

Role of BMI in Spiritual Intelligence, Narcissism, and Body Image of College Students

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ABSTRACT

Spiritual intelligence is our capacity for developing meaning, vision and value and allows us to dream and to strive. Narcissism is characterized by indulgence in excessive self-love, selfishness, feelings of superiority, disregard for others, lack of empathy, illusions of grandiosity, and the use of people for one's self gain. Body image relates to a person's perceptions, feelings and thoughts about his or her body. A 3x2 factorial design was employed to observe the main and interaction effects of BMI (low, normal and high) and gender on spiritual intelligence, narcissism and body image in college students. Further, a correlational design was used to determine the predictors of the dimensions of body image from spiritual intelligence and narcissism. A non probability purposive sampling technique was used to gather data from 360 college students (180 boys and 180 girls) of low, normal and high BMI. There was a significant influence of BMI on fatness evaluation and negative effect. Significant gender differences were seen in some of the dimensions of all the three variables. Also, interaction effect between BMI and gender were reported in certain cases. Results also showed that spiritual intelligence, critical existential thinking, personal meaning production, transcendental awareness, conscious state expansion and narcissism were found to be significant predictors of various criterion variables. Spiritual intelligence can be explored in more than one population in order to gain a better understanding of its influence over body image. Based on the results of the current research study, interventions could be designed which aim at enhancing the understanding of spirituality and spiritual intelligence. This would, in turn, contribute to the fostering of a desirable body image in college students.

Keywords: Spiritual intelligence, Narcissism, Body image, Body Mass Index (BMI), College students

Introduction

"Who looks outside, dreams; who looks inside, awakes." - C. G. Jung (1957)

Salagame (2010) elucidated that 'Know thy self' and 'ko'ham' (who am I?) probably epitomizes the Western and Indian approaches to the problem of human identity from ancient times. While the dictum 'know thy self' is an injunction from the other, ko'ham is an inquiry from 'within'. At a psychological level, human identity can be represented by ego and ahamkara, which have roots in Western and Indian traditions respectively.

In his work, Erikson used the term 'identity' synonymously with what others considered 'self – concept'. An aspect or a part of self – concept can be understood by conceptualizing the term 'identity' (Leary & Tangney, 2011). Although children have identities, the transition from adolescence into adulthood is theorized as involving a re - examination of important identities. Adolescents and young adults are predicted to conclude upon an identity that remains stable, after trying on various possibilities.

Self concept encompasses a wide range of components including self image, self efficacy, self regulation, and self confidence among others. Govanakoppa (2013) investigated the relationship between self – esteem, modernity and subjective well-being among college students from the state of Karnataka and implicated that the rapid change that is brought about during the transition period from childhood to adolescence leads adolescents to serious conflicts with themselves as well as with society at large. Beaumont and Scammell (2012) found a significant relationship between the various dimensions of identity styles, identity commitment, identity distress, the search for meaning in life, the presence of meaning in life and expression of spirituality among undergraduate students.

While spirituality refers to the individual's search for, and experiential elements of, the sacred, meaning, higher-consciousness, and transcendence, spiritual intelligence places a greater emphasis on abilities that draw on such spiritual themes to predict functioning and adaptation and to produce valuable products or outcomes (Emmons, 2000). Hence, spiritual intelligence combines the constructs of spirituality and intelligence into a new construct of spiritual intelligence.

Spiritual intelligence is considered to be necessary for insight in making spiritual choices that not only contribute to psychological well-being, but also enhance overall spiritual development. According to Wolman (2001), "Spiritual intelligence is the human capacity to ask ultimate questions about the meaning of life, and to simultaneously experience the seamless connection between each of us and the world in which we live."

King (2008) conducted extensive research on the concept of spiritual intelligence and proposed four core abilities or capacities of spiritual intelligence: critical existential thinking, personal meaning production, transcendental awareness and conscious state expansion. Spiritual intelligence can then be thought of as being

more than an individual mental ability. It can be understood to connect the personal to the transpersonal and the self to spirit. Spiritual intelligence hence surpasses the conventional psychological development. In addition to the aspect of self-awareness, it also implies awareness of our relationship to the transcendent, to each other, to the earth and all beings (Vaughn, 2002).

Kotnala (2014) examined spiritual intelligence in a sample of 60 graduate students between the ages of 19 to 25. The findings revealed that although both the genders were above average on spiritual intelligence there were no significant differences between male and female students in spiritual intelligence.

Spiritual intelligence is affected by several factors such as personality traits, familial beliefs, cultural factors, and also religious and environmental impacts. Verma and Yadav (2016) examined the relationship between spiritual intelligence and the big five personality traits in young adults. The results revealed that individuals who were open to new experiences, followed order and discipline, agreed to social conventions and who possessed introvert behaviors were higher on spiritual intelligence. The results also revealed that the levels of narcissism and the associated self entitlement reduced the levels of spiritual intelligence in young adults.

Twenge and Foster (2008) attempted to map the increases in narcissism with ethnic groups over the period 2002 – 2007, which ultimately showed that college students were progressively endorsing more narcissistic personality traits over the generations. The levels of narcissism were then examined in the current generation of college students and the results showed that the current generation of business and psychology students did in fact have higher levels of narcissism, with business students possessing significantly higher levels of narcissism when compared to psychology students (Westerman, Bergman, Bergman, & Daly, 2011).

Lipowska and Lipowski (2015) investigated the effect of narcissism on body image. It was seen that narcissism was a modulator of self-satisfaction with one's own body, and this varied depending on BMI level. Extremely underweight women and obese individuals were seen to constitute the groups in which narcissism had the strongest impact (negative) on the self-satisfaction with the body.

Body image is a multidimensional construct encompassing how we perceive, think, feel, and act toward our bodies and lies on a continuum from healthy body perceptions (ie, accurate and mostly positive) to unhealthy body perceptions (ie, inaccurate and mostly negative) (Voelker, Reel, & Greenleaf, 2015). Adolescence represents a pivotal stage in the development of positive or negative body image. As adolescents experience significant physical changes in their bodies during puberty, they are likely to experience highly dynamic perceptions of body image (Croll, 2005). Adolescent girls and overweight adolescents of both genders have been shown to have very low levels of body satisfaction. A poor self – concept and lack of confidence are often at the core of a negative body image (Voelker Reel, & Greenleaf, 2015).

Body image is a multidimensional, subjective and dynamic concept that is not limited to the aesthetic characteristics of the person, but also takes into consideration his or her state of health, skills, and sexuality. Body image does not simply reflect the biological endowment of the individual or the feedback received from the significant others. While these factors might indeed influence the level of body satisfaction, what is decisive is the way the body is experienced and evaluated by the individual himself (Neagu, 2015).

An individual's body image depends on biological factors (genetic traits, increased BMI, a series of pathologies), personal factors (age, gender, personality, self-esteem), interpersonal factors (family, peers and media messages), and socio - cultural factors (social values, norms, and ideals). Social factors includes the aspect of comparing oneself to peers or "media models" in order to evaluate themselves.

Studies have shown that there is a positive correlation between body image and narcissism. For instance, Jackson, Ervin and Hodge (1992) found that highly narcissistic individuals had more favourable body images and were higher in masculinity and self-esteem in a sample of college students. Also, no gender differences were observed in either the levels of narcissism or its body image correlates. Davis, Claridge, and Cerullo (1997) also showed that the adaptive and maladaptive aspects of narcissism were 'interactively' associated with body esteem in young women. Hence, it can be said that narcissism is positively associated with body image. However, its relationship with spiritual intelligence is not clear. There could be a potential relationship between spiritual intelligence and body image, and also with narcissism. The present study has been conducted in order to add to this literature. The present day students pursuing undergraduate students are

comprised of the post millennials, who seem to be the most affected by the idealized body image. Hence, the sample for the study consisted of students pursuing under graduation – between the ages 18 and 22.

Objectives

1. To analyze the role of BMI and gender in spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), narcissism, and the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in college students.
2. To determine if spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion) and narcissism predict the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in collegian boys and girls with low, normal and high BMI.

Method

Research Design

The present study adopts a factorial design to determine if there is an influence of BMI and gender on spiritual intelligence (viz., critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), narcissism, and body image (viz., overall appearance evaluation; health fitness influence; investment in ideals; health-fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in college students. The present study also employs a correlational design to determine if spiritual intelligence (viz., critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), and narcissism predict body image (viz., overall appearance evaluation; health fitness influence; investment in ideals; health-fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in collegian boys and girls with low, normal and high BMI.

Sample

The population of interest for this study was students pursuing under graduation in the city of Hyderabad. Non probability purposive sampling was used to include a sample of 360 college students, of which, 180 students were boys and 180 students were girls. The sample belonged to the age group of 18 to 22 years (Mean age = 18.77; Standard deviation = 0.959). While the inclusion criteria for the sample was students living with their families/guardians and who were studying in Hyderabad, the exclusion criteria was students living in a hostel or living as paying guests and students pursuing under graduation through distance mode.

The cut offs given by the World Health Organisation (WHO) for BMI were referred to, in order to categorize the sample into the three groups based on their Body Mass Index (BMI): high BMI (25 and above), normal BMI (19 to 24), and low BMI (18 and below), with each category consisting of 120 students (60 boys and 60 girls).

Instruments

The first instrument to be administered was the information schedule. Participants were asked to provide their gender, age, height, weight, BMI, education, information regarding religious and spiritual affiliation and participation, physical and psychological health.

Spiritual Intelligence Self Report Inventory (SISRI – 24)

The next instrument used in the study was ‘The Spiritual Intelligence Self-Report Inventory’ (SISRI) developed by King (2008) – who first proposed a four-factor model of spiritual intelligence based on which, a 24-item self-report measure (SISRI) was developed. SISRI measures spiritual intelligence. It has a 5 point Likert scale ranging from Not at all true of me (0), Not very true of me (1), Somewhat true of me (2), Very true of me (3), to Completely true of me (4). There are 23 positive items and 1 negative item in this inventory. The inventory consists of four scales, with 7 items in critical existential thinking (CET); 5 items in personal meaning production (PMP); 7 items in transcendental awareness (TA); and 5 items in conscious state expansion (CSE). Scoring is done by adding all item responses or subscale scores, after accounting for the reverse-coded item. Sum of all item responses ranges from 0 to 96. Higher scores represent higher levels of spiritual intelligence

and/or each scale. The scale has high internal consistency with Cronbach's alpha being 0.95, and Split Half Reliability being 0.94, which were based on a sample of 305 university college students (231 females, 74 males) with a mean age of 25.56 years. Both construct and external validity was found to be satisfactory – with the latter being calculated with ROQAN Spiritual Intelligence Test (2010).

Narcissistic Personality Inventory (NPI – 16)

The next instrument was The Narcissistic Personality Inventory-16 (NPI-16), which was developed by Ames, Rose, and Anderson (2006), is a shortened form of the NPI-40 for measuring subclinical narcissism. The inventory consists of 16 items (with a pair of questions for each item), the responses to which are given by ticking against the appropriate sentence. The scores are calculated by computing proportion of responses consistent with narcissism. Higher score indicates higher level of narcissism. NPI – 16 is highly reliable with Cronbach's Alpha being 0.72, and inter – item correlation being 0.13. The NPI – 16 has a factor analysis ranging from 0.13 to 0.66. The NPI-16 has also been shown to have meaningful face, discriminant, internal and predicative validity. It also correlated with the NPI-40 at $r = .90$ ($p < .001$).

Body Self Image Questionnaire (BSIQ – 27)

The last instrument used in the present study was Body Self Image Questionnaire – Short Form (BSIQ – SF) developed by Rowe, Benson, & Baumgartner (1999). The BSIQ – SF aids in measuring body image in young adults. It is answered on a 5 point Likert scale: ranging from 1 or a – Not at all true of myself; 2 or b – Slightly true of myself; 3 or c – About halfway true of myself; 4 or d – Mostly true of myself; 5 or e – Completely true of myself. The questionnaire consists of 9 subscales: overall appearance evaluation (OAE); health fitness influence (HFI); investment in ideals (II); health-fitness evaluation (HFE); attention to grooming (AG); height dissatisfaction (HD); fatness evaluation (FE); negative affect (NA); social dependence (SD). Each subscale has three questions and each subscale score ranges from a minimum of 3 to a maximum of 15. The questionnaire consists of 27 items, out of which one item is reverse scored. The questionnaire was found to be reliable with Cronbach's alpha being 0.68 - 0.92. It was also found to be valid with the factorial validity being 0.77.

Procedure

After selecting the measures, a few arrangements were made for data collection. The information schedule was prepared and the questionnaires were organized. The authorities of the colleges who gave permission for data collection were contacted and their permission was sought. The researcher visited the colleges who had given permission for the data collection on the scheduled dates. Rapport was established with the students and they were made aware that their participation in the study was purely voluntary. They were assured of maintaining confidentiality through-out the study and were also informed that they could choose to leave the study at any point, or request the researcher to not use the data sets filled by them. The students who agreed to participate in the study were requested to sign an 'Informed Consent Form'. Next, the Information Schedule was administered. The students who met the sampling criteria were screened. The instructions for the questionnaires (namely, the BSIQ, SISRI and NPI - 16) were given first and the subjects were requested to respond to the items. There was no fixed time limit for any of the questionnaires. However, the respondents were asked to complete each questionnaire in about 30 minutes.

Results

The obtained quantitative data of this study was analyzed using two way ANOVA and step wise regression analyses with the help of Statistical Package for Social Sciences (SPSS) version 20.0. The results of the study are discussed in two sections. The first section depicts the results of two way ANOVA, which was used to determine if BMI and gender play a role on the levels of spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), narcissism, and the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in college students.

Table 1 indicates that there is a significant difference between college students with high BMI, normal BMI, and low BMI with respect to fatness evaluation with fatness evaluation increasing with increasing BMI. Also, it has been seen that there is a significant difference in the negative effect of college students with those having high BMI reporting significantly more negative affect than those with low BMI.

Table 1 – Results of Two-Way ANOVA with BMI and gender as the IVs and spiritual intelligence and its dimensions critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion, narcissism, and the dimensions of body image: overall appearance evaluation, health fitness influence, investment in ideals, health fitness evaluation, attention to grooming, height dissatisfaction, fatness evaluation, negative affect, social dependence and as the DVs. (n=360)

Variables	BMI			F	Gender		F	Interaction Effect (BMI* Gender)
	Low BMI Mean (SD) (N = 60)	Normal BMI Mean (SD) (N = 60)	High BMI Mean (SD) (N = 60)		Boys Mean (SD) (N = 180)	Girls Mean (SD) (N = 180)		
Spiritual Intelligence	54.31 (15.69)	52.88 (15.55)	54.79 (16.17)	0.47	52.19 (16.09)	55.79 (15.29)	4.70	0.51
Critical Existential Thinking	14.58 (5.57)	14.09 (6.13)	15.10 (5.64)	0.91	14.03 (5.43)	15.15 (6.08)	3.38	0.14
Personal Meaning Production	12.57 (4.08)	11.72 (4.44)	11.81 (4.34)	1.42	11.82 (4.46)	12.24 (4.12)	.84	1.47
Transcendental Awareness	16.46 (5.27)	16.40 (5.12)	17.37 (5.55)	1.30	15.77 (5.16)	17.72 (5.32)	12.36***	0.42
Conscious State Expansion	10.71 (4.23)	10.68 (4.31)	10.51 (4.07)	0.07	10.57 (4.43)	10.69 (3.95)	.07	0.21
Narcissism	5.63 (3.03)	5.45 (2.54)	5.32 (2.44)	0.41	6.08 (2.60)	4.86 (2.63)	19.67***	0.2
Overall Appearance Evaluation	11.71 (2.40)	11.36 (2.49)	11.32 (2.46)	0.92	11.52 (2.37)	11.41 (2.53)	.18	2.16
Health Fitness Influence	10.51 (2.82)	10.37 (2.82)	10.46 (3.12)	0.07	10.23 (2.96)	10.66 (2.87)	1.96	0.28
Investment in Ideals	9.19 (3.27)	9.46 (3.21)	9.81 (3.16)	1.11	9.13 (3.02)	9.84 (3.36)	4.36*	0.91
Health Fitness Evaluation	9.90 (3.07)	9.43 (3.06)	9.21 (2.92)	1.66	9.79 (2.96)	9.23 (3.07)	3.16	3.47*
Attention to Grooming	9.68 (2.85)	9.24 (2.80)	9.56 (2.78)	0.75	9.66 (2.86)	9.33 (2.76)	1.21	0.22
Height Dissatisfaction	7.94 (3.71)	7.61 (3.68)	8.43 (3.79)	1.49	7.52 (3.40)	8.47 (4.00)	5.82*	0.62
Fatness Evaluation	4.99 (2.57)	6.14 (3.37)	7.10 (3.58)	13.73***	5.66 (2.95)	6.49 (3.60)	6.41*	8.77***
Negative Affect	4.92 (2.47)	5.49 (2.71)	6.07 (3.35)	4.88*	5.48 (2.70)	5.51 (3.10)	.01	1.82
Social Dependence	7.31 (2.58)	7.49 (3.01)	7.80 (3.02)	0.90	7.33 (2.57)	7.73 (3.15)	1.75	2.48

Note: *p<0.05, **p<0.01, ***p<0.001

With respect to gender differences, it was seen that girls were higher on transcendental awareness. College boys had higher scores on narcissism than girls. In the dimensions of body image girls reported higher investment in ideals, greater height dissatisfaction and increased fatness evaluation. An interaction effect of BMI and gender was also seen in health fitness evaluation and fatness evaluation the results of which are presented in figure 1 and 2 respectively.

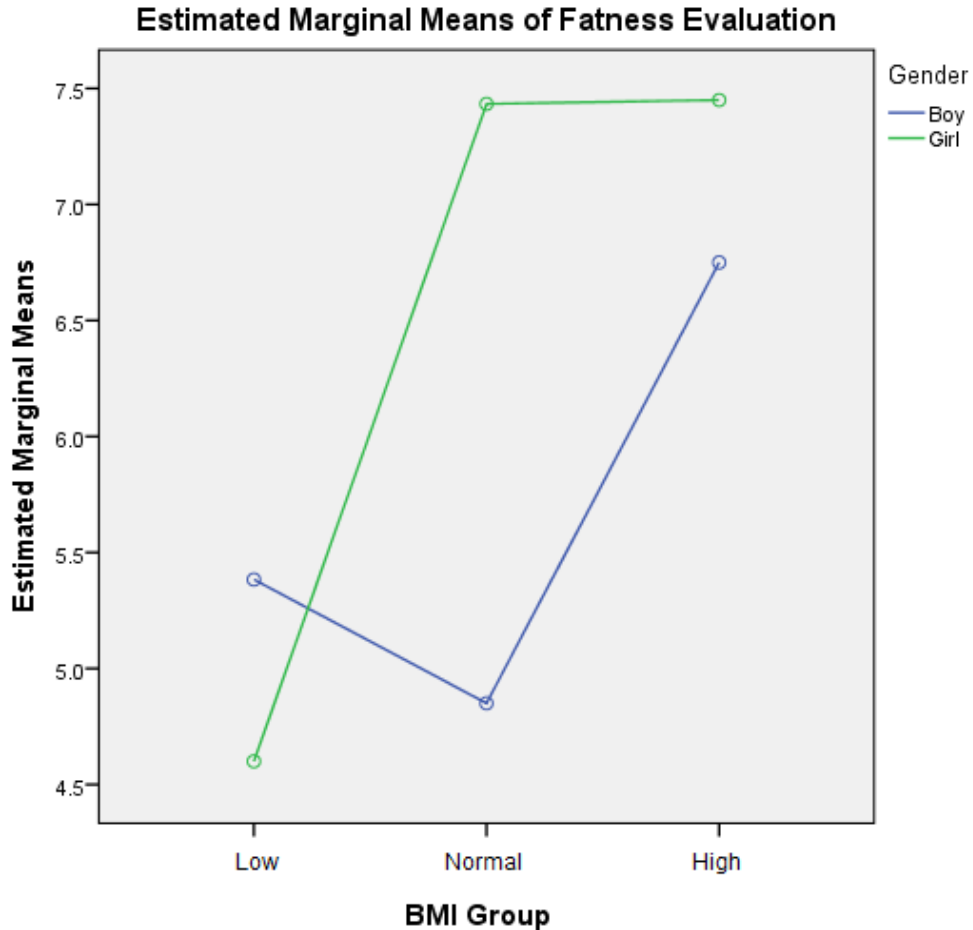


Figure 1: Line graph showing the interaction between BMI and gender in college students on fatness evaluation, a dimension of body image.

An interaction between levels of BMI and gender was seen in fatness evaluation as seen in figure 1. Among boys, fatness evaluation decreased slightly from those with low BMI to normal BMI, but increased substantially in those with high BMI. On the other hand among girls, it was seen that expectedly girls with low BMI had lower levels of fatness evaluation than those collegian girls with normal or high BMI. However, collegian girls with normal and high BMI had similar levels of fatness evaluation. It can thus be said that girls with normal and high BMI show no difference in terms of evaluating themselves as fat despite difference in BMI.

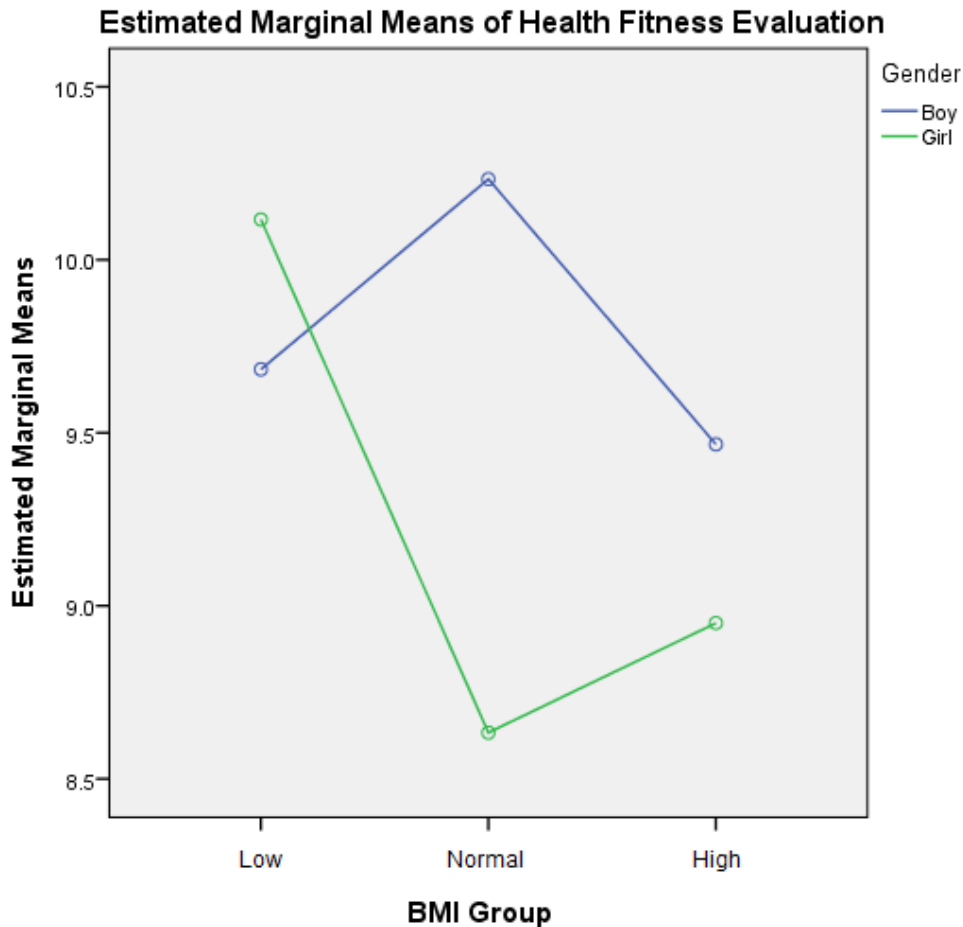


Figure 2: Line graph showing the interaction between BMI and genders in college students on health fitness evaluation, a dimension of body image.

An interaction between the levels of BMI and gender was also seen in health fitness evaluation which is represented in figure 2. It was revealed that among collegian girls, those with low BMI had highest levels of health fitness evaluation, which decreased substantially when the BMI increased to the normal range and increased only marginally when the BMI was high. It is interesting to note that, like in fatness evaluation, the difference between the girls in the groups of normal and high BMI is marginal. On the other hand, among boys with low BMI and high BMI the health fitness evaluation was similar with it being the highest for boys with normal BMI.

Step wise regression predicts the criterion variable from the predictor variable, based on the relationship between the two. While the criterion variables are the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence), the predictor variables are spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion) and narcissism, in the current study. The results of this step wise regression analysis are delineated in the following paragraphs.

Table 2a outlines the results of the step wise regression analyses that was conducted to evaluate if spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), and narcissism are able to predict the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in collegian boys with low BMI. Spiritual intelligence is seen to predict both overall appearance evaluation and

investment in ideals. Similarly, social dependence was predicted by personal meaning production and height dissatisfaction by transcendental awareness. Lastly, attention to grooming was predicted by narcissism.

Table 2a - Summary of the stepwise regression analyses showing the predictors for the dimensions of Body Image in Collegian Boys with Low BMI (N = 60).

	Predictor Variables	Overall Appearance Evaluation	Health Fitness Influence	Investment in Ideals	Health Fitness Evaluation	Attention to Grooming	Height Dissatisfaction	Fatness Evaluation	Negative Affect	Social Dependence
β	Spiritual Intelligence	0.33*	NS	0.31*	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Personal Meaning Production	NS	NS	NS	NS	NS	NS	NS	NS	0.3*
	Transcendental Awareness	NS	NS	NS	NS	NS	0.3*	NS	NS	NS
	Conscious State Expansion	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	0.3*	NS	NS	NS	NS
Adjusted R ²	Spiritual Intelligence	0.09	NS	0.08	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Personal Meaning Production	NS	NS	NS	NS	NS	NS	NS	NS	0.07
	Transcendental Awareness	NS	NS	NS	NS	NS	0.07	NS	NS	NS
	Conscious State Expansion	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	0.08	NS	NS	NS	NS

*p<0.05, **p<0.01, R-Coefficient of Correlation, ΔR^2 -R Square Change, β -Standardized Coefficient Beta

Table 2b gives an overview of the contribution of spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), and narcissism to the prediction of dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in collegian boys with normal BMI. It was seen that health fitness influence was predicted by conscious state expansion and investment in ideals was predicted by spiritual intelligence. On the other hand, attention to grooming was predicted by conscious state expansion, while negative affect was predicted by critical existential thinking. Also, as seen in the table, both critical existential thinking and transcendental awareness predict social dependence.

Table 2b - Summary of the stepwise regression analyses showing the predictors for the dimensions of Body Image in Collegian Boys with Normal BMI (N = 60).

	Predictor Variables	Overall Appearance Evaluation	Health Fitness Influence	Investment in Ideals	Health Fitness Evaluation	Attention to Grooming	Height Dissatisfaction	Fatness Evaluation	Negative Affect	Social Dependence
β	Spiritual Intelligence	NS	NS	0.37**	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	NS	NS	NS	NS	NS	NS	0.29*	0.31*
	Personal Meaning Production	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Transcendental Awareness	NS	NS	NS	NS	NS	NS	NS	NS	0.41*
	Conscious State Expansion	NS	0.42**	NS	NS	0.3*	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	NS	NS	NS	NS	NS
Adjusted R ²	Spiritual Intelligence	NS	NS	0.12	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	NS	NS	NS	NS	NS	NS	0.06	NS
	Personal Meaning Production	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Transcendental Awareness	NS	NS	NS	NS	NS	NS	NS	NS	0.165
	Conscious State Expansion	NS	0.16	NS	NS	0.07	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	NS	NS	NS	NS	NS

*p<0.05, **p<0.01, R-Coefficient of Correlation, ΔR²-R Square Change, β-Standardized Coefficient Beta

Table 2c portrays the apportionment of spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), and narcissism in the prediction of the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in collegian boys with high BMI. Overall appearance evaluation is seen to be predicted by personal meaning production. Health fitness influence was seen to be predicted by both conscious state expansion and critical existential thinking.

Table 2c - Summary of the stepwise regression analyses showing the predictors for the dimensions of Body Image in Collegian Boys with High BMI (N = 60).

	Predictor Variables	Overall Appearance Evaluation	Health Fitness Influence	Investment in Ideals	Health Fitness Evaluation	Attention to Grooming	Height Dissatisfaction	Fatness Evaluation	Negative Affect	Social Dependence
B	Spiritual Intelligence	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	0.31*	NS	NS	NS	NS	NS	NS	0.34*
	Personal Meaning Production	0.27*	NS	NS	0.31*	NS	NS	NS	NS	NS
	Transcendental Awareness	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Conscious State Expansion	NS	0.61***	NS	NS	NS	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	NS	NS	NS	NS	0.25*
Adjusted R ²	Spiritual Intelligence	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	0.42	NS	NS	NS	NS	NS	NS	NS
	Personal Meaning Production	0.06	NS	NS	0.08	0.15	NS	NS	NS	NS
	Transcendental Awareness	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Conscious State Expansion	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	NS	NS	NS	NS	0.15

*p<0.05, **p<0.01, R-Coefficient of Correlation, ΔR²-R Square Change, β-Standardized Coefficient Beta

The contributions of spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), and narcissism are able to predict the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in collegian girls with low BMI have been outlined in Table 2d. While narcissism predicted overall appearance evaluation, health fitness influence was predicted by critical existential thinking. Conscious state expansion was seen to predict health fitness evaluation. Similarly, height dissatisfaction was predicted by transcendental awareness and negative affect by personal meaning production. Lastly, critical existential thinking was seen to predict social dependence.

Table 2d - Summary of the stepwise regression analyses showing the predictors for the dimensions of Body Image in Collegian Girls with Low BMI (N = 60).

	Predictor Variables	Overall Appearance Evaluation	Health Fitness Influence	Investment in Ideals	Health Fitness Evaluation	Attention to Grooming	Height Dissatisfaction	Fatness Evaluation	Negative Affect	Social Dependence
B	Spiritual Intelligence	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	0.32*	NS	NS	NS	NS	NS	NS	0.27*
	Personal Meaning Production	NS	NS	NS	NS	NS	NS	NS	-0.34**	NS
	Transcendental Awareness	NS	NS	NS	NS	NS	0.32*	NS	NS	NS
	Conscious State Expansion	NS	NS	NS	0.38**	NS	NS	NS	NS	NS
	Narcissism	0.32*	NS	NS	NS	NS	NS	NS	NS	NS
Adjusted R ²	Spiritual Intelligence	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	0.08	NS	NS	NS	NS	NS	NS	0.06
	Personal Meaning Production	NS	NS	NS	NS	NS	NS	NS	0.1	NS
	Transcendental Awareness	NS	NS	NS	NS	NS	0.09	NS	NS	NS
	Conscious State Expansion	NS	NS	NS	0.13	NS	NS	NS	NS	NS
	Narcissism	0.09	NS	NS	NS	NS	NS	NS	NS	NS

*p<0.05, **p<0.01, R-Coefficient of Correlation, ΔR²-R Square Change, β-Standardized Coefficient Beta

Table 2e summarizes the contributions of spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), and narcissism in the predictions of the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in collegian girls with normal BMI. Health fitness influence is seen to be predicted by transcendental awareness, while critical existential thinking contributed to the prediction of investment in ideals. Lastly, health fitness evaluation was seen to be predicted by conscious state expansion, with attention to grooming being predicted by narcissism.

Table 2e - Summary of the stepwise regression analyses showing the predictors for the dimensions of Body Image in Collegian Girls with Normal BMI (N = 60).

	Predictor Variables	Overall Appearance Evaluation	Health Fitness Influence	Investment in Ideals	Health Fitness Evaluation	Attention to Grooming	Height Dissatisfaction	Fatness Evaluation	Negative Affect	Social Dependence
β	Spiritual Intelligence	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	NS	0.47***	NS	NS	NS	NS	NS	NS
	Personal Meaning Production	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Transcendental Awareness	NS	0.3*	NS	NS	NS	NS	NS	NS	NS
	Conscious State Expansion	NS	NS	NS	0.43**	NS	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	0.31*	NS	NS	NS	NS
	Adjusted R ²	Spiritual Intelligence	NS	NS	NS	NS	NS	NS	NS	NS
	Critical Existential Thinking	NS	NS	0.21	NS	NS	NS	NS	NS	NS
	Personal Meaning Production	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Transcendental Awareness	NS	0.07	NS	NS	NS	NS	NS	NS	NS
	Conscious State Expansion	NS	NS	NS	0.17	NS	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	0.08	NS	NS	NS	NS

*p<0.05, **p<0.01, R-Coefficient of Correlation, ΔR^2 -R Square Change, β -Standardized Coefficient Beta

Table 2f encapsulates the provision of spiritual intelligence and its dimensions (critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), and narcissism in the predictions of the dimensions of body image (overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in collegian girls with high BMI. Overall appearance evaluation is seen to be predicted by personal meaning production. Also, health fitness influence was predicted by conscious state expansion. Similarly, the prediction of investment in ideals is made by critical existential thinking. Furthermore, a health fitness evaluation had been predicted by personal meaning production. Lastly, spiritual intelligence contributes to the prediction attention to grooming.

Table 2f - Summary of the stepwise regression analyses showing the predictors for the dimensions of Body Image in Collegian Girls with High BMI (N = 60).

	Predictor Variables	Overall Appearance Evaluation	Health Fitness Influence	Investment in Ideals	Health Fitness Evaluation	Attention to Grooming	Height Dissatisfaction	Fatness Evaluation	Negative Affect	Social Dependence
β	Spiritual Intelligence	NS	NS	NS	NS	0.33**	NS	NS	NS	NS
	Critical Existential Thinking	NS	NS	0.31*	NS	NS	NS	NS	NS	NS
	Personal Meaning Production	0.36**	NS	NS	0.31*	NS	NS	NS	NS	NS
	Transcendental Awareness	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Conscious State Expansion	NS	0.44***	NS	NS	NS	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	NS	NS	NS	NS	NS
Adjusted R ²	Spiritual Intelligence	NS	NS	NS	NS	0.1	NS	NS	NS	NS
	Critical Existential Thinking	NS	NS	0.08	NS	NS	NS	NS	NS	NS
	Personal Meaning Production	0.11	NS	NS	0.08	NS	NS	NS	NS	NS
	Transcendental Awareness	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Conscious State Expansion	NS	0.18	NS	NS	NS	NS	NS	NS	NS
	Narcissism	NS	NS	NS	NS	NS	NS	NS	NS	NS

*p<0.05, **p<0.01, R-Coefficient of Correlation, ΔR^2 -R Square Change, β -Standardized Coefficient Beta

Discussion

The aim of the current research study was to determine the role of BMI and gender on the levels of spiritual intelligence and its dimensions (viz. critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion), narcissism, and the dimensions of body image (viz. overall appearance evaluation; health fitness influence; investment in ideals; health fitness evaluation; attention to grooming; height dissatisfaction; fatness evaluation; negative affect; social dependence) in college students.

The study found that individuals with high BMI score higher on both fatness evaluation and negative affect when compared to individuals with normal and low BMI. Higher scores on fatness evaluation, which is one's assessment of their body as fat, in people with high BMI would be understandable. However, the higher levels of negative affect in this group indicates that their actual body shape, their assessment of it as fat and possibly others' evaluation of them as fat may be leading to more distress and emotional disturbances.

It was also seen that BMI and gender had interacted with each other significantly in the dimensions of health fitness evaluation and fatness evaluation. Studies have previously found that boys and girls are subjected to different body shape expectations and hence BMI has different influence on their evaluation of themselves as fit or fat. This is consistent with previous research (Brebante & Cagas, 2015; Chung, 2005) that concluded that BMI was positively correlated with both fatness evaluation and negative effect, while being negatively correlated with health fitness evaluation.

Brebante and Cagas (2015) also reported that BMI was negatively correlated with overall appearance evaluation, health fitness influence, investment in ideals, health fitness evaluation, attention to grooming, height dissatisfaction, and social dependence. However, in the current study no significant influence of the levels of BMI was seen in overall appearance evaluation, health fitness influence, investment in ideals, health fitness evaluation, attention to grooming, height dissatisfaction, and social dependence. This difference in results could be due to the different gender composition of the sample. While the current study employed both collegian boys and girls, Brebante and Cagas (2015) included only collegian girls in their study. Research on psychological influence of body image on girls has been extensive, but it has only recently been explored substantially among boys (Ricciardelli & McCabe, 2004).

Gillen and Lefkowitz (2012) concluded that there were gender differences in terms of body image, as well as stability and change in body image development. However, the findings of the current study stand in

contradiction to these findings with the results finding no significant differences between college boys and girls with respect to overall appearance evaluation, health fitness influence, investment in ideals, health fitness evaluation, attention to grooming, height dissatisfaction, fatness evaluation, negative affect and social dependence.

Pingitore, Spring and Garfieldt (1997) concluded that with an increase in BMI, women became disproportionately more dissatisfied with their bodies when compared to men. The results of the current study are in concurrence with these results, with an interaction effect being seen between gender and BMI with respect to the fatness evaluation dimension of body image.

The present study also explored various dimensions of spiritual intelligence in collegian boys and girls and found that girls were higher on transcendental awareness than boys. Kotnala (2014) had found no gender differences in an Indian sample of graduate students using the same tool and similar results were seen in other studies as well (Devi, Rajesh and Devi, 2017). However, BMI did not seem to have an influence on spiritual intelligence of college students. It was also seen that boys were higher on narcissism than girls, which is in line with theoretical expectations. But the role of BMI on narcissism was not evident in the results.

The results of this study have shown that spiritual intelligence and its dimensions predict some of the dimensions of body image in collegian boys with low, normal and high BMI as well as collegian girls with low, normal and high BMI. In collegian boys with low BMI, spiritual intelligence predicted overall appearance evaluation and investment in ideals; personal meaning production predicted social dependence; transcendental awareness predicted height dissatisfaction; and narcissism predicted attention to grooming respectively.

Jackson, Ervin and Hodge (1992) studied the relationship between narcissism and body image in college students. The results of the current study show that narcissism lent to the prediction of attention to grooming in collegian boys with low BMI. The results showed that individuals who scored high on narcissism, both boys and girls, scored higher in body image as well. People high on narcissism focus on themselves and their appearance and may pay particular attention to how they present themselves to the world leading to increased grooming.

Also, in collegian boys with normal BMI, spiritual intelligence predicted investment in ideals, critical existential thinking and transcendental awareness together predicted social dependence, critical existential thinking also predicted negative affect, and conscious state expansion predicted health fitness influence and attention to grooming. Additionally in collegian boys with high BMI, critical existential thinking along with conscious state expansion predicted health fitness influence, with the former also contributing to the prediction of social dependence along with narcissism. Personal meaning production was seen to predict overall appearance evaluation, health fitness evaluation, and attention to grooming.

Jafari and Esmaeli (2015) conducted a study to examine the relationship between body image and spiritual intelligence in college students. The results depicted that there were no significant differences between boys and girls with respect to spiritual intelligence. Similar results were observed in the current study, which were backed by the results of the regression analyses. The results depicted that the contribution of spiritual intelligence and its dimensions towards the dimensions of body image in collegian girls with low, normal and high BMI were only marginally different from the results seen in collegian boys with low, normal and high BMI.

When it came to girls with low BMI, critical existential thinking was seen to predict health fitness influence and social dependence while personal meaning production predicted negative affect. Health fitness evaluation was predicted by conscious state expansion and height dissatisfaction by transcendental awareness. In girls with normal BMI, critical existential thinking contributed to the prediction of investment in ideals, transcendental awareness predicted health fitness influence, conscious state expansion predicted health fitness evaluation and narcissism predicted attention to grooming. Finally, in girls with high BMI, it was found that spiritual intelligence contributed to the prediction of attention to grooming, critical existential thinking predicted to investment in ideals, personal meaning production contributed to the prediction of both overall appearance evaluation and health fitness evaluation, and conscious state expansion was seen to predict health fitness influence.

It can be observed that the results depict differential explanation patterns of predictor and criterion variables in the six groups. This can better be understood by viewing the results in the broad context of spiritual development in adolescence. Erikson developed a theory conceptualizing development as a series of stages. According to this theory, the individual encounters a crisis at every stage, the successful resolution of which leads to optimal growth and development (Roehlkepartain, 2006).

Erikson (1950) held that identity formation is the primary developmental task of adolescence. This is in addition to a significant amount of role confusion that alters the ease with which the individual can surpass the crisis. He elucidated that resolving this crisis at this stage would ensure that the growth of identity would be easier in adulthood. The development of identity also encompasses the development of a spiritual identity. The individual may, at this stage, develop a spiritual identity that is not only stable, but also helps in guiding the ensuing goals, behaviors and personal experiences (Roehlkepartain, 2006).

Although the sample of the current study falls toward the fag end of the adolescent phase (according to Erikson), it can be understood that the crisis and the role confusion can be attributed to the difference in pattern of the predictions. This is because, the crisis of the adolescent phase is found to last in the initial phases of the successive stage, i.e. early adulthood.

Another theory of development that lends weight to the mixed results of the study is the Identity Theory proposed by Marcia (1966), who aimed to expand the stages proposed by Erikson. According to this theory, an individual goes through 4 stages in the course of identity development. The third stage, "Identity Moratorium" can be defined as a step that involves an active searching of religious, spiritual, occupational as well as personal identity. This stage can be observed from late adolescence to early adulthood. At this level, the individual explores various options and struggle to form a sense of identity. As seen in Erikson's stage, the individuals encounter confusion in regards to the formation of their identity (Marcia, Waterman, Matteson, Archer, & Orlofsky, 2012). A high degree of exploration is represented in this stage, which is sometimes accompanied by a low level of commitment. The crisis at this stage prompts the individuals to explore differing beliefs, values and goals. However, no final decision is seen to be made at this stage, regarding these beliefs, values and goals. Thus, a commitment to a particular identity has not yet been made (Roehlkepartain, 2006).

Maslow in his theory of hierarchy of needs has delineated the five stages in which a human's needs evolve over 5 stages – from basic physiological necessities to self actualization. The fourth stage in this hierarchy covers the needs of esteem. While this broad category includes confidence, achievements and gaining the respect of others, it also encompasses the aspect of the view one has over his or her body, i.e. body image. Spirituality and spiritual intelligence fall in the final stage of the hierarchy, i.e. self actualization.

The diminished contribution of spiritual intelligence towards the dimensions of body image could be attributed to the fact that the sample of the current study were still finding their way through the fourth stage and are yet to reach the final stage.

Further, the group under study was found to have spiritual intelligence levels which were in the mid range and not very high which could be indicative of incomplete spiritual development. In the sample studied, the attendance in spiritual and religious activities varied with 10.6% reported attending spiritual programmes and talks on a weekly basis, 5.8% on a monthly basis, 1.9% once in 2 months, 3.6% once in 3 months, 5% once in 6 months, and 5.6% yearly once while the rest half of the sample did not report attending any such activities. The varying attendance levels in spiritual and religious activities could have contributed differently to the spiritual levels of the sample. In addition to this, earlier studies focusing on influence of spiritual and religious activities on body image have considered whether body image concerns were addressed in these activities, which was not considered in the present study.

It can thus be concluded that the spiritual intelligence in the sample is still developing which explains the mixed patterns of its predictions towards the dimensions of body image. It can also be assumed that the contribution of spiritual intelligence and its dimensions to the various dimensions of body image, that are seen to move towards a negative body image, such as height dissatisfaction, attention to grooming, investment in ideals, negative affect and social dependence, could in fact be undergoing a positive transformation. It can be speculated that this contribution, in effect, is leading to the decline of the said variables of body image. However, research looking into the association between spiritual intelligence and body image in college

students, such as the present study, is still exploratory in nature and the correlational design further precludes drawing causal relationship between the variables.

Conducting a study that would, in essence, compare the scores on spiritual intelligence, narcissism and body image between adolescents and adults who are in middle age would aid in not only adding empirical evidence to the literature, but would also better delineate the effects of the aforementioned theories on spiritual intelligence, narcissism and body image in a more comprehensive manner. However, conducting such a study would require a bigger sample spread over a larger area.

Despite the limitations of the present study, it has brought to light some salient relationships when it comes to body image in college students. It was seen that the girls with normal BMI had relatively high levels of fatness evaluation which is an incorrect self appraisal. This was not seen in boys highlighting the vulnerability of girls to having negative body image. Intervention(s) may be held for girls falling in this group in order to help them gain a more realistic body evaluation. The positive relationship between spiritual intelligence and some aspects of positive body image indicate a new avenue of research that can be used to enhance development of spirituality and positive body image in young adults.

The recommendations of the research would mainly involve attempting to control other intervening variables, such as socioeconomic status, religion, type of spiritual institution affiliated with etc. that could influence the chosen variables and help in obtaining a clearer picture about the relationships among the variables studied. This would in turn help in carrying out intervention studies to change body image through either spiritual or narcissistic influences. Also, conducting a longitudinal study to see the differences in spiritual intelligence and body image over time, could lead to a better understanding of the pattern in all these aspects change over time. They could also explore the different avenues through which the individuals look to nourish their spiritual intelligence.

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