

# Spousal Abuse and Depression in Women – An Etiological Approach to Depressed Women: Spousal Abuse as A Contributory Factor

#### **AUTHORS:**

Tahoora Ali<sup>1</sup>, Parisha Kelkar<sup>2</sup>, Suprakash Chaudhury<sup>3</sup>, Daniel Saldanha<sup>4</sup>

<sup>1</sup>Junior Resident, <sup>2</sup>Assistant Professor, <sup>3</sup>Professor and Head of Department, <sup>4</sup>Emeritus Professor

Department of Psychiatry, Dr. D. Y. Patil Medical College, Hospital and Research Centre, D. Y. Patil

Vidyapeeth, Pune.

### **ABSTRACT**

**Background:** Spousal abuse is a major health concern, both at individual and community levels. Its relevance is often lost in the oblivion, and that it can underlie a major health derangement is conveniently ignored. Depressive disorders comprise a pertinent implication of this social vice, yet remain unexplored in this context.

**Aim:** To establish spousal abuse as a contributory factor to depressive disorder in married women. **Materials and Methods:** A 100 women diagnosed with depression (cases) and another 100 normal women (controls) were evaluated with regards to their sociodemographic and clinical profiles, and the nature and pattern of abuse they undergo, using proformas and three scales: Composite Abuse Scale (CAS), Women's Experience with Battering (WEB), and Marital Adjustment Questionnaire (MAQ). The scores were calculated and analysed.

**Results:** The cases had poorer physical and gynaecological functioning, and were more likely to have suicidal intent. They had poorer marital relations. The scores of CAS and WEB were higher in the cases, and MAQ was higher in the controls. Physical abuse and emotional abuse were seen to co-occur.

**Conclusion:** Depressive disorders are more likely to occur in women who are victims of spousal abuse. **Keywords:** marriage, abuse, violence, intimate partner violence, domestic violence, married women

DOI: 10.48047/ecb/2023.12.si4.1086

## **INTRODUCTION**

As per global accounts, the World Health Organisation claims that every third woman endures abuse at the hands of her husband. [1] While being a gross violation of human rights, it raises an alarm in the domain of community health, as well. Despite the manifolds concerns it poses, it is unfortunately extremely common. [2] The Indian Act of Protection of Women from Domestic Violence, 2005, coins the term "domestic violence" for spousal abuse, and defines it as any acts of emotional, physical, or sexual abuse by the spouse, taking forms of threats, harm, or injury, potentially endangering the safety, life, as well as mental and physical well-being of an individual. As per the fifth National Family Health Survey (NFHS-5), 32% of married Indian women can be categorised as victims of spousal abuse per the aforementioned act. [3]

Literature suggests that spousal abuse can cause impairment in both physical and mental wellbeing of women. While impairments of physical health may manifest overtly in the form of injuries, debilitating pains, chronic health conditions, and gynaecological or obstetric complications; mental health manifestations are more covert, but just as debilitating, commonly occurring in the form of depressive disorders, post-traumatic stress disorder, anxiety disorder, or substance abuse. [4] Spousal abuse goes beyond the mere cause-and-effect relation with mental disorders, to also share variability with respect to its severity; more severe forms of abuse *Eur. Chem. Bull.* 2023,12(Special issue 4), 12093 – 12104

being associated with poorer mental health and functioning. [5]

Depressive disorders find particular relevance when occurring in the context of spousal abuse, due to manifold reasons. Despite being one of the most common mental illnesses which women lose their vital years of functioning to, its insidious onset is oftentimes missed, and it barely receives adequate attention as a mental illness, especially in a Low-and-Middle-Income Country (LMIC) like ours. This is exacerbated by the commonly prevalent nature of spousal abuse, which the general population conveniently turn a blind eye to. [2, 4, 5] Notwithstanding, there is a dearth of Indian studies done in this context; with most of them either focussing on the deleterious effects of abuse on overall health and well-being of married women, or on mental health as a unit. Depressive illnesses have largely missed the spotlight in Indian and South Asian studies alike, and this paucity encouraged us to delve into this topic and elucidate a relationship of potential importance. [6, 7, 8]

# MATERIALS AND METHODS

This study was conducted in a tertiary care centre, which is attached to medical institution. After due approval from Institutional Ethics Committee, the subject was started in August, 2020 and continued till September, 2022. All the subjects were required to give a written informed consent before participation in the study. Estimating the prevalence of depressive disorders in married women enduring spousal abuse to be

6.9%, [9] the sample size was calculated to be 100 subjects, approximately.

# **Sample**

Through purposive sapling, 100 married women aged between 18 years to 60 years, and fulfilling the diagnostic criteria for depressive disorders as per ICD-11 DCR, were taken as cases. Another 100 socio-demographically matched women without any psychiatric illness were taken as controls.

#### **Tools**

**Self-constructed proforma**: For evaluating of social, demographic, and clinical parameters.

Mini International Neuropsychiatric Interview (MINI): A diagnostic instrument using ICD-10 to allot diagnoses to psychiatric illnesses. [10]

Composite Abuse Scale (CAS): A broadly encompassing 30-item scale to assess violence by a husband/intimate partner, having four subscales: Severe Combined Abuse (SCA), Emotional Abuse (EA), Physical Abuse (PA) and Harassment (H). [11]

# Women's Experience with Battering (WEB):

A 10-item scale to assess forms of commonly encountered abuse that women deal with on a daily basis. [12]

Marital Adjustment Questionnaire (MAQ): A 25-item scale in Hindi language having binary responses in the form of yes or no. [13]

#### Methodology

Every participant was first explained the aims and objectives of the study, and was asked to provide a written informed consent. After confirming the diagnosis of depressive disorder *Eur. Chem. Bull.* 2023,12(Special issue 4), 12093 – 12104

with the help of two psychiatrists, they were assorted into the case group. In the absence of any psychiatric illness, they were assorted into the control group. Without informing them of their allotment, they were made to answer the battery of questionnaires and scales; the scores of which were calculated and used for further evaluation. SPSS (IBM, Chicago, USA) was used to statistically evaluate the collected data, with the help of inferential and descriptive statistics.

#### **RESULTS**

The cases and control had no significant difference in sociodemographic characteristics, such as age, domicile, education, occupation, and income. Similarly, there was no significant difference observed in the husbands of the cases and the controls, in terms of their education, vocation or income. The pattern of substance use in both the cases and controls were similar, with tobacco having the highest frequency of consumption. The cases had a significantly higher number of physical illnesses and suicidal ideation and attempts, as compared to the controls. Menstruation-related problems were significantly higher in the depressed women. The number of depressed women who could regard their husbands as their emotional supports (32%) was significantly lower than the number of normal subjects who could do the same (69%). (Tables 1 and 2)

The number of husbands abusing substances were significantly different for cases and controls, with the husbands of the cases comprising the majority. The most common substance abused by them was tobacco, followed closely by alcohol. The number of husbands

engaging in extramarital affair and gambling was also higher in the cases, as compared to the controls. A significantly higher number of cases shared poor relationships with not only their husbands, but also their in-laws. (Table 3)

A significantly higher number of cases were undergoing emotional abuse, physical abuse, and sexual abuse. The most commonly cited reason for these forms of violence was alcohol abuse by their husbands, as told by 24% of the cases and 12% of the controls. Second in line was work-related frustration, and some of the other commonly encountered reasons in the study were: (i) suspicion of infidelity, (ii) trivial matters of daily occurrence, (iii) extramarital relations of the husband, (iv) poor marital relationship, (v) influence of other family members, (vi) giving birth to a daughter, (vii) abuse of other substances, and (viii) wife earning more than the husband.

The scores of Composite Abuse Scale, as well as its subscales, viz., Severe Combined Abuse, Physical Abuse, Emotional Abuse, Harassment; and Women's Experience with Battering Scale, were all significantly higher in the cases than in the controls. The score of Marital Adjustment Questionnaire was significantly higher in the controls. (Table 4)

Severe Combined Abuse sub-scale of CAS bore a positive correlation with the other sub-scales of CAS (Physical Abuse, Emotional Abuse, and Harassment), CAS, and WEB. Physical Abuse sub-scale of CAS showed positive correlation with all the other sub-scales of CAS, as well as CAS and WEB. Emotional Abuse Scale showed a positive correlation with all other sub-scales of Eur. Chem. Bull. 2023,12(Special issue 4), 12093 – 12104

CAS, as well as CAS and WEB. Harassment subscale of CAS too showed positive correlation with all other sub-scales of CAS, CAS, and WEB. Over and above the aforementioned correlations of CAS, it also bore a positive correlation with WEB. MAQ, however, was negatively correlated with all the sub-scales of CAS, CAS, as well as WEB. (Table 5)

#### **DISCUSSION**

The study reflected a stronger association of depression and chronic medical illnesses: with hypothyroidism, hypertension, diabetes mellitus, migraine, and polycystic ovarian syndrome being the commonly encountered ones. The relation between chronic conditions such as these and depressive disorders have been robustly supported to be bi-directional, with one causing and/or accentuating the other. [14, 15, 16] Besides that, depression also finds significant correlation with abnormalities of menstrual cycle, attributing the latter to the effects that depression has on estrogen and the gonadotropic hormones. Depressed women are also twice as likely to have premature cessation of menstrual cycles. [17]

Social support, or rather the lack of it, is implicated in various ways in the course of a mental illness: as a precipitant, a perpetuator, and as a poor prognosticator. Studies assert that women are more likely than men to depend on social support for mental well-being. [18] The observation of this study was no different in suggesting poorer emotional supports of the depressed women, in comparison to the normal women. Moreover, the relationship of a married lady with her husband has critical importance in

psychiatry. A bad marital relation is a breeding ground for depressive illnesses in women, supporting evidence for which abound in prevalent literature, such that these disadvantaged women are more than two times likely to be depressed. [4, 19, 20]

Depressed women were significantly more likely to be enduring emotional abuse, which was found to be the most common form of abuse in the study. Existing studies are in support of this claim, with rates of prevalence being 80% or even more. [21, 22] Some of the common ways that husbands use to mete out this form of abuse is humiliation, manipulation, isolation, badmouthing, monetary constraints, and jealous behaviour. [23] This form of abuse has been amply supported as a precipitant for depressive illnesses. [21] Similar to emotional abuse, physical abuse (51%) and sexual abuse (34%) were also higher in the depressed women. Indian demographic studies reveal that 28% married women are victims of physical violence, and 6% women are victims of sexual abuse. [3] Physical abuse finds an inverse correlation with sociodemographic status, such that the povertystricken women are common victims. Educated women are less likely to be physically abused. [23, 24] Sexual abuse was associated with highest health-related complications, spanning the domains of medical illnesses, gynaecological and obstetric illnesses, as well as mental illnesses. [25]

The most common reason for abuse in the present study was alcohol abuse by the husband. Alcohol abuse is the underlying reason for physical and sexual forms of abuse, more than emotional form *Eur. Chem. Bull.* 2023,12(Special issue 4), 12093 – 12104

of abuse. [26] The dependence goes beyond this to also be severity-based, with severe alcohol dependence predicting higher abuse. [27, 28] The other reasons arise from patriarchal practices and strict gender-role conformations, which align women inferiorly in the social ladder, and render their abuse as obvious outcomes of familial distress. Extramarital affairs were also seen to be one of the causes of abuse, which was significantly higher in the husbands of the depressed women as compared to the nondepressed women. Men indulging in such affairs are more likely to be emotionally abusive towards their wives. [29, 30] Suicidal ideation and attempt were also higher in depressed women, as depression is one of the leading causes of suicide. Spousal abuse, especially in its severe forms, has also been studied to be a determinant of suicide. [31, 32]

The scores for CAS and its four sub-scales, and WEB were significantly higher in the depressed women than in the non-depressed women. Other studies using these scales have inferred similarly. The association of depression in victims of spousal abuse is inevitably proven by various studies, at rates as high as 2-3 times; thus, providing support to the present finding. [33, 34] The present study suggested that emotional abuse and physical abuse co-occur. Many studies suggest that one of these two forms often facilitate the other form of abuse. The crux of both these forms of abuse is poor marital relations, and the dissatisfaction and contempt arising as a result of these factors, make women more vulnerable to both the forms of abuse. Husbands who are physically abuse, have a high

likelihood to be emotionally abusive as well. [21, 35] A sound and healthy marital adjustment bodes well for a married woman, as concurred by the present study. Marital adjustment was seen to be higher in the controls, implying that a normal marital relation was ground for sound mental health and functioning, whereas poorer marital relations bode way to depressive illnesses. This finding is also well supported by prevalent literature. [36, 37]

## STRENGTHS AND LIMITATIONS

The present study, with its specialised approach to depressive disorders, is unique in the Indian context. The social, demographic, and clinical factors have been evaluated in details. The Socratic form of questioning allowed free expression. The limitations of this study are a humble sample size and it's cross-sectional nature disallowing the exploration of a cause-effect relationship.

#### **CONCLUSION**

Depressive disorders in women can be hence deemed to be correlated with spousal abuse, with emotional abuse being the most common type of abuse. Alcohol abuse by husband comprises the most prevalent cause of spousal abuse.

# **REFERENCES**

- 1. Ellsberg M, Emmelin M. Intimate partner violence and mental health. Global health action. 2014 1;7(1):25658.
- 2. World Health Organization. Violence against women prevalence estimates, 2018: global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-Eur. Chem. Bull. 2023,12(Special issue 4), 12093 12104

- partner sexual violence against women. Switzerland; 2021.
- 3. James KS, Singh SK, Lhungdim H, Shekhar C, Dwivedi LK, Pedgaonkar S, et al. National Family Health Survey (NFHS-5). International Institute for Population Sciences (IIPS) and ICF; 2021.
- 4. Dillon G, Hussain R, Loxton D, Rahman S. Mental and physical health and intimate partner violence against women: A review of the literature. International journal of family medicine; 2013.
- 5. Miller E, McCaw B. Intimate partner violence. New England Journal of Medicine. 2019 28;380(9):850-7.
- 6. Kamimura A, Ganta V, Myers K, Thomas T. Intimate partner violence and physical and mental health among women utilizing community health services in Gujarat, India. BMC women's health. 2014 Dec;14(1):1-1.
- 7. Nayak MB, Patel V, Bond JC, Greenfield TK. Partner alcohol use, violence and women's mental health: population-based survey in India. The British journal of psychiatry. 2010 Mar;196(3):192-9.
- 8. Chandra PS, Satyanarayana VA, Carey MP. Women reporting intimate partner violence in India: Associations with PTSD and depressive symptoms. Archives of women's mental health. 2009 Aug;12:203-9.
- 9. Sheehan DV, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, Hergueta T, Baker R, Dunbar GC. The Mini-International Neuropsychiatric Interview (MINI): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and

- ICD-10. Journal of clinical psychiatry. 1998;59(20):22-33.
- 10. Hegarty K, Bush R, Sheehan M. The composite abuse scale: further development and assessment of reliability and validity of a multidimensional partner abuse measure in clinical settings. Violence and victims. 2005;20(5):529-47.
- 11. Tutty LM, Radtke HL, Thurston WE, Nixon KL, Ursel EJ, Ateah CA, et al. The mental health and well-being of Canadian Indigenous and non-Indigenous women abused by intimate partners. Violence against women. 2020;26(12-13):1574-97.
- 12. Naeem F, Irfan M, Zaidi QA, Kingdon D, Ayub M. Angry wives, abusive husbands: Relationship between domestic violence and psychosocial variables. Women's Health Issues. 2008;18(6):453-62.
- 13.Akhtar-Danesh N, Landeen J. Relation between depression and sociodemographic factors. International journal of mental health systems. 2007;1(1):1-9.
- 14. Saini RK, Chaudhury S, Singh N, Chadha DS, Kapoor R. Depression, anxiety, and quality of life after percuataneous coronary interventions. Industrial Psychiatry Journal. 2022;31(1):6.
- 15. Olver JS, Hopwood MJ. Depression and physical illness. Medical Journal of Australia. 2013;199:S9-12.
- 16. Evans M. Physical illness and depression. Principles and practice of geriatric psychiatry. 2010 Dec 17:508-14.
- 17. Padda J, Khalid K, Hitawala G, Batra N, Pokhriyal S, Mohan A, Zubair U, Cooper AC, Eur. Chem. Bull. 2023,12(Special issue 4), 12093 12104

- Jean-Charles G. Depression and its effect on the menstrual cycle. Cureus. 2021;13(7).
- 18. Grav S, Hellzèn O, Romild U, Stordal E. Association between social support and depression in the general population: the HUNT study, a cross-sectional survey. Journal of clinical nursing. 2012;21(1-2):111-20.
- 19. Beck AT, Bredemeier K. A unified model of depression: Integrating clinical, cognitive, biological, and evolutionary perspectives. Clinical Psychological Science. 2016;4(4):596-619.
- 20. Maquet YG, Ángel JD, Cañizares C, Lattig MC, Agudelo DM, Arenas Á, Ferro E. The role of stressful life events appraisal in major depressive disorder. RevistaColombiana de Psiquiatría (English ed.). 2020;49(2):67-74.
- 21. Kelly VA. Psychological abuse of women: A review of the literature. The Family Journal. 2004;12(4):383-8.
- 22. Lammers M, Ritchie J, Robertson N. Women's experience of emotional abuse in intimate relationships: A qualitative study. Journal of Emotional Abuse. 2005;5(1):29-64.
- 23. Jeyaseelan L, Kumar S, Neelakantan N, Peedicayil A, Pillai R, Duvvury N. Physical spousal violence against women in India: some risk factors. Journal of biosocial science. 2007;39(5):657-70.
- 24. Lee J. Pathways from education to depression. Journal of cross-cultural gerontology. 2011;26(2):121-35.
- 25. Indupalli AS, Giri PA. Sexual violence among married women: An unspoken sting. International Journal of Research in Medical Sciences. 2014;2(4):1248-52.

- 26. Tittlová M, Papacek P. Factors contributing to domestic violence. International Journal of Entrepreneurial Knowledge. Volume 6; 2018.
- 27. Apatinga GA, Tenkorang EY. Determinants of sexual violence against married women: Qualitative evidence from Ghana. Sex Abuse. 2021;33(4):434-54.
- 28. Thomas MD, Bennett LW, Stoops C. The treatment needs of substance abusing batterers: A comparison of men who batter their female partners. J Fam Violence. 2013;28(2):121-9.
- 29. Das TK, Alam MF, Bhattacharyya R, Pervin A. Causes and contexts of domestic violence: Tales of help-seeking married women in Sylhet, Bangladesh. Asian Social Work and Policy Review. 2015;9(2):163-76.
- 30. Hussain M, Bashir R. Social Causes of Domestic Violence: Astudy. International Journal of Creative Research Thoughts (IJCRT). 2018;6(1):1859.
- 31. Indu PV, Remadevi S, Vidhukumar K, Shah Navas PM, Anilkumar TV, Subha N. Domestic violence as a risk factor for attempted suicide in married women. Journal of interpersonal violence. 2020;35(23-24):5753-71.

- 32. Kaslow NJ, Thompson MP, Okun A, Price A, Young S, Bender M, Wyckoff S, Twomey H, Goldin J, Parker R. Risk and protective factors for suicidal behavior in abused African American women. J Consult Clin Psychol 2002;70(2):311.

  33. Ahmadabadi Z, Najman JM, Williams GM, Clavarino AM, d'Abbs P, Tran N. Intimate partner violence and subsequent depression and anxiety disorders. Social psychiatry and psychiatric epidemiology. 2020;55(5):611-20.
- 34. Gilchrist G, Hegarty K, Chondros P, Herrman H, Gunn J. The association between intimate partner violence, alcohol and depression in family practice. BMC Family Practice. 2010;11(1):1-0.
- 35. Carney MM, Barner JR. Prevalence of partner abuse: Rates of emotional abuse and control. Partn Abuse. 2012;3(3):286-335.
- 36. Shankar B, Ali A, Deuri SP. A Study on Sexuality and Marital Adjustment among Person with Somatization Disorder. International Journal of Scientific Research. Volume 2; 2013. 37. Wani NA, Dar KA, Wani RY. Relationship between marital adjustment and socio-cultural determinants. Indian Journal of Health and Wellbeing. 2013;4(1):31.

# **TABLES**

Table 1: Sociodemographic variables of the subjects

	Variable	Case (%)	Control (%)	Chi Square Value	P
Age	18-24	5	4	2.964	0.564
(in years)	25-34	18	15		

	35-44	12	19		
	45-54	9	9	-	
	55-60	6	3		
Residence	Urban	45	48	1.382	0.240
	Rural	5	2		
Education	Uneducated	5	2	1.435	0.488
	Upto 12 <sup>th</sup> standard	31	32		
	Higher education	14	16		
Occupation	Housewife	28	17	6.315	0.097
	Unskilled Labourer	11	17		
	Skilled Labourer	5	11		
	Professional	6	5		
Socioeconomic	Upper	1	0	2.902	0.574
Class according to Modified	Upper Middle	7	4		
Kuppuswamy's Socioeconomic	Lower Middle	7	8		
Scale (2018)	Upper Lower	29	28		
	Lower	6	10		
Income of Self	0	31	19	7.213	0.065
	1-10000	11	13		
	10001-50000	7	17		
	>50000	1	1		

Table 2: Clinical variables of the subjects

	Variable	Case (%)	Control (%)	Chi Square Value	P
Physical Illness	Present	31	43	7.484	0.006
	Absent	19	7		
Menstruation	Regular cycles	23	38	11.755	0.008
	Irregular cycles	12	3		

Eur. Chem. Bull. 2023,12(Special issue 4), 12093 – 12104

	Menopausal	14	7		
	Amenorrhea due to pregnancy	1	2		
Patient's Substance	None	43	48	3.941	0.268
Consumption	Alcohol	2	0		
	Tobacco	4	2		
	Mud	1	0		
Suicidal	Present	39	0	63.934	0
Ideation/Attempts	Absent	11	50		

Table 3: Sociodemographic details, substance use pattern, extramarital affairs, and gambling behaviours of the husbands of the subjects

	Variable	Case (%)	Control (%)	Chi Square Value	P
Education of	Uneducated	5	1	3.731	0.155
Husband	Upto 12 <sup>th</sup> standard	29	36		
	Higher education	16	13		
Occupation of	Unemployed	11	9	0.318	0.957
Husband	Unskilled Labourer	12	12		
	Skilled Labourer	16	18		
	Professional	11	11		
Income of	0	9	9	6.121	0.106
Husband (in Rs.)	1-10000	6	7		
	10001-50000	27	33		
	>50000	8	1		
Substance	None	17	28	9.036	0.029
Consumption by Husband	Alcohol	26	15		
	Tobacco	29	17		

	Others	4	1		
Extramarital	Yes	15	3	9.756	0.002
Affair by Husband	No	35	47		

Table 4: Comparison of scores of the Composite Abuse Scale and its sub-scales, Women's Experience with Pattering and the Marital Adjustment Questionnaire

with Battering and the Marital Adjustment Questionnaire Control Mann P Rating scales and subscales Case Whitney Mean Mean Median Median Value (SD) (SD) 0 Composite Severe 16.50 16 1.56 140.00 0.000 Abuse Combined (8.87)(4.15)Scale Abuse subscale 36.24 39 3.32 0 89.50 0.000Physical Abuse subscale (13.81)(7.72)0 17.32 20 **Emotional Abuse** 1.62 248.50 0.000 Subscale (10.35)(4.52)5 0 6.50 0.54 0.000 Harassment 441.00 subscale (6.01)(1.85)75.50 7.04 0 Total score of 76.56 108.00 0.000 Composite (35.04)(17.12)Abuse Scale Women's Total score 21.62 10 14.36 10 1014.00 0.040 Experience (10.41)(18.56)with Battering 23 Marital Total score 17.10 20.5 20.76 862.50 0.007 Adjustment (8.09)(5.85)Questionnaire

Table 5. Spearman's Correlations of severe combined abuse, physical abuse

		Severe Combi ned Abuse	Physica l Abuse	Emotio nal Abuse	Harass ment	Compos ite Abuse Scale	Women's Experience with Battering
Physical Abuse	C C	.918**					
	Si g.	.000					
Emotional Abuse	C C	.918**	.890**				
	Si g.	.000	.000				
Harassment	C C	.826**	.797**	.818**			
	Si g.	.000	.000	.000			2
Composite Abuse Scale	C C	.960**	.979**	.934**	.843**		
	Si g.	.000	.000	.000	.000	·	9
Women's Experience	C C	.310**	.294**	.272**	.221*	.317**	
with Battering	Si g.	.002	.003	.006	.027	.001	
Marital Adjustment Questionnair e	C C	381**	357**	320**	247*	394**	727**
	Si g.	.000	.000	.001	.013	.000	.000

CC - Correlation Coefficient; Sig - Sig. (2-tailed)

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

<sup>\*.</sup> Correlation is significant at the 0.05 level (2-tailed).