

# IMPORTANCE OF ADLERIAN LIFESTYLE PERSONALITY ATTRIBUTES FOR BODY MASS INDEX AMONG WOMAN

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## Abstract

A number of researchers have suggested associations between personality attributes and weight issues. Nevertheless there is no clear explanation of the relationship of personality and weight control. This study investigated the impact of Adlerian Lifestyle personality attributes as it relates to Body Mass Index (BMI) among women. The study consisted of 772 Lithuanian woman who completed online instruments that included the Lithuanian version of the Basic Adlerian Scales of Interpersonal Success - Adult form (BASIS-A)Inventory and questions that assessed height, weight, and behavioral variables such as eating habits, physical activity and other weight control activities. The results indicated significant higher scores of Belonging/Social Interest, Taking Charge and Striving for Perfection in the group of women with elevated BMI in compare to normal weight. Significant predictive value of Going Along, Taking Charge and Being Cautious personality attributes together with some other behavioral and biological variables for BMI was revealed. The authors suggested practical implications and guidelines for practitioners, health professionals, and consultants.

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**Keywords:** Adlerian Lifestyle, BASIS-A, weight-control, Body Mass Index

## Introduction

The numbers provided by the World Health Organization (WHO) show that there are 1.1 billion overweight people and approximate 500 million (9,8%) who are obese. This situation is called *Global obesity (or Globesity)*. During the last 20 years the number of obese people has doubled in the world. It is well known that overweight and obesity contributes to many diseases such as diabetes, heart diseases, mobility disorders, high blood pressure, stroke and many negative psychological outcomes, such as

depression (Tuthillet al., 2006; van der Merve, 2007), reduced quality of life (Kolotkin, Crosby, & Williams, 2008), poor body image, low self-concept and negative attributions of life events (Friedman & Brownell, 1995). Psychological and health issues is affecting people in Lithuania too (Barzda & Bartkevičiūtė, 2012).

To address this growing health issue a number of interventions ranging from motivational interviewing, group-based weight-control treatment programs, advise by primary care providers, diet plans proposed in numerous books, and suggestions by nutritional experts have been analyzed in scientific literature (Armstrong et al., 2011; Jelalian, Sato, & Hart, 2011; Rose, Poynter, Anderson, Noar, & Conigliaro, 2013). It is interesting that one can find an incredible amount of different diets and suggestions on ways to lose or control weight, but as yet there is little agreement on what dynamics enhance or inhibit the success of these interventions. We predict that the effective interventions have not been created because it is not enough to tell people what they have to do to control or lose weight, but a bigger task is to identify the process of weight control and the individual characteristics or differences that may enhance or interfere with the intervention plan. Furthermore, we propose that one cannot organize an effective treatment plan without taking time to analyze the psychosocial dynamics such as personality and individual motivation. The purpose of this study will be exploratory in nature. It will address personality as a motivational factor that would enhance researchers and professionals to develop more effective prevention and intervention programs related to weight issues.

### **Impact of Personality**

Most personality studies addressing weight issues have focused on eating disorders (Brookings & Wilson, 1994; Bollen & Wojciechowski, 2004; Miskinyte, Perminas, Sinkariova, 2006; Silva, 2007; Soares et al., 2009; Tasca et al., 2009, Miskinyte, Bagdonas, 2010; Miskinyte, 2011).

Nevertheless, a number of studies have found relationships of personality and weight issues as it relates to personality attributes of extroversion, neuroticism, conscientiousness, agreeableness, self esteem, cooperative behavior etc. in non-clinical population (Miller & Downey, 1999; Adams & Mowen, 2005; Provencher et al., 2008; Roehling, Roehling, & Odland, 2008; Kakizakier et al., 2008; Terracciano et al., 2009; Sutin, Ferrucci, Zonderman, & Terracciano, 2011; Grave et al., 2013; Swami et al., 2013). Findings are controversial in various populations, which suggest the idea that different ethnic experience might yield different results in relation to personality and weight issue.

Elfhag and Rössner (2005) state that more studies should focus on the relationship between personality characteristics and weight outcomes. We

agree with the presented lack of psychological studies on weight control and particularly in Lithuania where overweight and obesity have been studied more from the biological and social perspective (Abaliksta, 2011, Ramzauskiene, 2011) and psychological studies do not include the measure of Body Mass Index (BMI).

If we want to investigate the importance of personality in weight management process, we propose that the first step would be to decide what personality attributes would be the most valuable to measure in relation to weight.

One could question, however, the value of forgoing studies in relation to personality and weight issues for others who would wish to design interventions for weight issues in that findings were based on specific unrelated personality traits with an absence of any organized personality theory. Void of a comprehensive theory inhibits practitioners and researchers from using the findings to address motivational issues and other personality dynamics that are so critical to individuals to succeed in the behavior change process. Therefore we propose that employing a theory-based model may provide the practitioners and researcher with a richer database to create intervention programs related to the sample under investigation. In this study the researchers have decided to use the theory of Individual Psychology as the theoretical base to understand the individual dynamics of individuals' weight-control behaviors.

### **Individual Psychology**

Individual Psychology which views the individual from a holistic perspective might be of help to explain motivational dynamics of individuals who may or may not struggle with weight issues. Individual Psychology stresses the purposefulness or motivational dynamics of behavior, the importance of social context, an individual childhood experiences and the development of one's lifestyle. Adler(1927) and Ansbacher and Ansbacher (1964) describe Lifestyle as a goal directed construct that integrates social goals of the perceived environment, biology and genetics. In this manuscript Lifestyle will be used as a synonym for what other scholars would refer to as personality. The definition we will use is the one by Jonyniene and Kern (2012). They propose that lifestyle is an organized set of beliefs that an individual creates before the age of seven within the confines of the family, that the individual consistently employs throughout life to solve problems related to social relationships, career, intimacy and we believe issues related to weight.

## **From theory to Instrumentation**

With the exception of the Meyers Briggs Type Indicator Inventory, which is based on the theory proposed by Carl Jung, there are few assessment tools that are anchored in a comprehensive personality theory. The advantage of using Individual Psychology as a comprehensive theory is that extensive research has been devoted to the development of an instrument that was specifically developed to measure a construct that encompasses a majority of the theoretical tenets of personality, as proposed by Alfred Adler. The construct is lifestyle and the instrument is the Basic Adlerian Scales for Interpersonal Success-Adult Form (BASIS-A).

The BASIS-A provides insight about an individual's general problem solving approaches to life based on the perceptions resulting from one's early childhood experiences (Frey & Snow, 2005). The instrument was created via years of research whereby the authors of the instrument isolated the most important constructs of Individual Psychology and then created items to directly measure the constructs inherent in the theory (Curlette, Wheeler & Kern, 1993). The Adlerian lifestyle personality attributes measured by the BASIS-A have solid support in field of health psychology as an important instrument with a variety of samples and research variables that include coping resources and stress (Kern, Gfroerer, Summers, Curlette & Matheny, 1996; Santamaria, 2002; Herrington, Matheny, Curlette, McCarthy & Penick, 2005; Suprina, 2006; Stoltz, Wolff, Monroe, Farris, & Mazahreh, 2013), substance abuse (Bauman, 2001), and behavior of insulin dependent diabetic patients (Kern, Penick & Hambry, 1996). Furthermore, some research support the relationship between Adlerian lifestyle personality attributes and weight issue in relation to lower Wanting Recognition, Being Causious and Liked by all scales and higher Belonging/Social Interest and Softness scales (Savaiano-Brady, 2001; Stoltz et al., 2009). However, Belangee, Sherman and Kern (2003) found that higher scores on Wanting Recognition and Being Causious scales were related to eating disorders. Another study revealed that clients with anorexia nervosa tend to restrict their life tasks of work, society and love and these restrictions may come from feelings of inferiority (Strauch & Erez, 2009).

Although there has been discussion of what comes first, personality traits which lead to overweight, or in the opposite (Sutin et al., 2013), we agree with Provencher et al. (2008) that particular dimensions of personality may contribute, either directly or through their association with other psychological factors. This leads to our first research question:

(1) What is the difference of Adlerian Lifestyle personality attributes between woman with normal and elevated BMI?

Finding these associations and, in particularly, the difference of the Adlerian personality attributes in two groups of woman with normal and

elevated BMI, might be of help in designing more effective prevention and interventions strategies for obese people and improve the outcome of individuals participating in weight loss programs (van der Merwe, 2007; Sutin, Ferrucci, Zonderman, & Terracciano, 2011).

Furthermore, the association between personality and weight or weight related behavior has been supported in previous studies (Kakizakier et al., 2008, Provencher et al., 2008, Terracciano et al., 2009, Sutin, Ferrucci, Zonderman, & Terracciano, 2011, Grave et al., 2013, Swami et al., 2013). However there was no clear explanation for such a relationship, therefore Magee and Heaven (2011) emphasized the need to identify mechanisms linking personality traits with obesity and weight gain. In this study we believe there is a connection of personality, body weight and behavioral factors. This leads to our second research question, which is:

(2) What might be the association between Adlerian lifestyle themes and Body Mass Index?

## **Method**

### **Participants and procedures**

Invitations to participate in the study and fill the online questionnaires and surveys were sent to different online forums, discussion groups etc. Several incentives for participation in the study were employed. Incentives included individual feedback on the BASIS-A Inventory, an invitation to a seminar on Individual Psychology and motivation, an participation in a lottery to win the coupon in one mall or an individual/family photo session. One thousand one hundred and seventy two individuals completed the questionnaires and surveys. For this exploratory study a decision by the researchers was made to only include the 772 women respondents for the study. A future study will address data presented by males and females. Selection of women participants was decided on the following criteria as a way of neutralizing the biological factors that could have impacted results of the study. The criteria was the female participants were not expecting, did not have a baby one year of age or younger and had not been diagnosed with a disease that could impact their metabolism or physical activity. The age of the research sample ranged from 18 to 60 with the mean of 32.49 (SD = 9.744). 40% women were married and 27.1% lived with or had a partner, almost half (46.8%) had children, and majority (71.2%) were highly educated. The average Body Mass Index in the sample was 22.74 (ranging from 16.23 to 51.54 with a SD= 3.99). The sample was divided into three categories of BMI defined by World Health Organization: (57(7.4%) woman were underweight, 531 (68.8%) were normal weight and 179(23.2%) were overweight).

## Measures

**Demographic information** included age, education, marital status, and children.

**Personality attributes (lifestyle themes)** were measured by the Basic Adlerian Scales for Interpersonal Success- Adult Form (BASIS-A) (Wheeler, Kern & Cullette, 1993). The 65-items BASIS-A Inventory was designed to assess five lifestyle themes: Belonging/Social Interest, Going Along, Taking Charge, Wanting Recognition, and Being Cautious and the five supporting scales of Harshness, Entitlement, Liked by all, Striving for perfection and Softness. Each item is a single sentence asking the participant to respond, "When I was a child, I..." and to rate their response on the Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with the midpoint (3) representing *indifferent*. The back forward translation of the instrument was completed following guidelines presented by Hambleton, Merenda and Spielberger (2005), van Widenfelt et al. (2005) and Maneesriwongul and Dixon (2004). The research studies on Lithuanian samples have been completed and published in peer reviewed journals. The studies support the internal reliability and validity of the instrument (Liesiene et. al., 2010; Astrauskaite & Kern, 2011; Jonyniene & Kern, 2012; Kazakavičiūtė et al., 2013; Gaubè & Kern, unpublished manuscript). Cronbach's alpha of the main scales ranged from 0.782 to 0.891. The coefficient of the agreement of the HELP Scales had a range from 0.84 to 0.95 in the normative study (Gaubè & Kern, unpublished manuscript).

**Eating habits** were measured by two scales constructed for this study. The Healthy Eating scale of 9 items was created following the recommendations for healthy eating presented in the methodological book for healthy lifestyle (Astrauskienė et al., 2011). The Cronbach alpha of the Healthy eating scale was 0.72. The scale of Good Eating habits was based on various studies that analysed eating behavior related to weight and included 4 items with a Cronbach alpha of 0.572.

**Physical activity** was measured by Godin Leisure-Time Exercise Questionnaire (Godin & Shephard, 1985, 1997). The Cronbach alpha of the questionnaire was 0.557.

**Other weight control behavior** included counting calories, planning meals, consumption of meal substitute or weight control supplements, fasting, strict dieting, consultation with a dietician, and weighing oneself.

**Body Mass Index (BMI)** was calculated from two self-reported measures - height and weight ( $BMI = (\text{mass (kg)}) / (\text{height (m)}^2)$ ). The BMI categories presented by the World Health Organization were regrouped into three categories of underweight (BMI less than 18.5), normal weight (BMI from 18.5 to 24.99) and overweight and obese (BMI 25 and over) woman.

**Perceived parents' weight situation** was calculated average from two questions where respondents were asked to evaluate in the Likert scale from 1 (absolutely no) to 5 (absolutely yes) if their mother or father had ever faced the weight issue.

### Data Analysis

The data was analyzed using the IBM SPSS Statistics 20. The first distributions of different variables using the Kolmogorov-Smirnov test were evaluated and parametric or non-parametric criteria were chosen for further investigation. The statistical methods included descriptive statistics and frequencies, Cronbach alpha, Mann Whitney test, correlation, linear regression and cluster analysis.

### Results

The Mann Whitney U test was used to explore the first research question designed to address the difference in personality attributes between normal and overweight woman. Analysis indicated that woman with elevated BMI are higher on BSI ( $p=0.007$ ), TC ( $p=0.003$ ) and Striving for perfection ( $p=0.02$ )(Table 1).

Table 1

Comparison of Adlerian personality attributes in two groups (normal and elevated BMI) Scales					
	Normal BMI		Elevated BMI		Mann-Whitney U test
	Mean	SD	Mean	SD	p value
BSI	32.65	6.097	34.07	5.677	<b>0.007</b>
GA	30.15	5.396	30.02	5.108	0.846
TC	20.33	6.739	21.93	6.778	<b>0.003</b>
WR	41.15	5.670	40.53	5.590	0.215
BC	18.09	7.140	18.94	7.197	0.132
Harshness	12.92	2.641	13.08	2.476	0.340
Entitlement	16.36	4.151	16.10	4.161	0.543
Liked by all	22.18	3.393	21.60	3.494	0.123
Striving for perfection	21.29	3.375	21.96	3.327	<b>0.020</b>
Softness	18.38	2.542	18.67	2.384	0.261

*Note.* BSI=Belonging/Social Interest, GA=Going Along, TC=Taking Charge, WR=Wanting Recognition, BC=Being Cautious.

The second research question was to identify the relationship of Adlerian Lifestyle themes and BMI. Three regression models were conducted to identify which variables accounted for the largest part of the variance related to BMI.

The first significant regression model ( $F=4.437$ ,  $p=0.000$ ) included ten personality attributes measured by BASIS-A as predictors for BMI. Higher GA, TC, BC, Striving for perfection and lower Entitlement were

found as significant related to the BMI in the model ( $p < 0.05$ ) and explained 7.1 percent of the variance.

Healthy eating, physical activity, and good eating habits were not found as significantly related to BMI in regression model.

A significant regression model ( $F=12.834$ ,  $p=0.000$ ) which explained 18.1 percent variance of BMI was identified by eliminating non significant personality attributes and adding other weight control variables, that included counting calories, planning meal, consumption of meal substitutes or weight control supplements, fasting, strict dieting, seeing dietician, and tracking ones personal weight.

The next analysis included the elimination of non significant variables and adding the biological variables of age and perceived parents' weight. The regression model ( $F=30.421$ ,  $p=0.000$ ) accounted for 30.7 percent of the variance of BMI.

The third analysis included eight significant variables that included lifestyle themes of GA, TC and BC, weight control supplements, strict dieting, planned meals by dietitians, age and perceived parents' weight. The regression model ( $F=41.195$ ,  $p=0.000$ ) accounted for 30.3 percent of the variance of BMI (Table 2).

	standardized coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.473	1.519		3.604	.000
GA	.129	.030	.170	4.244	.000
TC	.063	.022	.106	2.895	.004
BC	.070	.019	.125	3.666	.000
Supplements	1.044	.217	.151	4.812	.000
Strict dieting	1.558	.245	.198	6.348	.000
Dietitian	1.032	.210	.152	4.918	.000
Age	.152	.013	.368	11.941	.000
Parents' weight	.574	.109	.163	5.259	.000

Note. GA=Going Along, TC=Taking Charge, WR=Wanting Recognition, BC=Being Cautious, Supplements= Consumption of weight control supplements, Dietitian= Following meal plan prepared by dietitian, Parents' weight= perceived mother's and father's weight situation.

Additionally we explored the correlations between Adlerian Lifestyle themes and BMI as well as cluster analysis of BASIS-A profiles in the two groups of woman with normal and elevated weight. BMI was found significantly associated with the Adlerian lifestyle themes of TC ( $p=0.023$ ), BC ( $p=0.001$ ) and P ( $p=0.003$ )(Table 3).

Table 3 Spearman's correlations (and p value) between BMI and BASIS-A scales

		BASIS-A scale								
	BSI	GA	TC	WR	BC	H	E	L	P	S
BMI	0.058	-0.002	<b>0.082</b>	-0.029	<b>0.125</b>	0.048	-0.068	-0.038	<b>0.106</b>	0.031
	0.108	0.967	<b>0.023</b>	0.427	<b>0.001</b>	0.184	0.059	0.298	<b>0.003</b>	0.387

*Note.* BSI=Belonging/Social Interest, GA=Going Along, TC=Taking Charge, WR=Wanting Recognition, BC=Being Cautious, H=Harshness, E=Entitlement, L=Liked by all, P=Striving for Perfection, S=Softness.

A cluster analysis was employed to explore the lifestyle themes of normal and overweight woman. Although there were various TC scores among four clusters of normal weight woman, cluster analysis revealed two clusters of BASIS-A scales in the group of overweight woman with elevated TC scale in both of them (Table 4). Helps scales did not support additional significant information on the profiles.

Table 4 Cluster analysis of BASIS-A scales in two group of woman with normal and elevated BMI

BASIS-A scales					
Woman with normal BMI					
Cluster	BSI	GA	TC	WR	BC
1	35.95	27.02	25.41	44.85	18.36
2	35.80	33.54	18.20	37.55	13.76
3	27.87	34.45	14.47	45.96	20.44
4	27.74	28.03	18.24	37.81	21.13
Woman with elevated BMI					
Cluster	BSI	GA	TC	WR	BC
1	31.65	28.05	22.17	40.63	22.84
2	37.34	32.70	21.62	40.39	13.66

*Note.* BSI=Belonging/Social Interest, GA=Going Along, TC=Taking Charge, WR=Wanting Recognition, BC=Being Cautious.

## Discussion

The first research question addressed the relationship between BASIS-A lifestyle themes of the group of normal and overweight women. One analysis provided information indicating that overweight women have higher scores on BSI, TC and Striving for Perfection lifestyle themes. Additional analysis of these findings was addressed with a correlational analysis and cluster analysis. A correlational analysis was conducted and the findings yielded the association between BMI and the Adlerian lifestyle themes of TC, BC and Striving for Perfection (Table 3). The cluster analysis yielded higher TC scores in the group of woman with elevated BMI (Table 5). Though each of the analysis identified a number of different lifestyle themes the one consistent theme in each of analysis was the Taking Charge lifestyle theme.

The second research question was to identify the role of personality variables/lifestyle themes in the weight-control process via several regression models. One of the unexpected results identified that healthy eating, physical activity and good eating habits were not related to BMI. Table 2 identified eight variables that were associated with BMI in the overweight sample (strict dieting, parent's weight and GA, TC, and BC lifestyle themes etc.). These findings indicated that the three-lifestyle themes of GA, TC and BC accounted for a portion of the variance. Again the TC lifestyle theme entered the model and accounted for a portion of the variance.

### **Meaning of the findings**

Based on the above findings we will describe in more detail the lifestyle themes and the relevance of this study related to understanding personality dynamics in the context of working with individuals who may be struggling with over weight issues.

A review of the findings of this study indicated the TC theme played a significant role in both research questions under investigation. There are several possible explanations for the consistent TC lifestyle theme in our findings from an Adlerian perspective.

This theme addresses the need of the individual to be in charge of self and others. Our study also identified that the overweight group were involved with weight management behaviors such as weight control supplements, strict dieting, and meal plan prepared by dietitian. One would assume that this individual would have little trouble with weight issues in that the TC lifestyle theme points to a person who prides oneself on being in control of one's environment. This was one of our most perplexing findings. Therefore we propose some explanations based on Adlerian theory.

First of all, in that this type of individual is highly sensitized to being controlled by others there may be a possibility that treatment strategies being implemented from an external perspective such as instructions by dietitians, weight control supplements etc. may be viewed by the individual as giving up control which could get in the way of having consistent follow through related to the interventions.

Another possibility might be that food may be a safeguarding tendency or coping strategy being used by the individual with elevated TC scores to avoid dealing with other intrapersonal or interpersonal issues. One of the major regulations of normal eating is adequate feelings of hunger and fulfilled hunger. We propose based on the findings in relation to Intuitive Eating (Gast & Hawks, 2000; Caldwell, Baime, & Wolever, 2012; Outland, Madanat, & Rust, 2013) that people that overeat may be lacking the natural impulses that alerts a person of his/her hunger needs and satiety. Therefore one could propose that some individuals struggling with weight issues do not

possess the appropriate reflective skills to assess if hunger is a result of a real physiological need or, from an Adlerian perspective, a compensatory, secondary gain, or safeguarding tendency.

One of other possible reasons why a person becomes overweight and also develops a lifestyle theme of Taking Charge might be imbedded in early development and the parent's response to the infant's needs. If, for example, in early infancy, the parent unintentionally provided food to an infant when the need was not hunger but was an unfulfilled emotional/psychological need, it may not only "teach" the child a way to take care of his/her emotional or physiological needs, but also may increase the impulse to overcome the experienced frustration (or inferiority in Adlerian terms) by increasingly taking care of him or herself, or in other words - taking charge of his/her own life and situations. These early experiences may result in the adult person who tries to take care of him or her self independently and attends his/her emotional needs such as anxiety, stress, or frustration by consuming food. So the sense of control or being in charge of one's emotional needs may develop into a personality dynamic that is used to cope with a number of life's challenges of which weight becomes one of them.

The findings of a number of lifestyle themes, with exception of the TC, appear to support the hypothesis that there is no one consistent profile that can be identified with the overweight individual. Adding to that our findings indicating a relationship of personality and parents weight one could build the case that it could be also due to modeling in the family or genetic predispositions.

Other lifestyle personality attributes that were reflected in the findings, but not consistent across various statistical analysis, was the Belong Social Interest (BSI) Going Along (GA), Being Cautious (BC) and Striving for Perfection (P). Given these findings we would like to address the meaning of these findings by discussing the interaction of personality/lifestyle themes and weight issues. A number of the assumptions are based on empirical findings of the various lifestyle themes that are addressed in the BASIS-A Technical Manual (Curllette, Wheeler & Kern, 1993).

One may also conclude, with exception of the BC scale in some of the analysis, that individuals struggling with weight issues in this study show little if any pathological or clinical disturbances.

The BSI and P lifestyle themes were found significantly related to the question of lifestyle themes between normal weight and women with elevated BMI ratings. Furthermore higher GA and BC themes were significantly associated with higher BMI ratings.

According to such a finding we could propose that a woman who is rules-focused(GA), likes to be in control of one self and others (TC), socially

oriented (BSI), and sensitive to affect of others (BC) may be more likely to have issues with overweight.

Our finding that BSI was higher in the group of overweight women partially supported previous research on the extraversion trait and higher BMI (Miller & Downey, 1999, Roehling, Roehling, & Odland, 2008, Terracciano et al., 2009). BSI corresponds to the basic Adlerian concept of community feeling. That feeling is described by the ability to connect and cooperate with another person. The individual with an elevated BSI is able to be empathic, cooperative, supportive, respectful, trusting and able to develop close relationships with others.

A guess would be that people, who have a higher need to be around people and socialize and are engaging might be more prone to attend social gatherings such as dining or making meals to others as a mean of sharing joy and pleasure. So they may find themselves in situations where they eat and the amount of food is not monitored. If person has some genetic or other reasons as predisposition for gaining weight, such lifestyle might get in a way to control healthy weight.

The P scale indicates that an individual may have better stress coping strategies and better problem solving strategies (Kern et al., 1996). We don't however, have any explanation or guesses on this scale related to overweight issues, but we do see how this trait, if overweight person has it, may help him to take care of his/her weight issue, as we would also believe that a person with a combined elevated BSI and P lifestyle theme have the potential of being more successful in implementing healthier eating habits (Curlette, Wheeler, & Kern, 1993).

The relationship of BC and BMI adds additional information to our previous findings. Higher BC may indicate a person is more sensitive and has perceived more stressful and unpredictable family experiences in one's life. If the individual learned early in life that food could serve as a stress reliever, he/she may continue to use this strategy into adulthood. It also would make sense that it could be more difficult for this individual to develop good eating habits in that stressors are contingent upon one's perception of the event and there by the individual may feel in less control of stress as well as one's eating behavior.

The importance of the connection of the GA theme and BMI might be explained by viewing this scale as one that measures rule-focused behavior. We propose the desire to be "the same as others" within the social context could interfere with the individual choosing or avoiding certain foods when the person is eating with others. In other words the need to belong from an Adlerian perspective may be a stronger incentive that possible weight issues in the future.

## **Practical Implications**

The results of this research partially support the importance of lifestyle themes in the weight control process and provide new ideas for clinicians and educators in relation to clinical treatment strategies that may be more successful for individuals wishing to lose weight. We propose that one of the short comings in diet regimens, treatment strategies, and self help books is that few address the personality or lifestyle dynamics that may be additive or interfere with successful treatment outcomes. To follow are some ways counselors, dietitians and other health professionals may understand the meaning of the lifestyle scales in the context of the findings which then will be followed with possibly more effective ways of consulting or counseling with the individuals struggling with weight issues.

If, for example, the professional assessed an individual with an elevated score on the TC scaleshe/she may wish to communicate with the individual using supportive techniques and placing and emphasis on providing the individual with choices in the treatment plan verses telling the individual what they need to do. It would be extremely important to communicate in a way that it allows the individual to believe they are making the decision verses the professional. Usually the major roadblock for the health professional will be to avoid or side step confrontational interactions with the high TC individual. This person is much more sensitized to competitive interactions. In addition, as mentioned earlier, elevated TC individuals with weight issues may have a variety of reasons related to weight issues. Thus the professional may wish to integrate into the treatment plan a method of tracking eating behavior and emotional states to assess if weight may be used as a symptom of another more important issue or replacement of other needs that need to be attended.

When working with an overweight person that has elevated Going Along score, the professional may wish to adopt a more directive approach in the session in that this individual will possibly be more interested in rules to follow from the expert. To be of most help for such an individual, one may wish to use more cognitive and behavioral technics such as instructing, using homework assignments, deadlines related to weight loss per week, and constant encouragement. So the helping person will be more effective if he/she will implement an attitude of a coach or instructor with this individual.

If the individual has and elevated BC scale the professional needs to extend the time of building the relationship and possibly discussing interpersonal issues related to weight issues prior to implementation of a treatment plan. Success for this person will be dependent on the relationship and intense encouragement during the process. Finally, interventions with individuals high on BSI and Striving for Perfection may be the most

successful individuals related to weight control in that they tend to have developed stress coping skills, interpersonal relationships a support system, motivation to succeed and problem solving strategies. To use the above information on lifestyle and BASIS-A the professional would need to contact the authors or access the website of [www.basis-a.com](http://www.basis-a.com).

## Conclusion

The study has not supported some of the assumptions or previous findings related to the overweight person. First is that there is a particular lifestyle or personality style of the person with weight issues and the next is that such an individual exhibits pathological tendencies. Our findings support the connection between BMI and some lifestyle themes but not a consistent profile and other weight related behavior. However, it does not support the expected relationship of BMI, exercise and eating behaviors. And finally, the study seems to indicate that individuals with elevated BMI and TC, even though they are actively involved with weight management techniques, may not be successful in dealing with their weight issues.

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Body Mass Index (BMI). BMI is calculated as the ratio of an individual's weight in kilograms divided by the height in meters squared ( $BMI = \text{kg}/\text{m}^2$ ). BMI provides a useful measure of body fat percentage and obesity. Body mass index (BMI), a measure of excess weight for height, has increasingly become the standard for measuring adiposity. BMI is calculated as weight in kilograms divided by height in meters squared. Individuals with a BMI of 25 or greater are considered overweight and those with a BMI of at least 30 are considered obese (Table 1). BMI is often used over other measures of adiposity because it is easy to calculate and removes the effect of height on weight. Measurements that measure the Adlerian concept of Lifestyle (the Wheeler, Kern, Curlette Lifestyle Personality Inventory and the Kern Lifestyle Scale). E. Clair Hawes is a Counseling Psychologist and has been in private practice specializing in marriage therapy for 16 years. The process and techniques of Adlerian marriage counseling and therapy, as it has been developed by these and other clinicians, are derived from the same set of basic principles and assumptions originally developed by Adler for understanding individual behavior. Adler's theories on human behavior might well be viewed as the first systems-based approach in the field of psychology. Body composition: Body mass index: Obesity. Numerous methods are available to assess body composition, all with their own advantages and limitations (Lukaski, 1987). Only a few methods are suitable in epidemiological studies or clinical practice, because of their technical simplicity, their low costs, or the fact that they are not time consuming. For the assessment of body fat percentage (BF%) in epidemiological studies, a weight-height index is the most simple method. A minimum of (inexpensive) equipment is needed, i.e. only a balance and a stadiometer or microtoise, and the errors in measurement due to intra- or inter-observer variation are small. Body mass index (BMI) can help someone understand their weight and risk for certain illnesses. Learn how to calculate BMI for women. Additionally, the proportion of muscle, fat, and bone in the body typically changes as people age, especially among females. The average female loses roughly 13 pounds of muscle and bone between the ages of 25 and 65, while belly fat increases to four times its previous amount. A 70-year-old female who still weighs what she did when she was 25 may, therefore, have a BMI that falls in the healthy range despite having a much larger percentage of body fat. Importance of Adlerian lifestyle personality attributes for body mass index among women. Justina Gaube Roy Max Kern. Department of Theoretic Psychology, Vytautas Magnus University, Lithuania. Abstract A number of researchers have suggested associations between personality attributes and weight issues. Nevertheless there is no clear explanation of the relationship of personality and weight control. This study investigated the impact of Adlerian Lifestyle personality attributes as it relates to Body Mass Index (BMI) among women.