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To Analyse The Mechanical Low Back Pain Related Disability And Quality Of Life In Obease And Non-Obease Nurses Working In Different Hospital - On The Basis Of Gender.

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ABSTRACT
Background: One of the primary reason people look for clinical consideration is low back torment (LBP) which is widely prevalent in everyone, but the problem is significantly more prevalent in medical healthcare and, particular in nurses. This study has taken few parameters which will help in evaluating how both the genders quality of life is been affected by the low back pain related disability.
Methods: It is a correlational study design to assess how mechanical low back pain related disability and quality of life in obese and non-obese nurses working in different hospital. For the study the related questionnaires was made relevant to the topic which included, demographic data, HRQOL scale, MOLBPQ scale, and VAS duration for this study was 6 months and this comprise of 380 participants. According to the inclusion criteria all gender are invited to take part in this study, with the mentioned age group of 25 years to 35 years. Nurses with the mechanical low back pain working in hospital in any of the shifts with an experience of at least of 1.5 to 2 years and above. Similarly for exclusion criteria the nurses who are below the age of 25 years and above the age of 35 years or pregnant /breast feeding or having any disease contributing to low back pain like, herniated intervertebral disk, degenerated arthritis of lumbar palsy, spondylolisthesis, sciatic nerve pain, scoliosis, osteoporosis, metastatic disease etc), and the nurse who underwent resent surgery are not eligible for taking part in the study.
Findings: The mean and stander deviation in female in terms of NPRS scoring is estimated at 5.626 ±1.643 and MOLBPDQ scoring is estimated at 67.313 ±15.753 and value of physical (PCS12) score in is estimated 43.083±5.518 and value of mental (MCS12) score is estimated 38.905±6.907. Similarly the mean value and stander deviation in male is terms of NPRS score is manifested as 5.673 ±1.793 and of MOLBPDQ score is manifested as 65.627 ±16.893 and value of physical (PCS12) score is manifested as 43.122±5.911 respectively and value of mental (MCS12) score is estimated as 38.818±6.472 respectively.
Interpretation: The result here in shows the high prevalence of back pain among the nurses working in different hospital with significant decrease in the quality of life among nurses who have work-related LBP of which specifically male with high BMI is been more affected. And the study also reveals that females are more physically function as compare to male. As male lose more energy and becomes fatigue more quickly.
Funding: No favors is taken or given to any participants. Legal permission is permitted by ethical committee for proceeding to the study.
Keywords: Nurses, Mechanical low back pain, Health related quality of life, modified Oswestry low back pain questioner.

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I. INTRODUCTION

Nursing in the twenty-first century is the glue that holds a patient's health care journey together. Throughout the patient experience, and wherever there is someone in need of care, nurses work tirelessly throughout the day and night to identify the problem and protect the individual patient's needs. Nurses are those who involves in helping people protect their health against diseases. They have an immense influence on creating positive habit related to health.[1]

The nursing workforce is unique in that it is the largest subgroup of health care provider, as well as in that it has a longstanding gender disparity, with women accounting for approximately 90% of nurses. [2]

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Physical, psychological and psychosocial challenges contribute to musculoskeletal disorder among nurse including both genders working in different hospital. [2] There are studies that shows that there are high prevalence of back pain disorder in women an d married nurses in comparison with male nurses and it shows that risk of LBP in women was 2.44 times more than the men nurses.[3][4]

One of the primary reason people look for clinical consideration is low back torment (LBP) which is widely prevalent in everyone, but the problem is significantly more prevalent in medical healthcare and, in particular, nurses. The most risky occupation for LBP, whose rates are surpassing heavy industry workforce, is nursing. Besides, the lifetime commonness of low back torment in nurses is higher than in everybody, with report as high as 90%. Moreover, LBP recurrence in nurses surpasses 70%. The job satisfaction and wellbeing of nurses has been drastically affected due low back pain.[3]

The effect of LBP incorporates: loss of physical capacity and function; crumbling of general wellbeing and reconditioning(loss of muscle tone and weight acquired);consistent or episodic pain or expansion in the degree of the torment; loss of social working showed as diminished interest in friendly and recreation exercise; family stress or loss of gathering and local area relatedness(frequently associated with issues related to unsatisfied job and with income);and interruption of mental working showed through a sleep in disorder irritation anxiety somatic complain and depression.[5]

Shift work, particularly night shift, is one of the most common causes of circadian rhythm disruption, resulting in significant alterations of sleep and biological functions, which, in turn, can affect the physical and psychological well-being and negatively condition work performance. [6]Paola Ferri et al, 2016 founded that 86%. Nurses were engaged in rotating night shifts. They reported the lowest average score in the units of job satisfaction, quality of life and quantity of sleep, with more frequent chronic fatigue, psychological, and cardiovascular symptoms as compared with the day shift workers, in a statistically significant vital mechanism.[6]

Nurses are those individual staffs who are in continuous contact with the patient in the hospital. They generally knowingly or unknowingly injure their back because of the physical burden associated with the manual handling of the patient. Nurses while working include lots of repetitive movement like repetitive compressing, twisting and loading of the disc in the flexed posture that intent increases the risk for internal disc disruption and annular tears.[7][5] Consistent and rehashed patient lifting and moving with restriction due to poor ergonomics of hospital equipment causes physiological stress in nurses. Nurses who perform tasks such as lifting, shifting client manually, repositioning, as well as transferring are more inclined to produce LBP unlike nurses who performed certain tasks that do not involve lifting or shifting client manually. Besides that, working hours and overtime are intended, that further increase the exposure to physical demand.[3] Munyao,et. al. 2020 back pain was first experienced in the 1-5years of their work experience. A majority (55%) worked more than 48 hours in seven days and 95% reported that there was enough heavy weight lifting equipment in the hospital.[8] Thus, LBP is one of the most important concerns in nursing profession, where high work load in delivery of healthcare services do have a considerable impact on the care profession.[9]

Naveen Ramesh, 2013 it was found that (67.7%) indicated that they need the autonomy to make patient care decisions, (74.9%) were unable to balance their work and family lives, (98.2%) were stressed in their work and (81.3%) of nurses were unable to complete their work in the time available. One of the most significant components of human health is quality of life (QOL). It is stationed in a physical, cultural, and social setting. Poor QOL can always lead to reduce work efficiency and early retirement from the job. [1]

Obesity is well known to have an impact on important health related quality of life, such as physical health, emotional well-being, and psychosocial functioning. [10] Researchers say that there is huge change in the quality-of-life score among the BMI categories, which significantly gets worsen with increase in BMI. Subsequently presence of obesity or increase BMI affects the individual physical wellbeing and increases the number of illnesses. Thus, obesity is independently related to physical functioning.so definitely increase body weight and acquired co-morbid illness worsens the quality of life of individual.[11] There are some available researches done which shows that the relationship between the LBP and BMI exist. In their researches researcher stated that the prevalence of LBP increased with increasing values of BMI for both sexes.[12] Rahman shri etal,2009 in his studies talked that overweight and obesity have the strongest association with seeking care for low back pain and chronic low back pain.[12] There are studies which show the obese person faces lots of difficulty while sleeping. Insomnia has a major role in predisposing one to overconsumption of energy which ultimately leads to weight gain. Studies shows that shorter sleep durations (5 hours per night versus 8 hours per night) were associated with 15.5% lower leptin levels and 14.9% higher ghrelin levels, independent of BMI, which may indicate that chronically shortened sleep duration could increase appetite, leading to overconsumption. (13)

Hypothesis

There is no significant relation in mechanical low back pain related to disability and quality of life in obese and non-obese nurses working in two different shifts.

Null Hypothesis

There will be a significant relation in mechanical low back pain related to disability and quality of life in obese and non-obese nurses working in two different shifts

II. MATERIAL AND METHODS

Study Design: it is a correlational study design to assess how mechanical low back pain related disability and quality of life in obese and non-obese nurses working in different hospital. The sample are taken from the nurses working in different hospitals in India. Duration of this study was 6 months and this comprises of 380 participants. According to the inclusion criteria all gender are invited to take part in this study, with the mentioned age group of 25 years to 35 years. Nurses with the mechanical low back pain working in hospital in any of the shifts with an experience of at least of 1.5 to 2 years and above. Similarly for exclusion criteria the nurses who are below the age of 25 years and above the age of 35 years or pregnant /breast feeding or having any disease contributing to low back pain like, herniated intervertebral disk, degenerated arthritis of lumbar palsy, spondylolisthesis, sciatic nerve pain, scoliosis, osteoporosis, metastatic disease etc), and the nurse who underwent resent surgery.

Method: For the study the related questionnaires was made relevant to the topic which included, demographic data, HRQOL scale, MOLBPQ scale, and VAS . Then those questionnaires in the Google form format were circulated through an online platform to nurses who are working in various hospitals, by keeping in mind consideration of exclusion and inclusion criteria. The data was collected during the period of 15 December 2021 to 30th February 2022. The participant in the study was voluntary and informed consent was obtained. The participating students were briefed about the purpose of the study and informed that their data would be safe and was guaranteed confidentiality. The scale used to collect the data is health related quality of life, Modified Oswestry Low Back Pain Disability questioner (MOLBPDQ) BMI, Numerical pain rating scale

III. RESULT: -

Table No 1: -Showing the descriptive statistics of age, weight, height, BMI on the basis of gender.

	AGE		**Weight (kg)**		**Height**		**BMI**	
	Female	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**
Valid	230	150	230	150	230	150	230	150
Missing	0	0	0	0	0	0	0	0
Mean	29.257	29.047	165.643	168.193	69.043	73.700	25.103	25.907
Std. Error of Mean	0.216	0.269	0.545	0.662	0.945	1.296	0.299	0.372
Std. Deviation	3.273	3.298	8.271	8.112	14.331	15.867	4.538	4.551
Variance	10.716	10.877	68.414	65.808	205.369	251.768	20.591	20.716
Skewness	0.664	0.461	0.096	-0.200	0.527	0.233	0.444	0.164
Std. Error of Skewness	0.160	0.198	0.160	0.198	0.160	0.198	0.160	0.198
Kurtosis	-0.522	-1.082	-1.112	-1.061	-0.366	-0.988	-1.052	-1.243
Std. Error of Kurtosis	0.320	0.394	0.320	0.394	0.320	0.394	0.320	0.394
Shapiro-Wilk	0.924	0.903	0.956	0.950	0.964	0.965	0.922	0.939
P-value of Shapiro-Wilk	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001

Note. Excluded 80 rows from the analysis that correspond to the missing values of the split-by variable Gender.

According to table no 1:-

- The mean and stander deviation of female in terms of age is exhibiting 29.257±3.273 as well as the mean and stander deviation of male in terms of age is manifested as 29.047±3.298.
- The mean and stander deviation of female in terms of weight is exhibited as 165.643 ± 8.112 as well as the mean and stander deviation of male in terms of weight is exhibited as168.193 ±8.112.
- The mean and stander deviation of female in terms of height is exhibited as 69.043 ±14.331 as well as the mean and stander deviation of male in terms of height is exhibited as 73.700 ±15.867.

- The mean and stander deviation of female in terms of BMI is exhibited as 25.103 ±4.538 as well as the mean and stander deviation of male in terms of BMI is exhibited as25.907 ± 4.551.
- The skewness in female in terms of age is shifting toward right side with the score of 0.664 and the skewness in males in terms of age is shifting towards right side with the score value of 0.461
- The skewness in female in terms of weight is shifting toward right side with the score of 0.096 and the skewness in males in terms of weight is shifting towards left side with the score value of -0.200.
- The skewness in female in terms of height is shifting toward right side with the score of 0.527 and the skewness in males in terms of age is shifting towards right side wth the score value of 0.233
- The skewness in female in terms of age is shifting toward right side with the score of 0.444 and the skewness in males in terms of age is shifting towards right side wth the score value of 0.164
- The kurtosis in female in terms of age is showing broaden peak with the value of -0.522

and kurtosis in male in terms of age is showing broaden peak with the value of 1.082.

- The kurtosis in female in terms of weight is showing broaden peak with the value of -1.112 and kurtosis in male in terms of weight is showing broaden peak with the value of -1.061
- The kurtosis in female in terms of height is showing broaden peak with the value of -0.366 and kurtosis in male in terms of height is showing broaden peak with the value of -0.988.
- The kurtosis in female in terms of BMI is showing broaden peak with the value of -1.052

and kurtosis in male in terms of BMI is showing broaden peak with the value of -1.243.

Table no 2:- Showing the descriptive statistics of NPRS and MOLBPDQ score on the basis of gender.

	NPRS Scoring		**MOLBPDQ Scores (%)**			
	Female	**Male**	**Female**	**Male**		
Valid	230	150	230	150		
Missing	0	0	0	0		
Mean	5.626	5.673	67.313	65.627		
Std. Error of Mean	0.108	0.146	1.039	1.379		
Std. Deviation	1.643	1.793	15.753	16.893		
Variance	2.698	3.215	248.172	285.390		
Skewness	0.311	0.212	-0.976	-0.790		
Std. Error of Skewness		0.160	0.198		0.160	0.198
Kurtosis		-0.700	-0.886		-0.140	-0.678
Std. Error of Kurtosis		0.320	0.394		0.320	0.394
Shapiro-Wilk		0.941	0.943		0.864	0.863
P-value of Shapiro-Wilk		< .001	< .001		< .001	< .001

Note. Excluded 80 rows from the analysis that correspond to the missing values of the split-by variable Gender.

According to table no 2:-

- The mean and stander deviation in female in terms of NPRS scoring is estimated as 5.626 ±1.643 and the mean value and stander deviation in male in terms of NPRS score is manifested as 5.673 ±1.793.
- The mean and stander deviation in female in terms of MOLBPDQ scoring is estimated as 67.313 ±15.753 and the mean value and stander deviation in male in terms of MOLBPDQ score is manifested as 65.627 ±16.893.
- The skewness in female in terms of NPRS scoring is shifting toward right side with the score of 0.3111 and the skewness in males in terms of age is shifting towards right side wth the score value of 0.212
- The skewness in female in terms of NPRS scoring is shifting toward left side with the score of -0.976 and the skewness in males in terms of age is shifting towards left side wth the score value of -0.790.
- The kurtosis in female in terms of NPRS score is showing broaden peak with the value of -0.700 and kurtosis in male in terms of MOLBPDQ is showing broaden peak with the value of -0.886
- The kurtosis in female in terms of NPRS score is showing broaden peak with the value of -0.140 and kurtosis in male in terms of MOLBPDQ is showing broaden peak with the value of -0.678.

Table no 3: - Showing the descriptive statistics of HRQOL domains on the basis of gender.

		Valid	Missing	Mean	Std. Error of Mean	Std. Deviation
PF (%)	Female	230	0	73.026	1.104	16.744
PF (%)	Male	150	0	71.233	1.500	18.373
RPH (%)	Female	230	0	54.783	1.782	27.024
RPH (%)	Male	150	0	53.500	2.219	27.175
REP (%)	Female	230	0	50.892	1.844	27.968
REP (%)	Male	150	0	51.116	2.178	26.678
E/F (%)	Female	230	0	49.109	0.723	10.967
E/F (%)	Male	150	0	50.167	0.942	11.534
Ewb (%)	Female	230	0	49.826	0.811	12.294
Ewb (%)	Male	150	0	49.013	0.856	10.488
SF (%)	Female	230	0	45.185	1.080	16.385
SF (%)	Male	150	0	48.103	1.244	15.233
P (%)	Female	230	0	48.893	1.159	17.578
P (%)	Male	150	0	49.167	1.285	15.744
GH (%)	Female	230	0	53.109	0.822	12.469
GH (%)	Male	150	0	52.767	1.080	13.229
HC (%)	Female	230	0	51.739	1.311	19.886
HC (%)	Male	150	0	52.000	1.613	19.755

Note. Excluded 80 rows from the analysis that correspond to the missing values of the split-by variable Gender

According to table no 3: -

- PF- The mean and stander deviation value of physical function in females is presented as 73.026 ± 16.744 similarly the mean and stander deviation value of physical function.in male is presented 71.233±18.373.
- RPH- The mean and stander deviation value of RPH in females is presented as 54.783± 27.024 similarly the mean and stander deviation value of RPH in male is presented 53.500±27.175.
- REP- The mean and stander deviation value of REP in females is presented as 50.892 ± 27.968 similarly the mean and stander deviation value of REP in male is presented 51.116±26.678.
- E/F- The mean and stander deviation value of E/F in females is presented as 49.826±12.294 similarly the mean and stander deviation value of E/F in male is presented 49.013±10.488.
- EWB- The mean and stander deviation value of EWB in females is presented as 45.826± 16.385 similarly the mean and stander deviation value of EWB in male is presented 48.103±15.233
- SF- The mean and stander deviation value of SF in females is presented as 45.185 ±16.385 similarly the mean and stander deviation value of SF in male is presented 48.103±15.233.
- P- The mean and stander deviation value of P in females is presented as 48.893 ±17.578similarly the mean and stander deviation value of P in male is presented 49.167+-15.744.
- GH- The mean and stander deviation value of GH in females is presented as 53.109±12.469 similarly the mean and stander deviation value of GH in male is presented 52.767±13.229.
- HC- The mean and stander deviation value of HC in females is presented as 51.739±19.886 similarly the mean and stander deviation value of HC in male is presented 52.000±19.755.

Table no 4:-showing the descriptive statistics of HRQOL factor in physical and mental score on the basis of gender.

	PCS-12		MCS-12	
	Female	Male	Female	Male
Valid	230	150	230	150
Missing	0	0	0	0
Mean	43.083	43.122	38.905	38.818
Std. Error of Mean	0.364	0.483	0.455	0.528
Std. Deviation	5.518	5.911	6.907	6.472
Variance	30.443	34.943	47.701	41.889
Skewness	-0.560	-0.717	0.161	0.463

	PCS-12		MCS-12	
	Female	**Male**	**Female**	**Male**
Std. Error of Skewness	0.160	0.198	0.160	0.198
Kurtosis	0.690	0.420	-0.296	0.234
Std. Error of Kurtosis	0.320	0.394	0.320	0.394
Shapiro-Wilk	0.979	0.958	0.992	0.980
P-value of Shapiro-Wilk	0.002	< .001	0.211	0.025

Note. Excluded 80 rows from the analysis that correspond to the missing values of the split-by variable Gender.

According to table no 4:-

- The mean and stander deviation value of physical (PCS12) score in female is 43.083±5.518 similarly mean and standard deviation value of physical (PCS12) score in male is 43.122±5.911 respectively.
- The mean and stander deviation value of mental (MCS12) score in female is 38.905±6.907 similarly mean and standard deviation value of mental (MCS12) score in male is 38.818±6.472 respectively.
- The skewness value of physical (PCS 12) score in female is shifting towards left side with the score of -0.560 similarly the skewness of physical (PCS 12) score in male is shifting towards left side -0.717.
- The skewness value of mental (MCS12) score in female is shifting towards right side with the score of 0.161 similarly the skewness of mental (MCS12) score in male is shifting towards right side 0.463.
- The kurtosis value of physical (PCS12) score in female is blunt peak with the value of 0.690 and similarly the kurtosis of physical (PCS 12) score is showing the blunt peak with the value of 0.420.
- The kurtosis value of mental (MCS 12) score in female is blunt peak with the value of -0.296 and similarly the kurtosis of mental (MCS12) score is showing the broaden peak with the value of 0.234.

Table no 5:- Showing independent sample T-test of respective domains on the basis of gender.

Independent Samples T-Test

	t	**df**	**P**	**Cohen's d**
AGE	0.609	378	0.543	0.064
Weight (kg)	-2.960	378	0.003	-0.311
Height	-2.967	378	0.003	-0.311
BMI	-1.685	378	0.093	-0.177
NPRS Scoring	-0.264	378	0.792	-0.028
MOLBPDQ Scores (%)	0.991	378	0.322	0.104
PF (%)	0.981	378	0.327	0.103
RPH (%)	0.451	378	0.652	0.047
REP (%)	-0.078	378	0.938	-0.008
E/F (%)	-0.901	378	0.368	-0.095
Ewb (%)	0.667	378	0.505	0.070
SF (%)	-1.744	378	0.082	-0.183
P (%)	-0.155	378	0.877	-0.016
GH (%)	0.255	378	0.799	0.027
HC (%)	-0.125	378	0.900	-0.013
PCS-12	-0.066	378	0.948	-0.007
MCS-12	0.123	378	0.902	0.013

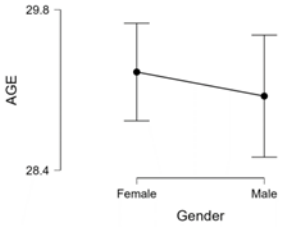
Note. Student's t-test.

- In age: t-value is 0.609, p-value is 0.543 and the Cohen’s d-value is 0.064
- In Weight: t-value is -2.960, p-value is 0.003 and the Cohen’s d-value is –0.311
- In Height: t- value is -2.967, p-value is 0.003 and the Cohen’s d-value is -0.311
- In BMI: t-value is -1685, p-value is 0.093 and the Cohen’s d-value is -0.177
- In NPRS: t-value is -0.26, p-value is 0.093 and the Cohen’s d-value is -0.028
- In MOLBPDQ score: t-value is 0.991, p-value is 0.322 and the Cohen’s d-value is 0.104
- In PF: t-value is 0.981, p-value is 0.322 and the Cohen’s d-value is 0.103

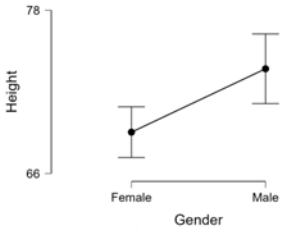
- In RPH: t-value is 0.451, p-value is 0.652 and the Cohen's d-value is 0.047
- In REP: t- value is -0.078, p-value is 0.938 and the Cohen's d-value is -0.008
- In E/F: t-value is -0.901, p-value is 0.368 and the Cohen's d-value is -0.095
- In Ewb: t-value is 0.667, p-value is 0.505 and the Cohen's d-value is 0.070
- In SF: t-value is -1.744, p-value is 0.082 and the Cohen's d-value is -0.183
- In P: t-value is -0.155, p-value is 0.877 and the Cohen's d-value is -0.016
- In GH: t-value is 0.255, p-value is 0.799 and the Cohen's d-value is 0.027
- In HC: t-value is -0.125, p-value is 0.900 and the Cohen's d-value is -0.013
- In PCS-12: t-value is -0.066, p-value is 0.948 and the Cohen's d- value is -0.007
- In MCS-12: t- value is 0.123, p-value is 0.902 and the Cohen's d-value is 0.01

Descriptive Plots

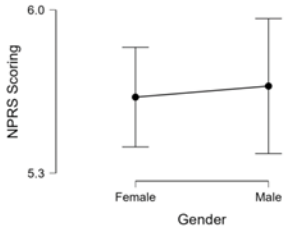
AGE



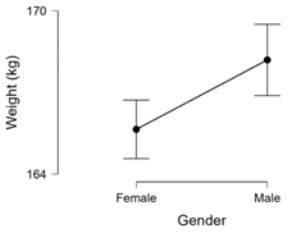
Height



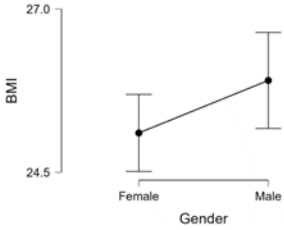
NPRS Scoring



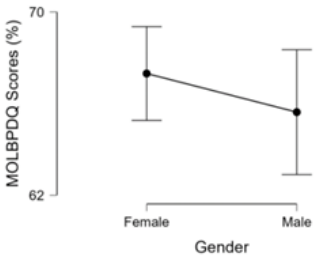
Weight (kg)



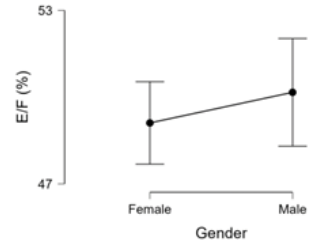
BMI



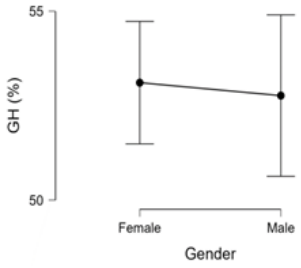
MOLBPDQ Scores (%)



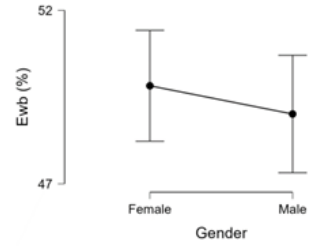
E/F (%)



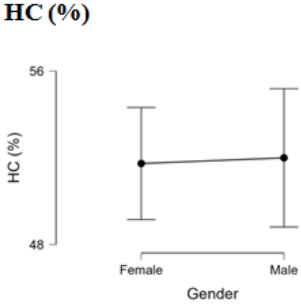
GH (%)



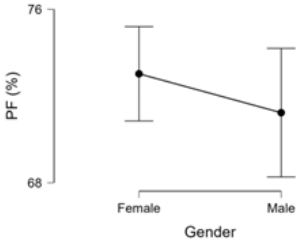
Ewb (%)

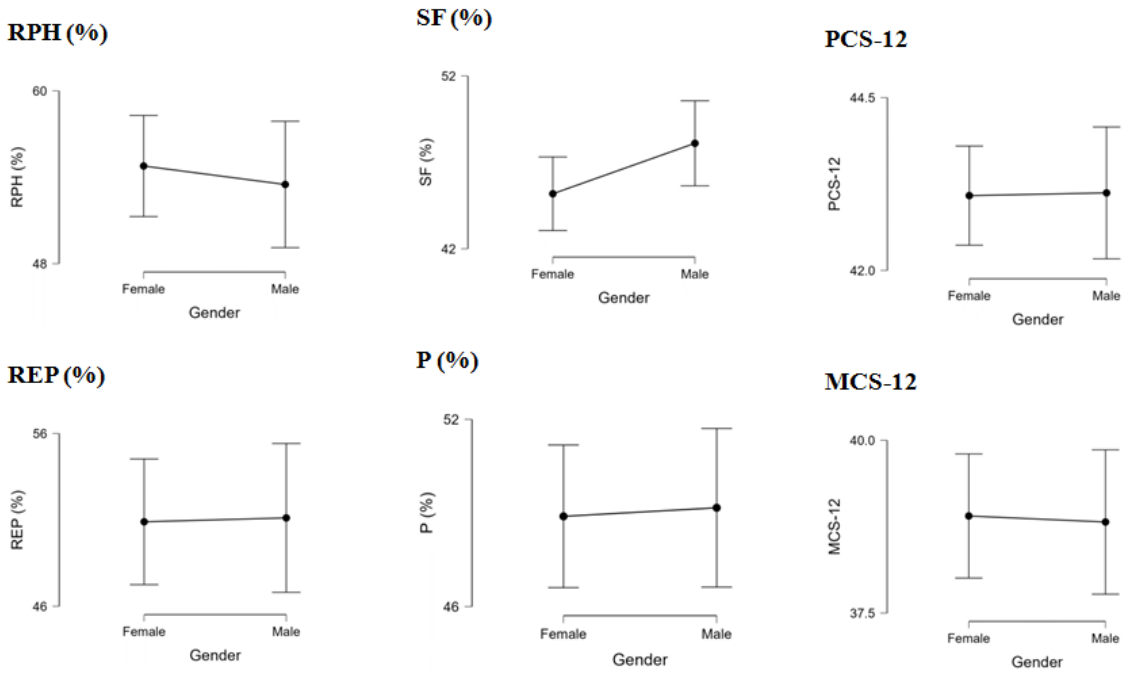


HC (%)



PF (%)





Graph No 1:- Showing the graphical representation of different variables on the basis of gender

Table No 6:- Showing the partial correlation between NPRS and MOLBPDQ scoring on the basis of gender.

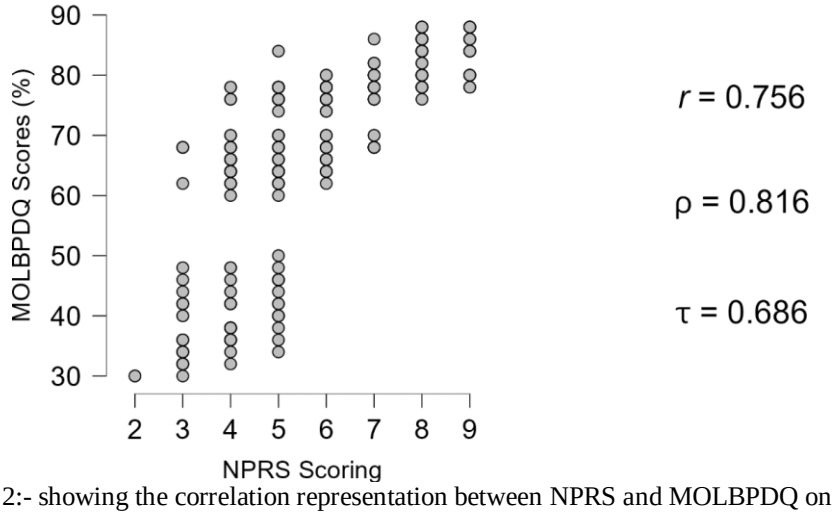
	Pearson		Spearman		Kendall	
	R	P	rho	P	tau B	P
NPRS Scoring - MOLBPDQ Scores (%)	0.756***	< .001	0.816***	< .001	0.686***	< .001

Note. Conditioned on variables: AGE
* p < .05, ** p < .01, *** p < .001

According to table no 6:-

- The Pearson shows r - value as 0.756 with its p-value as <0.001 respectively.
- The Spearman shows rho value as o.816 with its p-value of 0.001.
- The Kendell shows tau B value as 0.686 with p-value as 0.001.

Graph No: - 2



Graph no 2:- showing the correlation representation between NPRS and MOLBPDQ on the basis of gender.

Table No 7:- Showing the correlation table of domains taken in study on the basis of gender.

			Pearson		Spearman		Kendall	
		N	r	p	rho	P	tau B	P
MOLBPDQ Scores (%)	- PCS-12	380	0.158**	0.002	0.135**	0.008	0.093**	0.009
MOLBPDQ Scores (%)	- MCS-12	380	-0.135**	0.009	-0.157**	0.002	-0.109**	0.002
MOLBPDQ Scores (%)	- NPRS Scoring	380	0.760***	< .001	0.818***	< .001	0.690***	< .001
PCS-12	- MCS-12	380	-0.072	0.163	-0.080	0.121	-0.054	0.116
PCS-12	- NPRS Scoring	380	0.087	0.091	0.089	0.084	0.066	0.076
MCS-12	- NPRS Scoring	380	-0.121*	0.018	-0.135**	0.008	-0.098**	0.008

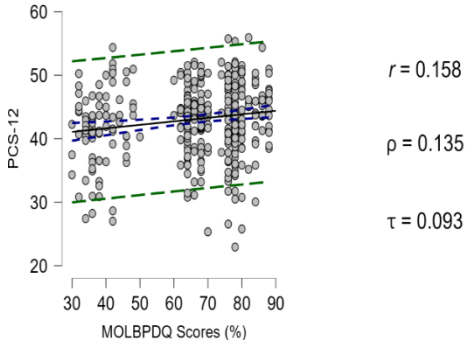
* p < .05, ** p < .01, *** p < .001

According to table no 7: -

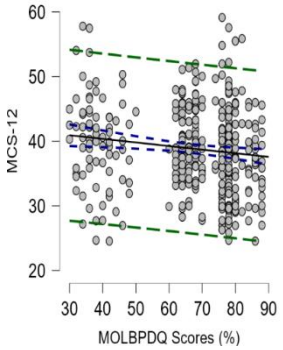
- In the correlation between MOLBPDQ scores and physical score the Pearson show r value as 0.158 and p value as 0.002 respectively. Similarly spearman shows rho value as 0.135 and p value as 0.008 and the last Kendall shows tau B value as 0.093 and p value as 0.009.
- In the correlation between MOLBPDQ scores and mental score the Pearson show r value as 0.135 and p value as 0.009 respectively. Similarly spearman shows rho value as 0.157 and p value as 0.002 and the last Kendall shows tau B value as 0.109 and p value as 0.002.
- In the correlation between MOLBPDQ scores and NPRS score the Pearson show r value as 0.760 and p value as < .001 respectively. Similarly spearman shows rho value as 0.818 and p value as < .001 and the last Kendall shows tau B value as 0.690 and p value as <.001
- In the correlation between PCS-12 scores and MCS-12 score the Pearson show r value as 0.072 and p value as 0.163 respectively. Similarly spearman shows rho value as 0.080 and p value as 0.121 and the last Kendall shows tau B value as 0.054 and p value as 0.116.
- In the correlation between PCS-12 scores and NPRS score the Pearson show r value as 0.087 and p value as 0.091 respectively. Similarly spearman shows rho value as 0.089 and p value as 0.084 and the last Kendall shows tau B value as 0.066 and p value as 0.076.
- In the correlation between MCS-12 scores and NPRS score the Pearson show r value as 0.121 and p value as 0.018 respectively. Similarly spearman shows rho value as 0.135 and p value as 0.008 and the last Kendall shows tau B value as 0.098 and p value as 0.008.

Graph No 3:-

MOLBPDQ Scores (%) vs. PCS-12



MOLBPDQ Scores (%) vs. MCS-12

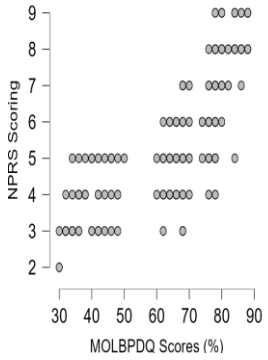


r = -0.135

ρ = -0.157

τ = -0.109

MOLBPDQ Scores (%) vs. NPRS Scoring

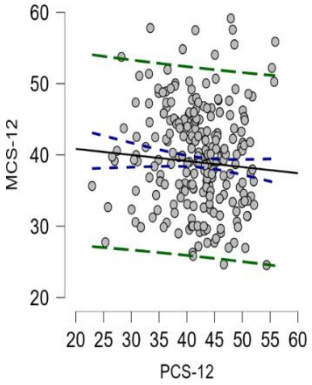


r = 0.760

ρ = 0.818

τ = 0.690

PCS-12 vs. MCS-12

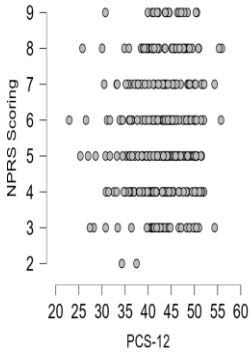


r = -0.072

ρ = -0.080

τ = -0.054

PCS-12 vs. NPRS Scoring

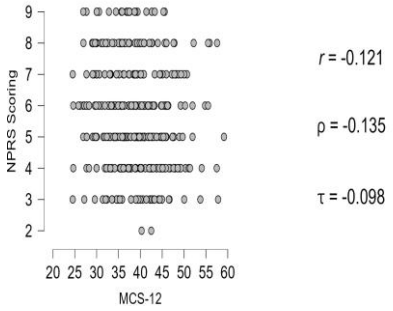


r = 0.087

ρ = 0.089

τ = 0.066

MCS-12 vs. NPRS Scoring



Graph No 3: - Showing the graphical representation of correlation in different domains on the basis of gender.

IV. DISCUSSION

It was attempted to analyse on the basis of gender the back pain related disability and its effect on the quality of life in obese and non-obese nurses working in different hospitals with a sample of 380. The approach was innovative because the combination of these instruments to contextualize the mechanical low back pain was not found in the literature. It is important to emphasize the importance of research base on the gender, considering that these knowledge ,information will help in the planning and execution of action aimed at preventing work related low back pain in nurse .

This study included 380 nurses' professionals who were measured and analysed for pain using the NPRS, disability using the MOLBPDQ, health-related QOL using the SF-36, and physical and mental scores using the SF-12. There were 380 participants who agreed to take part in the study, with the female sex accounting for 60.52 percent of the population and the male population accounting for 39.48 percent of the population (150 out of 380).

According to studies, women suffer from lower back discomfort at a larger rate (61%) than males (37 percent). Although, according to the statistics in this study, both genders experience the same level of discomfort. (Voice of Anna 14) Females have a higher average age than males, while males have a higher average weight than females, with males having a higher average height than females. Obesity, which is a contributing factor in lumbar pain, causes a loss in abdominal muscular strength and an increase in lumbar lordosis (A KARAHAN15), whereas the male population in this study had a higher BMI than the female population. Although the statistically shows that both the gender suffered almost same level of pain but comparative male suffered more pain than female.

Researches showed that higher population (61%) of women suffered from low back pain than men (37%). Although in this study the statistic shows that each gender suffers same level of pain [14]. According to the present investigation we found female age more than males , and male weight are more than female with males being more dominant in height as compare to female. Obesity, which is one of the contributing factors for lumbar pain, leads to decrease abdominal muscle strength and increase the level of lumbar lordosis [15] while in this study the male population was found to have increased BMI as compare to female population. Although the statistically shows that both the gender suffers almost same level of pain but comparative male suffers more pain than female.

The pain score according to the result analysis, the NPRS score is mentioning that males are having slightly more pain as comparing with females. Now similarly, the MOLBPDQ score presented that, females have more disability than males, or we can say, that females are more prone to the disability as compare to males.

However , there is nine domains of HRQOL- SF 36 questionnaire i.e., Physical functioning , Role limitation due to physical health, role limitation due to emotional problem , energy/fatigue, emotional wellbeing, social functioning, pain, general health, health change.

Numerous studies have shown that strong chronic LBP affects daily functioning and significantly lowers the QOL which was confirmed in our own study. The results showed that people suffering from LBP rated the quality of their life the lowest in the physical domain.[16]

Female are more physically functioned as compare to males, but females are slightly affected with their roles, which is limited due to emotional problems , both male and female are approximately equally affected or function in their life style.

According to this study, the fourth domain is energy/'fatigue. When compared to females, males appear to lose more energy and become fatigued more quickly. As fatigue appears to play an important role in the cause of psychophysical overload, it produces feelings of physical and mental tiredness that alter mental alertness, implying the ability to work efficiently. [17]

Emotional well-being of the female is more affected than male and because of which social functioning of the female is drastically affected than male. The general health of female was found to little bit better than the male and the health change in male is slightly more than the female.
Occurrence of low back pain as health problem in nurses working in different hospital contribute to show the need for monitoring and bring required changes for nursing staffs and improve their condition.

V. CONCLUSION

Low back pain is the occupational hazards for the nursing staffs. The result here in shows the high prevalence of back pain among the nurses working in different hospital with significant decrease in the quality of life among nurses who have work-related LBP of which specifically male with high BMI is been more affected. And the study also revels that females are more physically function as compare to male. As male lose more energy and becomes fatigue more quickly.
Further studies that assess the impact of nurses' mental and physical well-being on their life and their work performance as well as studies examining institutional factors contributing to this serious problem working are urgently required.

LIMITATION

- Time was less for the study.
- Number of sample could have increase.
- More parameters could have included in the study.
- Study had a limited small sample size in respective groups as compare to their population boom.
- Different variables are not taken in the study.

ETHICAL CLEARANCE

As per the Ref No. 23/20MPT-2021 School of Health Science Garden City University given clearance for the research. There is no finding and no conflict of interest.

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