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*Corresponding authors: Dr. Rekha Wagani, Associate Professor, Amity Institute of Behavioral and Allied Sciences, Amity University, Mumbai, India, E-mail: rwagani@mum.amity.edu; rekha.wagani@gmail.com

ORCID: <https://orcid.org/0000-0001-8326-843X>

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Research Article

Role of self-awareness in the promotion of health and well-being of college students

Rekha Wagani* and Pranita Gaur

Associate Professor, Amity Institute of Behavioral and Allied Sciences, Amity University, Mumbai, India

Abstract

The quest for knowing self is the most basic of human nature, which is long believed to be necessary for promoting good health and well-being. This research provides a theoretical and empirical examination of the role of Self-Awareness (SA) in health and well-being. It was proposed that self-awareness is a positivistic construct that would promote health and well-being. In order to achieve the above-stated purpose, two series of studies were planned. The first study aimed to find out the contribution of SA to various dimensions of health and well-being. A total of 300 college students equally drawn from both genders participated in the study. The self-awareness scale (developed by the researcher), health scale for college students (adapted for the present study), and WHO spirituality form were given to participants. Study I demonstrated that self-awareness predicted most health and well-being factors. The findings further suggested that self-awareness may promote health and well-being. In study II, 60 experimental-control group participants were recruited. Students were allocated into experimental and control groups. A specifically designed Self-awareness Intervention Program (SAIP) was held for five days for the participants in a controlled setting. The results showed a substantial increment in the health and well-being of the treatment group in comparison to the control group. A brief follow-up interview was conducted to understand the Intervention's results. A major implication of the present study is that SA can be used as a positivistic construct and that an intervention program can be taken as a low-cost strategy to promote the health and well-being of college students.

Introduction

The quest for knowledge of self is one of the most basic curiosities but a natural one about human nature. 'Who am I' is the basic question that arises in everyone's heart. Self-awareness has been thoroughly used in therapy and training for medical and paramedical professionals for many years but it was the result of seminal work done by two experimenters [1] who empirically tested it and defined it as the capacity to become the object of one's own attention. Later on, the pioneering work done by Fenigstein, [2] helped to conceptualize this from a mood state to a dispositional capacity which can be assessed through various scales [3-6]. Self-awareness was considered an integral part of the life journey which can be improved and enhanced through the introduction of various ways and activities. Like in psychotherapy, the healing is

thought to depend on the client's understanding, as it deepens and most of the unconscious part becomes conscious [7]. The present research conceptualizes self-awareness as the inherent tendency of human beings to attend to one's self frequently more than the aspects or objects other than the self, but it takes place when the self becomes the focus and the environment becomes the background. The magnitude of self-awareness to a greater extent depends on the interest and previous knowledge of the elements of the self and the amount of time spent in activities like self-reflection, self-observation, self-monitoring, and introspection. So present research is based on these propositions:

1. Each human being possesses this inherent tendency.
2. Self-awareness is a volitional act.

3. To become self-aware the person needs to attend self-more than the others things to become self-aware.
4. Attendance of non-self-aspects results in increased awareness which does not necessarily bring self-awareness.
5. Previous knowledge about the self and its elements can influence the process of self-awareness.
6. The amount of time spent in activities (self-reflection, self-observation) can determine self-awareness. So based on these propositions present research proposes that self-awareness can be measured as well as enhanced through training which may result in improved self-knowledge, health, and well-being nevertheless, attendance of non-self aspects can increase awareness too (outward awareness).

Inward versus outward attention

In the history of self-awareness studies, a difference between private and public self-consciousness was extensively discussed by scholars [6,8-10]. The foremost condition of self-awareness is the tendency to keep the self in the center and push the non-self aspect in the background. It provides individuals direct access to self without the overinfluence of background. So the individual who has the tendency to keep self in focus does not get easily trapped in the outside world's pressure. This tendency is named here as Inward Attention (IA). In the vice versa condition, a person can develop a tendency to keep information of the environment in focus and push the self in the background. This tendency is called outward attention. Self-awareness cannot be completely conceptualized without the inclusion of outward attention. Based on the above constructs the present study proposes that direction and focus of attention is required to change to enhance self-awareness. Therefore, understanding both tendencies is required to understand the construct of self-awareness.

Self-awareness: A way of enhancing health and well-being

Self-awareness can be linked to health and well-being through activities that enhances self-awareness like yoga [11,12], various meditation techniques [13-15], through counselling and psychotherapies [16,17], training of self-awareness [18,19] changing the belief system [20]. This can result in an improvement in mental health and well-being [3,5,6].

Can Self-awareness be improved?

Assuming self-awareness as a positive psychology construct, the possibility of developing it in an individual has significant implications for a clinical, counselling, and educational setting. Nasby [21] has pointed out that such selective processing of self-knowledge also lies behind the development of the self-concept. Till now, very few attempts have been reported to improve self-awareness in the research domains [4]. Other attempts too are limited to specific populations like nursing students [22-24].

Present study

In the present research two subsequent sub-studies were conducted to check if inward attention and outward attention can be differently related to well-being and health based on the propositions discussed in the definition section of self-awareness. The first study aims to examine the relationship between self-awareness scales: Inward attention scales and outward attention scales with health and well-being. The second study introduces an intervention program on self-awareness consisting of activities that increase self-reflection, self-observation, introspection, and self-monitoring resulting in attending to the self more frequently than the aspects and objects other than self, and a decrease in outward attention.

Study- I: Self-Awareness, Health and Well-being

Method

Participants and Procedure : The present study consisted of 300 college students, equally drawn from both genders with a mean age of 20.5 years for females and 19.8 years for males. The inclusion criteria for the study were to include students enrolled in college for UG courses, not more than 22 years old, and not reported any psychopathological condition. Similar to the first study, the sample was recruited from two universities. Female students were selected from Banasthali Vidyapith who were enrolled in B.Tech. and BBA courses. Male students selected from Jaipur National University were enrolled in B.Tech courses. The university student population represents various backgrounds (high, middle, and low socioeconomic status) and all three settings, urban, semi-urban, and rural setting.

Initially, participants gave their informed consent for the participation in the study. The study was conducted in two different (Banasthali Vidyapith and Jaipur National University) venues by taking the permission of their respective departmental authorities. Students were informed to gather at one venue for participation. A total of 152 female students participated in the study without leaving any incomplete questionnaire whereas 115 male students participated in the study leaving 35 questionnaires with incomplete information. Demographic information was taken by asking them questions regarding their age, income, and caste (Table 1). Some participants left blank

Table 1: Distribution of the Sample by Residential context, Gender, caste, and Income (N = 266).

Variables	Categories	Frequency	Percentage
Gender	Male	107	41.30
	Female	152	58.70
Ecological Context	Urban	151	61.19
	Semi-Urban	35	14.30
	Rural	58	23.80
Socio-economic status	High	80	37.20
	Middle	88	40.90
	Low	30	14.00
	Very Low	17	7.90
Caste	General	175	69.20
	OBC	70	27.70
	SC	8	3.20



some demographic details due to which different proportions emerged on demographic categories e.g. a total of 259 reported their gender but only 244 participants reported socioeconomic status. Regarding the total demographic, 61% belonged to urban settings whereas 14% and 24% belonged respectively to semi-urban and rural areas. 37% of participants belonged to a high socio-economic status which was rated on the basis of their salary above 50,000, 40% belonged to the middle class (less than 50,000 and above 30,000), 30% of participants were from low SES (below 30,000 and above 10,000) and 8% were from very low SES (less than 10,000 per month). The caste system was followed as per government categorization General, OBC, SC, and ST in which no participation belonged to the ST category. 69% reported belonging to the general caste which is a very high rate in comparison to the other two categories reported in the study. The second higher caste was OBC with 28%. SC contributed only 3% of the total sample in the present study. The participants were informed about the study. They completed a consent form prior to participation in the study. Participants were given one envelope consisting of the measures used in the present study with clear instructions. Demographic information was taken by asking them questions regarding their age, income, and caste (Table 1).

Measures

Self-awareness scale: This Scale developed for the present study consisted of 50 items with two sub-scales Inward attention (23 items) and Outward attention (27 items). It measures the degree of self-awareness by measuring the direction of attention of the individual toward inner (self and self-aspects) and outward (away from self). Both sub-scales showed acceptable alpha reliability: Inward Attention $r = .79$ and Outward Attention $r = .79$.

Health scale for college students: This health scale was developed for the present research by reviewing the earlier measures of health. Items were adapted from standard measures. Conceptualizing health as a multidimensional construct, dimensions pertaining to college students were considered important. These dimensions were: physical, psychological, emotional, social, and spiritual. The psychometric properties of this measure are given in Chronbach alpha of the health scale was .83 with item Mean = 2.76 and SD = .37 (for items) showed a very satisfactory level of inter-item reliability (Table 2). Scale also showed good convergent validity as it was found significantly correlated with Spirituality Questionnaire $r = .43$ and Mental Health Scale $r = .44$.

Mental health continuum: The short form of the Mental Health Continuum (MHC-SF) is derived from the long form (MHC-LF), which consists of 14 items. It measures emotional well-being (3 items), psychological well-being (6 items based on Ryff's Model (1989) of psychological well-being), and social well-being (5 items based on Keyes' model (1998) of social well-being). MHC-SF has a high reliability $> .80$ (Keyes, 1995). These 14 items were chosen as the most prototypical items representing the construct definition for each facet of well-being (Emotional, psychological, and social well-being). The retest reliability of the MHC-SF over three successive 3-month periods averaged .68 and the 9-month test-retest was .65.

WHO spirituality scale: the WHOQOL-SPRB is designed to assess a person's perception of the quality of life from spiritual, personal, and religious perspectives. The present spirituality scale was derived from WHOQOL-SPRB (Quality of life and Spirituality, religiousness and personal belief). A total of 16 items representing spirituality consisted of four domains, namely, the spiritual connection (e.g. to what extent do you feel any connection between your mind, body, and soul), the meaning and purpose in life (for e.g. to what extent do you feel your life has a purpose), the spiritual strength (e.g. to what extent does your spiritual strength help you to feel happy in life), and wholeness and strength (e.g. to what extent does any connection to a spiritual being help you to understand others).

Results

Relationship of health and well-being with background characteristics: The mean score and SD of the both criteria and outcome variables computed were given in Table 3. Background characteristics were categorical in nature, so dummy variable coding was done to analyse the categories e.g. in the gender category females were coded 1 and males were coded 0. An identical process was followed for creating a dummy variable for SES (0, 1, 2) and Setting (0, 1, 2).

Gender was found significantly and positively correlated with academic adjustment, optimism, and spirituality but negatively with body consciousness. The females were good at academic adjustment, having more optimism and high

Table 2: Descriptive statistics about the Health Scale.

Scale	Alpha	Mean	SD	Range	No. of Items
Health Scale	.83	2.76	.37	1.47	32

Note. N = 266.

Table 3: Means, SDs and Correlation Coefficients between Background Characteristics and Components of Health and Well-being.

Variables	1	2	3	Mean	SD
1. Gender				1.59	0.49
2. Setting	.29**			0.72	0.44
3. SES	.34**	.28**		0.63	0.48
SA	-.09	-.02	-.27**	10.61	2.82
ACD	.13*	.05	-.00	11.16	2.342
DP	-.08	-.08	-.23*	7.53	2.87
PNH	-.06	-.12	-.02	6.92	1.34
AUT	.11	.20**	.08	11.41	2.00
ALN	-.09	-.10	-.15	9.07	2.36
OPT	.13*	.10	-.03	15.52	2.62
BC	-.28**	-.13	-.22*	11.10	3.16
INS	.03	.04	-.12	9.66	2.37
SP	.43**	.07	.07	61.00	11.56
WB	-.13	-.04	-.14	55.86	9.13

Note: SA: Social Anxiety; ACD: Academic Adjustment; DP: Depression; PNH: Perceived Negative Health; AUT: Autonomy; ALN: Alienation; OPT: Optimism; BC: Body Consciousness; INS: Insomnia; SP: Spirituality; WB: Well-Being. ** $p < .001$; * $p < .01$; * $p < .05$.



spirituality than their male counterparts. Females were found less body conscious than males. A significant positive relationship exists between urban settings and autonomy which explains that urban participants were more autonomous than their rural counterparts. Social anxiety, body consciousness, and depression were significantly related to SES. It can be said that participants with low SES had social anxiety, body consciousness, and depression in comparison to high SES.

Zero-order correlations among self-awareness, health, and well-being: combined sample

Tables 4,5 present descriptive statistics of self-awareness, health, and well-being for males, females, and combined

Table 4: Descriptive of Self-awareness, health, and well-being for male, female, and combined sample.

Variables	Combined Sample		Male		Female	
	Mean	SD	Mean	SD	Mean	SD
IA	65.16	7.92	61.80	7.05	66.90	7.67
OA	68.55	11.01	69.66	11.43	68.11	10.68
BC	11.10	3.16	12.13	3.18	10.51	2.85
ALN	9.07	2.36	9.42	2.45	8.91	2.27
PNH	6.92	1.34	7.09	1.34	6.8	1.33
ACD	11.16	2.342	10.95	2.35	11.49	1.99
DP	7.53	2.87	7.88	2.66	7.19	2.75
OPT	15.52	2.62	15.23	3.01	15.7	2.12
WB	55.86	9.13	56.69	9.55	54.38	8.34
AUT	11.41	2.00	11.13	2.29	11.71	1.61
INS	9.66	2.37	9.8	2.35	9.52	2.33
SA	10.61	2.82	10.99	2.87	10.2	2.7
SP	61.00	11.56	53.96	11.51	66.13	11.39

Note: IA: Inward Attention; OA: Outward Attention; SA: Social Anxiety; ACD: Academic Adjustment; DP: Depression; PNH: Perceived Negative Health; AUT: Autonomy; ALN: Alienation; OPT: Optimism; BC: Body Consciousness; INS: Insomnia; SP: Spirituality; WB: Well-Being.

samples and present Pearson correlation coefficients for the self-awareness subscales with the variables under investigation respectively. Both the sub-scales of self-awareness showed different patterns of relationship with health and well-being.

The inward attention was found significantly and positively related to academic adjustment ($r = .20, p < .01$), optimism ($r = .39, p < .01$), well-being ($r = .38, p < .01$), autonomy ($r = .29, p < .01$) and spirituality ($r = .40, p < .01$). Body consciousness ($r = .20, p < .01$), perceived negative health ($r = .27, p < .01$), depression ($r = -.20, p < .01$), insomnia ($r = -.18, p < .05$) and social anxiety ($r = -.20, p < .05$) was negatively but significantly associated with inward attention. Alienation did not show a significant correlation with inward attention. Outward attention was found significantly and positively correlated with body consciousness ($r = .48, p < .01$), alienation ($r = .35, p < .01$), perceived negative health ($r = .16, p < .05$), depression ($r = .28, p < .01$), insomnia ($r = .19, p < .05$), academic adjustment ($r = .18, p < .05$) and social anxiety ($r = .42, p < .01$). Autonomy ($r = .19, p < .01$) and spirituality ($r = .22, p < .01$) were significantly and negatively related with outward attention. Overall, spirituality, optimism, and well-being showed a strong correlation with inward attention whereas social anxiety, body consciousness, and alienation showed a strong correlation with outward attention scale.

Regression analysis of dimensions of self-awareness with health and well-being: combined sample

Simple linear regression analysis was performed to see the contribution of the self-awareness sub-scale to the variance of health and well-being variables among college students (combined sample- Table 6). Outward attention accounted for a 23% variance for body consciousness ($F = 54.86, p < .001$) whereas inward attention negatively contributed to determining body consciousness ($R^2 = .04, F = 7.46, p < .001$).

Alienation was significantly predicted by outward attention ($R^2 = .12, F = 25.19, p < .001$) but not by inward attention. It

Table 5: Mean, SD, and Zero-order correlation between self-awareness variables and outcome of health and well-being (Combined Sample).

Variable	1	2	3	4	5	6	7	8	9	10	11	12
0. IA												
1. OA	-.10											
2. BC	-.20**	.48**										
3. ALN	-.07	.35**	.31**									
4. PNH	-.27**	.16*	.17*	.11								
5. ACD	.20**	-.18*	-.09	-.15*	-.06							
6. DP	-.20**	.28**	.29**	.44**	.29**	-.35**						
7. OPT	.39**	-.08	-.10	-.11	-.23**	.39**	-.33**					
8. WB	.38**	-.02	.00	-.04	-.10	.35**	-.30**	.34**				
9. AUT	.29**	-.19**	-.12	-.12	-.08	.14*	-.11	.22**	.15*			
10. SL	-.18*	.19*	.13*	.24**	.27**	-.09	.37**	-.13*	-.16*	.05		
11. SA	-.20*	.42**	.30**	.28**	.19**	-.10	.30**	-.19**	-.16*	-.21**	.22**	
12. SP	.40**	-.22**	-.23**	-.15*	-.15*	.32**	-.37**	.32**	.19*	.18**	-.21**	-.10

Note: IA: Inward Attention; OA: Outward Attention; SA: Social Anxiety; ACD: Academic Adjustment; DP: Depression; PNH: Perceived Negative Health; AUT: Autonomy; ALN: Alienation; OPT: Optimism; BC: Body Consciousness; INS: Insomnia; SP: Spirituality; WB: Well-Being.*** $p < .001$; ** $p < .01$; * $p < .05$

**Table 6:** Summary of simple linear regression analysis of dimensions of self-awareness predicting the different components of health and well-being (Combined Sample).

Criterion	Predictor	B	R ²	t	F
BC	IA	-.20	.04	2.73	7.46**
	OA	.48	.22	7.41	54.86***
ALN	OA	.35	.12	5.02	25.19***
PNH	IA	-.27	.07	3.76	14.14***
	OA	.16	.02	2.14	4.59*
ACD	IA	.20	.04	2.74	7.52**
	OA	-.18	.03	2.41	5.82*
DP	IA	-.20	.03	2.72	7.37**
	OA	.28	.07	3.98	15.83***
OPT	IA	.39	.15	5.64	31.93***
WB	IA	.38	.14	5.17	26.74***
AUT	IA	.29	.08	4.07	16.52***
	OA	-.19	.03	2.65	7.04**
INS	IA	-.18	.03	2.36	5.60**
	OA	.19	.03	2.51	6.30**
SA	IA	-.20	.03	2.59	6.69**
	OA	.42	.17	6.12	37.49***
SP	IA	.40	.16	5.59	31.32***
	OA	-.22	.04	2.79	7.80**

Note: *** $p < .001$; ** $p < .01$; * $p < .05$.

implies that those who had outward attention would likely have feelings of alienation by the above-explained amount. Inward attention didn't seem to play any role in affecting this outcome variable. Illness was significantly predicted by outward attention ($R^2 = .02$, $F = 4.59$, $p < .05$) and inward attention ($R^2 = .07$, $F = 14.14$, $p < .001$).

Inward attention explained 4% variance in accounting outward attention with a beta value of .20 standard deviations ($R^2 = .04$, $F = 7.52$, $p < .01$). Outward attention significantly predicted academic adjustment ($R^2 = .03$, $F = 5.82$, $p < .05$) but negatively. So saying differently, inward attention is responsible for an increase of .20 standard deviations change in academic adjustment whereas it is decreased by .18 standard deviations by outward attention. In a similar vein, depression was significantly predicted by inward attention ($R^2 = .04$, $F = 7.37$, $p < .01$) and outward attention ($R^2 = .07$, $F = 15.83$, $p < .001$). Therefore, inward attention is responsible for decreasing the amount of depression by 0.20 standard deviations whereas outward explains an increment of 0.28 standard deviations in depression.

Optimism, a positive aspect of health, was significantly predicted by inward attention ($R^2 = .15$, $F = 31.93$, $p < .001$). It implies that 0.39 standard deviation changes will happen in optimism if there is one standard deviation change in inward attention which indicates a good amount of prediction. Outward attention did not come out with any contribution to optimism which explains that it does not affect optimism in students. Autonomy is significantly predicted by both the independent predictors but in opposite ways. Inward attention contributes 8% ($F = 16.52$, $p < .001$) whereas outward attention accounts for only 3% ($F = 7.04$, $p < .01$) of variance suggesting the fact that autonomy is increased by 0.29 standard deviations at one standard deviation change in inward attention whereas it is decreased by 0.19 standard deviations at one standard deviation change in outward attention.

Insomnia and social anxiety were significantly predicted by both the predictors and followed a similar pattern. Insomnia has been explained by a 3% variance by both the predictors but in opposite directions. This is in line with the hypothesis. Inward attention predicted a 0.18 standard deviation change ($F = 5.60$, $p < .05$) and outward attention predicted a 0.19 standard deviation change ($F = 7.04$, $p < .01$) in insomnia. Social anxiety was strongly predicted by outward attention explaining 17% of the variance ($F = 37.49$, $p < .001$) whereas inward attention explained 3% variance ($F = 6.69$, $p < .01$) but negatively.

Inward attention strongly predicted spirituality among college students, explaining 16% of the variance ($F = 31.32$, $p < .001$) whereas outward attention did it in the opposite direction, explaining 5% of the variance ($F = 7.80$, $p < .01$). It could be said that those who have high inward attention will also have spirituality whereas the presence of outward attention will reduce the level of spirituality.

Discussion

The primary aim of the study was to explore self-awareness with health and well-being. The results revealed an association among background characteristics like gender, residential setting, and Socio-Economic Status (SES) of the sample with health and well-being. Gender was significantly associated with spirituality, body consciousness, academic adjustment, and optimism. Apart from the gender differences, the present study also revealed an association of depression with socioeconomic status. It was found that depression was higher in students who belong to the low socio-economic group than in those who belong to the high socio-economic group [25,26]. A similar association of SES was seen with social anxiety [27]. In another study on Indian students, it was revealed that in comparison to the middle and higher classes, the lower class feels more social anxiety (Deb, et al. 2010). A study done in India by Shivane (2011) found differences in the autonomy of students among urban and tribal settings. Those students who belong to the urban area had more sense of autonomy due to the environmental demands of urban settings in comparison to rural settings (Zhang & Fuligni, 2006).

As proposed inward attention showed a positive association with positive health constructs such as academic adjustment [28,29] optimism [30], autonomy [31], etc. and negative association with negative health constructs like insomnia, illness, body consciousness, etc. Contrast trend revealed with outward attention. Inward attention and outward attention significantly predicted both negative and positive health constructs. Inward attention showed a significant contribution to academic adjustment, optimism, well-being, autonomy, and spirituality but a negative contribution to, perceived negative health, depression, insomnia, and social anxiety. In conversion, outward attention significantly contributed to body consciousness, alienation, perceived negative health, depression, insomnia, and social anxiety whereas significantly negatively contributed to academic adjustment, autonomy, and spirituality. This can be inferred that a significant amount of increment in the frequency of attending the outer objects can increase body consciousness, alienation, perceived negative

health, depression, insomnia, and social anxiety and decrease autonomy, academic adjustment, and spirituality [32-35].

Study II- Effect of intervention program on health and well-being

Various studies explored the above aim in various contexts like clinical [36], social work [37], and neurological and counseling [38,39]. The above findings prompted the development and design of a self-awareness intervention program specific to college students to enhance their level of self-awareness which in turn can promote various health and well-being aspects. The aim of the intervention program is to direct the attention toward the self and to minimize the tendency to subsidize or push the self into the periphery due to the habit of being trapped in the outer world's pressure. In other words, the aim is to centralize the self and establish a connection of its facets by volitional attention and amount of time.

Method

Participants and procedure : A total of 60 participants were recruited in the experimental-control group study. Half of the students made the experimental group and another half made the control group. The students were allocated in groups using simple random assignment. The selection procedure was kept very specific keeping the understanding and acceptability of the program content for the participants. Undergraduate female students were taken into the study with a mean age of 19.2 years. All students were pursuing a psychology B.A. course at the University of Banasthali. Students were required to give their written consent form. Prior to final recruitment in the experimental condition, students were given an orientation program regarding the study. They were informed about their role requirement and active participation in the study by summarizing the proposed benefits of the program of the study. The program was held as a five-day program where participants were supposed to present from morning nine to evening at six o'clock which 1 hour was kept for lunch. This program was held for five days in official vacation at Banasthali Vidyapith with the prior permission of the department. A high-tech venue was arranged for the program for the highest creative utilization of the technology for the program (e.g. power point projector, sound system, comfortable furniture, etc.). All the students were hostler in the same university. This was kept in priority to choose students who shared their room with the students who participated in the study so they could continue their exercise given in the daytime and can keep some watch on their thoughts. This was done to maximize the depth and intensity of their exercise for their self. Participants were given responsibility for each other to keep trying to connect with their own self, maximize their self-talk, and keep vigilant about their pattern of thought.

Measures

Self-awareness Measure: The measure referred to in study-1:

Mental health Continuum: The measure referred to in study-1

Spirituality Scale: The measure referred to in study-1

Health Questionnaire for College Students- The measure referred to in study-1

Semi-structured interview schedule: a semi-structured interview schedule was developed for the present study so as to explore the variables under study and to generate qualitative data. The interview schedule consisted of six open-ended questions. These questions were about the experiences during the program, changes during and after the program, and the importance of the program. The questions were framed in such a way that participants' subjective experiences and feelings during the program could be understood. For example, one such question was, "In what aspects of self-awareness program create a difference in your life?"

Self-awareness intervention program: Having a very subtle aim of producing self-awareness, this intervention program is the result of a review of various types of literature and an experiential journey of the researcher based on the participation of various self-awareness programs. The Self-awareness Intervention program had two objectives, to *turn the direction of attention inward* and to *deepen the understanding of self as a source of life*. It was a personal goal-oriented program and not a group therapy. For the above-said purpose, many techniques have been used. These techniques can be divided into two types, initial exercises and deep exercises. Initial exercises start from bodily sensations or breathing awareness. Deep exercises include sustaining attention on subtle aspects of self e.g. on thoughts or energy of our body without relying on gross sensation (A detailed description of SAIP is mentioned in the unpublished thesis of Wagani, 2014).

Results

Preliminary analysis: Preliminary analyses were conducted to ensure that the group of participants within each of the intervention conditions (control and treatment) did not differ from each other. Comparison across the intervention conditions, using a series of one-way ANOVAs revealed no significant differences in the pre-intervention means of the Self-Awareness Sub Scales; Inward attention ($F_{1,58} = .25 p > .05$); Outward attention ($F_{1,58} = .01 p > .05$). Similarly no significant differences were found in the pre intervention means of Health Scale and Mental Health Continuum; academic adjustment ($F_{1,58} = .37 p > .05$); depression ($F_{1,58} = .01 p > .05$); social anxiety ($F_{1,58} = .00 p > .05$); spirituality ($F_{1,58} = .33 p > .05$); well-being ($F_{1,58} = .00 p > .05$); body consciousness ($F_{1,58} = .30 p > .05$); optimism ($F_{1,58} = .51 p > .05$); alienation ($F_{1,58} = .02 p > .05$); insomnia ($F_{1,58} = 1.30 p > .05$); illness ($F_{1,58} = 2.89 p > .05$); autonomy ($F_{1,58} = .001 p > .05$). Table 7 displays the means and standard deviations on each dependent measure both groups and testing occasions wise.

Self-awareness intervention program effects

To examine the statistical significance of the intervention program using mixed method ANOVA, the main and interaction effects were examined to see whether the experimental group differed from the control group after intervention. It is important to mention here that in a simple mixed method,

**Table 7:** Mean and SDs of scores on the measures of health and well-being by testing occasions and group.

Measures	Experimental Group				Control Group				Interaction Effect (1,58)	η^2
	Pre Test		Post Test		Pre Test		Post Test			
	Mean	SD	M	SD	M	SD	M	SD		
IA	63.36	7.97	69.71	7.26	62.22	8.75	63.11	8.40	13.69***	.21
OA	69.88	11.10	58.84	14.13	70.12	12.66	66.80	11.88	5.83*	.11
SA	12.36	3.22	10.36	3.07	12.30	2.23	12.22	3.02	4.72*	.09
ACD	11.11	2.22	12.5	1.84	10.7	2.69	10.85	3.43	5.94*	.10
DP	7.71	2.45	6.11	2.30	7.79	3.35	8.08	3.18	3.97*	.07
PNH	5.32	1.44	5.11	2.41	6.00	1.52	6.67	2.72	1.06	.02
AUT	6.32	.98	7.25	1.24	6.33	1.36	6.56	1.28	3.48	.06
ALN	7.39	1.87	6.46	1.67	7.46	1.22	7.92	1.32	6.10*	.11
OPT	15.82	2.39	17.32	2.11	15.37	2.27	14.85	1.99	8.84**	.14
BC	6.43	1.55	5.18	1.44	6.15	2.18	6.11	1.95	5.58*	.10
INS	6.59	2.24	5.22	2.23	7.22	2.24	7.33	1.92	4.96*	.10
SP	60.26	6.78	66.22	7.95	61.48	6.13	59.26	5.87	14.09***	.23
WB	63.25	6.75	68.00	8.86	63.44	7.04	63.15	6.61	8.95**	.15

Note. *** $p < .001$; ** $p < .01$; * $p < .05$

ANOVA's main effect tells the combined effect of both the groups in the dependent variable which is not the aim of the experimental study. In interaction effect, on the other hand, the magnitude of the main effect remains contingent upon groups (experimental and control). Therefore, a significant F value indicates a change in the dependent variable in a particular group which is assumed to be the treatment group in the experiment. Table 7 displays the interaction effect and effect size due to the effect of the intervention program.

A significant interaction was found between self-awareness sub-scales; inward attention and group, $F_{1,58} = 13.69$, $p < .001$, $\eta^2 = .21$. This effect shows that if testing occasions were ignored then inward attention increased in the experimental group than in the control group. Similarly, a significant interaction was found between outward attention and group, $F_{1,58} = 11.88$, $p < .05$, $\eta^2 = .11$. This effect explains that the experimental group showed a decreased level of outward attention than the control group. The effect on self-awareness dimensions showed that self-awareness significantly increased among participants due to the intervention program.

Mixed ANOVA results (Table 7) display a substantial increment in the health and well-being of the treatment group. A significant interaction was revealed between positive aspects of health and the group. A significant increase was found in optimism, $F_{1,58} = 8.84$, $p < .01$, $\eta^2 = .14$, academic adjustment, $F_{1,58} = 5.94$, $p < .05$, $\eta^2 = .09$, spirituality, $F_{1,58} = 14.09$, $p < .001$, $\eta^2 = .23$, and well-being, $F_{1,58} = 8.95$, $p < .01$, $\eta^2 = .15$ whereas no significant effect was found in autonomy in the treatment group $F_{1,58} = 3.48$, $p > .05$, $\eta^2 = .06$ which shows that autonomy didn't increased in treatment group. A significant decrease was found in negative aspects of health. As social anxiety $F_{1,58} = 4.72$, $p < .05$, $\eta^2 = .09$, body consciousness $F_{1,58} = 5.58$, $p < .05$, $\eta^2 = .10$, insomnia $F_{1,58} = 4.96$, $p < .05$, $\eta^2 = .10$, depression $F_{1,58} = 3.97$, $p < .05$, $\eta^2 = .07$ and alienation $F_{1,58} = 6.10$, $p < .05$, $\eta^2 = .11$ showed significant interaction with group. Illness did

not show a significant difference in the treatment group and control group.

Qualitative study

As described above, a separate qualitative study was conducted to explore the mechanism of self-awareness in the intervention group. For this purpose, ten participants of the intervention group were interviewed by the experimenter. Semi-structured, open-ended interviews were conducted and six questions were kept uniform in all the interviews. Interviews were recorded using audio tape, and conducted by the first author. The hand-written text from each participant's interview was written shortly after the interview without leaving out or adding anything. A phenomenological approach was used when analyzing the texts. Data were analyzed by using thematic analysis. Thematic analysis can be applied across a range of theoretical and epistemological approaches "Through its theoretical freedom, it provides a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex account of the data" [40]. Braun and Clarke (2006) guidelines were used for the analysis which involves six phases and many other important inputs for reliable thematic analysis.

Results

Results revealed that most participants were either very satisfied or entirely satisfied with the program. A total of six themes were identified which in turn consisted of sub-themes. Each theme represented a single domain that differed from other domains

About the program

Necessity of the program: all respondents expressed the importance of self-awareness in their lives. They felt that after attending this program they realized how much it was

important to their life. The following simple response reveals the importance of the program in the participants' lives.

“Now I feel that how much this program was important for me” (1).

“This program has helped me a lot” (2).

Prior status of the participants: participants in their interview frequently mentioned their prior status and then compared it after the program. One of the respondents mentioned her status before and after the program.

“I was not at all confident at first, although I had music but I felt that I could not sing in front of anyone. After this program, I gained a lot of confidence, so after that, I gave programs in classes and also in annual functions” (9).

They expressed that before attending this program their focus was mainly on their weakness, that they were having social anxiety and were suffering from a lack of awareness about their emotional and mental status.

Participants frequently picked their classroom experiences to check the changes in their self due to the program. As one of the following excerpts shows the problem of the participant.

“My mind used to get diverted very quickly, for example, if I am sitting in the class and my friend is whispering something in my ear during that time, then I used to think only about that thing only and could not concentrate on the class”(1).

Change of focus

The module of the program aimed to present a difference between outer attention and inward attention through some experiential exercises. Almost all the participants expressed a change in their orientation for attending the self and not-self.

“Earlier when I used to look at a person, I used to see his weakness, any person first sees the weakness of someone... but now I also see his goodness” (3).

This was expressed in terms of a shift in their thinking. Participants expressed that focus on self increased automatically. They came to understand what the role of another's suggestion is in their life, and to what extent they have to accept the view of others about themselves.

Identifying connections from self

Self-awareness is not only expressed in terms of understanding oneself rather it is also expressed in terms of awareness of the connectedness of self with the universe, its relation to one's self, the natural link between self and society, and the origin of society in one's self.

Connectedness with the universe: Faith in a higher power was expressed by participants by using the concept of universal consciousness. The concept of energy was felt by everybody and was experienced in terms of vibrations, sensitivity for vibrations, and effects on oneself in relation to the universe.

Connectedness with society: Self-awareness cannot be narrowed down only by relating it completely with self. The participants mentioned increased empathy and adjustment to their surroundings.

Increased awareness of self

Respondents mentioned an increased awareness of self in their lives. This increased awareness was expressed in terms of awareness of emotions, awareness about their strength and weakness, and also awareness about their mental state.

“Now we are able to understand ourselves better, what we feel, what we believe, and what we should do ” (3).

Emotional awareness: Emotions were prominent during the program as apart from the mental understanding it is the emotions that present quite a complex picture. Respondents expressed their self quite excitedly on these aspects. No direct question was posed on emotional awareness as it was assumed that it would be expressed indirectly in their narratives.

Now I have become very strong, now I don't care about friends if I think I am right” (5).

Awareness about thoughts: self-concept can be said as beliefs about the self. These beliefs are never expressed directly by the individual but rather reflected in various reactions. Therefore, these do not have direct access.

“Sometimes I become more depressed... Generally, I feel lighter by talking to my family in such states, but sometimes the family also uses the same methods and treats me in the same way as others do, usually, we also move in life based on others' opinions and even our family as well. Even when our mind is not in the right place, we try to show connection with God, even when it seems that there is disappointment from all sides, from inside we feel that there is nothing in this world except our own. There is self, it has to be maintained, from there only we can do something” (2).

Visualization of self

The basic quality of every individual is to detach from oneself and take it as an object. Visualization of the self extends this quality in terms of visualizing the self and its facets by using the quality of self-observation. Participants indicated that now they were able to visualize and differentiate between mind, body, and emotions. Some expressed it in terms of experiencing energy, body, and thoughts in their day-to-day life.

Self-control

A sense of self-control was reflected by the participants. It is well understood that this sense of authority is the first condition for a change in habits, behaviors, and thought processes. Participants realized that only they could feel and understand their various levels of self (mind, body, and emotions). Therefore, management of any disharmony can only be done by them. As one participant expressed herself.

“Earlier I didn't feel like it, but now I can divert my mind and make myself understand that I am the one who can do everything right” (2).

This sense of authority leads participants towards greater self-control.

Discussion

The objective of the present study was to examine the status of health and well-being through enhancing self-awareness. The results of this intervention study revealed that positive health constructs increased in the treatment group after intervention. An increase in the self-awareness level during the course of the intervention program resulted in a decrease in the negative constructs of health [14]. This reveals two important conclusions for the study. The first is that the results indicate the effectiveness of the intervention program. This is because both kinds of data support it; qualitative data revealed that the participants strongly felt the need for this kind of program in their life, whereas, the analysis of quantitative data showed a substantial change in the self-awareness level of the participants. The second conclusion is that the change in the level of self-awareness also indicates a change in the health status of the participants.

General discussion

The present conceptualisation of self-awareness differs from the previous conceptualisation of self-awareness as the object of scrutiny [41]. It also differs from the limited definition of self-awareness where self-awareness is defined as the automatic tendency and non-interesting act or a passive reflection on self by the self. In addition to it, the kind of conceptualisation available for self-awareness in the existing research lacks a connection with the theoretical definitions of self-awareness discussed in detail by various philosophers, psychotherapists, and meditators. The present conceptualisation expanded the definition of self-awareness identifying it as the inherent tendency and a continuous process, [42] present in everyone which can be enhanced through guidance and training [43]. The research proposes that the identification of direction and focus of attention in any individual can give an understanding of these two individual tendencies. A systematic training as shown in the second study may increase self-reflection, and self-observation through directing the attention on the self [44,45]. Self-reflection, self-focused attention, and mindfulness awareness showed positive association with various health and well-being indicators in previous researchers [12,13,46-48]. Self-awareness could result in a more organized self-concept [21], self-regulation [49,50], and self-control [51]. The present research theorized that self-awareness is the result of attention and cognition. The primary conditions for self-regulation are attention and cognition [52]. Controlling thoughts, emotions, and impulses which were identified as important domains of self-control [53,54] required to be controlled. These constructs showed a positive relation to health and well-being indicators in the past. The two constructs inward attention and outward attention can both be considered integral parts of self-awareness.

Without the understanding of both tendencies, self-awareness would be incomplete. The expansion of the self-awareness construct in the present research provides an opportunity to use this construct as the positive construct which was earlier extensively discussed in Eastern tradition nevertheless did not examine empirically. This is an indication towards to take a call to change the conventional and limited definition of positive constructs like self-awareness [13].

Conclusion

In conclusion, the results of the present study revealed various findings pertaining to the conceptualization of self-awareness and the effect of self-awareness on the health and well-being of college students. This study was conducted on college students therefore; it provides useful insights related to that age group. Two subsequent studies give a broader vision to understand the self-awareness construct from conceptualization to its implication. The first study results show that high self-awareness contributes to health and well-being. The second study can be taken as the application of the first study, the result of which suggests the promotion of health and well-being requires enhanced self-awareness. Exploration of the role of gender also leads to very interesting results where a different pattern of health and well-being is revealed in relation to self-awareness. However, past research remained unanswered on this issue. One of the very important gains from the result of the study is that there is a progression from psychological health to psychological distress in terms of the association that inward attention to outward attention, respectively, have with psychological distress.

The current results showed a different pattern of health status in male and female students. These results can give insight to counselors working in educational settings. Therefore, it could be inferred that self-awareness results have different implications for both male and female populations.

The next and very important implication of the present study is the intervention program. This provides a useful strategy for both policymakers and educationists to deal with the various problems of students like alienation, academic adjustment, autonomy, and optimism. Some parts of the intervention program can be incorporated into the educational curriculum in order to promote the holistic growth of the students.

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