

The effect of self-identity on body shape management

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Abstract

The purpose of this study was to investigate the effects of self-identity on body shape management for college students. This study used descriptive research to analyze the effects of self-identity, which has contained factors of Subjectivity, Self-acceptance, Future Confidence, Goal Orientation, Scrupulous. The subjects were 404 college students located in C province who were voluntarily agreed. Multiple regression analysis was conducted to verify the effects on self - identity and body shape management. As a result, self - acceptance of self - identity' subcomponents had no effect on body shape management, but future confirmation, goal orientation, Scrupulous, intimacy affects body shape management($P < 0.001$). Based on these results, in order to manage the body shape of college students, it is considered effective to present the visible goals and apply the programs that students can do themselves. In addition, it can be seen that it is effective to start body shape management during college group life to enhance intimacy.

Keywords: *Self-identity, Body shape management, College students.,*

1. Introduction

Contemporary people have become more interested in their appearance due to the relaxed lifestyle, the expansion of education and social advancement. However, modern diet seems to be increasingly making the body obese. Obesity is considered to be a very important health threat, it is accepted without obligation, but the obesity population is steadily increasing[1,2]. Obesity is not only closely related to various diseases and cancers but also affects quality of life. College students are in the early stages of adulthood, and this is a crucial time to maintain a happy life[3]. Also college students are active in heterosexual relationships and are more interested in their appearance than any other age[4]. Education is most effective when their needs are high[5]. In other words, since college students are interested in their appearance, it is considered more effective to manage body shape on this scale than other ages. But first, they need to make a good judgment of their body shape. Many of young people are often criticized for being skinny with beauty[6]. In some cases, Despite knowing that it is harmful to health, they may experience side effects while doing indiscreet body management[4,6]. While body shape management of college students makes them seem attractive to others, body shape management is more important than health. Furthermore college students, in the early

days of an adult, correct body shape management is essential for a healthy family[3]. Recent research has suggested that obesity is kind of a stigmatized condition[1,2]. Concerns with personal inferiority (social level), shame and self-criticism may impact on body shape management behaviors. This distorted perception is an obstacle to correct body shape management[1]. Therefore, it is important to recognize oneself correctly and manage one's body shape properly. Correct self-awareness can be linked to self-identity recognition in a broader sense. Self-identity has been studied so far in relation to social adaptation.

Self-identity are classified with subjectivity, self acceptance, Future convictions, Goal Orientation, scrupulosity(initiate), and Intimacy by [7]. The current study investigated associations between shame, self-criticism, negative affect and eating behaviors in women based weight management programme focused on behavior change[4,6,8]. There are many factors that affect body shape management. Therefore it is judged that it is difficult to interpret it as a simple factor. It is necessary to find out whether the ego identity that constitutes the various subunits affects body shape management.

A recent study on body shape management, there were effect of a body shape management program on mother's body shape and the body composition[9], A Study on the Use Realities and the Preference for the Skin and Body Shape Care Appliances[10], A study on practice of health management and body type control behavior according to health care consulting[11].

These studies focus on how to manage already formed body shape. In order to form a healthy body, it is important to examine the factors affecting body shape management. Human beings are social animals and appearance affects a lot of social life. Looking at the results that have been studied so far, Self-identity is an important element of socialization. Body shape management is also an important factor in living a healthy society. If so, self-identity and body-shape management can have a common element for healthy socialization. Self-awareness is a part of self-identity. Recently, there was A Comparison of Appearance management Behaviors of middle school boys with girls in relation to the Perception of Body Size - Among girls and boys' middle school in Gwangju[12]. According to the research results, middle school boys and girls tended to perceive their bodies slimmer as well as obese unlike reality, According to these results, the researchers emphasize that it is recommended to give education for correct perception of their body shape[12]. And also the correlation of body size perception factor and appearance management behavior was tended to using a diet rather than doing exercise. Especially, the appearance management behavior of slimness distortion perception[11,12]. A lot of self-identity has been studied. The results show that self-identity plays an important role in social maturity. Appearance, body shape is also an important component of socialization[13,14,15,16].

However, the relationship between self-identity and body shape management has not been studied so far college students. Therefore, It is meaningful to study the effects on body shape management for college students. This study has the following research objectives specifically.

First, This study investigates body shape management with individual characteristics.

Second, This study analyzes the relationship between body image recognition and self - identity.

Third, This study investigates the effect of ego identity on body shape management.

2. Method

2.1 Research tools

The scale used in this study is self-identity. This scale was developed by Park, A chung[7] and used by Im and Hwang [17]. When Im and Ho [17] used cronbach alpha was .946 and the entire Cronbach alpha of this study was .917. This scale was 6 point likert and consists of 60 items consisting of 6 sub - factors,

subjectivity, self - acceptance, future conviction, goal orientation, scrupulous and intimacy. Sub-component reliability of self-identity were each subjectivity(.705), self - acceptance(.792), future conviction(.775), goal orientation(.706) scrupulous (.705) and intimacy(.824)(Table 1).

Table 1. Self-identity tool's constituent factor and reliability

Scale	Sub-component	Cronbach α
Self identity	subjectivity	.705
	self - acceptance	.792
	future conviction	.775
	goal orientation	.706
	scrupulous	.705
	intimacy	.824
	Total	.917

2.2 Data analysis

Statistical program spss 18.0 was used to analyze this study. First, Personal information for research purpose was analyzed frequency. Second, chi square(x2) analysis was conducted to find out the different forms of body shape management based on personal characteristics. Third, Correlation analysis was performed to find out the correlation between body type recognition and self - identity. Multiple regression analysis was conducted to understand the effect of self-identity on body shape recognition and body shape management.

3. Result

3.1 Information of Research Objects

The demographic characteristics of the objects were shown Table 1. A total of 404 students, female students participated more than boys as Male(12.6%)and Female(87.4%). The age distribution were age 19(50.2%), 20(4.5%), 21(36.8%), and 21(36.8%). The Grade distribution were 1st(26.0%), 2nd(26.5%), 3rd(25.2%), and 4th(22.3%). The Residence type distribution were Commute(17.3%), Dormitory(65.1%), Trace(14.9%), and Others(2.7%). The Part time job distribution were convenience store(8.4%), Restaurant(3.5%), Others(43.3%), and None(44.8%). The Allowance(pocket money) distribution were Less than 100,000 won(24.0%), Less than 200,000 won(22.0), Less than 300,000 won(31.9%), and more than 300,000 won(22.0%). The body shape recognition distribution were Skinny(13.9%), Standard(21.8%), Obese(55.7%), and Very obese(8.7%). The body shape management distribution were Diet(29.0%), Exercise(29.7%), Diet food(7.7%), Others(18.6%), and None(15.1%).

Table 2. Information of Research Objects (N=404)

Characteristic		Fre. (N)	Ratio (%)	Characteristic		Fre. (N)	Ratio (%)
Gender	Male	51	12.6	Part time job	Convenience store	34	8.4
	Female	353	87.4		Restaurant	14	3.5
					Others	175	43.3
					None	181	44.8
Age	19	203	50.2	Allowance (won)	↓ 100,000	97	24.0
	20	18	4.5		↓ 200,000	89	22.0
	21	149	36.8		↓ 300,000	129	31.9
	↑22	34	8.5		↑ 300,000	89	22.0
Grade	1st	105	26.0	Body shape recognition	Skinny	56	13.9
	2nd	107	26.5		Standard	88	21.8
	3rd	102	25.2		Obese	225	55.7
	4th	90	22.3		Very obese	35	8.7
Residence type	Commute	70	17.3	Body shape management	Diet	117	29.0
	Dormitory	263	65.1		Exercise	120	29.7
	self-governing	60	14.9		Diet food	31	7.7
	Others	11	2.7		Others	75	18.6
					None	61	15.1

3.2 Body shape management type according to individual characteristics

The level of body shape management according to personal characteristics was shown in the table 2. Analysis of body shape management according to demographic and sociological characteristics showed significant difference at 0.05 level. According to 'gender', male students were most likely to control body shape (84.3%), among the female students(71.0%) of the students did not manage body shape, Second was managing body shape by 'diet'(32.0%) ($p = .000$). By grade, the following results were obtained. The first grade was 'diet' (44.8%) the most, In the second grade, 'exercise' (47.7%) and third grade 'exercise' (40.0) were the most common body shape management methods, In the fourth grade, 'diet' and 'exercise' were the most common (40.0%) ($p = .000$). The residence type was as follow, The students attending 'commute school' were the most 'exercising' (38.6%), the 'dormitory students' were on 'diet' (31.6%), 'trace students' were most preferred to 'exercise'(43.4%) body shape management($p=.000$). Analysis of body shape management by 'allowance(pocket money) level were as follow, In the case of 'less than 100,000 won'

monthly allowance, 'exercise '(43.3%) was the most frequent, 'less than 200,000 won' (58.4%) was 'Others', 'Diet' (50.4%) was the most common for 'less than 300,000 won', also 'Diet' (29.2%), 'exercise' (25.8%) and 'non-exercise' (29.2%) showed similar levels with 'over 300,000 won'(p=.000). Analysis of body shape management according to 'part-time job' were as follow, Participating students at 'convenience stores' preferred 'exercise' (50.0%), The students who work at 'restaurants' also had the highest number of 'exercise' (11.7%), The students who did not work part-time were the most 'diets' (40.9%). Analysis of body shape management based on body shape recognition were as follow, the students who perceived themselves to be 'skinny' did not manage body shape(67.9%), The students who recognized it as the 'standard' were the most with 'exercise' (50.0%), the students who thought that they were 'obese' were the most 'diets'(42.7%), students who think they are 'very obese' were appeared as 'Others'(p=.000).

Table 3. Body shape management type according to individual characteristics

Variables	Categories	Body shape management					Total	χ ² (p)
		Diet N(%)	Exercise N(%)	Diet food N(%)	Others N(%)	None N(%)		
Gender	Male	4(7.8)	43(84.3)	1(2.0)	2(3.9)	1(2.0)	51(12.6)	.000**
	Female	113(32.0)	77(21.8)	30(8.5)	73(20.7)	60(71.0)	353(87.4)	
Grade	1st	47(44.8)	16(15.2)	0(0)	21(20.0)	21(20.0)	105(26.0)	.000**
	2nd	0(0)	51(47.7)	14(13.1)	28(26.2)	14(13.1)	107(26.5)	
	3rd	34(40.0)	36(40.0)	0(0)	9(10.0)	9(10.0)	102(25.2)	
	4th	36(40.0)	36(40.0)	0(0)	9(10.0)	9(10.0)	90(22.3)	
Residence type	Commute	17(24.3)	27(38.6)	17(24.3)	9(12.9)	0(0)	70(17.3)	.000**
	Dormitory	83(31.6)	67(25.5)	14(5.3)	66(25.1)	33(12.5)	263(65.1)	
	self-governing	17(28.3)	26(43.3)	0(0)	0(0)	17(28.3)	60(14.9)	
	Others	0(0)	0(0)	0(0)	0(0)	11(18.0)	11(18.0)	
Allowance	↓100,000	17(17.5)	42(43.3)	17(17.5)	0(0)	21(21.6)	97(24.0)	.000**
	↓200,000	9(10.1)	14(15.7)	0(0)	52(58.4)	14(15.7)	89(22.0)	
	↓300,000	65(50.4)	41(31.8)	0(0)	23(17.8)	0(0)	129(31.9)	
	↑300,000	26(29.2)	23(25.8)	14(15.7)	0(0)	26(29.2)	89(22.0)	
Part time Job	Convenience store	17(50.0)	17(50.0)	0(0)	0(0)	0(0)	34(8.4)	.000**
	Restaurant	0(0)	14(11.7)	0(0)	0(0)	0(0)	14(3.5)	
	Others	26(14.9)	64(36.6)	31(17.7)	54(30.9)	0(0)	175(43.3)	
	None	74(40.9)	25(13.8)	0(0)	21(11.6)	61(33.7)	181(44.8)	
Body shape recognition	Skinny	0(0)	18(32.1)	0(0)	0(0)	38(67.9)	56(13.9)	.000**
	Standard	21(23.9)	44(50.0)	0(0)	23(26.1)	0(0)	88(21.8)	
	Obese	96(42.7)	58(25.8)	31(13.8)	31(13.8)	9(4.0)	225(55.7)	
	Very obese	0(0)	0(0)	0(0)	21(60.0)	14(40.0)	35(8.7)	

Missing data excluded.

3.3 Correlation between body shape recognition and self-identity

The correlation between self-identity and body-form perception is shown in the table 3. Correlation coefficients were used to analyze the degree of relevance between the variables used in the study (Analysis of correlation between body image recognition and sub-components of self-identity). It was confirmed whether each correlation coefficient was related or not at statistical significance level. Self-identity consists of self-acceptance, future convictions, goal orientation, scrupulosity, intimacy, subjectivity. Based on the factor analysis of research, the variables confirmed the reliability and validity of the tools through analyzed the correlation between 'body shape recognition' and 'self-identity'. The correlation between 'body shape recognition' and 'self-identity' was Table 3. 'Self-acceptance' was not associated with 'body type perception' ($r = -.029, p > .005$). But The components of ego - identity except self - acceptance were found to be correlated. The results are as follows. 'Future convictions' was shown to be significant ($r = .636, p < .001$), 'Goal Orientation' was shown to be significant ($r = .651, p < .001$), 'Scrupulosity' was shown to be significant ($r = .765, p < .001$), 'Intimacy' was shown to be significant ($r = .439, p < .001$), 'Subjectivity' was shown to be significant ($r = .296, p < .001$).

Table 4. Correlation between body shape recognition and self-identity.

Variables	Mean	Standard Deviation	Correlation						
			1	2	3	4	5	6	7
Body shape recognition	3.59	.83	1.00	-.029	.196**	.300**	.304**	.262**	.296**
Self-acceptance	3.99	.58		1.00	.421**	.466**	.505**	.570**	.238**
Future convictions	3.92	.48			1.00	.636**	.240**	.348**	.357**
Goal Orientation	3.51	.60				1.00	.651**	.642**	.466**
Scrupulosity	3.34	.57					1.00	.765**	.361**
Intimacy	3.40	.68						1.00	.439**
Subjectivity	3.59	.40							1.00

** . The correlation coefficient is at 0.01 level (both sides).

3.4 The effect of self- identity on body shape recognition

The effect of self-identity on body shape recognition was shown in the table 4. As a result of the analysis, the degree of self - identity explained 21.2% of body type recognition. Durbin-Watson was used to test the independence of residuals. The result is 2.220 and it is judged that there is no correlation with the residual. As a result of the analysis of variance, the probability of significance is .000. Thus This regression equation is significant because the variance result is lower than .05. In addition, the tolerance limits were calculated from the multi-collinearity diagnosis. The tolerance limit value appeared from 0.314 to .733, indicating that there is no problem with multi-collinearity. This suggests that self - identity affects the perception of body shape. The results showed that the higher the subjectivity and the initiative, the higher the body shape management, On the contrary, self - acceptance and body type perception have negative effects.

3.5 The effect of self-identity on body shape management

The effect of self-identity on body shape management was shown in the table 5. As a result of the analysis, the degree of self - identity explained 24.3% of body type recognition. Durbin-Watson was used to test the

independence of residuals. The result is 1.372, which means that there is no correlation with the residual. As a result of the analysis of variance, the probability of significance is .000 and it is lower than .05, so this regression equation is meaningful. In addition, the tolerance limits were calculated from the multi-collinearity diagnosis. The tolerance limit value appeared over 0.1, which means indicating that there is no problem with multi-collinearity. As a result of analyzing the effects of self - identity on body shape management, the higher the subjectivity, the higher the body shape management, Future assurance and body shape management have negative effects.

Table 5. The effect of self-identity on body shape management

Dependent variable	Independent variables	Non-standardization factor		β	t	p	Tolerance limit
		B	Standard error				
Body shape Management	Constant	7.792	1.437	-	5.422	.000**	
	Subjectivity	.670	.360	.095	1.859	.064	.733
	Self-acceptance	1.325	.273	.275	4.856	.00**	.596
	Future convictions	-2.672	.363	-.461	- 7.366	.00**	.486
	Goal Orientation	-.823	.366	-.175	- 2.245	.025	.314
	scrupulosity	.429	.371	.088	1.159	.247	.329
	Intimacy	.028	.312	.007	.090	.928	.333
$R^2=.243$, Modified $R^2=.232$. $F=21.268$, $p=.21.268$, Durbin-Watson=1.372							

*. $p < 0.05$, **. $p < 0.01$

4. Conclusion

On the basis of the analysis above, it can come to conclusions. This study was designed to explore the relation between self-recognition and body management in college students. The information of objective were 404. All of them were enrolled in the first, second, third, and fourth grades who agreed to participate in the study.

In this study, most of the students were living in dormitories(65.11%) because of the reason that the study schools were located in the provinces. In addition, there were relatively few students who were part-time than large-city students due to the difficulty of approaching the school. The allowance for monthly use was less than 300,000 won(78%). Most of the students who answered that they were fat for their own obesity, most of the students were rated as being stressed about their body shape. Body shape management was the most prevalent exercise, and the second choice was the least preferred way to eat less.

When analyzing body shape management according to personal characteristics, Male students preferred exercise the most, and female students preferred eating less. This result is the same as Hong's study[18]. By grade, the first year preferred a lesser diet, the second year preferred exercise, the third year preferred a lesser

amount of exercise and meals, and the fourth year preferred exercise and meals at the same rate. On the basis of this, the lower grades mainly manage body shape by decreasing the amount of food, while the higher the grade, the less the amount of food and the exercise can be seen. By type of residence, students and self-governing students at home from school preferred exercise, and the boarder preferred to eat less. On the basis of this, students commute school from home to school are more likely to exercise body shape management, but they who were resident at dormitory tend to prefer to reduce the amount of food. By the amount of allowance(pocket money) to use per month, less than 100,000 won was selected mainly for exercise, and the rest was chosen evenly for diet and exercise and diet food choices. In other words, students with low pocket money prefer exercise, but those with relatively high pocket money prefer to use diet food or diet rather than exercise. By part-time analysis, part-time students choose dietary control and exercise evenly, while non-part-time students chose dietary control. Students who thought that they were skinny by type of awareness did not manage body shape. Students who thought it was standard preferred exercise, students who thought that it was fat selected dietary control, students who thought it was very fat Did not manage body shape. Based on these results, it can be seen that the body shape management is different according to the recognition of the body shape. This is because Lee Jung-Soon's research shows that body image recognition has a context with studies related to body image and satisfaction[19].

When analyzing the correlation between body type recognition and self-identity, there was no correlation between self-acceptance and body type perception, but the more the person is convinced about the future, the more oriented toward the goal of social life, It was found that the recognition of the recorded body type was increased. This result is expected to be an effective program when planning body shape management. In other words, it can be predicted that a program that is more objective than the vague body management program and that makes the future feel good to the person by managing the body shape is efficient.

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6. References

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