ORIGINAL RESEARCH PAPER
Volume - 15 | Issue - 09 | September - 2026 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A STUDY OF RELIGION/ SPIRITUALITY AND ITS INFLUENCE ON QUALITY OF LIFE AMONG MEDICAL STUDENTS.

Psychiatry

Dr Nayana S.Naik* Associate Professor in Psychiatry. Institute of Psychiatry and human behavior, Opposite Flower Cross, Bambolim Goa*Corresponding author

Dr. Mary D'Souza Professor in Psychiatry. Institute of Psychiatry and human behavior, Opposite Flower Cross, Bambolim Goa

Dr. Chinmay Sanjay Naik Third year MD postgraduate in Pharmacology. Goa Medical College Bambolim Goa.

ABSTRACT

Background: Higher education is perceived as stressful period in student's life, as they have to adjust with various stresses of life. Research in the university population concerning religiosity /spirituality and its association with quality of life is evolving and it has been found to have positive correlation with quality of life. This study aims at contributing to the evolving research in this area. **Objective:** The objective of this study was to establish level of spirituality/religiosity, perceived quality of life and its correlation with spirituality/ religiosity in medical students. **Study design and setting:** Descriptive, cross sectional, co relational design was used. **Methods:** Study included convenience sample of undergraduate MBBS students of 5th semester during their Psychiatry clinical posting at tertiary care Psychiatry hospital. 147 participants completed scales on socio demography, religiosity /spirituality and quality of life.**Statistical analysis:** Data was analyzed using SPSS V.22. Cronbach's α co-efficient was applied to examine the internal consistency of WHO-BREF QOL and scales of religiosity/spirituality. Spearman's correlation coefficient was used to determine the level of agreement between different domains of the WHO QOL-BREF and religiosity/spirituality scales. Paired T test was used to compare difference between score means of different domains. **Results:** This study shows good internal consistency with Cronbach's α=.792 for WHO-QOL BREF and α=.722 for scales of Religiosity/spirituality. The highest and lowest mean score of WHOQOL domain was found for environmental health domain (Mean=14.53± 2.52) and Psychological health domain (Mean =13.72 ±2.23) respectively. Scores on religiosity/ spirituality scales were of moderate level. **Conclusion:** Findings from this study indicate that sampled medical students have moderate level of R/S and moderate to high level of perceived quality of life. There is a positive correlation between R/S and QOL among sampled medical students.

KEYWORDS

religiosity, Spirituality, Quality of life, Medical students.

INTRODUCTION

College life is a period of self-exploration and transition. Various factors play an important role in shaping the personality and quality of life throughout this experience. Religiosity and Spirituality (R/S) play very important role. Many university students are actively seeking and engaging in spiritual quest to find meaning in life. University students have high expectations that their college experience will play a vital role in emotional and spiritual development (1). Additionally student Value College experience because they are seeking self-understanding and deeper personal values and encouragement to express their spirituality (1).

Higher education is perceived as a stressful period in student's life, as they have to cope up with various stresses. Young medical students are no exception to these. Various studies reveal that suicide and depression have been found to be higher in medical students than other undergraduate students.

Defining religion is an ordinarily difficult task complicated with wide range of religion in the world, their complex histories and cultural meaning. Religiosity can be defined as a practice of being religious, which includes activities such as attending religious services, praying and finding value in religious beliefs(2).

Mattis suggested three distinct differences between religiosity and spirituality. First religiosity is defined as organized worship whereas spirituality is defined as personal values. Second religion is associated with a path or journey and spirituality as an effect. Finally religion is closely linked to worship experience; spirituality is closely associated with relationship (3).

There are various definitions given in the literature but definition given by Koening has been widely accepted in health research. According to koening HG "religion is an organized system of belief, practice, rituals and symbols deigned to facilitate closeness to the sacred or transcendent (God), higher power or ultimate truth or reality " whereas "spirituality is a personal quest for understanding answers to the ultimate questions about life about meaning and about relationship with the sacred or transcendent which may (or may not)lead to or arise from the development of religious ritual and the formation of community(4).

For the purpose of this research paper the authors will be using this term interchangeably that is Religion /spirituality(R/S).

Quality of life defined by world health organization (WHO) as an "individuals perception of their position in life in the context of the culture and value system in which they live and in relation to their goals; expectations, standards and concern (5).

Relationship between Religiosity, spirituality and QOL is a topic of interest among many researchers. There are studies which have found positive as well as negative relationship between R/S and QOL.

It has been demonstrated repeatedly that religion positively affects quality of life in many cases with chronic illness as well as terminal illnesses cope with their disease progression. Religion and spirituality may be useful in improvement of mental health in college students. Many studies have stated that religiosity can moderate the adverse effect of stress and help in individual reduce the impact of life stressors

Health problems in college population is vast and can diminish QOL .There is a need to explore the level of R/S and its association with QOL or its influence. As the R/S is poorly understood topic and QOL research that has been performed is limited in healthy adults there is a need for deeper understanding as how R/S relates to QOL; however there are very few studies address this connection with people without immediate threat to life like young adolescents. The purpose of this study is to establish the relationship between religion/spirituality and quality of life in Healthy college age students. This study may add to the existing, literature.

MATERIAL AND METHODOLOGY:

This study was approved by Institutional Ethic committee. Permission taken from Fetzer institute to use the domains on religiosity and spirituality. Permission was also taken from WHO to use QOL-BREF scale. Informed written consent was taken from the participants for this study.

Research questions

1: what are the levels of religiosity /spirituality among sampled students?
2: what is the perceived/subjective quality of life among sampled students?
3: what is the relationship between religiosity /spirituality and

quality of life among sampled students?

Research/study design:
A descriptive, cross sectional and co relational design was used for this study

Sample selection and data collection method: This study included convenience sample of 5th semester undergraduate MBBS students, aged 18-25years. Data was collected from students attending Psychiatry clinical posting. Participants completed traditional pen paper survey instrument.

This instrument comprised of three sections.
1: Total of four subscales of Multidimensional measurement of Religiousness/spirituality (MMRS) for R/S, intended to measure participant's level of R/S.
2: WHOQOL –BREF, 26 items questionnaire on a Likert scale which intended to measure participant's perceived quality of life.
3: Asses socio-demographic profile of sample including age, sex race ethnicity, religion etc.

Instrumentation
A publication of Fetzer Institute/National institute report on aging working group named "Multidimensional measurement of Religiousness/spirituality (MMRS) for use in health 1999 (6).

The publication was developed as a resource that provides as extensive listing of questions relevant to R/S as it relates to health outcomes. It is organized by various domains. Each section identifies domain describes its relationship to health, recommends measures, discusses previous psychometric work, recommends uses and discusses key questions and concerns. There are 12 such domains included in these documents and are intended for use in studies that evaluates the relationship between R/S and health. The working group identified twelve key domains, which were chosen because of its strength and empirical connection to their health outcomes.

For the purpose of this study the authors have taken four domain of R/S to look merely at the direct effect of this domain on health i.e. quality of life. The four domains which are been used for this study are:
1: Daily spiritual experiences (DSES)
2: Meaning
3: Belief
4: Forgiveness.

Scales description
1: DSES
It is an instrument developed to provide researcher with a self-report measures of spiritual experiences as an important aspect of how R/S is expressed for daily life for many people. It is a sixteen item scale which includes construct like Awe, gratitude, mercy, sense of connection with transcendent, compassionate love, and desire to be close to God. It also includes measure of awareness of discernment /inspiration and transcendent sense of self.

The measures were originally developed for the use in health studies but have been increasingly used more widely in social sciences. This domain identifies 9 key dimensions.

1:Connection with the transcendent,2: sense of support from the transcendent,3:sense of wholeness, internal integration,4: Transcendental sense of self 5:sense of Awe, 6:sense of gratitude, 7: sense of compassion 8: sense of mercy 9: longing for the transcendent.

This instrument has been incorporated into 3 stage studies of Physical outcomes. Reliability and exploratory factor analysis from different sample support the use of the instrument to measure the daily spiritual experiences.

The scale is highly internally consistent with α ranging from .91 to .95 across the samples.

According to author this instrument measures subjective experiences that form an integral part of daily life for many ordinary people. The goal of this instrument was to obtain a measure of spiritual life as it plays out in the experiential details of daily life. The experiences tapped by this instrument are feelings and sensations rather than cognitive awareness of specific beliefs.

- It is 6 points likert scale ranging from "many times a day to "never almost never"
- Item number 16 is worded in reverse direction and was scored reversely. The overall scale from DSES is computed by summing the responses to all 15 items and separately scoring the item 16.
- It ranges from 1 to 6 with higher score representing fewer daily spiritual experiences.

Direction for scoring:
The original items were developed to have the same scale direction as the entire multidimensional measure. Thus the original scores were the reversed scores with higher number indicating less spiritual experiences.

2: Meaning:
From functional tradition of religious definition the search for meaning could be (has been) defined as inherently religious by Pargament. Anyone who searches for answers to question of meaning from this point of view would be defined as religious regardless of the nature of that search.

The illustrative items like "The events in my life unfold according to divine plan' "without god my life will be meaningless" "my spirituality gives me meaning to my life's joy and sorrows" are better indicators of the attainments of religious/spiritual meaning.

This is 20 item likert scales. 1- Strongly disagree 2: disagree 3: Neutral 4: Agree somewhat 5: Agree 6: strongly agree. Constructing meaning from life's event is an essentially human endeavor. Less clear is the means for measuring persons search for meaning (the process) and the success or failure of that search (outcome) although many items pertaining to meaning are present in a variety of scales none could be called definitive.

3: Belief
The central features of religiousness are the cognitive dimension of belief; members of the religious groups are identified as "Believers". However, members of the same religious group vary in strength of their belief and may also disagree what their belief should be. Belief can be central to health and healing as well.

This scale has both long form and short form. The first two items are included in short forms. Little psychometric work exists for the 2 items on the short form although they exhibit strong face validity.

For this study we taken long form which consists of 7 items, self-administered which can be completed in 1.5 minutes.

- First item is taken from Yale health and aging project. Consists of three point likert scale 1-None,
- 2-a little, 3-agreat deal
- Item no. 2 is scored as 1-yes, 2-no, 3- undecided. Rest of the five items are scored on a likert scale 1-agree strongly, 2-agree somewhat, 3-can't decide, 4-disagree somewhat, 5 –disagree strong

4: Forgiveness
This domain includes 5 dimensions of forgiveness: confession, feeling forgiven by God, feeling forgiven by others, forgiving others and forgiving oneself.

Forgiveness is overcoming negative affect and judgment toward the offender, not by denying ourselves the right to such affect and judgment, but by endeavoring to view the offender with compassion, benevolence and love while recognizing that he or she has abandoned the right to them.

There are 10 items scored on 4 point likert scale. Items are negatively scored i.e. higher score on the scale denotes less level of forgiveness and lower score denotes higher level of forgiveness.
1=always or almost always, 2=often, 3=seldom, 4=never.

5: WHO QOL- BREF:
It is an abbreviated version of whoqol-100, which is the product of international collaboration .It, is composed of 26 items. Divided into 4 domains. Physical. Psychological, Social relationship and Environmental.

There are two items examined separately. Q1. Ask about an individual

overall perception of quality of life and Q2: ask about individual overall perception of their health. The score of four domain denotes an individual's perception of quality of life in each particular domain.

Domains scores are scaled in positive direction i.e. higher scores denote higher quality of life.

WHO- BREF contain 5 likert style response scales "very poor to very good" (evaluation scale "very dissatisfied to very satisfied" (evaluation scale)"none to extremely' (intensity scale) "none to complete (capacity scale) and "Never to always" (frequency scale).

Each domain is made up of question for which the score may vary between 1-5. The mean score in each domain indicates the individual's perception of their satisfaction with each aspect of their life, relating it with quality of life. The higher the score, the better this is perceived to be.

The 4 domains: Physical health with 7 items(DOM1),Psychological 6 items (DOM2),social relationship with 3 items(DOM3),and environmental health with 8 items(DOM4).

Raw domain score for the WHOQOL-BREF were transformed to a 4-20 score according to guidelines (6). Item no. 3, 4 and 26 are negatively phrased items and they were reverse coded to transform negatively framed questions to positively framed questions during data analysis.

Data analysis

- Information collected was organized with SPSS -22 versions.
- Descriptive analysis performed including frequencies, percentages, ranges, means and standard deviations.
- Spearman's correlation coefficient was used to determine the level of agreement between the four domains of spirituality and QOL.
- To investigate the association between the participant's characteristics (sociodemography) and their QOL, and spirituality, t-independent test was used.
- For statistical analysis of WHOQOl-BREF domains, transformed scores were used.
- In R/S domains DSES, Belief and forgiveness are negatively phrased items with higher scoring denotes lesser R/S experiences.
- The level of significance was set at $p<0.05$.
- Cronbach's α for QOL scale was .791 and for R/S scales was .723, which shows acceptable internal consistency as cronbach's α coefficient value of >.7 was considered as desirable reliability estimates (7).

RESULTS:

The purpose of this study was to

(1) Assess the level of religiosity/spirituality among sampled medical students
(2) To study the level of quality of life among sampled students
(3) To find association between the two.

A total of 150 survey questionnaire were collected from the participants and 147 surveys were included in the data analysis. The remainder survey (n=3) were discarded due to incomplete /missing data.

1: Demography of the sample

The sample of 147 adult consisted exclusively of university medical students aged 18-25 yrs of age who were enrolled for MBBS course of Goa University.

- The sample was predominantly female (n=93, 61.5%). All were single. Majority belonged to Hindu religion
- Please refer to Table 1 for additional demographic data.

Table 1 Demographic Variables of the participants (N=147)

Sociodemographic.		N (%)
age 18-25		147(100)
Gender	Male	54(36.70
	female	93(63.3)
Marital status	single	147(100.0)
	Married	0(0.0)
Religion	Hindu	112(76.2)
	Christian	30(20.4)
	Sikh	2(1.4)
	Muslim	2(1.4)
	Buddhist	1(0.7)
Primary Language	Konkani	87(59.2)
	Marathi	10(6.8)
	Hindi	18(12.2)
	English	16(10.9)
	Kannada	7(4.8)
	others	9(6.1)
Residence	Urban	96(65.3)
	Rural	51(34.7)
Parental income	up to one lakh	34(23.1)
	1--5 lakh	94(63.9)
	more than 5 lakhs	19(12.9)
Education :	5th semester MBBS	

To investigate the association between participant characteristics and their religious/Spirituality and Quality of life t-independent test was used. The results are as follows:

MMRS subscales and sociodemography

- Females scored higher than males on subscale of DSES, Meaning and Belief with s significance level of $P<0.05$.however there was no difference on the subscale of forgiveness.
- Catholic religion participants scored higher than Hindu religion participants on the scale of DSES, Belief and Meaning; however score on forgiveness scale was identical.
- Residence did not score significantly on MMRS subscales. Higher parental income was positively associated with forgiveness with significance level of $P<0.05$

QOL and sociodemography

The mean score for quality of life (Qn.no.1) was significantly higher in females than males with mean of 3.96±.80 and 3.62±.875 respectively however there was no difference in scores on satisfaction of life item (question no. 2).

In Physical domain (DOM1) males scored slightly higher but were not statistically significant however the scores were identical in Psychological domain (DOM2). Females scored higher than males with mean of 14.92±2.56 and 13.70±3.24 respectively in social relationship (DOM 3) with significance level of $P< 0.05$.

Scoring in Environment domain (DOM 4) was not statistically significant among the genders. Parental income was positively correlated with domains 2, 3, and 4 of QOL with statistical significance of $p< 0.05$.

No statistical significance could be seen as regards to religion in all four domains of QOL.

Assessment of research question:

- 1: What is the level of R/S in the participants?
- Total of four subscales of MMRS were used to assess the level of spirituality/religiosity among the sampled students.

Examination of the DSES scale revealed that 25.9% of the participant reported God's presence every day.36.6% found comfort in my R/S every day. The mean of all the item was 3.03 with standard deviation of 0.899 indicating moderate spiritual experience. For detail refer to table 2.

Table 2. Daily spiritual experiences

	Many times a day	Every day	Most days	Some days	Once a while	never or almost never	Mean	Standard deviation
1.God's presence	18(12.2)	35(25.9)	21(15.0)	20(13.6)	33(22.4)	16(10.90)	3.38	1.6
2. connect all	17(11.6)	25(19.7)	26(17.7)	34(23.1)	22(15.0)	19(12.9)	3.5	1.58
3.joy lifts	22(15.00)	33(22.4)	27(18.4)	34((23.1)	22(15.0)	9(6.1)	3.21	1.47
4.strength in R/S	21(14.3)	42(28.6)	33(22.4)	31(21.1)	9(6.1)	8(5.4)	3.006	1.4
5.comfort in R/S	29(19.7)	53(36.1)	24(16.3)	24(16.3)	9(6.1)	8(5.4)	2.64	1.38
6.Deep inner peace	27(18.4)	28(19.0)	34(23.1)	34(23.1)	16(10.9)	8(5.4)	3.05	1.43
7.Ask God's help	29(19.7)	29(19.7)	39(26.5)	24(17.0)	17(11.6)	8(5.4)	2.95	1.47
8Guided by God	28(19.0)	29(19.7)	29(19.7)	31(21.1)	19(10.2)	15(10.2)	3.13	1.58

9.feel love directly	25(17.0)	32(21.8)	31(21.1)	23(15.6)	24(16.3)	12(8.2)	3.16	1.56
10. Feel love others	23(15.6)	25(17.0)	30(20.4)	37(25.2)	11(7.5)	21(14.3)	3.35	1.54
11.spi.touched by beauty	22(15.00)	32(21.8)	28(19.00)	36(24.5)	18(12.2)	11(7.5)	3.25	1.5
12.thankful for blessing	30(20.4)	46(31.3)	28(19.00)	24(16.3)	13(8.8)	6(4.1)	2.7	1.38
13.selfless caring	19(12.90	28(19.0)	46(31.6)	34(23.1)	14(9.5)	6(4.1)	3.06	1.25
14.accepth others	16(10.9)	22(15.0)	42(28.6)	41(27.9)	18(12.2)	6(4.1)	3.41	1.32
15.desire divine	14(10.2)	76(51.2)	32(21.8)	32(21.8)	24(16.3)	8(5.4)	2.27	0.883
	Not at all close	somewhat close	very close	as close as possible				
16.how close do you								
feel close to God	16(10.9)	79(53.7)	38(25.9)	10(6.8)			2.07	0.757
Mean, questions 1 to 15=3.03								
standard,deviations questions 1 to 15 =0.899								

Examination of data from this scale of Meaning revealed that 32.7% agreed to the statement "my spiritual belief gives me meaning to my life's joy and sorrow"

, 82% strongly disagreed to the statement "the goal of my life grow out of understanding God "whereas 38.1% gave neutral response.

The mean of all items was 3.32 with a standard deviation of 0.813 indicating moderate to high level of meaning. For more details refer to table number 3.

Table 3.Meaning							
	strong dis	Disagree	Neutral	Agree	stro.agree	Mean	Std.devia.
1:spiritual belief gives meaning	11(7.5)	13(8.8)	56(38.1)	48(32.7)	19(12.9)	3.12	0.9
2:grow out of understanding of God	12(8.2)	21(14.3)	58(38.1)	47(32.0)	11(7.5)	3.23	1.1
3:Daily life would be meaningless	12(8.2)	17(11.6)	51(34.7)	50(34.0)	17(11.6)	3.53	1.07
4: meaning from feeling connected	6(4.1)	14(9.9)	39(26.9)	72(49.0)	16(10.9)	3.49	0.967
5: helps in painful and confusing events	10(6.8)	10(6.8)	49(33.3)	53(36.1)	25(17.0)	3.18	1.05
6:When loose touch with God	13(8.8)	23(15.6)	59(36.7)	43(29.3)	14(9.5)	3.27	1.1
7:sense of significance and purpose	15(10.20	15(10.2)	51(34.7)	52(35.4)	14(9.5)	3.37	1.05
8:mission guided by faith in God	13(8.8)	13(8.8)	56(36.1)	46(31.3)	19(12.9)	3.01	1.08
9:Disconnection lose sense of purpose	30(20.4)	30(20.4)	54(36.7)	35(23.8)	14(9.5)	3.52	1.07
10:Relationship with God helps find	10(6.8)	9(6.1)	47(32.0)	59(40.1)	22(15.0)	3.42	1.07
11:significant because of God's plan	10(6.8)	14(9.5)	56(38.10)	47(32.0)	20(13.6)	3.16	1.05
12: Importance from spiritual point	9(6.1)	22(15.0)	63(42.9)	40(27.2)	13(8.8)	3.23	1
13:Fulfiling god given purpose	9(6.10	17(11.6)	60(40.8)	46(31.3)	15(10.2)	3.77	1.02
14:Part of something greater than myself gives meaning	10(6.8)	10(6.8)	47(32.0)	58(39.5)	22(15.0)	3.4	1.33
15:spiritual perspective adds	5(3.4)	12(8.2)	68(48.2)	49(33.3)	13(8.8)	3.24	0.904
16: Purpose in life reflects	13(8.8)	12(8.2)	64(43.5)	44(29.9)	14(9.5)	3.07	0.96
17:without religious foundation	11(7.5)	25(17.0)	63(42.9)	34(23.1)	14(9.5)	3.28	0.94
18:spirituality adds meaning	11(7.5)	10(6.8)	61(41.5)	52(35.4)	14(9.5)	3.53	0.96
19:how I choose my		10(6.8)	48(32.7)	58(39.5)	20(13.6)	3.27	0.96
20:Spirituality defines Goals	9(6.1)	18(12.2)	63(42.9)	42(28.6)	15(10.2)	15(10.2)	1.07
Mean=3.32							
Standard deviation=0.813							

Belief

- For the statement "How much religion a source of strength and comfort to you". 42.9% responded as great deal and 46.5%responded as little.
- For the statement "do you believe there is life after death, 45.6% participants responded as undecided and 27.9% said yes.
- The mean was 1.78 and standard deviation of 0.9. The lower score denotes higher level of perception of belief.

Table 4.Belief							
	none	a little	great			Mean	Stand.dev.
How much religion source of strength	13(8.3)	68(46.3)	63(42.9)			2.38	0.67
	Yes	No	Undecided			Mean	Std.dev.
Do you believe life after death	41(27.9)	38(25.9)	67(45.6)			2.19	0.85
	Agree strongly	some what	can't decide	disagree somewha	disagree Strongly	Mean	Std.dev.
God's goodness and love	68(46.3)	51(34.7)	19(12.9)	4(2.7)	5(3.5)	1.82	0.99
world moved by love	78(53.1)	50(34.0)	13(8.8)	5(3.4)	1(0.7)	1.62	0.83
hope for future	68(46.3)	49(33.3)	18(12.2)	6(4.1)	6(4.1)	1.86	1.05
children to believe	58(39.5)	48(32.7)	29(19.7)	6(4.1)	5(3.4)	1.97	1.04
everything has purpose	79(53.7)	52(35.4)	10(6.8)	3(2.0)	3(2.0)	1.63	0.86
Mean question no 3 to 7 =1.78							
Std. deviation qn no. 3 to 7=0.9							

Forgiveness:

For the statement "it is easy for me to admit I am wrong"55.7% responded as Often, 27% responded to the statement "I believe that God has forgiven me for things I have done wrong" as never. Mean of all the items were 2.27 with SD 0.43 indicating moderate level of forgiveness. For details please refer to table no 5.

Table 5.Forgiveness						
	always/almost always	often	seldom	Never	Mean	std.dev.
1:admit that I am wrong	42(25.6)	79(55.7)	21(14.3)	4(2.7)	1.92	0.778
2:Things have done wrong	27(18.4)	67(45.0)	40(27.3)	15(8.8)	2.26	0.86
3:God has forgiven for wrongs	49(33.4)	62(42.2)	32(21.8)	4(2.7)	1.93	0.81

4:times God has punished	19(12.9)	54((36.7)	50(34.0)	16(10.9)	2.42	0.85
5:People say they forgive	32(26.2)	43(29.3)	52(35.4)	8(5.4)	2.26	0.886
6:will never make up for the	22(15.0)	58(39.5)	49(33.3)	33(22.4)	2.63	0.993
7:make up easily with friends	31(21.1)	44(29.9)	53(36.1)	4(2.7)	2.23	0.89
8:grudges held for long	19(12.9)	52(33.4)	52(35.1)	32(21.8)	2.65	0.961
9:Hard to forgive self.	25(17.0)	43(29.3)	49(33.3)	21(14.3)	2.44	0.937
10:failed to live right life.	21(14.3)	46(31.3)	46(31.3)	36(24.5)	2.68	1.02
Mean=2.27						
SD=0.43						

Quality of Life

- Another Objective of this study was to assess perceived quality of life among the participants using WHO-BREF
- Questionnaire. The mean score for Q1 and Q2 was 3.84± .84 and 3.54±.95 respectively showing moderate amount of satisfaction.
- The domain values for DOM 1= Mean 13.98±2.11, DOM2=13.72±2.21, DOM 3 Mean= 14.47±2.87 and
- DOM4 mean=14.53±2.52 were obtained. Refer to table 6 for details.

Table 6.Quality of life							
	very poor	poor	neither	good	very good	Mean	SD
1:rate your QOL	4 (2.7)	7 (4.8)	7(4.8)	20(13.6)	93 (63.3)	3.84	0.84
	very dissatisfied	Dissatisfied	neither	satisfied	v.satisfied	Mean	SD
2:satisfaction with health	7 (4.8)	15 (10.2)	29 (19.7)	83 (56.5)	13 (8.8)	3.5	0.95
	not at all	a little	mod.amt.	very much	an extre.	Mean	SD
3:physical pain prevents work	27(18.4)	44(29.9)	32(21.80	59(40.1)	2 (1.4)	2.64	8415
4 :need medical RX to function	55(37.4)	52(35.4)	27(18.4)	37(25.2)	14(9.5)	1.97	0.959
5:how much enjoy life	8(5.4)	15(10.2)	41(27.9)	59(40.1)	14 (9.5)	3.44	1.12
6:extent life to be meaningful	2(1.4)	8(5.4)	63(42.9)	74(50.3)	15 (10.2)	3.52	0.94
7:well able to concentrate	4(2.7)	18(2.2)	82(55.8)	68(46.3)	6 (4.1)	3.15	0.98
8:safe in daily life	5(3.4)	10(6.8)	62(42.2)	57(38.8)	10 (6.8)	3.38	0.8
9:healthy physical environment	5(3.4)	9(6.1)	47(32.0)	44(29.9)	75 (50.3)	3.53	0.79
10:enough money for everyday life	3(2.0)	11(7.5)	58(35.1)	55(37.4)	5 (4.1)	3.43	0.89
11:bodily appearance	4(2.7)	15(10.2)	47(32.0)	44(29.9)	23 (16.3)	3.52	0.86
12:enough money for need	6(4.1)	32(21.8)	59(36.7)	65(44.2)	10 (6.8)	3.82	0.84
13:information in day to day life	1(0.7)	12(8.2)	43(30.6)	64(43.5)	32 (21.8)	3.11	1.09
14:opportunity for leisure	6(4.1)	32(12.1)	54(36.7)	77(52.4)	10 (6.8)	3.46	0.97
15:able to get ground	2(1.4)	7(4.8)	63(42.9)	66(44.9)	9 (6.1)	3.44	1.7
16:satisfaction with sleep	4(2.7)	25(17.0)	37(25.2)	79(53.7)	17 (11.4)	3.45	1.1
17:satisfaction with daily living activity	3(2.0)	18(12.2)	42(28.6)	77(52.4)	7 (4.3)	3.29	0.78
18:satisfaction with work capacity	4(2.7)	21(14.3)	53(36.1)	66 (44.9)	3 (2.1)	3.56	0.99
19:satisfaction with self	1(0.7)	16 (10.9)	40 (27.2)	79 (53.9)	11(7.4)	3.59	0.84
20:satisfy with personal relationship	5(3.4)	6 (4.1)	46 (31.3)	77 (52.4)	13 (8.1)	3.29	0.83
21:satisfaction with sex life	0	0	0	0	0	0	0
22:satisfied with the support fro	4(2.7)	9 (6.1)	9 (6.1)	27 (18.4)	15 (10.2)	3.56	0.81
23;condition of living place	5(3.4)	4 (2.7)	20 (13.6)	82 (55.5)	27 (18.1)	3.59	0.84
24:satisfaction to access to health care	5(3.4)	5 (3.4)	17 (11.6)	90 (61.2	41 (21.9)	3.29	0.89
25: mode of transportation	7 (4.8)	22 (15.0)	32 (21.8)	78 (53.1)	29 (19.7)	3.64	0.92
	never	seldom	Quiteoften	very often	Always	Mean	SD
26:negative feeling	13 (8.8)	59 (40.1)	46(31.3)	21 (14.3)	4 (2.7)	3.96	0.91

In this study among the four domain of WHOQOL-BREF the highest satisfaction rating was found for domain 4 that is environmental Health; Mean 14.53±2.52 implying that good financial resources acquiring new information skills and leisure activities.

Lowest mean was seen in Psychological health DOM 2 mean 13.72±2.23 indicating poor psychological health. Most SD from mean SD=2.87 was observed in DOM3 might be associated with different interpretation of the question used in this domain and small number of questions.

QOL as a measure can identify groups with physical or mental health problems and provide guide to intervention and follow up evaluation (8)

Third research question: association between R/S and quality of life in the participants:

Significant inter-domain correlation was noted In R/S subscales. In QOL-BREF scales first two items and other four domains were positively correlated with each other. The domain of DSES showed statistically significant correlation with question no 1, r=.-211, p=.010, DOM3 r=.201, p=.015 and DOM4 with r=.-1658 p=.045 of WHO-QOL domains respectively.

Domain of meaning did not show any significant correlation with QOL domain.

Belief was statistically correlated with q no.1 r=.-295, p=.000 environmental health DOM4 with r=.-228, p=.006 of quality of life domains.

Forgiveness was correlated with q no.1 r=-.184 p=.026 qno.2 r=-.266, p=.001, DOM1 with r=-.274, p=.001 and DOM2 r=-.326 p=000 respectively. Higher the difficulty in forgiving means lower the level of quality of life.

No correlation was found in DOM3 and DOM 4.

Refer to table no.7 for more details.

Table 7. Correlations												
Spearman's rho			QOL	satisfact.	DOM1	DOM2	DOM3	DOM4	DSES	SPR	BELIEF	FORGIVE
Spearman's rho	QUALITY OF LIFE	Correlation Coefficient	1	.477**	.353**	.499**	.338**	.440**	-.211*	0.139	-.295**	0.083
		Sig. (2-tailed)	.	.000	0	0	0	0	0.01	0.094	0	0.319
		N	147	147	147	147	147	147	147	147	147	147
	How satisfied are you With life	Correlation Coefficient	.477**	1	.250**	.405**	.371**	.317**	-0.029	0.078	-0.021	.173*
		Sig. (2-tailed)	0	.	0.002	.000	.000	.000	0.723	0.35	0.803	0.036

		N	147	147	147	147	147	147	147	147	147	147
	DOM1 (Physical	Correlation Coefficient	.353**	.250**	1	.497**	.436**	.479**	-0.055	-0.08	-0.004	.237**
		Sig. (2-tailed)	.000	0.002	.000	.000	.000	.000	0.50	0.338	0.959	0.004
		N	147	147	147	147	147	147	147	147	147	147
	DOM2 (Psychological)	Correlation Coefficient	.499**	.405**	.497**	1	.521**	.477**	-0.113	0.045	-0.118	.230**
		Sig. (2-tailed)	.000	.000	.000	.	.000	.000	0.174	0.586	0.156	0.005
		N	147	147	147	147	147	147	147	147	147	147
	DOM3 (Social)	Correlation Coefficient	.338**	.371**	.436**	.521**	1	.519**	-.203*	0.069	-0.116	0.055
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000	0.014	0.407	0.161	0.508
		N	147	147	147	147	147	147	147	147	147	147
	DOM4 (Environmental)	Correlation Coefficient	.440**	.317**	.479**	.477**	.519**	1	-.168*	0.128	-.228**	0.069
		Sig. (2-tailed)	.000	.000	.000	.000	.000		0.042	0.123	0.006	0.407
		N	147	147	147	147	147	147	147	147	147	147
	DSE (daily spiritual experiences)	Correlation Coefficient	-.211*	-0.029	-0.055	-0.113	-.203*	-.168*	1	-.583**	.620**	.384**
		Sig. (2-tailed)	0.01	0.723	0.505	0.174	0.014	0.042	.000	.000	.000	.000
		N	147	147	147	147	147	147	147	147	147	147
	SPR (Meaning)	Correlation Coefficient	0.139	0.078	-0.08	0.045	0.069	0.128	-.583**	1	-.655**	-.230**
		Sig. (2-tailed)	0.094	0.35	0.338	0.586	0.407	0.123	.000	.000	.000	0.005
		N	147	147	147	147	147	147	147	147	147	147
	BEL(Belief)	Correlation Coefficient	-.295**	-0.021	-0.004	-0.118	-0.116	-.228**	.620**	-.655**	1	.245**
		Sig. (2-tailed)	0	0.803	0.959	0.156	0.161	0.006	0	0	.000	0.003
		N	147	147	147	147	147	147	147	147	147	147
	FORG(forgiveness)	Correlation Coefficient	0.083	.173*	.237**	.230**	0.055	0.069	.384**	-.230**	.245**	1
		Sig. (2-tailed)	0.319	0.036	0.004	0.005	0.508	0.407	.000	0.005	0.003	.
		N	147	147	147	147	147	147	147	147	147	147

**Correlation is significant at the 0.01 level (2 –tailed).
*Correlation is significant at the 0.05 level (2 –tailed).

DISCUSSION:

This survey included demographic items and scales assessing R/S and QOl. The demographic data revealed that female's outnumbered males in the study .various studies have shown that women are in majority in terms of entry to medical school worldwide, this has been termed as" Feminizing of Medicine".

The first Indian woman Physician Anandibai Joshi graduated in 1886.About 125 years later Indian women started to outnumber men in admission in medical colleges and trend continues to grow stronger by the year. In India women constituted 51% of the students joining medical colleges cornering 23522 seats in 2014-15 compared to 22934 men. This increase is keeping with the worldwide trend. In fact neighboring country like Pakistan and Bangladesh have much higher proportion of women in Medical colleges, 70% and 60%. Respectively (9).

In religious denomination Hindu participants were 66.08% followed by Christian 25.10 and Muslims 8.33%. Hindu has overall major representation in state of Goa (10).

In our study regarding the gender and QOL it was seen that female scored higher on quality of life item; social and environmental domain. A study found that women aged 57-60 yrs exhibited significantly greater QOL in physical, social and environmental domain than in man in the same age group but nearly identical quality of life in Psychological domain(11). Our study findings are consistent with this study except for age and Physical domain. However Present study is in contrast with Brazilian study where females had lower scores in most of the domains. Another study found that women had significantly lower QOL in the Psychological and social relationship domains possibly because women tended to be more depressed than men (12).

In our study we found that females scored higher on the subscales of DSES, belief and Meaning .On forgiveness there were identical scores.

A comparative study done on male and female hostellers explored that females are more spiritual than male and have better QOL and there was a positive correlation between spirituality and QOL.Another study by Bryant found that women are more spiritual than men (13).Women are generally more spiritually and religiously inclined than men, exhibiting higher levels of religious commitment, spiritual quest, charitable involvement, equanimity, and compassion. Hammermeisteret also found similar result (14).

On religious denomination, catholic participants, N=30 scored higher in the subscales of DSES, Belief, and Meaning, whereas scores on forgiveness were identical between Hindu and catholic. There was no statistical significance found on QOL scale.

The possible explanation to this observation could be that the DSES has three theistic items; items on meaning scale are also theistic in nature .Moreover the first item on scale of belief is from Psalm 23.

Theism is the belief in the existence of a God specifically. Catholic is a theistic religion which has the monotheistic belief in God, whereas polytheistic religions such as Hinduism hold a belief in many Gods. On the basis of religious practice catholic participants may have scored higher on these scales. However on the scale of forgiveness Hindu and Catholic participants have scored identically.The concept of forgiveness is central to Judeo-Christian tradition; it is also core belief of Christian faith celebrated in Easter the most important Christian holiday. Jews and Christian have concept of both divine and interpersonal forgiveness. Religion has impact on how someone chooses to forgive and the process they go through.

The theological basis for forgiveness in Hinduism is that a person who does not forgive carries a baggage of memories of the wrong of negative feelings of anger and unresolved emotions that affect their present as well as their future. The equal scoring on the scale of forgiveness may be explained by this. Parental income was positively correlated with all 4 domains of QOL scale. Various studies have correlated positive relationship with family income and social and environmental domain.

What is the level of R/S in the participants?

Data from all four subscale of R/S revealed that participants have moderate level of R/S, also data from the WHO-QOL BREF showed moderate to high level of perception of quality of life.

Highest mean satisfaction rating was found for DOM4 (environmental) mean of 14.53±2.52, indicating very good financial resources, opportunities for acquiring new information and skills and

leisure activities.

It was followed by DOM3 mean of 14.47±2.87. Greater SD was observed (social relationship) might be associated with different interpretation of questions used in this domain and also small number of questions (only three)

The score was lowest in Psychological domain with mean of 13.72±2.26; this could be because of stress and other poor psychological factors in medical students. College can be stressful periods and finding happiness and peace could be difficult. Various factors contribute to stresses. Many students look for ways to cope up with the stressors by indulging in risky behavior like substances intake. A study from Saudi Arabia found that medical and dental students experienced high levels of psychological distress, with alarming levels of depression, anxiety, and stress (15). Many studies have reported decreased QOL scores among medical students during their training years, which is associated with several future adverse effects, including an unhealthy lifestyle, variable psychological problems, academic failure, and other negative impacts on the students' professional development.

Although health professionals are trained on attending to these aspects during their studies, their own QOL might decline during their years in medical schools (16). One Chinese study revealed that the third-year medical students had the lowest overall QOL scores, and the authors attributed this to the stressful transitions from basic years to clinical years (17).Moreover, one Brazilian study reported that female students had lower scores in most of the domains (18).

The present study revealed poor psychological well-being and social relationships of medical students. Medical students may perceive devoting time to personal well-being as being less important than academic commitments. In addition, many medical schools do not provide effective social support and health care to students. The results of the present study are in general agreement with those of a prior study that also used the WHOQOL-BREF.

Third research question: association between R/S and quality of life in the participants:

Significant inter-domain correlation was noted In R/S subscales. In QOL-BREF scales first two items and other four domains were positively correlated with each other. The domain of DSES showed statistically significant correlation with question no 1, r=.-211, p=.010, DOM3 r=.201, p=.015 and DOM4 with r=.-1658 p=.045 of WHO-QOL domains respectively. Please refer to table 7 for details.

From the study it was revealed that the participants had moderate level of religiosity/spirituality and moderate to high level of QOL.

Most students showed moderate level of spirituality score. Additionally most students have a moderate sense of religious well-being and life satisfaction and purpose. College can be stressful periods and finding happiness and peace could be difficult. Various factors contribute to stresses. Many students look for ways to cope up with the stressors by indulging in risky behavior like substances intake and engaging in sexual encounters.

Based on the finding it may be concluded that participants have moderate level of spirituality and moderate to high level of quality of life and there is a strong correlation between two.

CONCLUSION:

The findings from this study confirm that the WHOQOL-BREF and MMRS scales are reliable instruments to measure quality of life, spirituality and religiosity. From the data it appears that participants have moderate Religiosity/Spirituality and moderate to high perception of quality of life.

The conclusion is that higher levels of spirituality and religiousness are positively associated with perceived QOL among healthy young adults with an emphasis on the psychological, environmental, and social relationships domains. Spirituality, understood as a broad concept on how individuals assign meanings to life in a multidimensional manner, creating inner values in the face of various situations of the human condition, regardless of a specific religious affiliation, appears as the most determinant factor in this positive relationship.

Whether it is linked to a religion or not, spirituality seems to be an interesting factor, even for those young individuals not facing significant morbid health. These constructs of spirituality like forgiveness, belief, meaning can benefit everyday life and may act as a buffer against various mental health issues like stress, depression, substance use etc.

The compromise of psychological well-being and social relationships can have implications that exceed a physician's personal well-being. Personal well-being makes it possible for individuals to have a true empathic attitude, which, in turn, is important to supporting patients. Patient care may be impaired by the poor performance of physicians with a low quality of life. Thus, physician's quality of life goes beyond an individual standpoint and involves a social standpoint as physicians are integral components of a good healthcare system. A system for optimal health should address the quality of life of its future physicians.

LIMITATIONS

1. This is cross sectional study so the findings reflect one point in time.
2. It is convenience sample, collected from one medical school and result might not be representative
3. A typical college aged 18-25yrs. Students doesn't have lot of past QOL to measure. And the scale measures QOL only in last 15 days.
4. all scales were subjective in nature.

Implication:

This study reveals poor psychological health among the participants and strong correlation between R/Sand QOL in healthy participants. University may consider setting up of counseling centers and to include religious based treatment option for students who are religious minded and open to such treatments methods during period of stress and depression and poor adjustments to the medical course. In addition it is possible for the college students to become involved in religious activities with the hope of improving their well-being.

Future direction: Assessing the quality of life of medical students allows for a better understanding of their general condition, and thus, can guide policy makers towards specific, context-sensitive, and appropriate interventions to promote students' QOL. This could prevent psychological, social, environmental problems threatening student's professional development, and ultimately improve the quality of care provided to future patients.

Acknowledgement: Nil
Conflict of Interest: Nil

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