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The effectiveness of motivational interview on weight reduction and self-efficacy in Iranian overweight and obese women

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Abstract

Motivational interview is a client-centered method of counselling that seeks to elicit intrinsic motivation for changing behavior. One of elements of motivational interviewing counselling is supporting self-efficacy. The purpose of this study was to investigate the effectiveness of MI on weight reduction and self-efficacy. 30 overweight and obese women were randomized to MI and control groups. Subjects in intervention group received 4 sessions motivational interview. Two month after intervention, MI showed significant improvement in BMI and self-efficacy. This study suggests that motivational interviewing techniques are acceptable and may be useful for targeting and maintaining motivation in Iranian overweight and obese women.

Keywords: obesity, motivational interview, self-efficacy, BMI, Iranian obese women.

1. Introduction

Obesity is associated with increased morbidity rates and variety of psychosocial problems. Despite this identified need for treatment of obesity few studies have explored the effectiveness of weight loss interventions for Iranian obese women.

Motivational interviewing (MI) is a patient- centered method of counseling that seeks to elicit intrinsic motivation for changing behavior and encourages patients to understand and resolve their ambivalence to such change [1]. Motivational interviewing appears to be particularly effective for individuals who are initially resistant to changing their behavior. The goal of MI is to support self-efficacy [2]. Self-efficacy is an essential element in motivation and a good predictor of treatment outcome [3].

This article describes experiences in 4-sessions group Motivational interviewing, created to decrease weight. Because no MI study articles detail the interventions in Iranian obese women, present article focuses on delivery of MI. The current study attempts to determine the effectiveness of MI on self- efficacy and initiating change in weight reduction behaviors among Iranian obese women.

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2. Method

2.1. Participants

Thirty Iranian overweight and obese women aged 18–55 years were recruited from a group of 63 volunteers who responded to notices and randomized to motivational interview and control groups. To participate in the study, women had to be overweight (BMIz25 kg/m2), between the ages of 18 and 55, and free of serious physical illness. Patients taking weight-reduction medications and pregnant subjects were excluded from participation. Each woman gave written consent for participation in the randomized controlled trial.

2.2. Materials

Weight reduction- Weight reduction was assessed by the use of Body Mass Index. BMI calculated as weight in kilograms divided by height in meters squared.

Self- efficacy- Self-efficacy in relation to eating was assessed with the WEL [4]. The WEL questionnaire includes 20 items in which respondents were asked to rate their confidence about being able to successfully resist the desire to eat using a 10- point scale ranging from 0 (not confident) to 9 (very confident). The WEL yields a global score and five subscales: negative emotions (e.g., eating when anxious), availability (e.g., eating when food is readily available), social pressure (e.g., declining food when others are encouraging eating), physical discomfort (e.g., eating when fatigued), and positive activities (e.g., eating when watching TV). Clark et al. [4] report the WEL possesses a stable five-factor structure and acceptable levels of internal consistency. Internal consistency of the five subscales has ranged from .70 to .90 and External validity of the WEL has also been supported, as changes in WEL scores were observed during obesity treatment [4].

2.3. Procedure

Present study was a randomized controlled trial in which we randomly assigned 30 women who met the study criteria in motivational interview and wait-list control group. Measurements were made at baseline and 2 month after intervention. Weight and height was recorded and BMI was calculated. Participants completed demographic form and the WEL questionnaire. Intervention group received 4 sessions motivational interview and control group did not receive any intervention. Waitlist Control group received treatment after a six month.

2.4 .Statistical analyses

Analysis of research data was performed using SPSS. Multivariate analysis of covariance was performed to investigate the effectiveness of MI. MANCOVA (with baseline measures as a covariate) were performed to explore differences between the intervention and the control groups in BMI and self- efficacy. MANCOVA's (with baseline measures as a covariate) were also performed to explore Differences between the intervention and control group in five subscales of the WEL.

3. Results

Table 1 shows the baseline sample mean and standard deviation on the BMI, the WEL, and subscales of the WEL in intervention and control group.

Table 1. Mean and SD based on the BMI, the WEL, and subscales of the WEL

Group	Intervention group		Control group	
	Mean	Std. Deviation	Mean	Std. Deviation
BMI	30.61	3.14	31.51	3.70
WEL	91.00	32.65	109.73	31.39

Negative emotion	15.80	8.95	22.40	11.26
Availability	13.73	6.92	20.66	6.67
Social pressure	20.20	7.94	23.13	8.29
Physical discomfort	21.13	7.40	20.33	6.28
Positive activity	20.13	6.66	23.20	7.67

Multivariate analysis of covariance was conducted on only the WEL and BMI as the dependent variables. The multivariate analysis revealed a significant effect due to groups (Wilks' Lambda = .541, F = 10.62, df = 2, 25, p = .001). Follow-up univariate tests revealed statistically significant differences between control group and intervention (see Table 2). Subjects in the intervention group significantly improved their BMI and self-efficacy from pretest to posttest compared to the control group.

A MANCOVA performed to explore Differences between the intervention and control group in five subscales of the WEL. Since the overall multivariate test indicated a significant multivariate main effect for group (Wilks' Lambda = .486, F = 4.02, df = 5, 19, p = .012), univariate probes were conducted across the five subscales of the WEL (see Table 2). Intervention group compared to control group displayed significantly ($p < .05$) higher scores on the negative emotion, social pressure, physical discomfort, and Positive activities subscales when controlling for pretest. There were no statistically significant differences between groups on the availability subscale of the WEL.

Table 2: Between Groups MANCOVA Model Summary for the BMI, the WEL, and subscales of the WEL

Variables	**MS**	**Df**	**F**	**Sig.**
BMI	1.65	1	6.29	.019
WEL	2336.563	1	11.03	.003
Negative Emotion	135.280	1	5.859	.024
Availability	6.530	1	.230	.636
Social pressure	53.053	1	4.762	.040
Physical discomfort	157.361	1	8.970	.006
Positive activities	107.980	1	6.668	.017

4. Conclusion

The objective of this study was to examine the effects of motivational interview on weight reduction and self-efficacy in 30 obese and overweight women. In this study motivational interview as a brief intervention significantly enhanced both weight loss and self- efficacy among Iranian obese and overweight women. The current study is the first to report the impact of motivational interviewing among Iranian women. The findings of the present study will have potential implications for obesity treatment of obese women in Iranian culture. In current study self-efficacy in all five subscales, and the total WEL score and BMI increased in intervention group. This finding supports previous data that showed enhanced self-efficacy in obese women who decreased weight in various treatment [5,6]. Many studies that investigated the effectiveness of motivational interview on weight reduction support this study [7,8,9,10]. Motivational interviewing augmented weight loss by increasing attendance at group sessions and producing more frequent and more comprehensive self-monitoring [11].

One of elements of motivational interviewing counselling is supporting self-efficacy. Models such as Roger's Protection Motivation Theory explain how an individual's self-efficacy, their perception of their own susceptibility to a health problem and the severity of their condition, affect the extent to which changes are made [12]. Several studies suggest self-efficacy increases over the course of obesity treatment [4,5,13]. Bas and donmz [5] note that treatments that improve self-efficacy may help participants lose more weight during treatment and future obesity treatment programs should consider including approaches that directly strengthen self- efficacy and promote weight loss simultaneously.

This study suggests that motivational interviewing techniques are acceptable and may be useful for targeting and maintaining motivation in Iranian overweight and obese women. Moreover, Health care professionals should consider the role of self- efficacy in behavior changes such weight reduction and support patient's self- efficacy.

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