

## Exploring the Moderating Effects of Gender on the Relationship between Motivation and Spiritual Intelligence of Higher Education Students in India

S. Malini<sup>1</sup> and R. Raju<sup>2</sup>

<sup>1</sup>*Department of Management Studies, Anna University, Chennai 25, Tamil Nadu, India*  
<sup>2</sup>*Department of Industrial Engineering, Anna University, Chennai 25, Tamil Nadu, India*  
E-mail: <sup>1</sup><amudhanmalini@gmail.com>, <sup>1</sup><maliniamudhan@gmail.com>, <sup>2</sup><rraju@annauniv.edu>

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**ABSTRACT** Motivation as a determinant of student performance has been identified and proven by several researchers of the past. Spiritual Intelligence, has gained greater interest among recent researchers in terms of influencing the performance of students of various academic disciplines. This research is an attempt to identify empirically the relationship between motivation and spiritual intelligence in addition to exploring the moderating effects of gender on the relationship between motivation and spiritual intelligence of Indian higher education students, especially pursuing their higher education. Primary data has been collected in quantitative form, from 523 students belonging to various higher education institutions in India through survey approach. Cluster sampling has been employed and the data has been subject to Principal Component Analysis and Hierarchical Regression using SPSS. The results reveal that even though motivation and spiritual intelligence are correlated with each other, gender does not moderate the relationship between these two variables in particular.

### INTRODUCTION

India is a nation that is well known for its spiritual values and culture. Spirituality is deep rooted in the citizens of India and reflected in each and every role they play (Devi et al. 2017). Spirituality is present everywhere including the educational institutions (Edward 2003; Devi et al. 2017). Motivation as a topic of research with respect to student education has long been in practice for years (Liu et al. 2014; Evans 2015). However, Spiritual Intelligence has gained a greater interest by researchers of the recent times (Vaughan 2002; King 2008; King and DeCicco 2009). Researchers are examining the concept of spiritual intelligence and its impact on the society through conducting various forms of research these days. This research is an attempt to empirically investigate the relationship between Motivation and Spiritual Intelligence among students belonging to the Higher Education Institutions in India. In addition to examining the relationship between these two concepts, this research also intends to identify the role of

gender in moderating the relationship between these two variables.

### Rationale of the Research

#### *Spiritual Intelligence*

The term Spiritual Intelligence emerged with the intention of integrating Intelligence and Spirituality (Emmons 2000). Spiritual intelligence is considered as the adaptive usage of spiritual data with the intention of solving problems that arise in day to day life (Zohar and Marshall 2009). Spiritual Intelligence is regarded as the most important form of intelligence for it has the capacity to bring in change in the culture, society as well as an individual (Devi et al. 2017). Developing spiritual intelligence will help a person in achieving inner peace as well gaining a positive outlook (Wigglesworth 2002). This inner peace as well as positive outlook creates a complete change in the attitude of an individual thereby improving the control and self-motivation of the individual in addition to reducing the higher lev-

els of stress commonly encountered by people as an impact of the modern lifestyle. Spiritual intelligence according to King (2008) could be measured using four dimensions namely, Personal Meaning Production, Conscious State Expansion, Critical Existential Thinking and Transcendental Awareness. Critical Existential Thinking is the capacity of an individual to perceive and understand the meaning of life. Personal meaning production as the name suggests is the capacity to identify the purpose and personal meaning in all forms of physical and mental experiences. Transcendental awareness is a key component of spiritual intelligence which denotes the characteristic of perceiving the spiritual dimension of life (Vaughan 2002). Conscious State Expansion an extension of transcendental awareness is the state in which an individual gains the capacity to enter the states that are spiritually profound through activities like meditation, Yoga, and relaxation.

### **Motivation**

Motivation from a student perspective can traverse from a level of demotivation through numerous forms of extrinsic motivation and finally complete at an intrinsic motivation level which ultimately is the preferred level of orientation of motivation best suited for learning (Sinatra 2005). Students with intrinsic motivation can learn well compared with that of others and can retain the knowledge gained out of that learning for a longer time (Sinatra 2005). This traversal through different stages of motivation is explained by Self-determination Theory (Ryan and Deci 2000). Self-determination Theory also abbreviated as Self-determination Theory (SDT) is a macro theory about motivation of human beings that explores the tendency of human growth towards attainment of self-motivation and personality integration (Ryan and Deci 2000). According to Gagné and Deci's (2005), Self-determination Theory, motivation can be classified into six types namely external regulation, demotivation, interjected regulation, integrated regulation, identified regulation and intrinsic motivation and will vary qualitatively depending upon how the external behaviours are regulated and internalized.

Previous research work identify that on using the concept of self-determination theory, it is possible for the researchers to study the level

of extrinsic and intrinsic motivation among students directly (Trenshaw et al. 2016). When compared with other theories, Self-determination theory facilitates researchers in gauging motivation in a class room (Evans 2015; Liu et al. 2014). Since this research focuses towards measuring the motivation of students SDT will suit best for this research. Therefore, in this research, Motivation is measured in terms of Self-determination Theory.

### **Objectives**

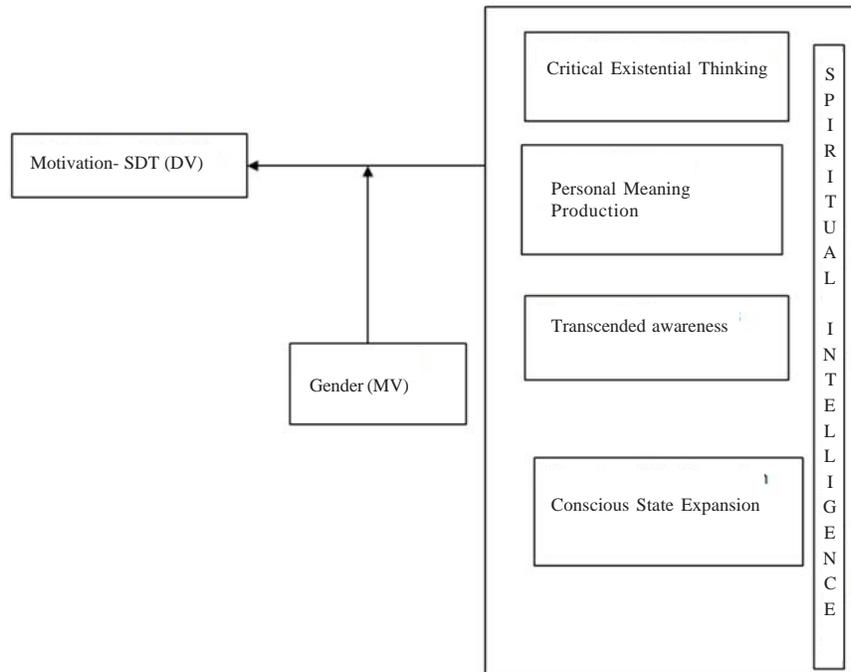
The objective of the study is to find the role of gender in moderating the relationship between spiritual intelligence and motivation especially with specific reference to Indian higher education institutions.

### **Research Gap**

Spiritual Intelligence among students at a higher educational institution level is now being studied as a topic of interest by several researchers at present. Likewise, motivation among students from the perspective of self-determination motivation theory has also attracted the interest of several researchers of the past (Leal et al. 2013; Liu et al. 2014; Evans 2015). Spiritual Intelligence and its association with personality trait (Mahasneh et al. 2015), psychological well-being (Sahebalmzamani et al. 2013) and many more variables have been studied with respect to the higher education context in the recent times. However, till date there has been no research integrating Spiritual Intelligence and Motivation, with specific reference to the Indian Higher Education Sector, especially examining the role of gender in moderating the relationship. This research intends to bridge the gap by making an attempt to investigate the role of gender in moderating the relationship between spiritual intelligence and motivation especially with specific reference to Indian higher education institutions.

### **Conceptual Framework and Hypothesis**

Figure 1 presents the conceptual model portraying the relationship between Motivation and Spiritual Intelligence, moderated by gender.



**Fig.1. Conceptual model portraying the relationship between spiritual intelligence and motivation with gender as the moderator**

Source: Author

### **Hypothesis One**

**H1:** There is a correlation between Motivation and Spiritual Intelligence of Higher Education students in India. Its specific research hypotheses include:

**H1.1:** Critical existential thinking fosters motivation of higher education students in India.

**H1.2:** Personal Meaning Production fosters motivation of higher education students in India.

**H1.3:** Transcended awareness fosters motivation of higher education students in India.

**H1.4:** Conscious State Expansion fosters motivation of higher education students in India.

### **Hypothesis Two**

**H2:** The relationship between motivation and spiritual intelligence among Higher

Education Students in India is moderated by gender of the students.

## **MATERIAL AND METHODS**

### **Approach of Research Employed**

This research makes use of a deductive approach also known as quantitative approach. Saunders et al (2007) has defined deductive approach as the one in which a research design is developed for the test of a set of hypothesis that has been derived and proposed through extensive review of existing literature. The researcher in this particular study has extensively reviewed the theories on motivation, spiritual intelligence and the relationship between spiritual learning and motivation and derived hypothesis that connect each and every factor of Motivation with that of every construct of Spiritual Intelligence. This study therefore can be considered to have adapted a quantitative or de-

ductive approach. Data collection is restricted to Higher Education Institutions across India. The research design employed is descriptive research design. Cluster sampling is the sampling design that has been adapted in this research. Higher education institutions in India have been chosen based on clusters classified depending upon the geographic location in which they are situated. Data has been selected from educational institutions belonging to top three major educational hubs India namely Delhi, Bengaluru and Chennai that are renowned for offering high quality higher education to students (CareerIndia 2016). Collection of primary data was done through distribution of questionnaires to the target respondents through online survey data collection tool. The questionnaire links of the survey instrument generated by the online survey tool was sent to 650 respondents. After data coding of the collected data, the final figure of number of valid responses arrived at was 523 thereby making the response rate as eighty percent. It was taken care of by the researchers that the data has been collected from the students enrolled in undergraduate level course or courses above that level. It has been ensured that the person who is responding to the survey is above 18 years and the educational institution from which data is being collected has been for not less than 10 years.

### Research Instrument

The researchers have designed the research instrument with three sections in it. Spiritual Intelligence, Motivation and Gender are the three major variables involved in this study. The first section of the questionnaire measures Spiritual Intelligence. In order to measure Spiritual Intelligence the researchers have utilized the instrument developed by Hildebrandt (2011). Hildebrandt (2011) scale has 24 items and measure spiritual intelligence with four main constructs critical existential thinking, transcended awareness, personal meaning production and conscious state expansion. The second section measures the variable Motivation. Motivation has been measured through the six constructs namely external regulation, demotivation, introjected regulation, integrated regulation, identified regulation and intrinsic motivation based on Self-determination Theory and proposed by Gagné and Deci (2005). The six constructs are

measured with the help of the instrument developed by Leal et al. (2013). Leal et al. (2013) in their research has used 29 items to measure the motivation of student using Self-determination theory. Since this research is also about student motivation, the researcher has adapted it considering it to be the most suitable instrument for this research. The third section of the questionnaire enquires about the gender of the student with two options 'Male' and 'Female'. The fourth and final section of the questionnaire enquires about the demographic profile of the respondents like age of the student department enrolled, course in which the student has enrolled, current semester, and the name of the educational institution.

### Techniques for Statistical Analysis

This research makes use of Principal Component Analysis in order to find the relationship between dependent and independent variable and hierarchical linear regression in order to find the moderating effects of the moderating variable (Gender) in modifying the relationship between the dependent variable (Motivation) and independent variable (Spiritual intelligence). According to Hair et al. (2010), hierarchical linear regression is best suited when there is a necessity to determine the moderating effects of an external variable on the relationship between the dependent variable and independent variables. In the researchers' case the impact of gender in altering the relationship between motivation and spiritual intelligence among higher education students is to be identified. Therefore this research finds Hierarchical Linear regression analysis as the most appropriate technique for identifying the relationship between the variables and testing the proposed hypothesis of this research. Statistical package for Social Sciences (SPSS) has been employed in order to carry out the statistical analysis.

### Techniques for Validation of Instrument and Findings

Reliability is an important strategy that has to be identified for any instrument to consider it suitable for collection of primary data. Cronbach alpha is the most widely adapted tool for calculating reliability of an instrument. It has been suggested by George and Mallery (2007) that

the value of Cronbach  $\alpha$  must be greater than 0.7 for an instrument to be accepted reliable. The reliability tests for the instruments used in this research is presented in Table 1.

**Table 1: Cronbach's test for reliability**

<i>Variable type</i>	<i>Cronbach's Alpha</i>	<i>N of variables</i>	<i>N of items</i>
Socio-demographic	.588	7	523
Spiritual Intelligence constructs (IVs)	.923	24	523
Motivation Constructs (DV)	.933	27	523

According to Cronbach's reliability tests, the data from a sample size of 523 respondents on analysis of relationship between motivation and spiritual intelligence among higher education students in India has significant alpha values. This alpha statistic shows that the data from independent variables is almost 92.3 reliable for the data analysis. Similarly, the data from socio-demographic factors is almost 58.8 reliable. Lastly the dependent variable shows a Cronbach's alpha of 0.933 indicating that the dependent variable is 93.3 reliable and valid.

In this research the Cronbach alpha value obtained for the adapted research instrument is 0.9 which is above the cut off limits. Therefore it can be considered reliable. Further in order to ensure the validity of the adapted research instrument, the researcher has adapted the instruments that have been adapted by many researchers in the past and have been proven to render valid results.

**Table 2: Distribution of age**

<i>Age</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative percent</i>
18-21	173	33.1	33.1	33.1
22-25	198	37.9	37.9	70.9
26+	152	29.1	29.1	100.0
Total	523	100.0	100.0	

**Table 3: Distribution of gender**

<i>Gender</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative percent</i>
Male	230	44.0	44.0	44.0
Female	293	56.0	56.0	100.0
Total	523	100.0	100.0	

## Data Analysis and Interpretation

This section presents the statistical analysis of the relationship between Spiritual Intelligence on Motivation and how it is moderated by gender. The virtual team performance is the dependent variable while e-learning system success is the independent variable. To achieve this goal, the following research hypothesis and its respective research question were set to guide in the analysis process. The analysis process will involve analysis of socio-demographic factors, descriptive statistics of both dependent and independent variable and lastly multiple linear regression. The study had 523 respondents who were mainly students from higher education institutions from, India.

## RESULTS

### Analysis of Socio-demographic Data of Respondents

According to Table 2, results show that, majority of the higher education students in India are aged between 22 and 25 years. Therefore, the 22-25 years age group is the modal age with a relative frequency of 37.9. The other age groups of higher education students in India are: 18-21 years with frequency of 33.1 and the 26+ years age group with relative frequency of 29.1. The age distribution is normally distributed as shown in the bar graph.

Table 3 shows that the female gender has a relative percentage of fifty-six percent in this study as compared to the males at forty-four

percent. These results show that the higher education students in India that were investigated portrayed gender parity. The females are more than the males as shown using the pie chart.

Table 4 shows on the level of study, results showed that majority of the higher education students in India who were the respondents are post-graduate (Masters) students with a frequency of 53.9 followed by the under graduate students with a frequency of 46.1. It was also worth noting that no Doctorate degree student was interviewed as a respondent. The pie chart shows the level of study distribution of respondents.

#### Analysis of Constructs of motivation of Higher Education Students in India

Analysis of constructs of motivation of higher education students in India was done using principal component analysis to ascertain the significant constructs and factors about motivation. The Principal Component Analysis (PCA) will first show the number of principal components that can describe the motivation and by what percentage of variability. The PCA will also show the significant principal components using a screen plot and finally it will identify the significant factors of motivation through use of factor loadings.

The results in Table 5 show that data concerning motivation can be grouped into 7 factors namely; Integrated intrinsic motivation, Demotivation, Introjected Regulation, External

Regulation with Evaluation, Identified Regulation, External Regulation and lastly a combination of Identified or Introjected or External Regulations. According to the results the first component of motivation has an eigen value of 10.048 and can contribute about 34.649 of total variability of motivation of a higher education student. The results also show that at least the first three components of motivation cumulatively contribute to about 86.372 of motivation. The screen plot also shows that out of 29 possible principal components, only seven components of motivation can explain the higher education student's motivation aspect.

The principal component analysis results shown in Table 6 demonstrate that most of the principal components (factor loadings) on the first three constructs of motivation (Integrated intrinsic motivation, Demotivation and Introjected Regulation) were at least equal or greater than 0.4, indicating that there is a moderate influence of motivation on spiritual intelligence among Higher Education Students in India. According to Hair et al. (1998), the factor loading, which is at least forty percent, is considered significant whereas a factor loading of which is greater than fifty percent is considered to be very significant.

Table 7 shows that all the Spiritual Intelligence (SI) constructs are significantly correlated to the overall motivation. The Critical Existence Thinking (CET) is significantly and moderately correlated with overall motivation with ( $r=0.503$ ,  $p=0.000$ ). However, Transcended

**Table 4: Distribution of level of study**

<i>Education level</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid percent</i>	<i>Cumulative percent</i>
Under Graduate	241	46.1	46.1	46.1
Post Graduate	282	53.9	53.9	100.0
Total	523	100.0	100.0	

**Table 5: Total variance explained by the constructs of motivation**

<i>Component</i>	<i>Initial eigenvalues</i>		
	<i>Total</i>	<i>% of variance</i>	<i>Cumulative %</i>
F1-Integrated intrinsic motivation	10.048	34.649	34.649
F2-Demotivation	8.999	31.030	65.679
F3-Introjected Regulation	6.001	20.693	86.372
F4-External Regulation with Evaluation	1.963	6.770	93.141
F5-Identified Regulation	1.057	3.643	96.785
F6-External Regulation	.928	3.200	99.985
F7-Identified/ Introjected/ External Regulation	.004	.015	100.000

Extraction Method: Principal Component Analysis.

**Table 6: Principal component analysis: Factor loadings**

<i>Factor investigated</i>	<i>Component</i>						
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
For the pleasure I obtain by engaging in interesting discussions with professors	.594						
Because education is a privilege	.788						
Because the university is a pleasure for me	.354						
Because access to knowledge takes place at the university	.988						
Because I love coming to the university	.399						
I come to the university because attendance is necessary for learning	.394						
Because studying broadens one's horizons	.683						
I come to the university because that is what I chose for myself		.517					
Honestly, I do not know why I come to the university		.489					
I really feel that I am wasting my time at the university		.573					
I had good reasons for coming to the university, but I now have doubts about continuing		.389					
I do not see why I must come to the university		.573					
I do not know or understand what I'm doing at the university	-.437						
I do not see what difference it makes coming to the university		.873					
I come to the university to prove to myself that I am able to complete the program			.389				
I come because that is what is expected of me			.473				
To prove to myself that I am an intelligent person			.289				
Because I want to prove to myself that I can be successful in my studies			-.642				
I come to the university so that I will not fail				.382			
I come to the university because attendance is mandatory				.288			
I come to the university to obtain a diploma				-.053			
If attendance was not mandatory, few students would attend classes					-.212		
Because I think attendance is required for students to take the program seriously					.288		
I want to avoid people seeing me as someone who has flunked out					.215		
I come to the university so I don't have to stay at home						-.152	
Seeing my friends is the main reason why I come to the university						.011	
I come to the university because I think attendance should be mandatory							.004
I come to the university because being successful makes me feel important							.000
I come to the university because as long as I am studying, I do not have to work							-.737

Extraction Method: Principal Component Analysis: 7 components extracted

Awareness (TA) is significantly but weakly correlated with overall motivation ( $r=0.379$ ,  $p=0.000$ ). On the other hand, it is worth noting that Personal Meaning Production (PMP) and Conscious State Expansion (CSE) are significantly and strongly correlated with overall motivation with ( $r=0.697$ ,  $p=0.000$ ) and ( $r=0.688$ ,  $p=0.000$ ) respectively. Therefore, the four spiritual intelligence constructs can be used in modelling and analyzing

the overall motivation through hierarchical regression.

### **The Effect of Critical Existential Thinking on Motivation of Higher Education Students**

The hypothesis on whether critical existential thinking fosters motivation of higher education students in India will be tested using hierar-

**Table 7: Correlations between overall motivation and spiritual intelligence constructs**

		<i>MOT</i>	<i>CET</i>	<i>TA</i>	<i>PMP</i>	<i>CSE</i>
<i>MOT</i>	R	1	.503**	.379**	.697**	.688**
	Sig.		.000	.000	.000	.000
	N	523	523	523	523	523
<i>CET</i>	R	.503**	1	.079	.766**	.940**
	Sig.	.000		.070	.000	.000
	N	523	523	523	523	523
<i>TA</i>	R	.379**	.079	1	.665**	.169**
	Sig.	.000	.070		.000	.000
	N	523	523	523	523	523
<i>PMP</i>	R	.697**	.766**	.665**	1	.846**
	Sig.	.000	.000	.000		.000
	N	523	523	523	523	523
<i>CSE</i>	R	.688**	.940**	.169**	.846**	1
	Sig.	.000	.000	.000	.000	
	N	523	523	523	523	523

\*\* Correlation is significant at the 0.01 level MOT=Overall Motivation, CET=Critical Existence Thinking, TA=Transcended Awareness, PMP=Personal Meaning Production and CSE=Conscious State Expansion

chical regression. The following hypothesis is to be tested.

$H_0$ : Critical existential thinking fosters motivation of higher education students in India against

$H_1$ : Critical existential thinking does not foster motivation of higher education students in India

The regression results in Table 8 exhibits the Critical Existence Thinking (CET) was found to be moderately correlated with overall motivation ( $r=0.503$ ,  $p=0.000$ ), but, the hierarchical regression test show that among the seven Critical Existence Thinking (CET) factors tested, only CET 2 which was seeking to test whether the student is able to enter higher states of consciousness or awareness in spiritual intelligence was found to be significant ( $t=13.416$ ,  $p=0.000$ ). The overall Critical Existence Thinking (CET) was not significant since it was eliminated in the process of hierarchical regression.

Therefore, since the Critical Existence Thinking (CET) was eliminated in the process of hierarchical regression, the null hypothesis will be rejected and the study accepts the alternate hy-

pothesis by concluding that Critical existential thinking does not foster motivation of higher education students in India.

#### Effect of Personal Meaning Production on Motivation of Higher Education Students

The hypothesis on whether Personal Meaning Production fosters motivation of higher education students in India will be tested using hierarchical regression. The following hypothesis was tested.

$H_0$ : Personal Meaning Production fosters motivation of higher education students in India

$H_1$ : Personal Meaning Production does not foster motivation of higher education students in India

The Personal Meaning Production (PMP) was found to be significantly and strongly correlated with overall motivation ( $r=0.697$ ,  $p=0.000$ ) (in Table 9). The hierarchical regression test also shows that among the five Personal Meaning Production (PMP) factors tested, two of the Personal Meaning Production factors together with

**Table 8: Hierarchical regressions results**

<i>Model</i>		<i>Unstandardized coefficients</i>		<i>Standardized coefficients</i> <i>Beta</i>	<i>t</i>	<i>Sig.</i>
		<i>B</i>	<i>Std. error</i>			
1	(Constant)	2.236	.062		35.846	.000
	CET2	.278	.021	.507	13.416	.000

**Table 9: Hierarchical regressions results**

Model		Unstandardized coefficients		Standardized coefficients Beta	t	Sig.
		B	Std. error			
1	(Constant)	1.046	.047		22.297	.000
	PMP1	.250	.010	.523	25.011	.000
	PMP3	-.062	.007	-.222	-9.580	.000
	PMP	.481	.018	.650	26.764	.000

the overall Personal Meaning Production were found to be significant. The two Personal Meaning Production factors are PMP1 which was seeking to test whether the student is able to find the meaning and purpose of life in helping to adapt stressful situations ( $t=25.864$ ,  $p=0.000$ ) and PMP3 which was seeking to test whether the student experience a failure, he or she is still able to find meaning in it ( $t=33.341$ ,  $p=0.000$ ) were found to be significant. The overall Personal Meaning Production (PMP) was also found to be significant since it was retained in the process of hierarchical regression ( $t=6.091$ ,  $p=0.000$ ).

Therefore, since the overall Personal Meaning Production (PMP) was not eliminated in the process of hierarchical regression, the null hypothesis will be accepted and the study concludes that overall Personal Meaning Production (PMP) will foster motivation of higher education students in India

#### Effect of Transcended Awareness on Motivation of Higher Education Students in India

The hypothesis on whether Transcended awareness fosters motivation of higher education students in India will be tested using hierarchical regression. The following hypothesis was tested.

$H_o$ : Transcended awareness fosters motivation of higher education students in India

$H_1$ : Transcended awareness does not fosters motivation of higher education students in India

The Transcended Awareness (TA) was found to be weakly correlated with overall motivation ( $r=0.379$ ,  $p=0.000$ ). However, the hierarchical regression test show that among the seven Transcended Awareness (TA) factors tested, two of the Transcended Awareness factors together with the overall transcended awareness were found to be significant. The two Transcended Awareness factors are TA4 which was seeking to test whether the student is able to define himself or herself by deeper non-physical self ( $t=25.864$ ,  $p=0.000$ ) and TA6 which was seeking to test whether the student is able to recognize qualities in people which are more meaningful than their body, personality or emotions ( $t=33.341$ ,  $p=0.000$ ) were found to be significant. The overall Transcended Awareness (TA) was also found to be significant since it was retained in the process of hierarchical regression ( $t=6.091$ ,  $p=0.000$ ). The results are showed in Table 10.

Therefore, since the overall Transcended Awareness (TA) was not eliminated in the process of hierarchical regression, the null hypothesis will be accepted and the study concludes that overall Transcended Awareness (TA) will foster motivation of higher education students in India

#### Effect of Conscious State Expansion on Motivation of Higher Education Students in India

The hypothesis on whether Conscious State Expansion (CSE) fosters motivation of higher education students in India will be tested using

**Table 10: Hierarchical regressions results**

Model		Unstandardized coefficients		Standardized coefficients Beta	t	Sig.
		B	Std. error			
1	(Constant)	1.046	.047		22.297	.000
	TA4	.280	.011	.511	25.864	.000
	TA6	.330	.010	.689	33.341	.000
	TA	.059	.010	.126	6.091	.000

hierarchical regression. The following hypothesis was tested.

$H_0$ : Conscious State Expansion fosters motivation of higher education students in India

$H_1$ : Conscious State Expansion does not foster motivation of higher education students in India

The Conscious State Expansion (CSE) was found to be strongly correlated with overall motivation ( $r=0.688$ ,  $p=0.000$ ) which is given in Table 11. However, the hierarchical regression test show that among the five Conscious State Expansion (CSE) factors tested, one of the factors together with the overall Conscious State Expansion was found to be significant. The two Conscious State Expansion factor was CSE3 which was seeking to test whether the student is able to define himself or herself by deeper non-physical self ( $t=27.455$ ,  $p=0.000$ ). The overall Conscious State Expansion (CSE) was also found to be significant since it was retained in the process of hierarchical regression ( $t=25.721$ ,  $p=0.000$ ).

Therefore, since the overall Conscious State Expansion (CSE) was not eliminated in the process of hierarchical regression, the null hypothesis will be accepted and the study concludes that overall Conscious State Expansion will fos-

ter motivation of higher education students in India

### The Effect of Gender on the Relationship between Motivation and Spiritual Intelligence

The hypothesis on whether the relationship between motivation and spiritual intelligence among Higher Education Students in India is moderated by gender of the students will be tested using ANOVA test. The following hypothesis was tested.

$H_0$ : The relationship between motivation and spiritual intelligence among Higher Education Students in India is moderated by gender of the students

$H_1$ : The relationship between motivation and spiritual intelligence among Higher Education Students in India is not moderated by gender of the students

The results in Table 12 show that the relationship between motivation and spiritual intelligence among Higher Education Students in India is significantly moderated by gender of the students only in Critical Existence Thinking (CET) component of spiritual intelligence ( $F=3.858$ ,  $p=0.050$ ). The other components of spiritual intelligence are not significantly moderated by gender since their p-values are more than 0.05.

**Table 11: Hierarchical regressions results**

Model		Unstandardized coefficients		Standardized coefficients Beta	t	Sig.
		B	Std. error			
I	(Constant)	1.149	.045		25.361	.000
	CSE3	.276	.010	.577	27.455	.000
	CSEA	.359	.014	.541	25.721	.000

**Table 12: ANOVA results**

ANOVA tests		Sum of squares	df	Mean square	F	Sig.
CET	Between groups	1.692	1	1.692	3.858	.050
	Within groups	228.459	521	.439		
	Total	230.151	522			
TA	Between groups	2.753	1	2.753	1.700	.193
	Within groups	843.851	521	1.620		
	Total	846.605	522			
PMP	Between groups	.887	1	.887	1.369	.243
	Within groups	337.702	521	.648		
	Total	338.589	522			
CSE	Between groups	.317	1	.317	.392	.532
	Within groups	421.802	521	.810		
	Total	422.119	522			

Therefore, since three out of four spiritual intelligence constructs were not significantly moderated by gender of the students, the null hypothesis will be rejected and the study concludes that the relationship between motivation and spiritual intelligence among Higher Education Students in India is not moderated by gender of the students.

The findings of the test of hypothesis can be presented as follows:

1. Personal Meaning Production (PMP) fosters motivation of higher education students in India
2. Critical existential thinking does not foster motivation of higher education students in India.
3. Transcended Awareness (TA) fosters motivation of higher education students in India
4. Conscious State Expansion will foster motivation of higher education students in India
5. Motivation and Spiritual Intelligence are positively correlated with each other
6. Gender does not moderate the relationship between motivation and spiritual intelligence.

### DISCUSSION

Motivation is an important factor determining the academic success of students. Learning is an integral part of the corporate training strategy. Spiritual Intelligence also has been in the recent times identified to have created a great impact on the learning process of the students. The results of the study reveal that Motivation and Spiritual Intelligence have a positive correlation between each other. Out of the four constructs of Spiritual Intelligence, Critical existential thinking alone does not foster motivation of higher education students in India. Further it also reveals that the relationship between motivation and spiritual intelligence among Higher Education Students in India is not moderated by gender of the students. A recent research done by Madhumathi and Suparna (2017) with respect to school students of Telengana district revealed that girl students exhibited greater spiritual intelligence when compared with that of the boys. However the study done by Choudhary and Rupa (2017) with respect to higher education

context showed that spiritual intelligence levels have no significance with respect to the gender of the students. Similarly research works done by Joshi (2014) and Khadivi et al. (2012) also reveal the same result. The findings of researchers' research having examined the moderating relationship that gender created on the relationship between spiritual intelligence and motivation with respect to the higher education context falls in line with that of the findings of Choudary and Rupa (2017) and other similar researchers. Thus it can be inferred that the students who have higher spiritual intelligence exhibit higher level of motivation towards learning irrespective of their gender. Considering the theoretical implications of this research, it has opened up new dimensions for future researchers to explore more in the academic arena of Spiritual Intelligence and Motivation. Considering the practical implications of the study, this research brings into light to what extent the students especially belonging to the collegiate level possess spiritual intelligence and to what extent it motivates them towards focusing in academics. By doing this educational institutions would be able to design their curriculum such that the motivational levels and interest among students towards academics is increased thereby enabling them to perform better in academics.

### CONCLUSION

India being one of the nations renowned for its spirituality, it is reflected in almost every phase of life of Indian individuals. This study reveals that spiritual intelligence fosters or motivates the students towards performing better in academics. This study makes it clear that there exists a relationship between spiritual intelligence and motivation of students belonging to higher educational institutions in India. The relationship remains unaffected irrespective of the gender of the students.

### RECOMMENDATIONS

This research, like any other research is not free from limitations. This study has been done taking into consideration exclusively the educational institutions in India and the respondents who participated in the survey were all student at higher education or collegiate level. The study therefore could be extended for other level of

education such as schools, and also other industries such as software organizations, manufacturing organizations etc. that are spread across the nation. In the future this study could also be repeated in educational institutions outside India and the consistency of the results could be compared with that of the present findings. This research could even be extended by adding many more moderators other than gender and their impacts in modifying the relationship between spiritual intelligence and motivation could be measured by the researchers of the future.

### REFERENCES

- Choudhary BKS, Rupa J 2017. A study of spiritual intelligence of higher education students of Haridwar district. *Kaav International Journal of Arts, Humanities and Social Sciences*, 4(3): 331-335.
- Devi RK, Rajesh NV, Devi MA 2017. Study of spiritual intelligence and adjustment among arts and science college students. *Journal of Religion and Health*, 56(3): 828-838.
- Edward CA 2003. Response to the spiritual intelligence debate: Are some conceptual distinctions needed here? *The International Journal for the Psychology of Religion*, 13(1): 49-52.
- Emmons AR 2000. Spirituality and intelligence: Problems and prospects. *The International Journal for the Psychology of Religion*, 10(1): 57-64.
- Evans P 2015. Self-determination theory: An approach to motivation in music education. *Musicae Scientiae*, 19(1): 65-83.
- Gagné M, Deci EL 2005. Self-determination theory and work motivation. *Journal of Organizational Behaviour*, 26: 331-362.
- George D, Mallery P 2003. *SPSS for Windows Step By Step: A Simple Guide and Reference 11.0 Update*. 4<sup>th</sup> Edition. Boston: Allyn & Bacon.
- Hair JF, Black WC, Babin BJ, Anderson RE 2010. *Multivariate Data Analysis*. 7<sup>th</sup> Edition. Upper Saddle River, New Jersey: Prentice Hall.
- Hildebrant LS 2011. *Spiritual Intelligence: Is it Related to a Leader's Level of Ethical Development?* Doctoral Dissertation. Minneapolis: Capella University.
- Joshi A 2014. *Study of Spiritual Intelligence and Emotional Intelligence Related Abilities of Teacher Trainees in Relation to Their Gender and Some Socio Educational Factors*. Doctoral Thesis. Nainital: Department of Education, Kumaun University.
- Khadivi A, Yusef A, Farnaz F 2012. Relationship between spiritual intelligence and self-esteem with students' educational improvement. *European Journal of Experimental Biology*, 2(6): 2408-2414.
- King DB 2008. *Rethinking Claims of Spiritual Intelligence: A Definition, Model, and Measure*. Master Thesis, Unpublished. Ontario, Canada: Trent University Peterborough.
- King DB, DeCicco TL 2009. A viable model and self-report measure of spiritual intelligence. *International Journal of Transpersonal Studies*, 28(1): 68-85.
- Leal EA, Miranda GJ, Carmo CRS 2012. Self-determination theory: An analysis of student motivation in an accounting degree program. *Revista Contabilidade and Finanças*, 24(62): 162-173.
- Liu WC, Wang CKJ, Kee YH, Koh C, Lim BSC, Chua L 2014. College students' motivation and learning strategies profiles and academic achievement: A self-determination theory approach. *Educational Psychology*, 34(3): 338-353.
- Madhumathi C, Suparna D 2017. Spiritual intelligence among secondary school students with respect to gender and management. *International Journal of Indian Psychology*, 4(4): 78-84.
- Mahasneh M, Shammout NA, Alkhazaleh ZM, Al-Aliwan AF, Abu-Eita JD 2015. The relationship between spiritual intelligence and personality traits among Jordanian university students. *Psychology Research and Behavior Management*, 8: 89-97.
- Official Home Page of CareerIndia 2016. Top 10 Cities for the Best Education in India. From <<https://www.careerindia.com/top-10-cities-the-best-education-india-011836.html>> (Retrieved on 15 October 2017).
- Ryan RM, Deci EL 2000. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55: 68-78.
- Sahebalzamani M, Farahani H, Abasi R, Talebi M 2013. The relationship between spiritual intelligence with psychological well-being and purpose in life of nurses. *Iranian Journal of Nursing and Midwifery Research*, 18(1): 38-41.
- Saunders M, Lewis P, Thornhill A 2007. *Research Methods for Business Students*. New York: Prentice Hall Financial Times.
- Sinatra GM 2005. The "warming trend" in conceptual change research: The legacy of Paul R. Pintrich. *Educational Psychologist*, 40(2): 107-115.
- Trenshaw KF, Revelo RA, Earl KA, Herman GL 2016. Using self-determination theory principles to promote engineering students' intrinsic motivation to learn. *International Journal of Engineering Education*, 32(3): 1194-1207.
- Vaughan F 2010. Identity, maturity and freedom: Transpersonal and existential perspectives. *Journal of Transpersonal Research*, 2: 2-9.
- Wigglesworth C 2002. *Spiritual Intelligence and Why It Matters*. Bellaire, TX: Conscious Pursuit Inc.
- Zohar D, Marshall I 2000. *SQ - Spiritual Intelligence: The Ultimate Intelligence*. NY: Bloomberg.

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