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Research Paper

Autosuggestion as a Mediator in Weight Management in Female College Students

Psychology

KEYWORDS : Body weight, weight management, autosuggestion, intervention, female college students

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ABSTRACT

A study was done to understand the mediating effect of autosuggestion in weight management in female college students. From three colleges and two women's hostel in and around Coimbatore, 82 female college students who expressed their consent to participate in the study, who were overweight, devoid of health conditions like polycystic ovary syndrome, diabetes and hypertension and who did not come under the category of obesity were selected by random sampling. Group A had 41 participants and they underwent the intervention of Exercise+Diet+Autosuggestions; Group B had 41 participants and they underwent the intervention of Exercise+Diet. They completed WHO-5 Well-being Index (1998 version) before and after the intervention.The results indicated that there was a marginal but a statistically insignificant difference in the body weight of the participants in both Group A and Group B. There was a statistically significant difference in the well-being of the participants in both Group A and Group B. The results recommended longer periods of behavioural interventions incorporating psychological techniques for adherence to the regimen resulting in sustained weight reduction.

Introduction

Obesity and overweight have now become a global epidemic. According to the World Health Organization (WHO, 2013), there will be about 2.3 billion overweight people aged 15 years and above and over 700 million obese people worldwide in 2015. Overweight and obesity are the fifth leading risk of deaths, resulting in around 2.8 million deaths of adults globally every year. In addition, 44% of the diabetes burden, 23% of the ischemic heart disease, and between 7% and 41% of certain cancer burdens are attributable to overweight or obesity (WHO, 2013). The young adults who are overweight are the population at risk to develop obesity.

Overweight and the eventual obesity negatively impact the health of women in many ways. Being overweight or obese increases the relative risk of diabetes, coronary artery disease, low back pain, knee osteoarthritis, hypertension, depression, multiple cancers and various reproductive health conditions in women. Earlier studies in exercise and diet contexts which examined perceived choice, a marker of autonomy, in relation to well-being found that it was associated with reduced negative affect (Daley and Maynard, 2003) and positive well-being (Parfitt and Gledhill, 2004).

The present study focused on comparing the effect of two combinations of intervention on body weight reduction of the selected female college students in which one involves autosuggestion. It has been found that a combined diet-plus-exercise programme provides greater long-term weight loss than a diet-only programme. Studies also show more beneficial effects when combined with psychological interventions. The action research was intended to provide such beneficial effects to the participants in reducing and maintaining their body weight.

Method

The Project Proposal submitted by the researcher to the Institutional Human Ethics Committee was subjected to perusal and approval was obtained (Approval No: AUW/IHEC-14-15/XMT-77). From three colleges and two women's hostel in and around Coimbatore, 82 female college students who expressed their consent to participate in the study, who were overweight, devoid of health conditions like polycystic ovary syndrome, diabetes and hypertension and who did not come under the category of obesity were selected by random sampling. Group A had 41 participants and they underwent the intervention of Exercise+Diet+Autosuggestions; Group B had 41 participants and they underwent the intervention of Exercise+Diet. They were given the WHO-5 Well-being Index (1998 version) before and after the intervention.

Intervention

The participants of Group A were given intervention involving Exercise+Diet+Autosuggestion and the participants of Group B followed intervention involving Exercise+Diet. Participants of Group B were not aware of or informed about the autosuggestions assigned for the participants in Group A. The intervention was for duration of thirty days. The Exercise routine was a forty-five minute workout with walking, jogging, planks and sit-ups.

The diet included option of healthy foods, distributed over five meals/day. The participants were strictly prohibited from consuming fast-foods (both vegetarian and non-vegetarian diet).

Autosuggestions were individualized, catering to the unique motivational levels of the participants.

Procedure for Autosuggestion

Once the autosuggestions were designed, the participants were asked to repeat them to oneself following a brief breathing exercise. The participants were instructed to repeat the autosuggestions in the morning when they are still on the bed soon after waking up and at night just before going to sleep. The participants are advised to repeat each autosuggestion between 20 and 100 times for best results. It is also beneficial to repeat the autosuggestion whenever the participants got a few moments in the midst of their day-to-day work or schedule. Practicing twice every day was mandatory.

Follow up

After fifteen days of starting the intervention, a follow up assessment (Assessment II) of body weight and well-being in Group A and Group B was done. At the end of the thirtieth day, another similar follow up (Assessment III) was done.

Measures

Adult Consent Form: It was used to get consent from the selected college students to participate in the study.

Case Study Schedule: To obtain personal and anthropometric data.

WHO (Five) Well-Being Index (1998 version): It had five sentences regarding how individuals felt over two weeks period which were to be rated on a five-point scale.

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Null Hypotheses

1. Autosuggestion does not moderate in weight management in the participants, who are the selected female college students.
2. There is no effect of exercise and diet on weight management in the sample.
3. There is no relationship between body weight and well-being in the sample.
4. There is no effect of the intervention on the well-being of the sample.
5. There is no relationship between body type and well-being of the sample.

Results and Discussion

Null Hypothesis 1: Autosuggestion does not moderate in weight management in the participants, who are the selected female college students.

Table 1: Showing the Significant Difference in Body weight of Group A in Assessments I, II and III

Source of Variance	Sum of Squares	df	Mean Square	F	P
Between:	49.372	2	24.686	0.673	0.512
Within:	4,402.124	120	36.684		
Total:	4,451.496	122			

The one way analysis of variance was carried out to find the difference in the mean body weight of Group A in Assessments I (before intervention), II (after 15 days of intervention) and III (after 30 days of intervention). Observing from the P value, 0.05 < 0.512, it can be noted that it is not statistically significant at any levels, hence the Null Hypothesis, "Autosuggestion does not moderate in weight management in the participants, who are the selected female college students" is accepted.

The mean body weight of the participants of Group A did show a sustained reduction from Assessment I (62.98) and Assessment II (61.99) through Assessment III (61.45). The short duration of one month for intervention could be attributed to this negligible and statistically insignificant difference.

Null Hypothesis 2: There is no effect of exercise and diet on weight management in the sample.

Table 2: Showing the Significant Difference between the Body Weight of Group A and Group B in Assessment III

Source of Variance	Sum of Squares	df	Mean Square	F	P
Between:	26.642	1	26.642	0.827	0.366
Within:	2,576.900	80	32.211		
Total:	2,603.542	81			

The one way analysis of variance was carried out on the sample to find the difference in the mean body weight of Group A and Group B in Assessment III. Observing from the P value, 0.05< 0.366, it can be noted that it is not statistically significant at any levels, hence the Null Hypothesis, "There is no effect of exercise and diet on weight reduction in the sample" is accepted.

Null Hypothesis 3: There is no relationship between body weight and well-being in the sample

Table 3: Showing the Correlation between Body Weight and Well-being of the Participants
N=82

Variable	Statistical Analysis	Body Weight	Well-being
Body Weight	Pearson Correlation	1	-.278*
	Sig. (2-tailed)		.011
Well-being	Pearson Correlation	-.278*	1
	Sig. (2-tailed)	.011	

Significant at 0.05 level

Table 3 shows the correlation between body weight and well-being. The correlation values reveal that the body weight and well-being are negatively correlated. Hence the Null Hypothesis, "There is no relationship between body weight and well-being in the sample" is rejected.This shows that when the body weight is more, there is lower well-being and vice versa in an individual.

Null Hypothesis 4: There is no effect of the intervention on the well-being of the sample.

Table 4: Showing the Significant Difference in Well-being of Group A and Group B in Assessment III

Source of Variance	Sum of Squares	df	Mean Square	F	P
Between:	15.516	1	15.516	3.034	0.085**
Within:	409.160	80	5.12		
Total:	424.676	81			

** Significant at the 0.01 level

The one way analysis of variance was carried out on the sample to find the difference in the mean well-being of Group A and Group B in Assessment III. Observing from the P value, 0.01< 0.085, it can be noted that it is statistically significant, hence the Null Hypothesis, "There is no effect of the intervention on the well-being of the sample" is rejected.

Null Hypothesis 5: There is no relationship body type and well -being of the sample.

Table 5: Showing the Correlation between Well-being and Body Type of the Participants
N=82

Variable	Statistical Analysis	Well-being	Body Type
Well-being	Pearson Correlation	1	.230*
	Sig. (2-tailed)		.037
Body Type	Pearson Correlation	.230*	1
	Sig. (2-tailed)	.037	

Significant at 0.05 level

Table 5 indicates a significant positive correlation at 0.05 level between well-being and body type. Hence, the Null Hypothesis, "There is no relationship between body type (one of the anthropometric variables) and well-being of the sample" is rejected. In the present study almost half of the participants had endomorphic body type and before intervention they were moderate in well-being. From this it can be inferred that body type does influence one's satisfaction eventually influencing well-being.

Conclusion

Overweight treatment strategies vary from person to person. There are several well documented methods for treating overweight, such as behaviour modification, physical activity and non clinical weight management programmes. From this research it can be concluded that a weight management intervention involving exercise, diet and autosuggestion (a psychological component) is more effective than a weight management intervention involving exercise and diet alone. Weight reduction has also been found to have a bearing on the participants' well-being.

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