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Original Research Article

Asses knowledge and practices of body mechanic technique among nurses at Punjab institute of cardiology Lahore

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Abstract: Body mechanic means the use of body as a machine and as a mean of movements efficiently. It should be practiced in every moment of life. People from all profession are almost affected with back pain and other musculoskeletal problems. Nurses experience low back pain more than other group, incidence varies among countries. Nurses need to use body mechanic technique during performing every procedure. They can use body mechanics more effectively if they have well knowledge about it. Purpose of this study was to assess the knowledge and practices of body mechanic techniques. A cross sectional descriptive design was used for this study. A sample of 216 nurses was taken by using convenient sample technique. Instrument used for this study was set of questioner compose of demographic data, nurse's knowledge and practices of body mechanic technique. Scoring was based on likers scale. Data was analyzed on SPSS (version 21) and results were presented in tables, pie charts and table for the demographic data, bar charts and table was used for the knowledge and practices of the participants. The demographic data revealed that all of the nurses were female and 41.3% (n=93) belong to the age group of 26-30years. Majority were from the ICU/CCU and having job experience of 0-5 years. 173% (n=173) were having diploma of general nursing and midwife as a qualification. 65% of nurses had fair knowledge about the body mechanic technique and 35% with poor knowledge. In term of practices, 60% nurses were practicing body mechanic techniques while the rest of 40% were not practicing. However, back pain is prevalent problem among nurses. Majority of the nurses was having knowledge about body mechanic technique but less was practicing it. Nurses need to be more educated about body mechanic technique and they should be emphasized to practice it in performing nursing procedure as well as in routine life.
Keywords: Body mechanic, Knowledge, practices, nurse, Pakistan

INTRODUCTION

Body mechanic is a word which describes how we use our body in daily routine. It includes the ways how we maintain the body when we sit, stand, bend, and lift something. By using body mechanics, we can use our body in a safe manner and we can prevent from many musculoskeletal injuries including low back pain. When we don't move our body safely and not follow the body mechanic techniques our spine is at risk of getting injury for this reason because it is important to have good knowledge about body mechanic technique in order to apply its principle in daily life to prevent from various musculoskeletal injuries [1]. Around the world, more common and significant problem is the chronic low back pain among all health care workers including nursing personnel. Maintaining good body posture is vital in reducing this problem. Adequate teaching about maintaining the proper body position can minimize the problem and reduce the suffering of the nursing staffs [2]. In United States, it has been estimated that the number of adult population who experience low back pain at least once in their lifetime is 60%-80% [3].Low back is the major health problem for many occupations and nursing is one of them. Many Nurses suffering from the problem of low back pain due to the nature of their work such as performing various tasks most of the time in upright position, including lifting and moving equipment, handling patients. According to Department of Labor of Bureau of labor statistics [4] Registered nurses ranked fifth who use for manual lifting and transferring the patients and have musculoskeletal injuries. Good body mechanic technique is moving, handling patients and lifting heavy object in a safe manner. Many of the nursing procedures are directly related to the utilization of muscles [5]. Proper and effective body mechanic is possible only

when nurses have good knowledge about it. Most common work related musculoskeletal disorder was lower back pain which is affecting 79.4% of nurses. Studies on nursing activities and body mechanics in clinical area are mostly related to low back pain. Studies showed that mostly nurses who had back pain rarely used the body mechanic principle [6].

Studies revealed that musculoskeletal disorders are more common among nurses than the other group. A study shown that the overall prevalence of low back pain in hospital staff was 65% and the highest rate was reported 77.1% among nurses [4].

Similarly, back pain and injuries are more frequent and highly prevalent among nurses due to mobilizing the heavy and obese patients. Risk of back injury can be reduced by adopting special intervention such as body mechanics [7].

Nursing personnel all over the world facing a significant problem of low back pain and it is mainly due to the manual lifting and handling the heavy objects and patients [5].

Nurses are believed to be having knowledge about the risk factors and preventive measures and apply effectively into practice in order to prevent from musculoskeletal and back injuries [8].

This indicates that nurses needs to be well informed about the risk factors and use of body mechanics technique in order to perform their duty safely. To practice the safe body alignment and techniques nurses should acquire knowledge and practices. Therefore, this study is aim to determine the knowledge and practices of nurses related to the body mechanic technique in PIC hospital Lahore

Research problem

It has been observed that many nurses request for the change of duty from the busy department or requesting for leave in order to take rest because of back pain and other musculoskeletal problem. Many competent nurses leave the bed side job and transfer to the education or management because of the low back pain. The Bureau of Labor Statistics reported that nearly 80% of the musculoskeletal injuries among nurses are directly related to the handling and shifting of the patients with inaccurate turning motions, nearly 17% of the nursing worker leave work due to job related injury [9]. Lack of knowledge and practices related to proper body mechanics techniques causes the morbidity increase among nurses. The sickness of nurses not only reduces the quality care of patients, it also declines the productivity and efficiency of nurses.

Significance of the study

This study will help to collect the information related to the knowledge of body mechanics techniques among nurses and this study will be helpful in developing learning program for nurses about body mechanic technique that further will reduce the morbidity related to the musculoskeletal injuries.

Objective

- To assess the nurses' knowledge towards body mechanic technique
- To assess the nurses practices towards body mechanics technique
- To check association of qualification with knowledge and practices.

LITRATURE REVIEW

This chapter presents critical analysis of relevant studies from around different countries. Literatures, published articles reviewed with primarily focus, about the knowledge and practices of body mechanic technique among nurses. Mainly the Google scholar is used to review the different literature from around the world.

A cross sectional descriptive study conducted in the province of Gaziantep, Turkey revealed that 84.2% nurses complain of low back pain and 66.4% complain of moderate to severe pain.it was found that nurses who did not get education and training about lifting and handling patients by using body mechanic technique, who remain standing for long time and bending forward for the interventions are 86.5% who stated that they sometimes compliance with body mechanics were 56.3% [10].

Al-Eisa and Al-Abbad [11] conducted a study in Saudi Arabia about the handling patient policy among nurses. Lack of patient handling policy identified with lack of awareness about the musculoskeletal problems. Recommendation was given to increase the level of awareness and using proper body mechanic in order to improve safe patient handling.

A cohort study conducted to identify the factors for the development of musculoskeletal injuries. Cohort study used to check the causal relationship between musculoskeletal problems and risk factor. Identified risk factors were included awkward body position of the nurses, heavy work, and repeating the unnecessary body movements [12].

A research study was conducted on musculoskeletal disorders among female nurses in a rural Japanese hospital. Data were gathered by means of a self-reporting questionnaire from 305 female staff nurse. Lower back pain (LBP) was the most commonly

reported musculoskeletal disorders, affecting 59% of all nurses [7].

A study conducted in Spain about effectiveness of the body mechanic checklist tool. The results revealed that with the addition of the knowledge there was reduction in the musculoskeletal injuries and there was an increase in the practices of the body mechanic technique [8].

A cross sectional study was conducted to investigate the prevalence of low back pain and musculoskeletal injuries among nurses in Iran. Result revealed that mostly nurses experienced musculoskeletal injuries at least in one region of the body within the period of 12 months. And it was directly related to heavy work of lifting and transferring the patients and over exertion [13].

Mwilia [8] conducted cross sectional study at Tanzania.Tthe purpose of the study was to explore the relationship between prevalence of work related musculoskeletal injuries and nurses knowledge A sample for 312 nurses was taken. Result of the study showed that there is a high prevalence of (73.6%) back pain. 50% of the nurses were knowledgeable about the risk factors of the back pain and use of body mechanic technique but the majority (60%) of participants reported not implementing the body mechanic technique. Barriers included insufficient training, personal attitude and knowledge versus behavior, and work environment.

An explorative study was conducted to assess the utilization of body mechanic technique among nurses in turkey. Data collected through observation and analyzed by using chi square. Results showed that majority (87.5%) of the nurses suffer from low back pain due to improper patient handling including shifting and transferring the patient in sitting position on the bed, not keeping the body in aligned position.79.4% nurses move the patient in standing position, and wearing heals,71.4% work without assistance. Study concluded that nurses do not follow practices of body mechanic technique which leads to back pain [8].

METHODOLOGY

Quantitative descriptive cross sectional design was used in this study. Study was conducted at the Punjab Institute of Cardiology (PIC) hospital jail road Lahore. The study population was 470 nurses of Punjab institute of cardiology hospital. Sample size was 216 calculated according to the formula by Yamane [14]**.** A convenient sample technique was used. Staff nurses from all departments working in PIC hospital was included who were willing to participate in the study. All other health care worker, head nurse, supervisors and nurses who are not willing to participate in the study. A well-constructed questioners adopted from [1] was utilized to collect the data. The adopted questionnaire was based on Thurston scale 'yes' and 'No' which was converted to 5points likers scale. Cronbach's Alpha was checked which was .80 for the knowledge questions and .70 for the practices questions and it was found reliable to use. Permission was granted after approval of synopsis from the principal of Lahore school of nursing and medical director of Punjab Institute of Cardiology Hospital Lahore. Informed consent was taken from the participants The data was analyzed by using the statistical package for social sciences (SPSS) version 21.

RESULTS

This chapter comprises on three sections, one is demographics section of participants, second section consist on knowledge of the participants about body mechan**i**c technique and the third section is about their practices.

Demographic datac practices and the third section is

Table-01: Shows the combine results of all question of demographic section

S.NO			Frequency	Percent
1	Department of the	ICU/CCU	65	30.1
	participant.	OT/Anesthesia	39	18.1
		Emergency	41	19.0
		Irfan block	20	9.3
		pre-op/pharmacy	6	2.8
		cardiology ward	39	18.1
		ECHO	6	2.8
		Total	216	100.0
2	Age of the participant	21-25	88	40.7
		26-30	93	43.1
		31-35yrs	28	13.0
		36-40yrs	7	3.2
			216	100.0
		Total		

3	Gender of the participant	Female	216	100.0
4	Professional education	Diploma in general nursing	173	80.1
	of the participant	and midwifery		
		PBSN/PSN		
		Total		
			43	19.9
			216	100.0
5	Job experience of the	0-5yrs	104	48.1
	participants	6-10 years	84	38.9
		11-15 years	27	12.5

Knowledge of the participants

Question # 1: Use of body mechanic can reduce the back pain table 2.1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	13	6.0	6.0	6.0
	disagree	34	15.7	15.7	21.8
	Neutral	33	15.3	15.3	37.0
	agree	109	50.5	50.5	87.5
	Strongly agree	27	12.5	12.5	100.0
	Total	216	100.0	100.0	

In this study 50.46% (n=109)of participants were agree that Use of body mechanic can reduce back pain,12.5% (n=27)were strongly agree, followed by 15.74% (n=34)disagree and 6.0%(n=13) were strongly disagree, 15.28% (n=33)having no knowledge about it, (Mean=3.48, SD =1.08) (see table 2.1).

Question # 2 Lifting heavier patient by using bed sheet is better than hands Table# 2.2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	6	2.8	2.8	2.8
	disagree	22	10.2	10.2	13.0
	neutral	21	9.7	9.7	22.7
	agree	119	55.1	55.1	77.8
	strongly agree	48	22.2	22.2	100.0
	Total	216	100.0	100.0	

The data shows, 55.09% (n=119)of respondents were agree for lifting heavier patient with sheet is better than hands, 22.22%(n=48) strongly agree, 10.19% (n=22) disagree, 2.778%(n=6) strongly disagree, 9.7% (n=21) were having no knowledge, with Mean=3.84, SD= .977) see table#2.2.

Question #3 I have back pain if i dont maintain the good posture while doing procedure Table # 2.3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	3.2	3.2	3.2
	disagree	24	11.1	11.1	14.4
	neutral	16	7.4	7.4	21.8
	agree	108	50.0	50.0	71.8
	stongly agree	61	28.2	28.2	100.0
	Total	216	100.0	100.0	

Results showed that 50% (n=115) participants were agreed for having back pain if they don't maintain the good posture while doing procedure, 28.24% (n=48) strongly agree, 11.11% (n=21) disagree, 3.24% (n=3) strongly disagree and 7.40% (n=29) were having no knowledge with mean Mean=3.89, SD=1.042) refer to table # 2.3.

Question# 4 Body mechanics practices maintain the proper body function Table # 2.4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	stongly disagree	3	1.4	1.4	1.4
	disagree	21	9.7	9.7	11.1
	neutral	29	13.4	13.4	24.5
	agree	115	53.2	53.2	77.8
	strongly agree	48	22.2	22.2	100.0
	Total	216	100.0	100.0	

Body mechanic practices maintain the proper body function, 53%(n=115)were agree, 22.22%(n=48)strongly agree,9.722%(n=21) disagree, 1.39%(n=3) strongly disagree and 13.43%(n=29) were neutral with Mean=3.85, SD= .923. (see table# 2.4).

Question #5 Body mechanic practices reduce the strain/spasm Table# 2.5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	1.9	1.9	1.9
	disagree	31	14.4	14.4	16.2
	neutral	35	16.2	16.2	32.4
	agree	119	55.1	55.1	87.5
	strongly agree	27	12.5	12.5	100.0
	Total	216	100.0	100.0	

Body mechanic practices reduce the back pain, 55.09% (n=119) were agree, 12.5% (n=27) strongly agree, 14.35%(n=14) disagree, 1.85% (n=4) strongly disagree,16.20%(n=35) neutral with Mean=3.62, SD= .942 see table# 2.5.

Question # 6 Body mechanic practices maintain the balance Table 2.6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.9	1.9	1.9
	disagree	41	19.0	19.0	20.8
	neutral	30	13.9	13.9	34.7
	agree	108	50.0	50.0	84.7
	strongly agree	33	15.3	15.3	100.0
	Total	216	100.0	100.0	

Results shows that, 50% (n=108) were agree about body mechanic practices maintain the balance, 15.28% (n=33) strongly agree, 18.98% (n=41) disagree, 1.85% (n=4) strongly disagree, 13.89% (n=30) were neutral with Mean=3.58, SD=1.02.refer to table #2.6.

Question # 7 use of continous muscle tension cause injuries and musculoskeletal pain Table # 2.7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	1.4	1.4	1.4
	disagree	26	12.0	12.0	13.4
	neutral	32	14.8	14.8	28.2
	agree	108	50.0	50.0	78.2
	strongly agree	47	21.8	21.8	100.0
	Total	216	100.0	100.0	

Results shown, 53.24% (n=115) were agree that Body mechanic use continuous muscles, 12.04%(n=26) strongly agree, 18.52% (n=40) disagree, 0.463%(n=1) strongly disagree and 15.74% (n=34)having no knowledge with Mean=3.58, SD= .942 see table # 2.7.

Question # 8 Object must be close to the gravity Table# 2.8					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	5	2.3	2.3	2.3
	disagree	26	12.0	12.0	14.4
	neutral	43	19.9	19.9	34.3
	agree	101	46.8	46.8	81.0
	strongly agree	41	19.0	19.0	100.0
	Total	216	100.0	100.0	

Object must be close to the gravity, 46.76% (n=101) were agree, 18.98% (=41) strongly agree, 12.04%(n=26) were disagree, 2.315%(n=5) were strongly disagree, 19.91% (n=43)were neutral with mean=3.68, SD= .991(Refer to table # 2.8.).

Question # 9 use of continous muscle tension cause injuries and musculoskeletal pain Table #2.9					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	1.4	1.4	1.4
	disagree	26	12.0	12.0	13.4
	neutral	32	14.8	14.8	28.2
	agree	108	50.0	50.0	78.2
	strongly agree	47	21.8	21.8	100.0
	Total	216	100.0	100.0	

Regarding the use of continuous muscle tension causes injuries and musculoskeletal pain, 50% (n=50) were agree, 21.76% (n=47) were strongly agree, 12.04% (n=26) disagree, 1.389% (n=3) strongly dis agree, 14.81% (n=32) having no knowledge with Mean=3.79, SD= .965, indicated in table # 2.9.

Question # 10: The principle of body mechanic is the act of ''attractive'' may produce less friction than reject Table # 2.10					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	1.9	1.9	1.9
	disagree	22	10.2	10.2	12.0
	neutral	46	21.3	21.3	33.3
	agree	108	50.0	50.0	83.3
	strongly agree	36	16.7	16.7	100.0
	Total	216	100.0	100.0	

Results shows 50% (n=108)of the respondent were agree about the principle of body mechanic,16.67% (n=36)were strongly agree, 21%(n=46) were neutral, 10.19% (n=22)were disagree and 1.852%(n=36) were strongly disagree with Mean=3.69, SD= .930. Details present in table # 2.10.

Question # 11: Injuries can be avoided through the body mechanics Table #2.11					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	9	4.2	4.2	4.2
	disagree	23	10.6	10.6	14.8
	neutral	38	17.6	17.6	32.4
	agree	115	53.2	53.2	85.6
	strongly agree	31	14.4	14.4	100.0
	Total	216	100.0	100.0	

Table shows, 53.24% (n=) were agree that injuries can be avoided by body mechanic technique, 14.35% (n=) were strongly agree, 10.65% (n=)were disagree, 4.167% (n=) were strongly disagree, 17.59% (n=) were neutral with Mean=3.63, SD= .994 refer to table # 2.11

Question # 2.12: I know the purpose of using body mechanics Table # 2.12					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disgree	4	1.9	1.9	1.9
	strongly agree	35	16.2	16.2	18.1
	neutral	48	22.2	22.2	40.3
	agree	98	45.4	45.4	85.6
	strongly agree	31	14.4	14.4	100.0
	Total	216	100.0	100.0	

Figure#12 shows 54.37% (n=) were agree, they know the purpose of using body mechanic, 14.35% (n=) strongly agree, 22.22% (n=), neutral, 16.20% (n=) were disagree, 1.85% (n=) were strongly disagree. See table #2.12.

Question # 13 : Heavy work activities like bending, twisting, and frequent heavy lifting contribute to low back pain Table # 13					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	2.8	2.8	2.8
	disagree	28	13.0	13.0	15.7
	neutral	34	15.7	15.7	31.5
	agree	107	49.5	49.5	81.0
	strongly disagree	41	19.0	19.0	100.0
	Total	216	100.0	100.0	

For'' Heavy work contribute to low back pain, 49.54% (n=) were agree,18.98% (n=) were strongly agree, 12.96% (n=) were disagree, 2.77% (n=) were strongly disagree, 15.74% (n=)were neutral with (Mean=3.69),(SD= 1.01), refer to table #13.

Question # 14: Improper use of body mechanics techniques cause spinal injuries Table# 2.14					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	1.9	1.9	1.9
	disagree	31	14.4	14.4	16.2
	neutral	38	17.6	17.6	33.8
	agree	116	53.7	53.7	87.5
	strongly agree	27	12.5	12.5	100.0
	Total	216	100.0	100.0	

Improper use of body mechanic 53.70% (n=) were agree, 12.5% were strongly agree, 14.35% (n=) disagree, 1.85% (n=) strongly disagree, 17.59% (n=)neutral with Mean=3.61, SD=.944(Table#2.14).

Question #15: Attire(shoes) play an important role to influence back pain Table # 2.15					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	1.9	1.9	1.9
	disagree	29	13.4	13.4	15.3
	neutral	40	18.5	18.5	33.8
	agree	109	50.5	50.5	84.3
	strongly agree	34	15.7	15.7	100.0
	Total	216	100.0	100.0	

Attire (Shoes) play an important role in back pain, 50.46% (n=) were agree, 15.74% (n=) were strongly agree, 13.43% (n=) were disagree, 1.85% (n=) were strongly disagree, 18.52% (n=) were neutral with Mean=3.61, SD= .944 see table # 2.15.

Practices of the participants

Question # 1 : I ask help from a friend if i have to lift big patient Table # 3.1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	2.8	2.8	2.8
	disagree	21	9.7	9.7	12.5
	neutral	34	15.7	15.7	28.2
	agree	97	44.9	44.9	73.1
	strongly agree	58	26.9	26.9	100.0
	Total	216	100.0	100.0	

Asking help from friend when lifting big patient, 44.9 (n=97) % agree, 26.9% (n=58) strongly agree, 15.4% (n=34) neutral, 23.6% (n=51) disagree, 3.2% (n=7) strongly disagree with mean =3.83, SD=1.021. See more detail in Tabl#3.1

Question # 2: I straighten knees and bending back when lifting object from the floor Table# 3.2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	3.2	3.2	3.2
	disagree	51	23.6	23.6	26.9
	neutral	33	15.3	15.3	42.1
	agree	95	44.0	44.0	86.1
	strongly agree	30	13.9	13.9	100.0
	Total	216	100.0	100.0	

For straighten knees and bending back when lifting object from the floor, 44.0% (n=95) agree, 13.9 (n=30) strongly agree, 15.3% (n=33) were neutral, 23.6% (n=51) disagree, 3.2% (n=7) were strongly disagree with Mean=3.42, SD= 1.092. Table# 3.2 can be seen for more detail.

Question # 3: I use the principle of body mechanics during procedure for removing patient from bed to chair Table# 3.3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	5	2.3	2.3	2.3
	disagree	40	18.5	18.5	20.8
	neutral	42	19.4	19.4	40.3
	agree	92	42.6	42.6	82.9
	strongly agree	37	17.1	17.1	100.0
	Total	216	100.0	100.0	

For using principle of body mechanics for shifting patient from bed to chair, 42.59% (n=92) were agree, 17.13% (n=37) were strongly agree, 19.44% (n=42) neutral, 18.5% (n=40) were disagree, 2.31% (n=5) were strongly disagree with Mean=3.54, SD= 1.051.see Table#3.3

Question # 4: I close my leg when moving patient in the bed Table # 3.4					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	3.2	3.2	3.2
	disagree	68	31.5	31.5	34.7
	neutral	41	19.0	19.0	53.7
	agree	73	33.8	33.8	87.5
	strongly agree	27	12.5	12.5	100.0
	Total	216	100.0	100.0	

Closing leg when mobilizing patient in the bed, 33.80% (n=73) agree, 12.50% (n=27) strongly agree, 18.98% (n=41) were neutral, 31.48% (n=68) were disagree, 3.24% (n=7) were strongly disagree with Mean=3.21, SD=1.116. See Table# 3.4

Question #5: I experience back pain previously Table # 3.5					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	3.2	3.2	3.2
	disagree	43	19.9	19.9	23.1
	neutral	37	17.1	17.1	40.3
	agree	104	48.1	48.1	88.4
	strongly agree	25	11.6	11.6	100.0
	Total	216	100.0	100.0	

Participants previously having back pain, 48.15% (n=104) were agree, 11.57% (n=25) strongly agree, 17.13% (n=37) were neutral, 19.91% (n=43) were disagree about this statement and 3.2%(n=7) were strongly disagree with Mean=3.45, SD1.038. See table3.5

Question # 6: I wear proper attire (shoes) during working time Table # 3.6					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	3.2	3.2	3.2
	disgaree	31	14.4	14.4	17.6
	neutral	35	16.2	16.2	33.8
	agree	105	48.6	48.6	82.4
	strongly agree	38	17.6	17.6	100.0
	Total	216	100.0	100.0	

About wearing proper attire during working, 48.61% (n=) agree about this statement, 17.59% (n=) strongly agree, 16.20% (n=) were neutral, 14.35% (n=) were disagree, 3.24% (n=) were strongly disagree with Mean=, SD= see table 3.6.

Question # 7: I know what body mechanics all about is? Table-7					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	3.2	3.2	3.2
	disagree	35	16.2	16.2	19.4
	neutral	51	23.6	23.6	43.1
	agree	98	45.4	45.4	88.4
	strongly agree	25	11.6	11.6	100.0
	Total	216	100.0	100.0	

I know what body mechanic all about is, 45.37% (n=98) agree, 11.57% (n=25) strongly agree,

23.61% (n=51) were neutral, 16.20% (n=35), disagree, 3.24% (n=7) were strongly disagree with Mean=3.46, SD=1.001. see Table 3.7.

Question# 8: i practice body mechanics all the time during working time Table # 3.8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	1.9	1.9	1.9
	disagree	26	12.0	12.0	13.9
	neutral	55	25.5	25.5	39.4
	agree	108	50.0	50.0	89.4
	strongly agree	23	10.6	10.6	100.0
	Total	216	100.0	100.0	

Participants practice of body mechanics all the time during working hours, 10.65% (n=23) were strongly agree for this statement, 50.0% (n=108) were agree, 25.46% (n=55) were neutral, 12.04% (n=26) disagree, 1.85% (n=4) were strongly disagree with Mean=3.56, SD= .903. See table# 3.8.

DISCUSSION

This study was conducted to determine the knowledge and practices of nurses towards body mechanic technique at Punjab Institute of Cardiology Lahore. Demographic data of the respondent showed that majority of the female charge nurses with age group of 26 to 30 year were 43.1% and 40.7% were with age 21 to 25 year. Majority 30.1% were from ICU/CCU department. Majority of the respondent 80.1%were general nursing and midwifery diploma holder and 19.9% were having BSN/PBSN degree .in this study second portion of the questionnaires were about the knowledge of the participans. Majority of the respondent 48.1% have job experience of 0 to5 years and 38.9 %were having 6 to 10 year. In this study out of 216, 140 (65%) of the respondent were having good knowledge about body mechanic technique followed by 45 (20%) have average knowledge and 31 (15%) were having no knowledge. In contrast a descriptive cross sectional study conducted on knowledge of nurses about body mechanic technique at college of nursing India. Study revealed that, (11.2%) staff nurses had poor knowledge on body mechanic technique, (41.7%) had good knowledge (5.7%) had excellent knowledge [5]. Similarly a cross sectional study was conducted to assess knowledge and practices of body mechanic technique among nurses at Johar Malaysia. The study shown, 68.2% were aware about the practices of body mechanic technique. In this study almost 60% of the subjects were having good practices of body mechanic technique, followed by 30% were having average practices and 10% does not practice body mechanic techniques. Similarly a correlational study was done at college of nursing at Mangalore India. The results shown, 88% of the respondent had average and 12% of the subjects had good practices towards body mechanic technique. In contrast a cross sectional descriptive study conducted at Tanzania to assess the risk factors and prevalence of low back pain. Results revealed that almost half of the nurses have good knowledge for the use of body mechanic technique but less practice on it. Findings revealed that only 38% of the nurses use back injury prevention technique at the regular basis [8]. This study revealed that there is significance relationship of knowledge towards practices. Chi square statistics revealed (p=.ooo) which indicated that the more the knowledge of the participants about the body mechanic technique; the more they practice it. Similarly a study conducted in Spain to check the effectiveness of the body mechanic checklist implementation. Findings revealed that an increase in the knowledge about body mechanics reduce the problem of low back pain and increases the practices of body mechanic technique [8].

CONCLUSION

The study revealed that nurses of Punjab institute of cardiology Lahore have over all fair knowledge about the body mechanic technique however, it depicts the less practices. Nurse who have fair knowledge about body mechanic technique, they also practice it as compared to those who have no knowledge. Likewise nurses with high qualification have more knowledge about the body mechanic technique as compared to the nursing diploma holders.

LIMITATION AND RECOMMENDATIONS

- Time was very short and the study was conducted only from one setting which cannot be generalized.it was first learning experience.
- Nurses were reluctant to give true data. There was no support and it was difficult to get permission from the stakeholders of the study site and settings as they are not aware of the importance of nursing research.
- Convenient sampling was also a limitation
- This study is conducted at one hospital of Lahore Pakistan; further studies can be conducted at large scale and the various different settings to make it stronger and generalize.

- This is a cross sectional study that is why inferences related to the causality of association could not be drawn.

STRENGTHS

The study has number of strengths which are as follows,

- This study conducted at Pakistan context which assessed knowledge and practices of nurses towards body mechanic technique.
- Moreover, this study has gathered rich data on knowledge and practices variables along with demographic variable.
- The large sample size of 216 in this study also enhanced the internal validity of this research.
- The training of the data collector and continuous supervision during data collection phase by the principal investigator was strength to ensure the appropriate quality of data collected for this study.

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