as a personality characteristics of the individuals can be one of the factors that create difference in individuals eating behavior. It is assumed that individuals with higher tendency to approach emotions, the eating behavior is expected to be more emotional, less restrained and effected more from external sensing of food related images and smells. During literature review, it is thought that some additional studies about individual differences, specified as need for affect, in identification of eating behavior would contribute to understand the influencing factors. Therefore, the current study investigates the association of eating behavior with need for affect as an individual difference in their preferred distance emotions. It contributes to the eating behavior literature by presenting a new dimension for eating behavior and individual's need for affect orientation. By studying the individual's emotional characteristics and offering a relationship between eating behavior and need for affect possible intervention methods can be offered based on their individual features.

II. LITERATURE

Factors in the eating behavior have listed as environmental, social and individual factors (Goodboy& Booth-Butterfield, 2007; Kinard& Webster, 2012) and founded self-efficacy is the most influential factor of them. Environmental, social and cognitive factors influential in eating behavior has analyzed according to their effect on each other. Results revealed that self-efficacy (cognitive factor) is the strongest factor among them. As an environmental factor advertising effect is reversed by peer or parental influence (social factor) (Kinard& Webster, 2012). A healthy eating factor research (Swan, Bouwman, Hiddink, Aarts, & Koelen, 2015) found 5 significant factors; being female, living with a partner; a strong sense of coherence, flexible restraint of eating, and self-efficacy for healthy eating and no difference in for unhealthy eating. The studies sign the search for individual differences in eating behavior. A similar study (Goodboy& Booth-Butterfield, 2007) analyzed eating behavior as an affect orientation of individuals with different scale. Different type of individuals in terms of their eating behavior studied by their gender, age (Braet&VanStrien, 1997), physical and emotional development (Drewett, Corbett, & Wright, 2006) weight (Geliebter and Aversa), being dietary (Pinaquy,

Chabrol, Simon, Louvet, & Barbe, 2003; van Strien, 2000), personality characteristics (van der Ham, van Strien, & van Engeland, 1998), BMI (Shloim, Hetherington, Rudolf, & Feltbower, 2015; Turker et al., 2012), marital status (Elfhag & Rasmussen, 2008), work time and profession (Wong, Wong, Wong, & Lee, 2010), socio cultural factors (Zeeni, Gharibeh, & Katsounari, 2013). A research study about eating attitudes and depression in university student sample (Buyukgoze-Kavas, 2007) found significant difference in eating attitudes, but no meaningful difference in the depression level of university students according to their gender. Like many different human behaviors, other than individual features, emotional status of individuals also has huge effect on eating behavior.

From the beginning of history, understanding the reasons underlying for human behavior is one of most curiosity evoking subject. Role of emotions on behavior is one of the reasons, since for everyone, they bring various type of human experience in human routine daily life. Sometimes emotions can cause “defining moments in human life”, sometimes “foolish, illogical and destructive experiences” (Baumeister, Vohs, DeWall, & Zhang, 2007). Emotions are valuable for dealing with fundamental daily tasks. Eating behavior is one of the basic behavior of daily life that usually considered in connection with emotions. Eating behavior is daily routine for everyone, it takes approximately one hour every day and has very extensive results in human life, such as, health, sickness, weight, joy, etc. Food consumption can be one of the factors causing a group of emotions (Jiang, King, & Prinyawiwatkul, 2014; Macht & Dettmer, 2006) or emotions can be cause to have some food or drink excessively (Kozak & Fought, 2011; Laitinen, Ek, & Sovio, 2002; Macht, Roth, & Ellgring, 2002). Alcohol, smoking, chocolate, sweet, and caffeine are examples of study topics interest in the sense of explaining the relationship between food and emotions. Role of emotions in eating behavior and emotions and food relationship have explored in many studies (Bongers, Jansen, Houben, & Roefs, 2013; Evers, Stok, & de Ridder, 2010; Jiang et al., 2014; Vanstrien, Frijters, Bergers, & Defares, 1986).

III. EATING BEHAVIOR OF INDIVIDUAL

The Dutch Eating Behavior Questionnaire (DEBQ) is one of the mostly used scale in the assessment of emotional eating behavior of individuals. The Dutch Eating Behavior Questionnaire has constructed to assess three different types of eating behavior in order to understand obesity eating patterns; emotional eating (eating based on negative emotions and stress), externally induced eating (eating based on external availability of food or food reminding any sense, regardless of the internal states of hunger and satiety), and restrained eating (eating based on restrictions, attempts to refrain from eating) with a 33 item scale.

DEBQ's validity has been questioned several times (Domoff, Meers, Koball, & Musher-Eizenman, 2014; Jansen et al., 2011; Ogden, 1993) and adapted to different cultures (Bailly, Maitre, Amanda, Herve, & Alaphilippe, 2012; Banos et al., 2011; Bozan, Bas, & Asci, 2011; Caccialanza et al., 2004; Cebolla, Barrada, van Strien, Oliver, & Banos, 2014; Halvarsson & Sjoden, 1998), it is one of the mostly used eating behavior scale. Critics about the methodological/ experimental design flaws and the variability of emotional eating based on participant characteristics for the self-report feature (Domoff et al., 2014), has responded by a retest study. The authors who constructed the original scale, retested the external eating scales predictive validity by measuring the participants actual eating behavior in a semi natural environment (van Strien, Herman, & Anschutz, 2012) and comparing their responses in DEBQ study and founded the scale is predictive for eating behavior in naturalistic environments. DEBQ takes the emotional eating only for negative emotions, however eating as a requirement for keeping healthy body and for enjoying food can be analyzed also. Recently studies (Macht, Haupt, & Salewsky, 2004), found positive emotions have greater effect on eating behavior. Turkish adaptation of DEBQ is tested by Bozan et. al. (Bozan et al., 2011).

IV. NEED FOR AFFECT OF INDIVIDUAL

The need for affect is a construct that describes individual differences in the tendency to approach or avoid emotion-inducing situations and activities (Appel, 2012: 418). A need for affect scale has developed and tested to explore the factors in emotion related behavior (Maio & Esses, 2001). Their model reveals that the individual differences in cognitive processes, in emotional processes, in behavioral inhibitions and activation and aspects of personality are factors related to the need for affect.

There are many studies about people emotional differences. Especially gender is an important determinant on need for affects. Men might learn to avoid emotions because not seen weakness and to prevent the unintentional destructive use of their strength. In contrast, women might learn to approach emotions because emotions enable them to empathize with the emotional experiences of others, thereby conforming to a caregiving role (Maio & Esses, 2001: 586). The need for affect complements constructs that are focused on emotional abilities or deficits such as emotional intelligence and alexithymia (Appel, 2012: 418). Individuals who are high in NFA are more likely to view emotions as useful when making judgments. Because these

individuals tend to enjoy experiencing strong emotions, their attitudes tend to possess a stronger affective basis, and their emotional responses to information play a more important role in guiding the formation of attitudes (Arceneaux & Vander Wielen, 2013: 26). Maio and Esses (2001) developed a scale to examine the relations between the overall need for affect and many criterion variables. The criterion variables included individual differences in emotion, cognition and personality, relevant attitudes and behaviors. When the different type of personalities are considered, it would be not a proper approach to assume all of the individuals have similar experience and emotional arousal levels. Accepting that affect and cognition are distinct processes, as stated by Maio & Esses (2001) need for affect has role in understanding emotion related processes. Individuals differ in their processing feelings based on their preference approach or avoidance of emotions. Need for affect scale also has been adapted and validated to Turkish culture (Duyan, Ucar, & Kalafat, 2011). Appel et.al. (2012) developed a short version of need for affect scale. In this study 10 items were considered to determine need for affect.

V. METHODOLOGY

To aim of evaluate relationship between need for affect and eating behavior, a questionnaire was developed. The data was collected via a questionnaire; the questionnaire includes 33 variables which were DEBQ questionnaire and 10 variables for need for affect questionnaire. Questionnaires were sent to all academicians in university via email. Some of the questionnaires turned out to be including false or mis-coded data, the analysis was done out of 275 questionnaires. The need for affect questionnaire were based on a 1 to 5 Likert scale (5- strongly agree/1-strongly disagree), and DEBQ questionnaire were based on a 1 to 5 Likert scale (5-very often/1-never). An explanatory factor analysis was applied and then correlation analysis was applied to determine correlations between factors.

VI. FINDINGS

The data collected from the 275 academicians' responses were analyzed using SPSS 17.0 statistical program and an explanatory factor analysis was done. Before reporting the results of this analysis, the study presents information about respondent profiles. As can be seen in Table 1, 54,9 % of the respondents are female and 45,1 % are male. Also, 38,9 % of the respondents fall into 29-39 age group. The percentage for respondents in 40-50 age group is 25,5% and 2,2% of the respondents are over 62. As far as the marital status of the respondents are concerned, it is seen that most of them married 60 %, 36 % of the respondents reported that they are single.

Table 1. Descriptive Statistics

		n	%
Gender	Female	151	54,9
	Male	124	45,1
Age	18-28	65	23,6
	29-39	107	38,9
	40-50	70	25,5
	51-61	27	9,8
	62-72	6	2,2
Marital Status	Married	165	60
	Single	99	36
	Divorced	11	4

An explanatory factor analysis was done on the data in order to determine the variables in the need for affect scale for individual, which were determined in accordance with literature on need for affect scale, the factors under which the variables were grouped. All 10 statements (items) in the questionnaire were included in the factor analysis. The statements which were not among the factors determined as a result of the explanatory factor analysis and which had a factor loading value below 0.40 were excluded from the analysis (Hair et al., 1998: 111). As a result of the explanatory factor analysis, grouped under 2 factors, namely, "Approach", "Avoidance" 9 statements were determined. As can be seen in Table 2, KMO value, which indicates the sample's sensitivity to the application, was found to be 0.722. This result indicates that the sample size is sufficient for factor analysis.

Table.2.Factor Analysis for Need for Affect

	Approach	Avoidance
I find strong emotions overwhelming and therefore try to avoid	,782	
I do not know how to handle my emotions, so I avoid them.	,778	
If I reflect on my past, I see that I tend to be afraid of feeling emotions	,705	
Emotions are dangerous—they tend to get me into situations that I would rather avoid.	,704	
I would prefer not to experience either the lows or highs of emotion.	,476	
I think that it is important to explore my feelings.		,810
It is important for me to be in touch with my feelings		,752
It is important for me to know how others are feeling.		,700
Emotions help people to get along in life.		,674
CV: % 54KMO andBartlett's Test: ,722		

An explanatory factor analysis was done to determine the variables in DEBQ scale for individual, which were determined in accordance with literature on emotional eating. 33 statement were included in questionnaire and 29 statements grouped under 4 factor. Differ from literature 4 factors appear in analysis which name is “Emotional”, “Restrained”, “External 1”, External 2”. As can be seen in Table, KMO value, which indicates the sample’s sensitivity to the application, was found to be 0.933. This result indicates that the sample size is sufficient for factor analysis.

Table.3.Factor Analysis forDEBQ

	Emotional	Restrained	External 1	External 2
I have a desire to eat when somebody lets me down	,921			
I have a desire to eat when I am emotionally upset	,914			
I have a desire to eat when I am cross	,907			
I have a desire to eat when I am bored or restless	,906			
I have a desire to eat when things are going against me or when things have gone wrong	,902			
I have a desire to eat when I am depressed or discouraged	,896			
I get the desire to eat when I am anxious, worried or tense	,887			
I have a desire to eat when I have nothing to do	,859			
I have a desire to eat when I am disappointed	,858			
I have a desire to eat when I am feeling lonely	,853			
I have the desire to eat when I am irritated	,839			
I have a desire to eat when I am approaching something unpleasant to happen	,803			
I have a desire to eat when I am frightened	,741			
I deliberately eat less in order not to become heavier		,860		
I have eaten too much, I eat less than usual the following days		,802		
I take into account my weight with what I eat		,802		
I refuse food or drink offered because I’m concerned about your weight		,782		
I try to eat less at mealtimes than I would like to eat		,733		
I deliberately eat foods that are slimming		,727		
If I have put on weight, I eat less than you usually do		,652		
I try not to eat between meals because I’m watching my weight		,638		
I watch exactly what I eat		,604		
If food tastes good to me, I eat more than usual			,871	
If food smells and looks good, I eat more than usual			,861	
If I see or smell something delicious, I have a desire to eat it			,857	
If I have something delicious to eat, do I eat it straight away			,737	
I eat more than usual, when I see others eating				,841
If I see others eating, I also have the desire to eat				,725
When preparing a meal I inclined to eat something				,535
CV: % 69,43 KMO= 0,933				

To determine correlation between need for affect and eating habits, Correlation analysis were applied. As a result, at seen in Table 4, as a factor of need for affect "Approach" has middle level positive correlation with Emotional factor (,203 Sig. ,001) of DEBQ and has low level positive correlation with External 1 factor (,164- Sig. ,007) and External 2 factor (,124- Sig. ,039) of DEBQ. As seen in literature people who approach to their feelings are affected their eating habits and at the same time external factor have little effect on their eating habits.

Table 4.Correlations between Need for Affect and DEBQ Factors

Correlations		Restrained	Emotional	External 1	External 2	Avoidance	Approach
Restrained	P. Corr.	1	,139*	-,145*	,009	-,042	-,080
	Sig. (2-tailed)		,022	,016	,881	,491	,186
	N	275	275	275	275	275	275
Emotional	P. Corr.	,139*	1	,136*	,421**	,041	,203**
	Sig. (2-tailed)	,022		,024	,000	,494	,001
	N	275	275	275	275	275	275
External 1	P. Corr.	-,145*	,136*	1	,335**	,050	,164**
	Sig. (2-tailed)	,016	,024		,000	,407	,007
	N	275	275	275	275	275	275
External 2	P. Corr.	,009	,421**	,335**	1	,065	,124*
	Sig. (2-tailed)	,881	,000	,000		,282	,039
	N	275	275	275	275	275	275
Avoidance	P.Corr.	-,042	,041	,050	,065	1	-,271**
	Sig. (2-tailed)	,491	,494	,407	,282		,000
	N	275	275	275	275	275	275
Approach	P.Corr.	-,080	,203**	,164**	,124*	-,271**	1
	Sig. (2-tailed)	,186	,001	,007	,039	,000	
	N	275	275	275	275	275	275
*. Correlation is significant at the 0.05 level (2-tailed).							
**. Correlation is significant at the 0.01 level (2-tailed).							

VII. CONCLUSION

Eating habits are an important factor that influence to individuals' daily life. There are many studies to determine factor that effect of people eating habits. Eating habits are effected from environmental, social and cognitive factors. At the same time, based on their individual attitude, some eat for health, some eat for gusto, some eat for living, and some eat as an obligation. Individuals are different in their eating behavior. Everyone has an attitude and perception towards eating behavior that shapes their eating behavior.

Describes individual differences in the tendency to approach or avoid emotion-inducing situations and activities. In this study, a comparison analysis was conducted for determine how effect "need for affect" to their eating behavior. At the results emotions influence to people eating behavior who approach their emotions. And individuals who are approach to their emotions are affected from external factor.

In this study Need for Affect Questionnaire and The Dutch Eating Behavior Questionnaire are comprised. In the further studies Structural Equation Modelling can be used to determine relationship between factors in both Questionnaire.

REFERENCES

- [1] Buyukgoze-Kavas. Eating attitudes and in a Turkish depression sample. *European Eating Disorders Review*, 15(4), 2007, 305-310. doi: DOI 10.1002/Erv.776
- [2] Cebolla, J. R. Barrada, T. van Strien, E. Oliver, and R. Banos. Validation of the Dutch Eating Behavior Questionnaire (DEBQ) in a sample of Spanish women. *Appetite*, Vol. 73, 2014, 58-64. doi: DOI 10.1016/j.appet.2013.10.014
- [3] Jansen, C. Nederkoorn, A. Roefs, P. Bongers, T. Teugels, and R. Havermans. The Proof of the Pudding is in the Eating: Is the DEBQ - External Eating Scale a Valid Measure of External Eating? *International Journal of Eating Disorders*, 44(2), 2011, 164-168. doi: DOI 10.1002/Eat.20799
- [4] K. Goodboy, and M. Booth-Butterfield. Affective orientation and eating behavior: Two studies of emotional, restrained, and external eating decisions. *Psychological Reports*, 101(3), 2007, 913-919. doi: DOI 10.2466/Pro.101.3.913-919
- [5] T. Kozak and A. Fought. Beyond alcohol and drug addiction. Does the negative trait of low distress tolerance have an association with overeating? *Appetite*, 57(3), 2011, 578-581. doi: DOI 10.1016/j.appet.2011.07.008
- [6] R. Kinard, and C. Webster. Factors influencing unhealthy eating behaviour in US adolescents. *International Journal of Consumer Studies*, 36(1), 2012, 23-29. doi: DOI 10.1111/j.1470-6431.2011.01005.x
- [7] A. Levinson, and M. Byrne. (2015). The Fear of Food Measure: A Novel Measure for use in Exposure Therapy for Eating Disorders. *International Journal of Eating Disorders*, 48(3), 2015, 271-283. doi: DOI 10.1002/Eat.22344
- [8] Braet, and T. Van Strien. Assessment of emotional, externally induced and restrained eating behaviour in nine to twelve-year-old obese and non-obese children. *Behaviour Research and Therapy*, 35(9), 1997, 863-873. doi: DOI 10.1016/S0005-7967(97)00045-4

- [9] Evers, F. M. Stok, and D. T. D. de Ridder. Feeding Your Feelings: Emotion Regulation Strategies and Emotional Eating. *Personality and Social Psychology Bulletin*, 36(6), 2010, 792-804. doi: DOI 10.1177/0146167210371383
- [10] Swan, L. Bouwman, G. J. Hiddink, N. Aarts, and M. Koelen. Profiling healthy eaters. Determining factors that predict healthy eating practices among Dutch adults. *Appetite*, 89, 2015 122-130. doi: DOI 10.1016/j.appet.2015.02.006
- [11] R. Maio, and V. M. Esses. The need for affect: Individual differences in the motivation to approach or avoid emotions. *Journal of Personality*, 69(4), 2001, 583-615. doi: DOI 10.1111/1467-6494.694156
- [12] A. Levenstein. *Fear of food: A history of why we worry about what we eat*. (Chicago: The University of Chicago Press, 2012).
- [13] Wong, M. C. S. Wong, S. Y. S. Wong, and A. Lee. The association between shift duty and abnormal eating behavior among nurses working in a major hospital: A cross-sectional study. *International Journal of Nursing Studies*, 47(8), 2010, 1021-1027. doi: DOI 10.1016/j.ijnurstu.2010.01.001
- [14] Laitinen, E. Ek, and U. Sovio. Stress-related eating and drinking behavior and body mass index and predictors of this behavior. *Preventive Medicine*, 34(1), 2002, 29-39. doi: DOI 10.1006/pmed.2001.0948
- [15] Ogden. The measurement of restraint - confounding success and failure. *International Journal of Eating Disorders*, 13(1), 1993, 69-76. doi: DOI 10.1002/1098-108x(199301)13:1<69::Aid-Eat2260130109>3.0.Co;2-Z
- [16] Arceneaux & R.J. Vander Wielen. The effects of need for cognition and need for affect on partisan evaluations. *Political Psychology*, Vol. 34, No. 1, 2013, doi: 10.1111/j.1467-9221.2012.00925.x
- [17] Elfhag, and F. Rasmussen. Food consumption, eating behavior and self-esteem among single v. married and cohabiting mothers and their 12-year-old children. *Public Health Nutrition*, 11(9), 2008, 934-939. doi: DOI 10.1017/S1368980008002449
- [18] K. Halvarsson, and P.O. Sjoden. Psychometric properties of the Dutch Eating Behaviour Questionnaire (DEBQ) among 9-10-year-old Swedish girls. *European Eating Disorders Review*, 6(2), 1998, 115-125. doi: DOI 10.1002/(Sici)1099-0968(199806)6:2<115::Aid-Erv222>3.0.Co;2-M
- [19] K. Williams, L. Thornton, and D. Crawford. Optimising women's diets. An examination of factors that promote healthy eating and reduce the likelihood of unhealthy eating. *Appetite*, 59(1), 2012 41-46. doi: DOI 10.1016/j.appet.2012.03.014
- [20] Macht, and D. Dettmer. Everyday mood and emotions after eating a chocolate bar or an apple. *Appetite*, 46(3), 2006, 332-336. doi: DOI 10.1016/j.appet.2006.01.014
- [21] M. Macht, C. Haupt, and A. Salewsky. Emotions and eating in everyday life: Application of the experience-sampling method. *Ecology of Food and Nutrition*, 43, 2004, 11-21. doi: 10.1080/03670240490454723
- [22] M. Macht, S. Roth, and H. Ellgring. Chocolate eating in healthy men during experimentally induced sadness and joy. *Appetite*, 39(2), 2002, 147-158. doi: DOI 10.1006/appe.2002.0499
- [23] Bailly, I. Maitre, M. Amanda, C. Herve, and D. Alaphilippe. The Dutch Eating Behaviour Questionnaire (DEBQ). Assessment of eating behavior in an aging French population. *Appetite*, 59(3), 2012, 853-858. doi: DOI 10.1016/j.appet.2012.08.029
- [24] N. Bozan, M. Bas, and F. H. Asci. Psychometric properties of Turkish version of Dutch Eating Behavior Questionnaire (DEBQ). A preliminary result. *Appetite*, 56(3), 2011, 564-566. doi: DOI 10.1016/j.appet.2011.01.025
- [25] N. Shloim, M. M. Hetherington, M. Rudolf, and R. G. Feltbower. Relationship between body mass index and women's body image, self-esteem and eating behaviours in pregnancy: A cross-cultural study. *Journal of Health Psychology*, 20(4), 2015, 413-426. doi: Doi 10.1177/1359105313502568
- [26] N. Zeeni, N. Gharibeh, and I. Katsounari. The influence of sociocultural factors on the eating attitudes of Lebanese and Cypriot students: a cross-cultural study. *Journal of Human Nutrition and Dietetics*, 26, 2013, 45-52.
- [27] Bongers, A. Jansen, K. Houben, and A. Roefs. Happy eating: The Single Target Implicit Association Test predicts overeating after positive emotions. *Eating Behaviors*, 14(3), 2013, 348-355. doi: DOI 10.1016/j.eatbeh.2013.06.007
- [28] F. Turker, M. Saka, E. Koseler, S. Metin, B. Yilmaz and M. Bas. Body mass index in Turkish female adolescents: The role of emotional eating, restrained eating, external eating and depression. *Healthmed*, 6(4), 2012 1367-1374.
- [29] Caccialanza, D. Nicholls, H. Cena, L. Maccarini, C. Rezzani, L. Antonioli, and C. Roggi. Validation of the Dutch Eating Behaviour Questionnaire parent version (DEBQ-P) in the Italian population: a screening tool to detect differences in eating behaviour among obese, overweight and normal-weight preadolescents. *European Journal of Clinical Nutrition*, 58(9), 2004, 1217-1222. doi: DOI 10.1038/sj.ejcn.1601949
- [30] F. Baumeister, K. D. Vohs, C. N. De Wall, and L.Q. Zhang. How emotion shapes behavior: Feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Review*, 11(2), 2007, 167-203. doi: DOI 10.1177/1088868307301033
- [31] R. F. Drewett, S.S. Corbett, and C. M. Wright. Physical and emotional development, appetite and body image in adolescents who failed to thrive as infants. *Journal of Child Psychology and Psychiatry*, 47(5), 2006, 524-531. doi: DOI 10.1111/j.1469-7610.2005.01529.x
- [32] R. M. Banos, A. Cebolla, E. Etchemendy, S. Felipe, P. Rasal, and C. Botella. Validation of the Dutch eating behavior questionnaire for children (DEBQ-C) for use with Spanish children. *NutricionHospitalaria*, 26(4), 2011, 890-898. doi: DOI 10.3305/nh.2011.26.4.5238
- [33] E. Domoff, M.R. Meers, A. M. Koball, and D. R. Musher-Eizenman. The validity of the Dutch Eating Behavior Questionnaire: some critical remarks. *Eating and Weight Disorders-Studies on Anorexia Bulimia and Obesity*, 19(2), 2014, 137-144. doi: DOI 10.1007/s40519-013-0087-y
- [34] S. Pinaquy, H. Chabrol, C. Simon, J. P. Louvet, and P. Barbe. Emotional eating, alexithymia, and binge-eating disorder in obese women. *Obesity Research*, 11(2), 2003, 195-201. doi: Doi 10.1038/Oby.2003.31
- [35] van der Ham, D. C. van Strien, and H. van Engeland. Personality characteristics predict outcome of eating disorders in adolescents: A 4-year prospective study. *European Child & Adolescent Psychiatry*, 7(2), 1998, 79-84.
- [36] T. van Strien, C. P. Herman, and D. Anschutz. The predictive validity of the DEBQ-External Eating Scale For Eating in response to food commercials while watching television. *International Journal of Eating Disorders*, 45(2), 2012, 257-262. doi: Doi 10.1002/Eat.20940
- [37] T. van Strien. Ice-cream consumption, tendency toward overeating, and personality. *International Journal of Eating Disorders*, 28(4), 2000, 460-464. doi: Doi 10.1002/1098-108x(200012)28:4<460::Aid-Eat16>3.0.Co;2-A
- [38] T. Vanstrien, J. E. R. Frijters, G. P. A. Bergers, and P. B. Defares. The Dutch Eating Behavior Questionnaire (DEBQ) for assessment of restrained, emotional, and external eating behavior. *International Journal of Eating Disorders*, 5(2), 1986, 295-315. doi: Doi 10.1002/1098-108x(198602)5:2<295::Aid-Eat2260050209>3.0.Co;2-T
- [39] Duyan, M. E. Ucar, and T. Kalafat. Adapting the Need for Affect Scale to Turkish Culture and its Psychometric Qualities. *EgitimveBilim-Education and Science*, 36(161), 2011, 116-130.
- [40] Y. Jiang, J. M. King, and W. Prinyawiwatkul. A review of measurement and relationships between food, eating behavior and emotion. *Trends in Food Science & Technology*, 36(1), 2014, 15-28. doi: DOI 10.1016/j.tifs.2013.12.005