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# Problem-solving self-appraisals of obese patients

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**Abstract. – OBJECTIVE: It has been reported that for obesity patients, improved problem-solving skills have a positive impact on losing weight and treatment adherence. The aims of our study, by describing the problem-solving self-appraisal of obese patients applied to our center, were to provide data in enriching the obesity management, to facilitate weight loss and improve long-term goals for patients.**

**PATIENTS AND METHODS: The study design was cross-sectional and descriptive. There were no sampling methods, all patients registered to the center program and passed the health screening module were asked to be included. The data collection was performed via "Socio-demographic information form" and "Problem-Solving Inventory" (PSI) forms. Quantitative data were compared by Student's t-test, Mann-Whitney U test, One-way Anova, post-hoc test, and correlation analysis.**

**RESULTS: The total average of the PSI scores of 87 patients was 122.33±20.25. There was no statistical significance between the inventory scores and gender, marital status, financial state, smoking, and alcohol consumption ($p>0.05$). Physical activity and education were correlated with the PSI scores ($p<0.05$).**

**CONCLUSIONS: The study showed that participants had low problem-solving self-appraisals. Providing an additional perspective on problem-solving skills may help to promote the psychological and physical well-being of obesity patients.**

*Key Words:*
Obesity, Problem-solving, Self-appraisal.

## Introduction

One of the most common behavioral strategies for weight loss interventions is problem-solving, a technique helping the patient identify barriers to behavior change and generate solutions[1]. Perri et al[2,3] defined a problem-solving model for obese individuals suggesting active problem-solving actions for problems encountered in daily life and reported that individuals completed the problem-solving training have lost more weight in the long-term. In addition to studies reporting that patients with improved or better problem-solving skills are more susceptible to therapy adherence and weight loss, recent meta-analysis reports indicate significant effects of such interventions on session attendance and physical activity[4-6]. Moreover, there are studies indicating that problem-solving may be a useful tool to predict increased body mass index (BMI) and overweight/obesity[7].

According to our knowledge, this is the first study describing the problem-solving self-appraisal of obese patients in the Middle East. We aimed to provide information in shaping the center program, to facilitate weight loss and promote long term goals for patients.

## Patients and Methods

The study design was cross-sectional and descriptive. It was conducted at Adana City Training and Research Hospital Obesity Center between November 1, 2018, and January 31, 2019. The center accepts individuals with BMI equal to or greater than 30. The program was divided into 6 modules scheduled in weekly, biweekly and monthly meetings in 9 months to carry out the assessment, health screening, basic medical information about obesity, cognitive change, behavioral change and sustainability activities, respectively. There were no sampling methods, all patients registered to the center and passed the second module were asked to be included. Initially, 95 cases volunteered for the study. Due to the incomplete forms, 8 of the cases were excluded. Data was collected by "Socio-demographic information form" and "Problem-solving Inventory" (PSI).

Problem-solving Inventory used in the study was developed by Heppner and Peterson[8], adapted to Turkish by Şahin et al[9] with Cronbach alpha 0.88. There were 35 items including 3 filler items rated on a 6-point Likert-type scale ranging from 1=Strongly agree to 6=Strongly disagree.



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The score is ranged between 32 and 192. Higher scores on the total PSI score are considered that the individual appraises himself or herself as poorer in his or her problem-solving style and less functional in solving personal problems[8,9].

### Human Ethics Committee Approval

The study was approved by the Adana City Training and Research Hospital Ethical Committee on September 12, 2018, with reference number 278. Informed consents were signed by participants who were well informed about the research, their right to decline to participate and to withdraw.

### Statistical Analysis

Statistical Package for the Social Sciences (SPSS) 20.0 software (IBM SPSS Statistics for Windows, Armonk, NY, USA) was used in data analysis. In descriptive analysis, mean, standard deviation, median, frequency, percentage, minimum and maximum values were calculated. Quantitative data were compared by Student's *t*-test, Mann-Whitney U test, One-way ANOVA, post-hoc test, and correlation analysis. The critical significance was set as 0.05.

## Results

In total, 87 patients completed the inventory. The mean age was 46.01±9.39 with a mean BMI of 36.61±3.71. Almost two-thirds were female (59.8%) and the majority were married (79.3%). Approximately half of the participants had only primary education (49.4%) and unemployed (48.3%). Participants that reported poor income were 43.7%. Most of them didn't smoke (70.1%) and consume alcohol (93.1%). More than half reported that they did not perform any form of physical activity (62.1%).

The mean PSI score was 122.33±20.25. There was no statistical significance between the inventory scores and gender, marital status, financial state, smoking, and alcohol consumption ($p>0.05$). Physical activity and education were correlated with the PSI scores ($p<0.05$).

## Discussion

The mean PSI score of 122.33±20.25 was considered as low. Heppner indicated that the average score of PSI for the non-clinical population was 88[10]. Also, Sabourin et al[11] have reported the average score for the same population as in the low 80s. Heppner et al[12] indicated a relation between negative problem-solving self-appraisal and women with eating disorders based on various studies. Aytin[13] reported a similar association with eating disorders and social problem-solving skills in 739 adolescents.

Similar to our findings regarding PSI scores and physical activity association, Canan and Ataoglu[14] reported a significant negative correlation between long-term regular sports activity and PSI scores. Also, Largo et al[15] suggested that perceived problem-solving was stronger predictors of physical health and perceived stress than were physical activity, alcohol consumption, or social support.

Participants with lower education presented higher scores in the PSI meaning low self-appraisals for problem-solving. Heppner et al stated that the inventory was found to be related to education level and there were reports indicating that individuals with higher educational levels indicated higher problem-solving self-appraisal[12].

The study was limited to the patients registered in our program. Another limitation may be the PSI since there are studies reporting different results. Larson and Heppner[16] have reported individuals reporting very high levels of problem-solving confidence and ability to approach problems while struggling in life situations, having depression and addicted to alcohol.

## Conclusions

The scant literature on problem-solving self-appraisals in this particular patient group prevents us from making clear assumptions. Nevertheless, in the light of studies reporting that addressing behavioral therapies have clinical importance in obesity management and given the associations with physical activity and education level, description of self-appraisal for problem-solving for an individual seems to have a potential in becoming in one of the guides in obesity therapy. We believe that providing an additional perspective on problem-solving skills may help to promote the psychological and physical well-being of obesity patients.

### Conflict of Interests

The Authors declare that they have no conflict of interests.

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