The Relationship between Quality of Life and Eating Attitudes in Turkish High School Students

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Abstract
The aim of this study is to examine the relationship between quality of life and eating attitudes of adolescents. This study was designed as a correlational study. Participants were 640 voluntarily participating 15-18 years old students studying at public high schools in Samsun, Turkey. Data was collected with the Quality of Life Scale for Children and Eating Attitudes Test. In the data analysis process, descriptive analysis and pearson correlation analysis for the relationship between life quality and eating attitudes were used. Simple linear regression analysis was also employed to see whether life quality predicts eating attitude scores. According to the study findings, there was a negative and statistically weak relationship between life quality and eating attitudes. Also, it was revealed that adolescents’ quality of life scores predicted their eating attitude scores. The study results were discussed with previous literature.

Keywords: quality of life; eating attitudes; Turkish high school students; Turkey

1. Introduction
The purpose of this study is to evaluate the relationship between quality of life and eating attitudes in Turkish high school students. Researches were interested with eating attitudes of the students (Cooper, Shaver & Collins, 1998; Batıgün & Utku, 2006; Bamford & Halliwell, 2009). With modernisation, social conditions and habits were subjected to change. Thus, human behaviours have altered accordingly. Natural needs were replaced outside the norms as the consumption behaviours of individuals have changed (Baudrillard, 2012). In time, eating behaviour and habits have shifted towards outside the norm, and become a habit shaped on slimness when the weight perception is shaped according to ideal identity (Uğur, 2008). Today, eating behaviour has serious consequences including anorexia, overweight, and irrecoverable behaviours. This is the main reason that eating disorders have become an interesting and popular topic (Öğuz, 2005).

Related researches indicated that obesity caused by eating disorders in adolescents are affecting quality of life negatively as body perception is negatively affected (Esen & Aktuğ, 2007; İşıklar, 2012). Adolescence is a transition period from childhood to adulthood, characterized by physical development, sexual development, (Blakemore & Choudhury, 2006) and psychosocial maturation characterized by a remarkable development in behaviour, cognition and brain level, hormonal and physical changes (Parlaz et al., 2012; Çavuşoğlu, 2013). Changes in this transition period leads transition to adult body shape and size. In addition to such physical change, there are also social and psychological changes. Due to psychological changes, psychological perception of the body or body image is more predominant than previous years (Wenar & Keig, 2005).

In adolescence where there are certain changes, eating habits are at a point where all familiar childhood patterns are subjected to change. Most of these changes are normal. Therefore, it is important to distinguish whether the eating attitudes are pathologic. Eating attitudes are common among adolescents (Hart et al., 2013; Randler et al, 2013). Eating habits describe the ideas, behaviours, and emotions of the individual regarding eating and nutrition (Aytin, 2014). Changes in eating behaviour could cause adolescents to be affected during growing stages. Avoiding their favourite foods, not eating with family and friends, over-exercising, being restricted at meals would affect growth and menstrual cycle (Weaver & Liebman 2011).
Industrialization, change of eating habits, urban life, media influence, and widespread interactions between cultures are interpreted as factors underlying the increase in prevalence of eating disorders. Therefore, studies on eating disorders abroad and in Turkey are common (Vardar & Erzengin, 2011; Schwimmer et al., 2003; Hajian-Tilaki & Heidari, 2007; Çayır et al., 2011; Işıklar, 2012; Hamurcu, 2014). When the eating disorder researches in Turkey are investigated, Çelik et al. (2016) stated that 6.35 of women university students have eating disorders, Çelikel et al. (2008) stated that 12.4% of university students have eating disorders, Vardar et al. (2011) stated that 4% of university students have eating disorders, and Büyük-Tural and Duman (2014) stated that 8% of high school students have eating disorders.

It is believed that the physical changes that may occur in the adolescents due to the eating attitude disorder will adversely affect the psychology of the adolescents and thus the quality of life. There are many factors that affect the healthy development of individuals during adolescence. One of the factors is the quality of life of the adolescent (Işıklar, 2012). The quality of life is expressed in the perception of the individual in his / her own situation, culture, and values system (Eser et al., 1999). Individual perspectives on satisfaction with their lives and psychological well-being have become important (Eiser & Morse, 2001). As it is known, one of the most important things for adolescents is the physical appearance. Physical appearance of adolescents affects their self-esteem and beliefs about life (Adams, 2000). In a survey, it is stated that the body mass index, which is high in children and adolescents, decreases the overall quality of life (Schwimmer, Burwinkle & Varni, 2003). For this reason, the interest in the quality of life among adolescents has become popular in recent years (Edwards et al., 2002).

It is thought that in this period where physical, biological and psychosocial changes are experienced, the changes in eating behaviours to achieve the ideal body image will play an important role in understanding the eating attitudes of the evaluation of the effect on the quality of life of the adolescent. Studies to evaluate the eating attitudes of adolescents are considered as a right approach to this topic. Because it is assumed that the culture is a product of the individual's living habits, and that it can affect the health of the individual and the quality of life as a result.

2. Method

2.1 Participants

The study's population constitutes 18,062 students who study in the state high school in the province of İlkadım, Samsun, Turkey in 2016-2017 academic years. The predetermined survey sample was set at 95% confidence interval and was set as 420 with 5% margin of error. Questionnaires were applied to volunteer students in the randomly selected branches of schools based on convenience sampling method. Initially, there were 660 students who completed the questionnaires. However, there were 20 participants who did not answer most of the questionnaire items or wrongly answered control items excluded from the data. Thus remaining 640 participants constituted the final sample. The age range of the participants was between 15-18, where 49.4% (316) were female and 50.6% (324) were male. It was determined that 23.4% (50) were in 9th grade, 25.8% (165) were in 10th grade, 26.3% (168) were in 11th grade, and 24.5% (157) were in 12th grade.

2.2 Measures

The Quality of Life Scale for Children (QLSC): The scale developed by Varni et al. (1999) was adapted to Turkish by Memik et al. (2008) and was used to measure quality of life of children and adolescents aged 2-18 years based on health. QLSC consisted of 23 items including question about physical health, emotional functioning, social functioning, and school functioning. The rating is made in 3 fields. The scale first calculates scale total point (STP), then physical health total points (FHTP), and lastly psycho-social health total points (PSHTP) that evaluates the emotional, social, and school functioning. The higher the QLSC total score, the health-related quality of life is perceived better (Çakın-Memik et al., 2008).

Eating Attitude Test (EAT): The validity and reliability study, developed by Garner and Garfinkel in 1979, and adopted to Turkish by Savaşır and Erol in 1989 tested and retest reliability is r = .65 and the Cronbach Alpha internal consistency coefficient was .70. EAT is an objective self-report scale aimed at evaluating the Anorexia Nervosa symptoms objectively and measuring behaviour and attitudes related to eating. The scale consists of 40 items and the items are marked on a 6-point Likert-type scale whose answers vary between always and never. Scoring is done according to pathologically endpoint responses and scores range from 0-3. For the questions 1, 18, 19, 23, 27 and 39 on the scale, sometimes has 1, rarely has 2, never has 3 points while the other options have 0 points. In all other questions on the scale, always, very frequent, and frequently option have 3, 2 and 1 points respectively, while the other options are 0. The total score from the scale is obtained by adding the scores given to all the questions, and the
increase in the score indicates the deterioration in the eating attitudes (Savaşır&Erol, 1989).

2.3 Procedure

Before the study, necessary permissions were obtained from Ondokuz Mayıs University Social and Humanities Ethics Committee (Decision no: 2017-91), İlkadım District Directorate of National Education, directors of the related schools and responsible lecturer at the time of the application. A written informed consent form was also obtained from the students, informing them that the participation was voluntary and the answers were confidential and could only be used for scientific study. The measuring instruments were applied to the students by the researcher in the classroom environment. The duration of the application of questionnaire lasted approximately 20-25 minutes.

2.4 Statistical Analyses

All statistical analyses were performed with SPSS 20.0 program. Descriptive analyses have been used to give information about the characteristics of the participants. In addition, the relationship between the quality of life and eating attitude of adolescents in this study was evaluated by Pearson Correlation Analysis. Pearson correlation coefficients can take values between +1 and -1. A positive relation between variables means that there is an inclination that a participant with a high score in a variable will take a high score in another variable, whereas a negative relation means that there is an inclination that a participant with a high score in a variable will take low score from another variable (Şahin, Barut, Ersanlı, & Kumcağız, 2014). Simple linear regression analysis was used to determine if the quality of life scores predicted the eating attitude score.

3. Results

The Pearson correlation analysis was conducted to examine whether there was any relationship between the eating attitude of the researcher and the independent variables, quality of life scale scores (physical health, psychosocial health and scale total scores), and the results are presented in Table 1.

Table 1. Correlation Coefficients Related to Relationship Between Eating Attitude and Quality of Life Scale Scores

| Eating attitude | Physical health | r     | p     |
|-----------------|----------------|-------|-------|
| Eating attitude | Psycho-social health | -0.345 | .001* |
| Eating attitude | Scale total points  | -0.341 | .001* |

Table 1 indicated that there is a significant relationship between quality of life scale scores and eating attitude. In other words, eating attitude and physical health ($r = -0.21$, $p < 0.001$), eating attitude and psychosocial health ($r = -0.31; p < 0.001$) and eating attitude and scale total score ($r = -0.341$) was found to be statistically weakly and negatively correlated.

A series of simple linear regression analysis performed to determine the predictive power of the eating habits on the quality of life scale scores (physical, psychosocial health and scale total scores) of adolescents and presented in Table 2.

Table 2. Eating Attitude Simple Linear Regression Analysis

| Variables                | B     | Std.Err | β     | t     | p     |
|--------------------------|-------|---------|-------|-------|-------|
| Model 1 (Constant)       |       |         |       |       |       |
| Physical health          | -0.007| .001    | -0.207| -5.340| .001* |
| F(1,638) = 28,518        |       |         |       |       |       |
| R² = 0.043               |       |         |       |       |       |
| p < .001*                |       |         |       |       |       |
| Model 2 (Constant)       |       |         |       |       |       |
| Psycho-social health     | -0.007| .001    | -0.345| -9.272| .001* |
| F(1,638) = 85,966        |       |         |       |       |       |
| R² = 0.117               |       |         |       |       |       |
| p < .001*                |       |         |       |       |       |
| Model 3 (Constant)       |       |         |       |       |       |
| Scale total points       | -0.005| .001    | -0.341| -9.173| .001* |
| F(1,638) = 84,142        |       |         |       |       |       |
| R² = 0.117               |       |         |       |       |       |
| p < .001*                |       |         |       |       |       |

Note: $p < .001$
Table 2 indicates that living standards scale points of adolescent effects eating attitude points. In other words, physical health levels are significant for eating attitudes, psycho-social health levels are significant for eating attitudes, and scale total points are significant for eating attitudes. According to these results, physical health levels explained 4.3% variance of eating attitudes ($R^2 = 0.043$), psycho-social health levels explained 12% variance of eating attitudes ($R^2 = 0.12$), and total scale points explained 11% variance of eating attitudes ($R^2 = 0.12$).

4. Discussion

In this study, the relationship between quality of life and eating attitudes of Turkish high school students were evaluated. The results indicated a significant relationship between quality of life and eating attitudes. When the related literature is reviewed, there is no research that investigates the relationship between quality of life and eating attitudes of adolescent. However, there was a significant relationship between eating attitude and anxiety severity in the available research (Büyüköztürk et al., 2017), and at least one anxiety disorder was diagnosed in two thirds of the patients with eating disorders (Kaye et al., 2004). When the relationship between quality of life and quality of diet was evaluated among adults, there is a strong link between these two subjects (Şahin, 2014). It was also found that individuals with obesity had a problem of quality of life in the field of physical health (Dixon, Dixon & O’Brien, 2003; De Zwaan et al., 2002) and that the quality of life of obese patients who received treatment increased (Kaukua et al., 2003; Kaukau et al., 2004). It can be said that the results of this study supports the research findings. It can be argued that increasing the level of awareness of eating attitudes in increasing the quality of life of the societies of adolescents is therefore important.

As it is commonly known, the roots of most of the diseases are based on childhood and adolescent period and this connection is often disregarded (Vicente Rodriguez et al., 2007). Promoting positive health behaviours and adopting healthy lifestyle plays a key role in health and prevention of diseases. This understanding is based on keeping the individual well-being, achieving behaviours to sustain and improve health status, and making the right decisions about individual health (Semerci, 2007). Improving health can be achieved as individuals take care of their own health, controlling themselves, and achieving a full health potential. To achieve this goal, harmful habits should be avoided via behaviours such as healthy eating behaviours, physical activity and weight control (Ayaz, Tezcan & Akınç 2005; Güngör & Hotun Şahin, 2006). Individual who turns these behaviours into attitudes can continue to be healthy and have healthier life. As the results of this research and many others indicated having healthy eating attitude will promote increasing the quality of life of an individual. For this reason, to develop a positive eating habit, it is necessary to start working from childhood. In this process, the steps to promote health are particularly important to parents and other related individuals.

Although the data obtained in this study is valuable, the number of studies directly investigating the relationship between quality of life and eating attitude in adolescents is rather limited. Therefore, the repetition of such studies will be useful for understanding the subject better. According to the results of this study, physical health levels accounted for 4.3% variance of the eating attitude, psychosocial health level accounted for 11% variance of the eating attitude, and total quality of life accounted for 11% variance of eating attitude. As seen these result indicate eating attitude in adolescents is not the only factor affecting quality of life. In future researches, it would be beneficial to study what variables affect the quality of life in adolescents. In the same manner, although there is increased interest in eating disorders in adolescents in recent years, studies on this area are still considered to be appropriate. It could be said that approaches to adolescents with eating disorders may contribute to increased quality of life and easier maintenance of daily life.

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