

**RELATIONSHIP BETWEEN INTEROCEPTIVE
AWARENESS, SOCIAL WELL BEING, DEPRESSION,
NOMOPHOBIA AND SMARTPHONE ADDICTION AMONG
EMERGING ADULTS**

Dissertation submitted by

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Under the Guidance of

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**Master of Science in Yoga Therapy
[M.Sc. yoga therapy-MAY 2020]
(SVYASA/MSCYT/AUG18/14)**

TO
SWAMI VIVEKANANDA YOGA ANUSANDHANA SAMSTHANA
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CERTIFICATE

This is to certify that **LAKSHMI SURENDRAN** who has got MSc registration with start from August 01, 2018, by Swami **Vivekananda Yoga Anusandhana Samsthana, deemed to-be University**, has completed the required training in acquiring the relevant background knowledge in Yoga Therapy and has completed the M.Sc. course of 2 years to submit this research project entitled “**Relationship between interoceptive awareness, social well-being, depression, nomophobia and smartphone addiction among emerging adults**”.

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Place: Bengaluru

DECLARATION

I hereby declare that the subjected study was conducted by me at **Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA)**, Bengaluru, under the guidance of **Dr. Rajesh S.K**

I also declare that the subject matter of my dissertation entitled **“Relationship between interoceptive awareness, social well-being, depression, nomophobia and smartphone addiction among emerging adults”** has not previously formed the basis of the award of any degree, diploma, associate-ship, fellowship, or similar titles.

DATE:

Lakshmi Surendran

PLACE: Bengaluru

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An Enriching learning experience can be possible only with the complete support of the Institution, Teachers, Family, and friends.

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DATE:

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**STANDARD INTERNATIONAL TRANSLITERATION CODE USED TO
TRANSLITERATE SANSKRIT WORDS**

a	=	अ	ña	=	ढ	pa	=	प
ā	=	आ	ca	=	च	pha	=	फ
i	=	इ	cha	=	छ	ba	=	ब
ī	=	ई	ja	=	ज	bha	=	भ
u	=	उ	jha	=	झ	ma	=	म
ū	=	ऊ	ñ	=	ञ	ya	=	य
ṛ	=	ऋ	ṭa	=	ट	ra	=	र
ṝ	=	ॠ	ṭha	=	ठ	la	=	ल
E	=	ए	ḍa	=	ड	va	=	व
Ai	=	ऐ	ḍha	=	ढ	śa	=	श
O	=	ओ	ṇa	=	ण	ṣa	=	ष
Au	=	औ	ta	=	त	sa	=	स
Ā	=	अं	tha	=	थ	ha	=	ह
Ḥ	=	अः	da	=	द	kṣa	=	क्ष
Ka	=	क	dha	=	ध	tra	=	त्र
kha	=	ख	na	=	न	jña	=	ज्ञ
ga	=	ग						
gha	=	घ						

ABSTRACT

Background

Interoceptive awareness is the conscious perception of the internal sensation of the body. It is known to be one of the factors that can help in emotion regulation, expressivity, and so many other elements.

Methods and materials

The Sample size of 350 students of age group 18-25 has been collected. They were given a questionnaire composed of 5 questionnaires namely multidimensional assessment of interoceptive awareness scale, Tromso social intelligence scale, patient health questionnaire, nomophobia, and smartphone addiction scale.

Result

There was a mild correlation between interoceptive awareness and social wellbeing, other variables were not found to have any significant correlations.

Conclusion

The present study doesn't show any significant correlation between MAIA and other variables except the mild correlation with social wellbeing. There was a significant correlation between MAIA and its subdomains

Keywords

Interoceptive awareness, depression, social well-being, nomophobia, smartphone addiction.

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CHAPTER 1

1.0 INTRODUCTION

The term Interoception was introduced by Sherrington in 1906 (Dunn et al., 2010). Interoceptive awareness is defined as the conscious perception of sensations from inside of the body that creates the sense of the physiological condition of the body, such as respiration, heartbeat, satiety, and the sensations of the autonomic nervous system that are related to emotions (Craig, 2015). The feelings we perceive from our bodies include pain, tickle, temperature, itch, sensual touch, muscular sensations, visceral sensations, hunger, thirst, vasomotor flush, and others related to the body's state (Mehling et al., 2012). In neuroscience and psychology, interoceptive awareness has normally been characterized as the feeling of the physiological state of the body (Mehling et al., 2012). In clinical prescription, body awareness has been characterized as the capacity to perceive unpretentious body prompts (Baas, Beery, Allen, Wizer, & Wagoner, 2004).

Most of the problems in our lives can occur due to our failure in maintaining social relations. From our own family to nations, sound relationships are the basis of harmony. Our well-being is directly dependent upon how well we can get along with others (Khan & Bhat, 2017). Social well-being is an important dimension of health along with physical and mental aspects. It plays an effective role in improving the quality of life, social efficacy, and social performance (Salehi et al., 2017). It is an important factor that demonstrates the circumstance and functioning of society (Prati, Albanesi, & Pietrantonio, 2017). It is operationalized as an individual's perceptions of his or her integration into society, of his/her acceptance with other people, of the coherence of society and social events, of a sense of contribution to society, and the potential and growth of society. Social well-being is the ability to perform social roles effectively and efficiently, monitoring and evaluation of how they operate in the community, and the quality of relationships with other people, relatives, and social groups (Javadi & Darvishpour, 2018).

Depression is mainly associated with various severe health-related outcomes as functional impairment and suicide. Depression is a widespread chronic medical illness that can affect the thinking process, mood, and physical health. It is characterized by low mood, fatigue, sadness, insomnia, and an inability to enjoy life.

However, so far clinical studies have shown that patients with depression do not have a satisfactory therapeutic outcome (Cui, 2015). Depression is a significant global public health concern; it is the leading cause of disability worldwide and is currently estimated to affect 350 million people. Depression is characterized by significant impairment in social and occupational functioning, and the majority of depressed individuals have recurrent episodes and/or chronic depression (Gujral et al., 2017).

The term nomophobia is used to describe a psychological condition when people have a fear of being detached from mobile phone connectivity. Various psychological factors are involved when a person overuses the mobile phone, e.g., low self-esteem, extrovert personality. The burden of this nomophobia situation is now increasing globally. Psychological disorders like social phobia or social anxiety and panic disorder may also precipitate nomophobia symptoms. It is difficult to differentiate whether the patient becomes nomophobic due to mobile phone addiction or existing anxiety disorders manifest as nomophobic symptoms. The signs and symptoms in nomophobic cases include- anxiety, respiratory alterations, trembling, perspiration, agitation, disorientation, and tachycardia. Nomophobia may also act as a proxy for other disorders (Bhattacharya et al., 2019).

Mobile phones and smartphones are both mobile, personal devices that indicate social identity and status, but the main differentiating feature between them is that a smartphone has permanent access to the Internet and consequently all of the Internet's appealing and problematic content. Smartphones provide numerous gratifications, such as sociability, entertainment, information finding, time management, coping strategies, and social identity maintenance (Haug et al., 2015). The smartphone has become an essential part of daily life and research has shown that certain people become so attached to their device that they experience anxiety when the phone is not with them (Cheever, Rosen, Carrier, & Chavez, 2014). The device can be comforting in times of stress, offering a "security blanket" effect whereby the initial negative response to a

stressor is lowered in a similar way that occurs at a younger age and a comfort object like a blanket (Panova & Lleras, 2016).

CHAPTER 2

2. ANCIENT LITERATURE AND LITERATURE REVIEW

- Patanjali yoga sutra 1.30

व्याधिस्त्यानसंशयप्रमादालस्याविरतिभ्रान्तिदर्शनालब्धभूमिकत्वानवस्थितत्वानि
चित्तविक्षेपास्तेऽन्तरायाः ॥३०॥

*vyādhi styāna saṁśaya pramāda-ālasya-avirati bhrāntidarśana-alabdha-
bhūmikatva-anavasthitatvāni citta-vikṣepāḥ te antarāyāḥ ॥30॥*

MEANING: Disease, languor, doubt, carelessness, laziness, worldly-mindedness, delusion, non-achievement of a stage, instability, these (nine) cause the distraction of the mind and they are the obstacles. These are the nine disruptive forces of consciousness.

- Patanjali yoga sutra 1.31

दुःखदौर्मनस्याङ्गमेजयत्वश्वासप्रश्वासा विक्षेपसहभुवः ॥३१॥

*duḥkha-daurmanasya-aṅgamejayatva-śvāsapraśvāsāḥ vikṣepa sahabhuvāḥ
॥31॥*

MEANING: Suffering, depression, nervousness, and agitated breathing are signs of this lack of clarity. The sutra tells us that if there is pain, or mental depression, or shaking of the body, or unrhythmic breathing during the sadhana, you may be sure that Chitta is undergoing a distracted condition.

- Patanjali yoga sutra 1.12

अभ्यासवैराग्याभ्यां तन्निरोधः ॥१२॥

abhyāsa vairāgyābhyāṁ tannirōdhaḥ ॥12॥

MEANING: Their suppression (is brought about) by persistent practice and non-attachment. The sutra explains the two methods for stopping the flow of the Chitta vrittis. It is a mental condition of non-attachment or detachment, which is freedom from raga and dwesha, attraction, and repulsion.

2.2. LITERATURE REVIEW

TITLE	AUTHOR	STUDY DESIGN	SAMPLE SIZE	TOOLS	RESULT	REFERENC E
Knowing your own heart, Distinguishing interoceptive accuracy from interoceptive awareness	Garfinkel, S. N, Seth, A. K., Barrett, A. B., Suzuki, K, & Critchley, H. D. (2015).	Experimental design	sample (N = 80)	A heartbeat discrimination task and a heartbeat tracking task	There was no significant difference in interoceptive awareness between individuals rated high and low on interoceptive accuracy during heartbeat tracking. In contrast, interoceptive awareness, measured using the ROC curve analysis of heartbeat discrimination task data, did not reach above-chance significance across the whole group. However, interoceptive awareness for good heart-beat discriminators did differ from chance, whereas poor heartbeat discriminators demonstrated no significant interoceptive awareness.	DOI: 10.1016/j.biopsycho.2014.11.004
Improved interoceptive awareness in chronic low back pain: a comparison of Back	Paolucci T, Zangrando F, Iosa M, De Angelis S, Marzoli C, Piccinini G, &	A Single-blind randomized controlled trial	N=53	The Feldenkrais method is based on awareness through movement lessons, which are verbally guided explorations of movement, conducted	The 2 groups were perfectly matched with regards to demographics and clinical characteristics at baseline. At the end of treatment, there were no significant differences between groups respect chronic pain	DOI:10.1080/09638288.2016.1175035

school versus Feldenkrais method	Saraceni, V. M. (2016)			<p>by a physiotherapist who is experienced and trained in this method.</p> <p>The Back-School program was a mild 5-week intervention that was administered by a multidimensional professional team.</p>	reduction. Hypothesized that there existed a correlation between interoceptive awareness and chronic pain.	
Psychometric Evaluation and Norms for the Multidimensional Assessment of Interoceptive Awareness (MAIA) in a Clinical Eating Disorders Sample.	Brown T. A, Berner L. A, Jones M. D, Reilly E. E, Cusack A, Anderson L. K, Wierenga C. E. (2017)	cross-sectional	Data from 376 patients (182 adults and 194 adolescents	<p>Multidimensional Assessment of Interoceptive Awareness</p> <p>Difficulties in Emotion Regulation Scale</p> <p>Toronto Alexithymia Scale</p> <p>State-Trait Anxiety Inventory-Trait subscale</p> <p>Eating Disorder Examination Questionnaire</p>	Patients with ARFID had the highest Trusting scores of any group, but post hoc analyses did not indicate any statistically significant between-group differences on this subscale. Not Distracting, trusting, and self-regulation were inversely associated with all EDE-Q subscale scores. Whole Body Listening was positively associated with EDE-Q Eating Concern scores.	DOI:10.1002/erv.2532

<p>Interoceptive awareness in patients with functional neurological symptoms, January 2016</p>	<p>Lucia Ricciardi, Benedetta Demartini, Laura Crucianelli, Charlotte Krahe, Mark J Edwards, Aikaterini Fotopoulou</p>	<p>Experimental Study design</p>	<p>17 patients with FMD from the movement disorder outpatient clinics at National Hospital for Neurology and Neurosurgery (age>18). Eighteen healthy individuals, matched for age, gender, and BMI, were also recruited and served as a control group.</p>	<p>A commonly used heartbeat detection task which tracks the level of concordance between one's heart rate and its subjective perception</p>	<p>FMD patients have lower interoceptive accuracy than healthy subjects, and such reduced interoceptive accuracy was predictive of their depressive symptoms, as well as their tendency to focus on the external features of their body (self-objectification). Contrary to our predictions, interoceptive accuracy was not predictive of alexithymia. These results suggest a potential trade-off between the allocation of attention to internal versus external aspects of the body in FMD.</p>	<p>DOI: 10.1016/j.biopsycho.2015.10.009</p>
<p>Vigorous Physical Activity, Mental Health, Perceived Stress, and</p>	<p>Nicole A Vankim, Toben F Nelson</p>	<p>cross-sectional</p>	<p>N=94</p>	<p>Self-report vigorous physical activity, perceived stress (measured using the Cohen Perceived Stress Scale), mental health (measured using the</p>	<p>Students who met vigorous physical activity recommendations were less likely to report poor mental health than students who did not meet recommendations. Also, addition, socializing partially</p>	<p>DOI: 10.4278/ajhp.111101-quan-395</p>

Socializing Among College Students				SF-36), and socializing (assessed using a self-report number of friends and hours spent socializing).	mediated the relationship between vigorous physical activity, mental health, and perceived stress; however, race and sex did not moderate the relationship.	
Social Exchanges and Subjective Well-being: Do Sources of Positive and Negative Exchanges Matter?	Cheng S.-T. Li K.-K, Leung E. M. F & Chan A. C. M.	Correlational study	N=1005	Degree of closeness and relationship types Positive and negative exchanges the Satisfaction with Life Scale Chinese Affect Scale	Social exchanges with close and peripheral vertical family members as well as close horizontal family members were associated with well-being. Well-being is determined not just by social exchanges but also by where they come from. In this regard, the vertical family, the horizontal family, and the nonfamily represent a hierarchy of preference for Chinese older adults, which, to some extent, reflects the influence of familism	DOI:10.1093/geronb/gbr061
PHQ-9 and PHQ-2 for Screening Depression in Chinese Rural Elderly	Liu, Z, Hu M, Liu H, Zhou L, & Xiao S, Yu Y.	Cross-sectional	N=839	The Structured Clinical Interview for DSM Disorders (SCID-I) was adopted to diagnose major depressive disorder (MDD) as a golden standard	Both PHQ-9 and PHQ-2 are valid screening instruments for depression in the rural elderly in China	DOI: 10.1371/journal.pone.0151042.

Recognition of depression, anxiety, and alcohol abuse in a Chinese rural sample: a cross-sectional study	YuYu, Mi Hu, Zi-Wei Liu, Hui-Ming Liu, Joyce P Yang, Liang Zhou, Shui-Yuan Xiao	Cross-sectional	N=2052	Patient Health Questionnaire (PHQ-9), the Generalized Anxiety Disorder Scale (GAD-7), and the Alcohol Use Disorders Identification Test (AUDIT)	The alcohol abuse vignette was more frequently attributed as a mental problem than the depression vignette and anxiety vignette. Higher education is common and also the strongest factor positively predicting the recognition of all three vignettes. Beyond that, being female is an independent predictor of correct recognition of alcohol abuse, while recognition of depression and anxiety were positively predicted by younger age.	DOI:10.1186/s12888-016-0802-0
Nomophobia and health hazard: Smartphone use and Addiction Among University students	Azra Daei, Hasan Ashrafi-Rizi, Mohammad Reza Soleymani	Cross-sectional study	N=320	nomophobia and smartphones use questionnaires	Nomophobia had a significant relationship with gender, age group, and level of education; and the frequency of using smartphones had a significant relationship with age group and level of education. There was a positive correlation coefficient between nomophobia and the frequency of using smartphones.	DOI: 10.4103/ijpvm.IJPVM_184_19
The relationships between nomophobia, alexithymia, and metacognitiv	Mesut Yavuz, Beyza Altan, Busra Bayrak, Merve Gunduz, Nurullah Bolat	Correlational study	N=1817	The Nomophobia Questionnaire (NMP-Q), The Twenty-Item Toronto Alexithymia Scale (TAS-20), and The Metacognition Questionnaire for	There was a significant correlation between NMP-Q and TAS-20 scores and MCQ-C scores. TAS-20, MCQ-C scores, and gender significantly predicted the nomophobia when	DOI: 10.24953/urkjpmed.2019.03.005

e problems in an adolescent population.				Children and Adolescents (MCQ-C) were administered to participants	NMP-Q score was a dependent variable	
Smartphone uses and smartphone addiction among young people in Switzerland	Severin Haug, Raquel Paz Castro, Min Kwon, Andreas Filler, Tobias Kowatsch, Michael P Schaub	Correlational study design	N= 1,519	Smartphone Addiction Scale for Adolescents (SAS-SV)	Smartphone addiction was more prevalent in younger adolescents (15-16 years) compared with young adults (19 years and older), students with both parents born outside Switzerland, persons reporting lower physical activity, and those reporting higher stress. Alcohol and tobacco consumption was unrelated to smartphone addiction.	DOI: 10.1556/2006.4.2015.037
Depression, anxiety and smartphone addiction in university students-A cross-sectional study	Jocelyne Matar Boumosleh, Doris Jaalouk	Cross-sectional study	N= 688	26-item Smartphone Addiction Inventory (SPAI) Scale and brief screeners of depression and anxiety (PHQ-2 and GAD-2)	Depression and anxiety scores emerged as independent positive predictors of smartphone addiction, after adjustment for confounders.	DOI: 10.1371/journal.pone.0182239

CHAPTER 3

3.AIM AND OBJECTIVE

3.1 AIMS OF THE STUDY

To understand the relationship between interoceptive awareness and social wellbeing among emerging adults.

To understand the relationship between interoceptive awareness and depression among emerging adults.

To understand the relationship between interoceptive awareness and nomophobia among emerging adults.

To understand the relationship between interoceptive awareness and smartphone addiction among emerging adults.

3.2 OBJECTIVE OF THE STUDY

- To evaluate the relationship between interoceptive awareness and social wellbeing among emerging adults.
- To evaluate the relationship between interoceptive awareness and depression among emerging adults.
- To evaluate the relationship between interoceptive awareness and nomophobia among emerging adults.
- To evaluate the relationship between interoceptive awareness and smartphone addiction among emerging adults.

3.3 RESEARCH QUESTION

Is there any relationship between interoceptive awareness social well-being, depression, nomophobia, and smartphone addiction among emerging adults?

3.4 HYPOTHESIS AND NULL HYPOTHESIS

HYPOTHESIS

- Interoceptive awareness is related to social wellbeing among emerging adults.
- Interoceptive awareness is related to depression among emerging adults.

- Interoceptive awareness is related to nomophobia among emerging adults
- Interoceptive awareness is related to smartphone addiction among emerging adults.

NULL HYPOTHESIS

- Interoceptive awareness is not related to social wellbeing among emerging adults.
- Interoceptive awareness is not related to depression among emerging adults.
- Interoceptive awareness is not related to nomophobia among emerging adults.

Interoceptive awareness is not related to smartphone addiction among emerging adults

3.5 OPERATIONAL DEFINITION

- Interoceptive awareness can be defined as the conscious perception of sensations from inside the body that creates the sense of the physiological condition of the body, such as heartbeat, respiration, satiety, and the autonomic nervous system sensations related to emotions (Craig, 2015). For the current study, Interoceptive awareness will be assessed by the Multidimensional Assessment of Interoceptive Awareness.
- Social well-being is the ability to perform social roles effectively and efficiently, monitoring and evaluation of how they operate in the community, and the quality of relationships with other people, relatives, and social groups (Javadi & Darvishpour, 2018). For this current study social well-being is assessed by The Tromso Social Intelligence Scale.
- Depressive disorders impose a substantial societal and economic burden, hurt on overall health are linked with an increased incidence of various illnesses and diseases (Cui, 2015). For this current study, depression is assessed by the Patient Health Questionnaire 9 scale.
- The term nomophobia or no mobile phone phobia is used to describe a psychological condition when people have a fear of being detached from mobile phone connectivity. (Bhattacharya et al., 2019). For this current study, nomophobia is assessed using NMP Scale.
- A Smartphone is defined as a mobile phone that performs many of the functions of a computer, typically having a touch screen interface, internet access, and an operating system capable of loading downloaded applications (Matar & Jaalouk, 2017). Increasing frequency and time spent on smartphones is closely related to the severity of smartphone addiction (Haug et al., 2015). For this current study, smartphone addiction is assessed using Smartphone Addiction Scale.

CHAPTER 4

4. METHODS

4.1. PARTICIPANTS

4.1.1 SAMPLES

Samples are collected from different Mahatma Gandhi university colleges in Kerala. Both males and females were taken, the age range between 18 to 25 years. A total of 350 samples has been collected.

4.1.2 SOURCE OF PARTICIPANTS

Students from Mahatma Gandhi University, Kerala.

4.1.3 INCLUSION CRITERIA

Age group between 18 to 25

Students from Mahatma Gandhi University.

Smartphone users.

4.1.4 EXCLUSION CRITERIA

Another age group.

Students without Smartphone

4.1.5 ETHICAL CONSIDERATION

Informed consent was taken from the participant.

4.2 DESIGN OF THE STUDY

Correlational Study Design

4.3 VARIABLES STUDIED

- The questionnaire for measuring Interoceptive awareness is the Multidimensional Assessment of Interoceptive Awareness. MAIA is a 32-item multidimensional instrument with eight separately scored scales for measuring interoceptive awareness (Mehling et al., 2018). The multidimensional assessment of interoceptive awareness (MAIA), is used to self-report the effects of mind-body interventions. The interoceptive awareness questionnaire consists of eight domains that separately assess the awareness of sensations internally, the quality of one's attention, the attitude toward and behavioral reaction to bodily sensations, and the personal style and capacity for mind-body integration. The eight MAIA domains are Noticing, Not-distracting, Not-worrying, Attention regulation, Emotional awareness, Self-regulation, Body listening, and Trusting (Lin et al., 2017).

- Social well-being can be measured using the Tromso social intelligence scale. The Tromso Social Intelligence Scale has been developed at the University of Tromso by Silvera, Martinussen & Dahl (2001). TSIS is a 21-item scale. Each subscale is based upon the 7 items on a 7-point scale, they have possible scores between 7 and 49.
- Depression is measured using The Patient health questionnaire. The PHQ 9 questionnaire is the depression module, which scores each of the 9 DSM-IV criteria as “0” (not at all) to “3” (nearly every day)
- Nomophobia can be measured using the nomophobia questionnaire (NMP-Q). The no mobile phone phobia questionnaire consists of 20 items that cover four main dimensions of nomophobia: not being able to communicate, losing connectedness, not being able to access information, and giving up convenience. Each item is measured by a 7-point Likert scale (Lee et al., 2018).
- Smartphone addiction can be measured using the Smartphone Addiction Scale (SAS). It is a self-reported scale developed by Kwon et al. based on internet addiction and the features of smartphones in 2013 (Kwon et al., 2013). The scale consisting of 33 items rated on a 6-point Likert-type scale from 1 to 6. A high total score on the scale, which has no cut-off score, shows a smartphone addiction risk (Demirci et al., 2014).

CHAPTER 5

5. DATA EXTRACTION AND ANALYSIS

5.1 DATA EXTRACTION

- **Multidimensional Assessment of Interoceptive Awareness**

It consists of a total of 37 items divided into 8 domain each domain is calculated by taking its average

Noticing consists of 4 questions

Not-Distracting consists of 6 questions

Not-Worrying consists of 5 questions

Attention Regulation consists of 7 questions

Emotional Awareness consists of 5 questions

Self-Regulation consists of 4 questions

Body Listening consists of 3 questions

Trusting consists of 3 questions

The Total of this scale is calculated by adding all items and dividing by 37.

- **Tromso-Social Intelligence Scale**

It consists of 3 domains; each domain is calculated by adding the items

Social Information Processing consists of 7 items

Social Skills consists of 7 items

Social Awareness consists of 7 items

- **PHQ -9** is calculated by adding all the items, it consists of 9 items.
- **Smartphone addiction** is calculated by adding all the items, it consists of 10 items.
- **Nomophobia** is calculated by adding a subdomain, it consists of 2 domains.

Part A consists of 9 items

Part B consists of 11 items

5.2 ANALYSIS

Data entry was done in an Excel sheet and all statistical analyses were performed using JASP.

The Computation of internal consistency (Cronbach's alpha) was done. A total of 350 samples was collected in which the data that are not meeting the inclusion criteria have been excluded.

Finally, 289 data were analyzed

CHAPTER 6

6. RESULT

DESCRIPTIVE STATISTICS

Descriptive statistics of all domains in Multidimensional Assessment of Interoceptive Awareness (MAIA)

Descriptive statistics	Noticing	Not distracting	Not worrying	Attention regulation	Emotional awareness	Self-regulation	Body listening	trusting
Valid	289	289	289	289	289	289	289	289
Missing values	0	0	0	0	0	0	0	0
mean	2.948	1.975	2.249	2.675	3.280	2.972	2.495	3.284
Std. Deviation	1.078	0.839	0.624	0.907	0.938	0.949	1.107	0.929
Minimum value	0.250	0.000	0.600	0.000	0.800	0.750	0.000	1.000
Maximum value	5.000	4.167	3.800	4.857	5.000	5.000	5.000	5.000

Descriptive statistics of The Tromso social intelligence scale (TSIS), Patient health questionnaire (PHQ-9), Nomophobia (NMP), Smartphone addiction scale (SAS).

Descriptive statistics	SAS_T	TSIS_SP	TSIS_SK	TSIS_SA	PHQ_T	NMP_T
Valid	289	289	289	289	289	289
Missing	0	0	0	0	0	0
Mean	27.692	32.405	28.727	29.689	10.893	74.917
Std. deviation	9.296	6.418	5.152	5.800	4.851	23.307

Minimum value	10.000	16.000	15.000	16.000	0.000	20.000
Maximum value	53.000	48.000	44.000	46.000	24.000	134.000

RELIABILITY ANALYSIS

Reliability analysis of multidimensional awareness of interoceptive awareness (MAIA)

Scale Reliability Statistics

mean	sd	Cronbach's α	Average interitem correlation
2.682	0.518	0.775	0.086

Reliability analysis of Smartphone Addiction Scale

Scale Reliability Statistics

mean	sd	Cronbach's α	Average interitem correlation
2.768	0.316	0.788	0.274

Reliability analysis of the Patient Health Questionnaire (PHQ-9)

Scale Reliability Statistics

mean	sd	Cronbach's α	Average interitem correlation
1.210	0.161	0.731	0.229

Reliability analysis of Tromso Social Intelligence Scale

Scale Reliability statistics

mean	sd	Cronbach's α	Average interitem correlation
4.325	0.463	0.387	0.029

Reliability analysis of nomophobia

Scale Reliability statistics

mean	sd	Cronbach's α	Average interitem correlation
3.746	0.158	0.929	0.393

Correlation Matrix showing the relationship between all the scales and their domains.

Pearson's Correlations

			Pearson's r	p
SAS_T	-	TSIS_SP	-0.183	0.002
SAS_T	-	TSIS_SK	-0.064	0.275
SAS_T	-	TSIS_SA	-0.049	0.404
SAS_T	-	IAQ_N	-0.039	0.513
SAS_T	-	IAQ_ND	0.021	0.723
SAS_T	-	IAQ_NW	0.104	0.079
SAS_T	-	IAQ_AR	-0.103	0.082
SAS_T	-	IAQ_EA	-0.114	0.053
SAS_T	-	IAQ_SR	-0.013	0.823
SAS_T	-	IAQ_BL	-0.065	0.272
SAS_T	-	IAQ_TRUSTING	-0.122	0.037
SAS_T	-	IAQ_TOTAL	-0.090	0.126
SAS_T	-	PHQ_T	0.235	< .001
SAS_T	-	NMP_A	0.145	0.014
SAS_T	-	NMP_B	0.022	0.709
SAS_T	-	NMP_T	0.081	0.172
TSIS_SP	-	TSIS_SK	0.151	0.010
TSIS_SP	-	TSIS_SA	-0.146	0.013
TSIS_SP	-	IAQ_N	0.284	< .001
TSIS_SP	-	IAQ_ND	-0.166	0.005
TSIS_SP	-	IAQ_NW	-0.099	0.092
TSIS_SP	-	IAQ_AR	0.205	< .001
TSIS_SP	-	IAQ_EA	0.306	< .001
TSIS_SP	-	IAQ_SR	0.262	< .001
TSIS_SP	-	IAQ_BL	0.142	0.016
TSIS_SP	-	IAQ_TRUSTING	0.265	< .001
TSIS_SP	-	IAQ_TOTAL	0.296	< .001
TSIS_SP	-	PHQ_T	-0.178	0.002
TSIS_SP	-	NMP_A	-0.029	0.622

Pearson's Correlations

			Pearson's r	p
TSIS_SP	-	NMP_B	0.109	0.063
TSIS_SP	-	NMP_T	0.066	0.261
TSIS_SK	-	TSIS_SA	0.120	0.042
TSIS_SK	-	IAQ_N	0.011	0.856
TSIS_SK	-	IAQ_ND	-0.029	0.629
TSIS_SK	-	IAQ_NW	0.050	0.397
TSIS_SK	-	IAQ_AR	0.078	0.189
TSIS_SK	-	IAQ_EA	0.032	0.583
TSIS_SK	-	IAQ_SR	0.051	0.389
TSIS_SK	-	IAQ_BL	-0.043	0.469
TSIS_SK	-	IAQ_TRUSTING	0.085	0.149
TSIS_SK	-	IAQ_TOTAL	0.058	0.322
TSIS_SK	-	PHQ_T	-0.066	0.267
TSIS_SK	-	NMP_A	0.126	0.032
TSIS_SK	-	NMP_B	0.101	0.085
TSIS_SK	-	NMP_T	0.130	0.027
TSIS_SA	-	IAQ_N	-0.084	0.157
TSIS_SA	-	IAQ_ND	0.135	0.021
TSIS_SA	-	IAQ_NW	0.027	0.647
TSIS_SA	-	IAQ_AR	-0.126	0.033
TSIS_SA	-	IAQ_EA	-0.081	0.170
TSIS_SA	-	IAQ_SR	-0.066	0.262
TSIS_SA	-	IAQ_BL	-0.079	0.179
TSIS_SA	-	IAQ_TRUSTING	-0.052	0.380
TSIS_SA	-	IAQ_TOTAL	-0.084	0.152
TSIS_SA	-	PHQ_T	-0.156	0.008
TSIS_SA	-	NMP_A	-0.120	0.041
TSIS_SA	-	NMP_B	-0.119	0.043
TSIS_SA	-	NMP_T	-0.140	0.017
IAQ_N	-	IAQ_ND	-0.301	< .001
IAQ_N	-	IAQ_NW	-0.020	0.732
IAQ_N	-	IAQ_AR	0.489	< .001
IAQ_N	-	IAQ_EA	0.425	< .001
IAQ_N	-	IAQ_SR	0.414	< .001
IAQ_N	-	IAQ_BL	0.351	< .001
IAQ_N	-	IAQ_TRUSTING	0.187	0.001
IAQ_N	-	IAQ_TOTAL	0.654	< .001
IAQ_N	-	PHQ_T	0.083	0.160
IAQ_N	-	NMP_A	0.028	0.634
IAQ_N	-	NMP_B	0.003	0.962
IAQ_N	-	NMP_T	0.015	0.805
IAQ_ND	-	IAQ_NW	-0.090	0.128
IAQ_ND	-	IAQ_AR	-0.355	< .001

Pearson's Correlations

			Pearson's r	p
IAQ_ND	-	IAQ_EA	-0.270	< .001
IAQ_ND	-	IAQ_SR	-0.330	< .001
IAQ_ND	-	IAQ_BL	-0.169	0.004
IAQ_ND	-	IAQ_TRUSTING	-0.188	0.001
IAQ_ND	-	IAQ_TOTAL	-0.142	0.016
IAQ_ND	-	PHQ_T	-0.050	0.400
IAQ_ND	-	NMP_A	-0.085	0.148
IAQ_ND	-	NMP_B	-0.018	0.764
IAQ_ND	-	NMP_T	-0.051	0.389
IAQ_NW	-	IAQ_AR	-0.024	0.688
IAQ_NW	-	IAQ_EA	-0.161	0.006
IAQ_NW	-	IAQ_SR	-0.136	0.021
IAQ_NW	-	IAQ_BL	-0.173	0.003
IAQ_NW	-	IAQ_TRUSTING	-0.114	0.053
IAQ_NW	-	IAQ_TOTAL	0.016	0.791
IAQ_NW	-	PHQ_T	-0.055	0.354
IAQ_NW	-	NMP_A	-0.037	0.532
IAQ_NW	-	NMP_B	-0.088	0.135
IAQ_NW	-	NMP_T	-0.080	0.173
IAQ_AR	-	IAQ_EA	0.490	< .001
IAQ_AR	-	IAQ_SR	0.570	< .001
IAQ_AR	-	IAQ_BL	0.450	< .001
IAQ_AR	-	IAQ_TRUSTING	0.429	< .001
IAQ_AR	-	IAQ_TOTAL	0.811	< .001
IAQ_AR	-	PHQ_T	0.016	0.790
IAQ_AR	-	NMP_A	0.077	0.194
IAQ_AR	-	NMP_B	0.089	0.131
IAQ_AR	-	NMP_T	0.099	0.094
IAQ_EA	-	IAQ_SR	0.480	< .001
IAQ_EA	-	IAQ_BL	0.400	< .001
IAQ_EA	-	IAQ_TRUSTING	0.388	< .001
IAQ_EA	-	IAQ_TOTAL	0.708	< .001
IAQ_EA	-	PHQ_T	-0.058	0.324
IAQ_EA	-	NMP_A	0.121	0.040
IAQ_EA	-	NMP_B	0.194	< .001
IAQ_EA	-	NMP_T	0.194	< .001
IAQ_SR	-	IAQ_BL	0.514	< .001
IAQ_SR	-	IAQ_TRUSTING	0.337	< .001
IAQ_SR	-	IAQ_TOTAL	0.709	< .001
IAQ_SR	-	PHQ_T	0.043	0.465
IAQ_SR	-	NMP_A	0.140	0.018
IAQ_SR	-	NMP_B	0.155	0.008
IAQ_SR	-	NMP_T	0.174	0.003

Pearson's Correlations

			Pearson's r	p
IAQ_BL	-	IAQ_TRUSTING	0.296	< .001
IAQ_BL	-	IAQ_TOTAL	0.646	< .001
IAQ_BL	-	PHQ_T	0.111	0.058
IAQ_BL	-	NMP_A	0.062	0.297
IAQ_BL	-	NMP_B	-0.059	0.316
IAQ_BL	-	NMP_T	-0.015	0.794
IAQ_TRUSTING	-	IAQ_TOTAL	0.536	< .001
IAQ_TRUSTING	-	PHQ_T	0.013	0.830
IAQ_TRUSTING	-	NMP_A	0.048	0.412
IAQ_TRUSTING	-	NMP_B	0.093	0.116
IAQ_TRUSTING	-	NMP_T	0.089	0.132
IAQ_TOTAL	-	PHQ_T	0.020	0.741
IAQ_TOTAL	-	NMP_A	0.088	0.134
IAQ_TOTAL	-	NMP_B	0.105	0.076
IAQ_TOTAL	-	NMP_T	0.115	0.051
PHQ_T	-	NMP_A	0.087	0.138
PHQ_T	-	NMP_B	0.022	0.714
PHQ_T	-	NMP_T	0.055	0.355
NMP_A	-	NMP_B	0.429	< .001
NMP_A	-	NMP_T	0.756	< .001
NMP_B	-	NMP_T	0.915	< .001

IAQ is the total score of Interoceptive Awareness. SAS is the total score of smartphone addiction. PHQ-9 is the total score of depression. TSIS is the total score of Social Wellbeing. NMP is the total score of Nomophobia. There was a significant correlation between MAIA and its subdomains. There was a mild correlation between interoceptive awareness and social wellbeing, other variables were not found to have any significant correlations.

CHAPTER 7

7. DISCUSSION

This study was conducted to understand the relationship between interoceptive awareness and social well-being among emerging adults. For this purpose, we have evaluated the relationship between four variables, smartphone addiction, social well-being, depression, and nomophobia. The objective of the study was to evaluate the relationship between Interoceptive Awareness and Smartphone Addiction, the relationship between Interoceptive Awareness and Social well-being, the relationship between Interoceptive Awareness and Depression, the relationship between Interoceptive Awareness and Nomophobia. Pearson's correlation coefficient shows there is no significant correlation between interoceptive awareness and smartphone addiction. There is a positive correlation between interoceptive awareness and social well-being. Other variables were not found to have any significant correlations. The study showed a significant correlation between MAIA Noticing and MAIA Not distracting, MAIA Noticing and MAIA Attention Regulation, MAIA Noticing and MAIA Emotional Awareness, MAIA Noticing and MAIA Self-Regulation, MAIA Noticing and MAIA Body Listening, MAIA Noticing and MAIA Total, MAIA Attention Regulation and MAIA Emotional Awareness, MAIA Attention Regulation and MAIA Self -Regulation, MAIA Attention Regulation and MAIA Body Listening, MAIA Attention Regulation, MAIA Attention Regulation and MAIA Trusting, MAIA Attention Regulation and MAIA Total, MAIA Emotional Awareness and MAIA Self-Regulation, MAIA Emotional Awareness and MAIA Body Listening, MAIA Emotional Awareness and MAIA Trusting, MAIA Emotional Awareness and MAIA Total, MAIA Self-Regulation and MAIA Body Listening, MAIA Self-Regulation and MAIA Trusting, MAIA Self -Regulation and Total, MAIA Body Listening and MAIA Total, MAIA Trusting and MAIA Total.

In a study, it shows that some addicted individuals may compensate for low signal and poor perception by instead relying on central representations of ideal body states (Epstein et al., 2009). A study shows that addicted individuals could show little bodily reactivity (i.e. low signal) and also not accurately monitor in the body (i.e. poor perception). This lack of bodily feedback would blunt effective experience and lead to neutral appraisals, potentially resulting in clinical symptoms of anhedonia, alexithymia, or poor insight (Goldstein et al., 2009). The present study shows, there is no significant relationship between interoceptive awareness and smartphone addiction. Another

previous study shows that there is a relationship between psychiatric disorders with the abusive use of technologies. We found that individuals who have abusive use of any psychiatric disorder associated may show symptoms of nomophobia (anxiety, anxiety, nervousness, among others) more often when you are unable to connect. We have seen that these symptoms do not usually occur with abusive users who use only the computer, internet, cell phone for leisure or work (Spear King et al., 2017). The present study shows, that there is no significant relationship between interoceptive awareness and nomophobia. Another study shows that MAIA scales were positively associated with psychological well-being (Hanley et al., 2017). In this current study moderate positive correlation between interoceptive awareness and social well-being. Another study shows that there is a negative relationship between depressive symptoms and interoceptive awareness (Pollatos et al., 2009). The present study shows, there is no significant relationship between interoceptive awareness and depression. The result of the present study did not match with the previous study result. Possibly the selected study sample did not show a higher degree of actual traits of smartphone addictions and hence failed to reflect the expected trends.

A moderate correlation was found between interoceptive awareness and social well-being, this is because greater sensitivity for one's bodily state will facilitate the regulation of emotional responses, as ongoing bodily changes can be detected more accurately, which might in turn create advantages in the discrimination and possible regulation of different emotional states. (Fustos et al., 2013).

This study constitutes the relationship between interoceptive awareness with social well-being, depression, nomophobia, and smartphone addiction. Also, it shows the relationship between interoceptive awareness and social well-being among emerging adults, other variables were not found to have any significant correlations. Rather than taking samples from the same institution, the future study can be conducted on different institutions.

CHAPTER 8

8. CONCLUSION

There was a mild correlation between interoceptive awareness and social wellbeing, other variables were not found to have any significant correlations. As discussed above the current study was not sufficient to evaluate the relationship between interoceptive awareness and social wellbeing among emerging adults. The result of the current study did not match with the previous finding due to certain limitations. Further research is required to examine the exact relationship between these variables.

CHAPTER 9

9. REFERENCE

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APPENDIX-1

INFORM CONCERN SHEET & DEMOGRAPHIC

Participant Informed Consent Form

By signing this form, I am agreeing that I am 18 years of age or older and am agreeing to participate in this project voluntarily.

Participants Signature Date

Demographics

1. Age: ----- Gender: Male ♦ Female ♦ Education qualification: -----

2. Marital Status: _____ Socio-economic Status: Low ♦ Medium ♦ High ♦

3. Residential areas: Urban ♦ Sub-urban ♦ Rural ♦

APPENDIX -2

QUESTIONNAIRE SMARTPHONE ADDICTION SCALE

1. Please indicate how much you agree or disagree with each statement about your smartphone use.		Strongly disagree	Disagree	Weakly disagree	Weakly agree	Agree	Strongly Agree
1	Missing planned work due to smartphone use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Having a hard time concentrating in class, while doing assignments, or while working due to smartphone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Feeling pain in the wrists or at the back of the neck while using a smartphone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Won't be able to stand not having a smartphone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Feeling impatient and fretful when I am not holding my smartphone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Having my smartphone in my mind even when I am not using it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	I will never give up using my smartphone even when my daily life is already greatly affected by it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Constantly checking my smartphone so as not to miss conversations between other people on Twitter or Facebook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Using my smartphone longer than I had intended	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	The people around me tell me that I use my smartphone too much.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX-3

QUESTIONNAIRE TROMSO SOCIAL INTELLIGENCE SCALE

For each item, indicate how well it describes you on a scale from 1 (describes me extremely poorly) to 7 (describes me extremely well):										
		Describ es me extreme ly poorly	1	2	3	4	5	6	7	Describ es me extreme ly Well
1	I can predict other peoples' behavior.									
2	I often feel that it is difficult to understand others' choices.									
3	I know how my actions will make others feel.									
4	I often feel uncertain around new people who I don't know.									
5	People often surprise me with the things they do.									
6	I understand other peoples' feelings.									
7	I fit in easily in social situations.									
8	Other people become angry with me without me being able to explain why.									
9	I understand others' wishes.									
10	I am good at entering new situations and meeting people for the first time.									
11	It seems as though people are often angry or irritated with me when I say what I think.									
12	I have a hard time getting along with other people.									
13	I find people unpredictable.									
14	I can often understand what others are trying to accomplish without the need for them to say anything.									
15	It takes a long time for me to get to know others well.									
16	I have often hurt others without realizing it.									

17	I can predict how others will react to my behavior.							
18	I am good at getting on good terms with new people.							
19	I can often understand what others mean through their expression, body language, etc.							
20	I frequently have problems finding good conversation topics.							
21	I am often surprised by others' reactions to what I do.							

APPENDIX-4

QUESTIONNAIRE NOMPFOBIA

Please indicate how much you agree or disagree with each statement about your smartphone	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I would feel uncomfortable without constant access to information through my smartphone							
I would be annoyed if I could not look information up on my smartphone when I wanted to do so							
Being unable to get the news (e.g., happenings, weather, etc.) on my smartphone would make me nervous							
I would be annoyed if I could not use my smartphone and/or its capabilities when I wanted to do so							
Running out of battery in my smartphone would scare me							
If I were to run out of credits or hit my monthly data limit, I would panic							
If I did not have a data signal or could not connect to Wi-Fi, then I would							

constantly check to see if I had a signal or could find a Wi-Fi network							
If I could not use my smartphone, I would be afraid of getting stranded somewhere							
If I could not check my smartphone for a while, I would feel a desire to check it							

If I did not have my smartphone with me,

I would feel anxious because I could not instantly communicate with my family and/or friends							
I would be worried because my family and/or friends could not reach me							
I would feel nervous because I would not be able to receive text messages and calls							
I would be anxious because I could not keep in touch with my family and/or friends							
I would be nervous because I could not know if someone had tried to get a hold of me							
I would feel anxious because my constant connection to my family and friends would be broken							

I would be nervous because I would be disconnected from my online identity							
I would be uncomfortable because I could not stay up-to-date with social media and online networks							
I would feel awkward because I could not check my notifications for updates from my connections and online networks							
I would feel anxious because I could not check my email messages							
I would feel weird because I would not know what to do							

APPENDIX-5

MULTIDIMENSIONAL ASSESSMENT OF INTEROCEPTIVE AWARENESS SCALE

Below you will find a list of statements. Please indicate how often each statement applies to you generally

Circle one number on each line

in daily life.

	Never					Always
1. When I am tense, I notice where the tension is located in my body.	0	1	2	3	4	5
2. I notice when I am uncomfortable in my body.	0	1	2	3	4	5
3. I notice where in my body I am comfortable.	0	1	2	3	4	5
4. I notice changes in my breathing, such as whether it slows down or speeds up.	0	1	2	3	4	5
5. I ignore physical tension or discomfort until they become more severe.	0	1	2	3	4	5
6. I distract myself from sensations of discomfort.	0	1	2	3	4	5
7. When I feel pain or discomfort, I try to power through it.	0	1	2	3	4	5
8. I try to ignore the pain	0	1	2	3	4	5
9. I push feelings of discomfort away by focusing on something	0	1	2	3	4	5
When I feel unpleasant body sensations, I occupy myself with something else so I don't have to feel them.	0	1	2	3	4	5
11. When I feel physical pain, I become upset.	0	1	2	3	4	5
12. I start to worry that something is wrong if I feel any discomfort.	0	1	2	3	4	5

13. I can notice an unpleasant body sensation without worrying about it.	0	1	2	3	4	5
14. I can stay calm and not worry when I have feelings of discomfort or pain.	0	1	2	3	4	5
15. When I am in discomfort or pain, I can't get it out of my mind	0	1	2	3	4	5
16. I can pay attention to my breath without being distracted by things happening around me.	0	1	2	3	4	5
17. I can maintain awareness of my inner bodily sensations even when a lot is going on around me.	0	1	2	3	4	5
18. When I am in conversation with someone, I can pay attention to my posture.	0	1	2	3	4	5
How often does each statement apply to you generally in daily life? Circle one number on each line						
Never						Always
19. I can return awareness to my body if I am distracted.	0	1	2	3	4	5
20. I can refocus my attention from thinking to sensing my body.	0	1	2	3	4	5
21. I can maintain awareness of my whole body even when a part of me is in pain or discomfort.	0	1	2	3	4	5
22. I can consciously focus on my body as a whole.	0	1	2	3	4	5
23. I notice how my body changes when I am angry.	0	1	2	3	4	5
24. When something is wrong in my life, I can feel it in my body.	0	1	2	3	4	5
25. I notice that my body feels different after a peaceful experience.	0	1	2	3	4	5
26. I notice that my breathing becomes free and easy when I feel comfortable.	0	1	2	3	4	5

27. I notice how my body changes when I feel happy/joyful.	0	1	2	3	4	5
28. When I feel overwhelmed, I can find a calm place inside.	0	1	2	3	4	5
29. When I bring awareness to my body, I feel a sense of calm.	0	1	2	3	4	5
30. I can use my breath to reduce tension.	0	1	2	3	4	5
31. When I am caught up in thoughts, I can calm my mind by focusing on my body/breathing.	0	1	2	3	4	5
32. I listen for information from my body about my emotional state.	0	1	2	3	4	5
33. When I am upset, I take time to explore how my body feels.	0	1	2	3	4	5
34. I listen to my body to inform me about what to do.	0	1	2	3	4	5
35. I am at home in my body.	0	1	2	3	4	5
36. I feel my body is a safe place.	0	1	2	3	4	5
37. I trust my body sensations.	0	1	2	3	4	5

APPENDIX-6
PATIENT HEALTH QUESTIONNAIRE(PHQ-9)

Over Last 2 Weeks, Often Have You Been Bothered by Any of The Following Problems	Not at All	Several Times	More Than Half the Day	Nearly Every Day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. moving or speaking so slowly that other people could have noticed. Or the opposite being so fidgety or restless that you have been moving around a lot more than usual.	0	1	2	3
9. thought that you would be better off dead, or of hurting yourself.	0	1	2	3

SI_N	Age	Gender	Education	Marital Status	SES	RA	SU4	SU5	SU6	SU7	SU8	SU9_C	SU9_SN	SU9_OI	SU9_E	SU9_S	SU9_EC	SU9_B	SU9_FS	SU9_DB	SU10
1	18	Male	B.sc	Single	Medium	Rural	3	yes	2	10	6	2	3	1	4	2	1	1	1	1	30
2	18	Female	B.com	Single	Medium	Rural	3	yes	4	2	4	1	1	3	4	2	1	1	1	1	4
3	19	Female	B.com	Single	Medium	Rural	2	No	1	3	5	1	1	1	1	1	1	1	1	1	30
4	19	Female	B.com	Single	Medium	Rural	1	yes	2	1	8	1	1	1	1	1	1	1	1	1	20
8	19	Female	B.com	Single	Medium	Sub-urban	4	No	5	6	8	1	1	1	2	1	1	1	1	1	10
15	19	Female	B.com	Single	Medium	Rural	3	No	4	5	8	1	2	3	2	1	1	2	2	1	5
19	21	Male	B.com	Single	Medium	Rural	5	yes	8	6	7	1	6	1	1	1	1	1	1	1	46
21	18	Male	B.com	Single	Medium	Rural	4	yes	5	10	5	2	3	1	1	1	1	1	1	1	15
22	18	Male	B.com	Single	Medium	Rural	4	yes	5	10	5	2	4	1	1	1	1	1	1	1	15
24	18	Male	B.com	Single	Medium	Urban	5	yes	5	10	5	4	1	2	3	4	5	6	7	8	10
27	19	Male	B.com	Single	Medium	Urban	5	yes	3	10	7	2	3	4	5	6	7	8	9	8	50
28	21	Female	M.com	Single	Medium	Urban	1	yes	3	10	7	3	1	1	2	2	2	1	1	1	20
29	23	Female	B.com	Single	Medium	Urban	5	yes	8	10	2	2	1	1	2	1	1	1	1	1	16
30	21	Male	M.com	Single	Medium	Sub-urban	4	yes	4	25	4	1	2	3	3	2	2	1	3	2	15
31	18	Male	B.com	Single	Low	Urban	4	yes	4	12	3	6	9	3	4	2	2	2	2	2	20
32	19	Female	B.com	Single	Medium	Rural	3	yes	8	12	4	7	9	3	7	2	2	2	2	2	17
33	23	Female	M.com	Single	Medium	Sub-urban	4	yes	8	30	2	2	3	2	3	1	2	2	2	1	15
35	18	Male	B.com	Single	High	Rural	2	yes	5	10	5	2	3	4	5	6	5	6	8	6	20
36	23	Female	M.sc	Single	Medium	Sub-urban	5	yes	5	10	6	3	2	4	5	4	3	4	3	1	28
38	23	Male	M.sc	Single	Medium	Sub-urban	6	yes	9	10	2	3	1	1	5	1	1	1	1	1	50
39	23	Female	M.sc	Single	Medium	Rural	3	yes	9	10	4	1	4	2	5	1	1	1	1	1	18
40	23	Female	M.sc	Single	Medium	Sub-urban	4	yes	9	10	3	9	3	4	3	2	2	1	1	1	8
41	23	Male	M.sc	Single	Medium	Sub-urban	8	yes	9	20	5	2	4	5	5	3	3	3	2	3	70
42	22	Male	M.sc	Single	Medium	Rural	12	yes	9	10	9	2	3	3	6	2	2	2	2	6	11
43	23	Female	M.sc	Single	Low	Rural	4	yes	9	5	4	4	5	5	1	1	1	1	1	4	1
44	23	Female	M.sc	Single	Medium	Sub-urban	6	yes	8	10	7	1	2	1	4	1	1	1	1	1	25
45	19	Female	B.com	Single	Medium	Sub-urban	1	yes	9	10	4	2	9	2	9	3	1	1	1	1	55
46	19	Female	B.sc	Single	Medium	Sub-urban	1	yes	9	10	3	9	7	2	2	1	1	1	1	2	5
47	19	Male	B.sc	Single	Medium	Sub-urban	5	yes	9	15	5	2	4	2	9	1	1	1	2	1	70
48	19	Male	B.com	Single	Medium	Urban	5	yes	9	10	5	3	9	2	5	2	2	1	2	5	71

SAS13_4	SAS13_5	SAS13_6	SAS13_7	SAS13_8	SAS13_9	SAS13_10	SAS14	TSIS_1	TSIS_2	TSIS_3	TSIS_4	TSIS_5	TSIS_6	TSIS_7	TSIS_8	TSIS_9	TSIS_10	TSIS_11	TSIS_12	TSIS_13	TSIS_14	TSIS_15	TSIS_16	TSIS_17	TSIS_18	TSIS_19	TSIS_20	TSIS_21
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1	4	2	3	2	1	5	3	6	2	6	2	4	7	7	3	7	7	1	1	5	4	1	1	7	7	5	1	7

NMP_16	NMP_17	NMP_18	NMP_19	NMP_20
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1	1	1	1	1
3	3	4	4	3
5	5	3	3	5
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4	4	4	4	4
4	4	4	4	4
7	7	7	7	7
7	7	1	1	7
6	6	6	6	6