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A Prospective study of Post Operative Orthopedic Patients on Assessing Health related Quality of life and the Factors Affecting their HRQOL with Counselling.

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ABSTRACT

Orthopedic is a branch of medicine dealing with the correction of deformities of bones or muscles. This research study aims to investigate the Health-Related Quality of Life (HRQOL) of Post-operative orthopedic patients and explore the factors that influence their HRQOL using WHO-BREF questionnaire, and by supplement counselling to address patient's psychosocial needs and enhance their HRQOL. This study involved a sample of orthopedic patients who undergone various surgical procedures and were recruited from tertiary care hospital. The data was collected through interviews using WHO-BREF Questionnaire and analyzed using appropriate Statistical techniques. The findings contribute to a comprehensive understanding of the factors influencing the HRQOL of post-operative orthopedic patients, thereby highlighting the importance of incorporating counseling as a supportive measure in their care. Ultimately leading to enhanced patient outcomes and overall satisfaction. The P-value was found to be appropriate.

Keywords: Health related quality of life, Post-operative orthopedic patients, WHO-BREF, Counseling, psychosocial factors, P- Value, Health care.

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INTRODUCTION

Orthopedic surgery is the area of medicine that deals with musculoskeletal problems. Orthopedic doctors treat patients surgically and non-surgically. The evaluation of the results of orthopedic surgery is crucial because it gauges the efficacy of the surgical approach and the quality of the care provided. The degree of contentment and well-being is what is meant by HRQOL. A variety of surveys have been created to assess HRQOL, and WHO-QOL is employed.

The focus on patients reported HRQOL as the result after the trauma has grown as trauma care has significantly improved in recent decades and increased survival rates. (Rajendra Dhamania et al., 2018) [1]. Orthopedic trauma is a widespread public health issue in nations like Ethiopia, where it accounts for 25% of all emergency surgery cases. (Riskey, Nurhussen, et al., 2020) [2].

Orthopedic patients typically spend little time in the hospital, thus it's important to provide pain management and medication counselling after orthopedic therapy. Asking inquiries regarding pain management and symptoms is encouraged by interactions between orthopedic patients and the medical personnel. (Elina Koppelomaki et al.,2022) [3]

With 2.5 million persons affected worldwide, osteoarthritis (OA) of the big joint is one of the most common causes of pain and disability. (Slilpi Singhet al.,2018) [4]. Understanding the potential dangers of poorly controlled acute pain may help postoperative pain management. The quality of healing and likelihood of developing persistent pain can both be significantly impacted by severe pain in the early postoperative period. (Heba Khalil et al.,2021) [5]. It will easier for patients' families to remember medicines, pain management, potential issues, and wound care when they take part in counselling with the patient. Although everyone has a different threshold for discomfort, women are thought to have more pain and nauseousness after surgery than men. Orthopedic surgery-related anxiety is reduced thanks to pre- and post-operative pain management therapy, and patients are encouraged to take charge of their own pain management. Additionally, counselling enables orthopedic patients to acquire new pain management techniques and recover more quickly.(D.Saba et al.,2022) [6]. In orthopedic surgery, surgical site infections are a significant consequence. (Anil K.Bhat et al.,2018)[7]. More than 86000 hip fractures were reported in Italy in 2022, placing a financial and social strain on patients and their families. Hip fractures were the primary reason (93%) for patients' admission to the orthopedic and trauma surgery unit (Gambatesa M, et al 2013).

Epidemiology:

In 2017, the number of orthopedic surgery procedures performed world-wide totaled approximately 22.3 million.

The number of procedures per year is forecast to grow at a 4.9% compound annual rate over the 2017 to 2023 interval, approaching 28.3 million by 2023 and making this one the most rapidly growing surgical procedure categories. (15)

MATERIALS AND METHOD

This study involves 150 inpatients and out patients who have undergone orthopedic surgery. Patients who are not willing to participate and who are mentally unstable are excluded from the study. The aim of the study is to asses and improve their HRQOL of the Post-operative orthopedic patient and factors affecting their Health-Related Quality of Life with counseling. The objective is to describe HRQOL by using WHO-QOL questionnaire in patients undergoing orthopaedic surgery and to investigate the factors affecting Health-Related Quality of Life and to counsel the patients on factors affecting their HRQOL.

The data is collected through interviews using WHO-BREF questionnaire and analyzed using SPSS software. The findings contribute to a compressive understanding of the factors influencing the HRQOL of post-operative orthopedic patients, thereby highlighting the importance of incorporating counseling as a supportive measure in their care. Ultimately leading to enhance patient outcomes and overall satisfaction. In our study, we counseled the patients in specific to certain complications and factors such as acceptance of bodily appearance, satisfaction with yourself, ability to perform daily activities, regular medications and checkups and no negative feelings, anxiety and depression.

RESULTS AND DISCUSSION

Distribution of Patients based on Gender:

Total 150 patients were enrolled in the study, that distribution of the study population showed male and female which are represented in Table-1, figure 1.

Table 1: Based On Gender

Sr.no	Gender	No. of. Patients	Percentage (%)
1	Male	71	47%
2	Female	79	53%

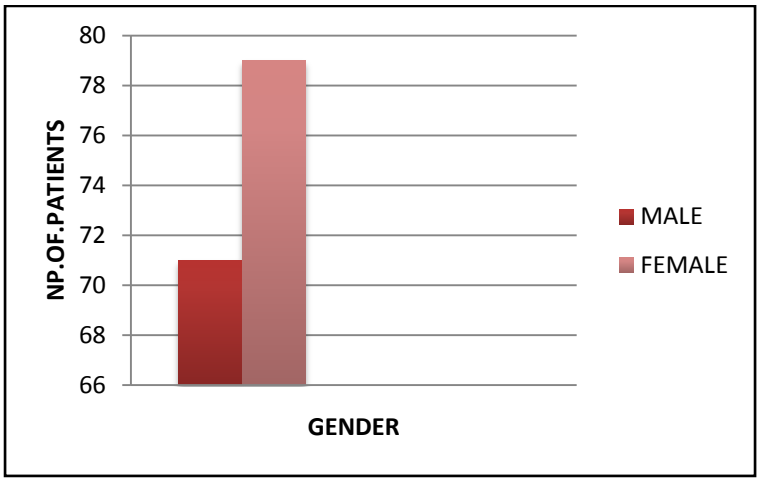

Figure 1: Based On Gender

Distribution of patients based on age group:

Majority of patients were found in between the age group 30-39 years and 40-49 years. All are represented in Table 2, figure 2.

Table 2: Based On Age Group

Sl.no	Age	Males	Females	Total no. of patients (%)
1	20-29	12	12	24(6%)
2	30-39	19	27	46(30%)
3	40-49	15	21	36(24%)
4	50-59	13	8	21(14%)
5	60-69	8	7	15(10%)
6	>70	1	4	5(3%)

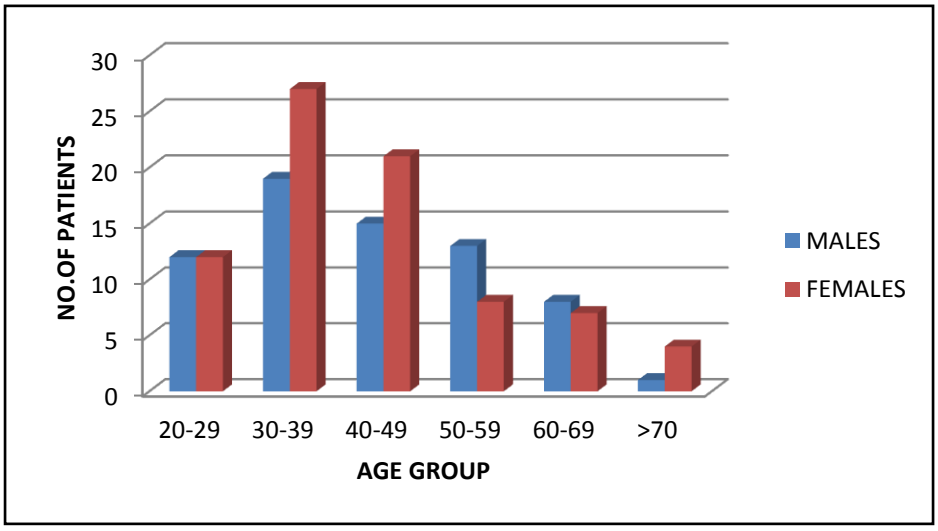

Figure 2: Based On Age Group

Distribution of patients based on complications:

Major complications observed in both genders were severe pain and reduced movement. Dislocation, ligament injury and infections were less observed. All were represented in Table-1.3, Figure 3.

Table 3: Complications observed in both genders

Sl.no	Complications	Males	Females
1	Severe Pain	68(45%)	78(52%)
2	Reduced Movement	48(32%)	67(45%)
3	Dislocation	10(6%)	16(11%)
4	Ligament Injury	21(14%)	28(18%)
5	Infection	22(15%)	12(8%)

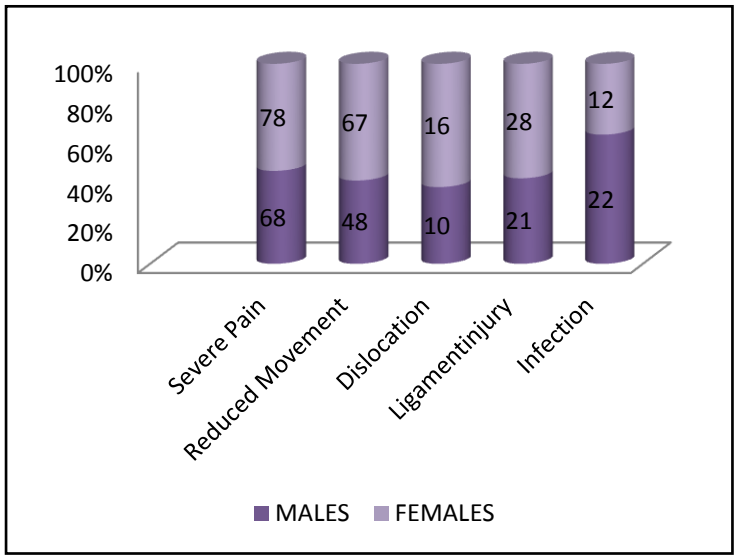

Figure 3: Complications observed in both genders

Distribution of patients based on place of living:

Based on place of living the distribution of patients showed that 78% in Rural area where as 28% in Urban area. All were represented in table 4, figure 4.

Table 4: Distribution of patients based on place of living

Sl.no	Place of living	Rural	Urban
1	No. of. Patients	42(28%)	108(72%)

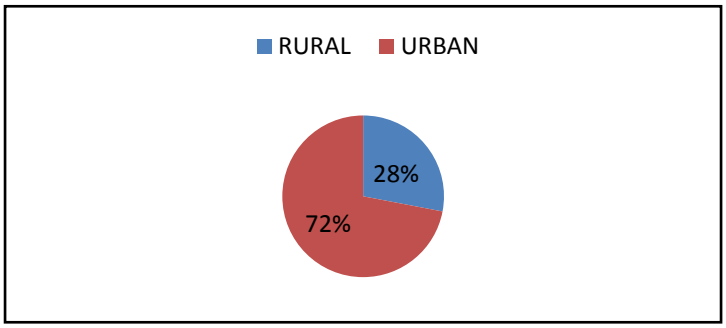

Figure 4: Distribution of patients based on place of living

Distribution of Patients Based On Type of Work

Based on type of work the distribution of patients showed that 61% of Employee, 23% of Housewife, Un employee of 8%, Business of 7%. All were represented in Table 5, Figure 5.

Table 5: Distribution of Patients Based On Type of Work

Sl.no	Type of work	No. Of patients	Percentage (%)
1	Employee	92	61%
2	Unemployee	12	8%
3	House Wife	35	23%
4	Business	11	7%

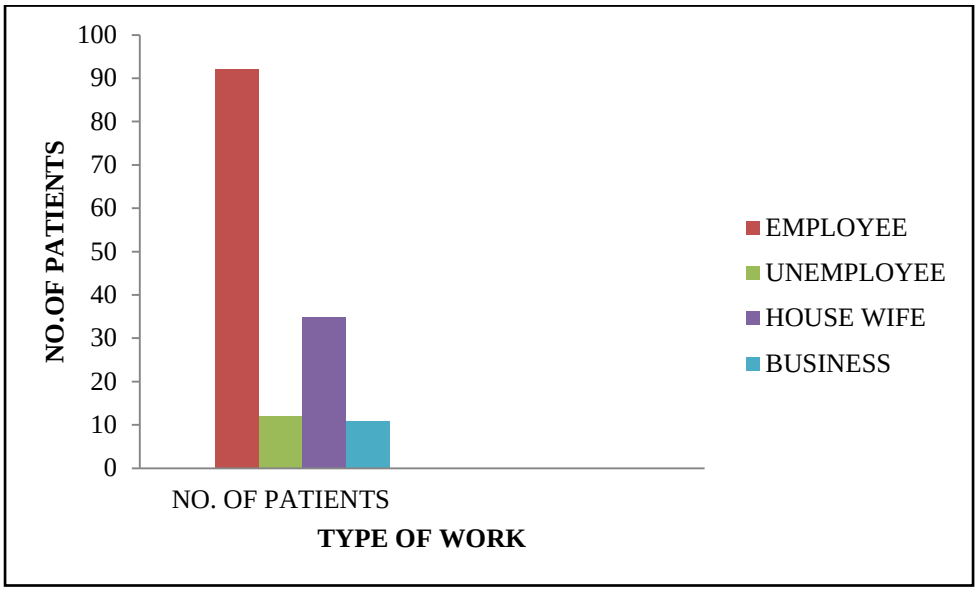

Figure 5: Distribution of Patients Based On Type of Work

Distribution of patients based on financial condition:

Based on financial condition the distribution of patients showed that middle class 124(82%), below middle class 15(10%) and above middle class 11(7%). All are represented in table 6, figure 6.

Table 6: Distribution of patients based on financial condition:

Sl.no	Financial condition	No. of patients	Percentage (%)
1	Middle Class	124	83%
2	Below Middle Class	15	10%
3	Above Middle Class	11	7%

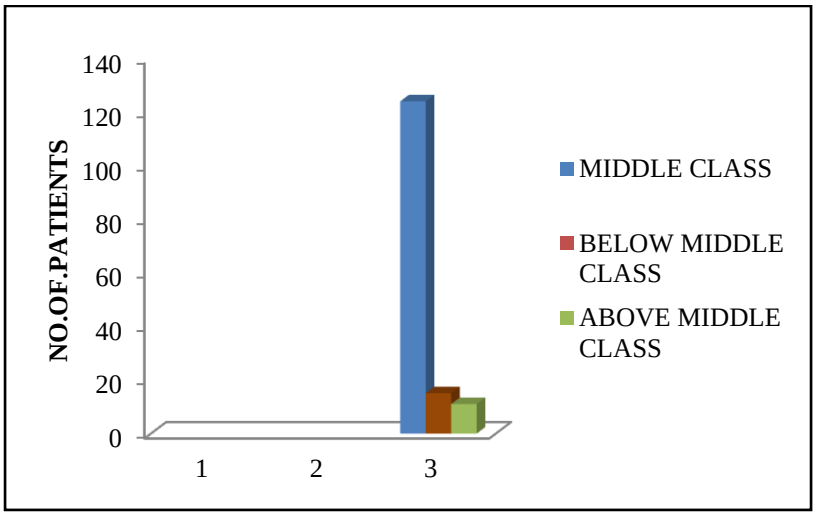

Figure 6: Distribution of patients based on financial condition:

Distribution of patients based on education:

Based on education the distribution of patients was showed in Schooling level 78(52%), Intermediate level 19(12%), in Graduation 18(12%) and in No education 35(23%). All are represented in Table 7, Figure 7.

Table 7: Distribution of patients based on education:

Sl.no	Education	No. of patients	Percentage (%)
1	Schooling	78	52%
2	Intermediate	19	13%
3	Graduation	18	12%
4	No Education	35	23%

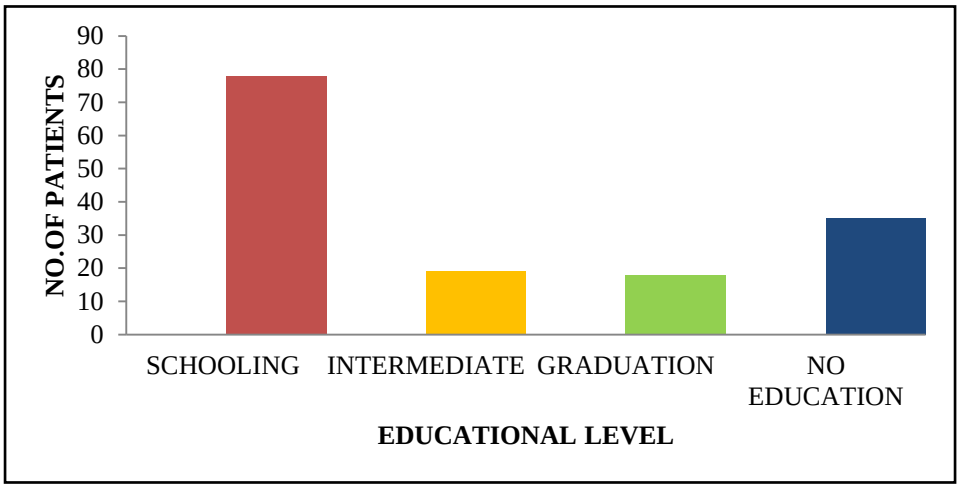

Figure 7: Distribution of patients based on education:

Associating factors with where questionnaire:

Association of gender with quality of life:

In our study, we collected 150 cases. In association of gender with quality of life the males have more impact in their health than females.

All are represented in table 8, figure 8.

Table 8: Association of gender with quality of life:

Sl.no	Levels	Male	Female
1	Level 1	0	0
2	Level 2	22(15%)	16(11%)
3	Level 3	36(24%)	39(26%)
4	Level 4	13(6%)	23(15%)
5	Level 5	0	0

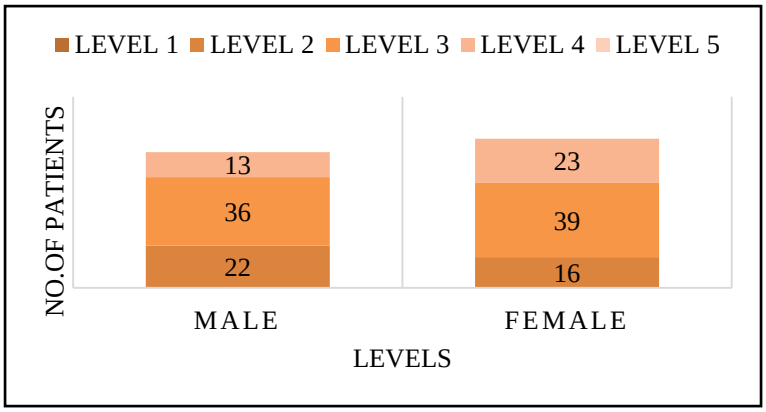

Figure 8: Association of gender with quality of life:

Association of place of living with quality of life:

Based on place of living, Level 4(36%) is more in urban areas when compared to rural areas (10.6%). All are represented in table 9; figure 9.

Table 9: Association of place of living with quality of life

Sl.no	Levels	Rural	Urban
1	Level 1	0	0
2	Level 2	6(4%)	10(7%)
3	Level 3	19(13%)	29(26%)
4	Level 4	16(11%)	54(36%)
5	Level 5	1(0.6%)	5(3%)

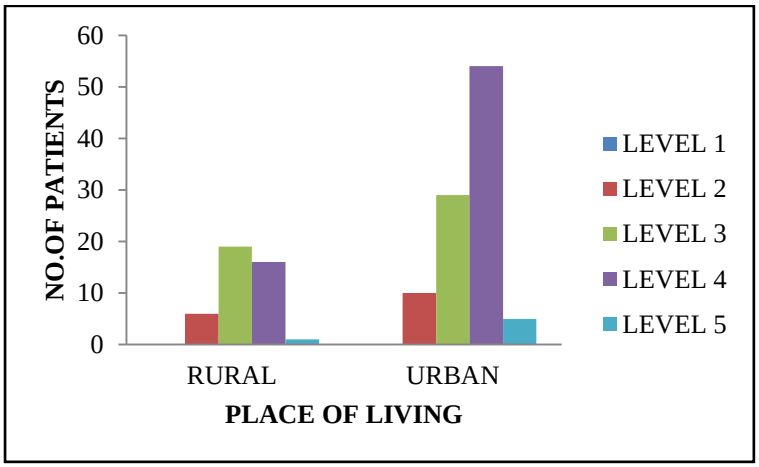

Figure 9: Association of place of living with quality of life

Association of Age with Quality of Life:

The majority of the patients are between the age group 30-39 have more prone to Level-2, 3, 4. Compare to other age groups. All represented in table 10; figure 10

Table 10: Association of Age with Quality of Life

Sl.no	Age	Level 1	Level 2	Level 3	Level 4	Level 5
1	20-29	0	5(3%)	10(7%)	9(6%)	0
2	30-39	0	11(7%)	24(16%)	16(11%)	0
3	40-49	0	7(5%)	13(95%)	10(7%)	0
4	50-59	0	11(7%)	9(6%)	4(3%)	0
5	60-69	0	6(4%)	3(2%)	6(4%)	0
6	70-79	0	1(0.6%)	2(1%)	2(1%)	0

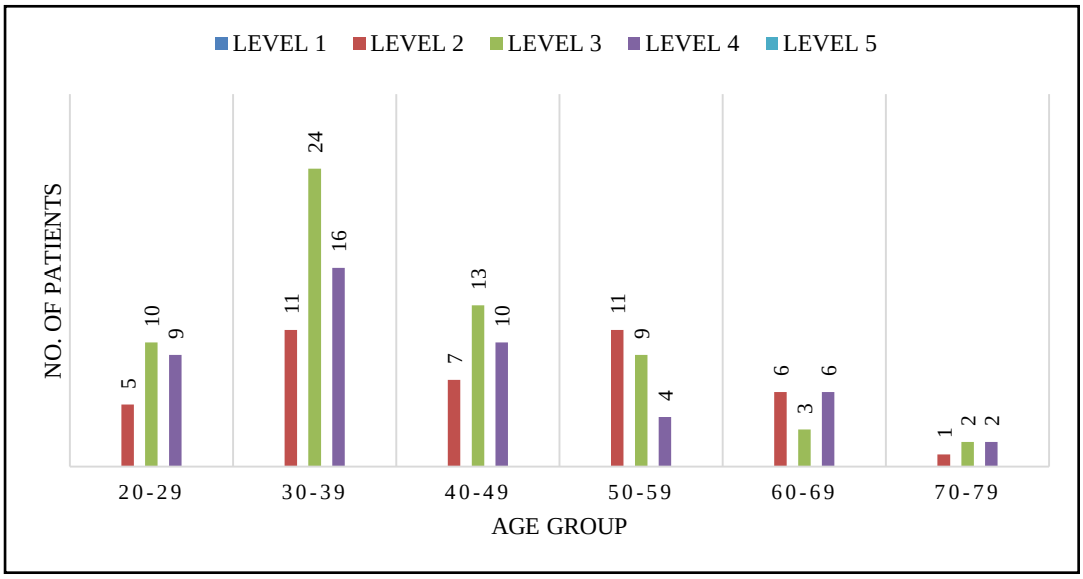

Figure 10: Association of Age with Quality of Life

Association of education with quality of life:

Schooling patients have more in Level-2, 3, 4; followed by non-education and less in intermediate and graduation. All are represented in table 11; figure 11.

Table 11: Association of education with quality of life

Sl.no	Education	Level 1	Level 2	Level 3	Level 4	Level 5
1	Schooling	0	20(13%)	36(24%)	23(15%)	0
2	Intermediate	0	5(3%)	9(6%)	3(2%)	0
3	Graduation	0	3(2%)	10(7%)	5(3%)	0
4	Uneducated	0	5(3%)	20(13%)	10(7%)	0

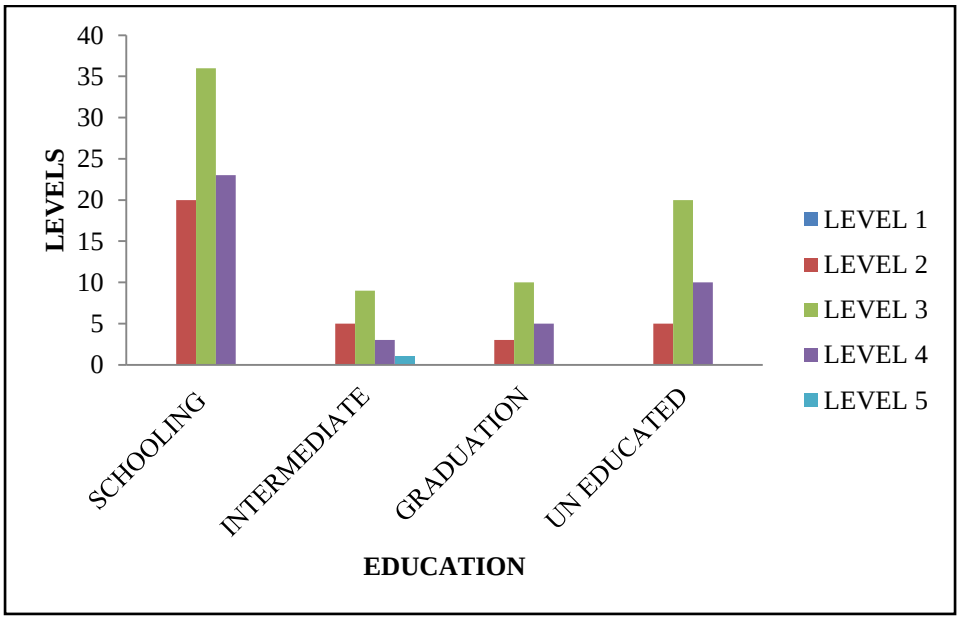

Figure 11: Association of education with quality of life

Association of complications with quality of life:

In association of complications with quality of life, patients with reduced movement, severe pain have more impact in their health-related quality of life. All are represented in Table 12; figure 12.

Table 12: Association of complications with quality of life

Sl.no	Complications	Level 1	Level 2	Level3	Level4	Level 5
1	Severe Pain	0	19(13%)	64(43%)	32(21%)	1(0.6%)
2	Reduced Movement	0	13(9%)	44(29%)	15(10%)	0
3	Ligament Injury	0	6(4%)	25(17%)	11(7%)	0
4	Dislocation	0	1(0.6%)	8(5%)	2(1%)	0

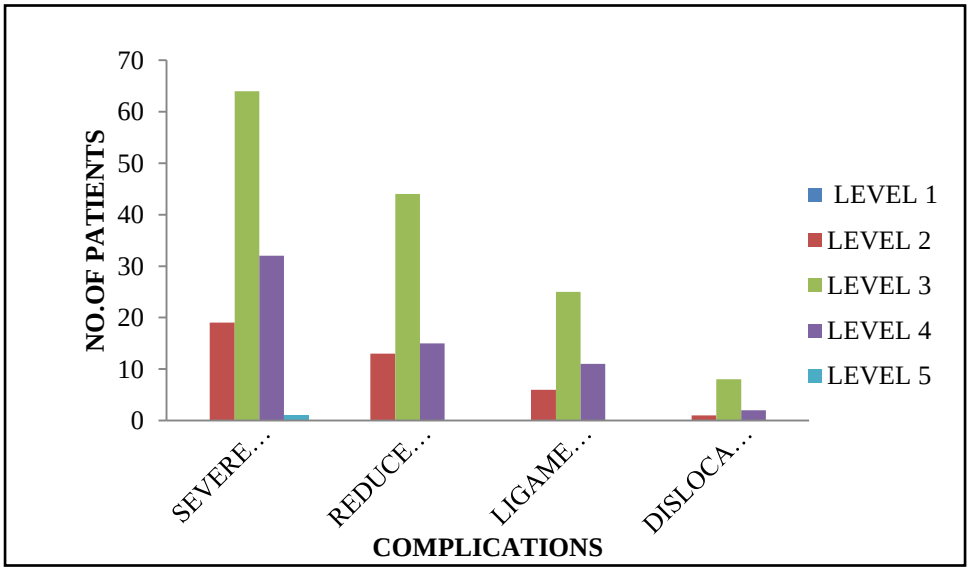

Figure 12: Association of complications with quality of life

Calculation of quality-of-life scores:

Table 13: Calculation of quality-of-life scores:

Sl.no	Factors	Level 1	Level 2	Level 3	Level 4	Level 5
1	Quality Of Life	0	46(31	66(44	37(24%)	1(0.6%)
2	Health Satisfaction	0	47(31%)	77(51%)	28(19%)	0
3	Medical Treatment	0	14(9%)	39(26%)	76(50.6%)	11(7%)
4	Concentration	0	49(33%)	85(57%)	16(11%)	1(0.6%)
5	Health And Physical Activity	1(0.6%)	18(12%)	88(59%)	41(27%)	2(1%)
6	Energy For Daily Life	2(1%)	54(36%)	71(47%)	23(15%)	0
7	Acceptance Of Bodily Appearance	2(1%)	24(16%)	91(61%)	31(21%)	2(1%)
8	Financial Condition	1(0.6%)	38(25%)	77(51%)	31(21%)	3(2%)
9	Capacity To Work	6(4%)	51(34%)	68(45%)	24(16%)	0
10	Satisfaction Of Sleep	1(0.6%)	17(11%)	75(50%)	45(30%)	2(15%)
11	Access To Health Service	0	10(7%)	68(45%)	64(43%)	8(5%)
12	Mental Condition	12(8%)	34(23%)	77(51%)	27(18%)	0

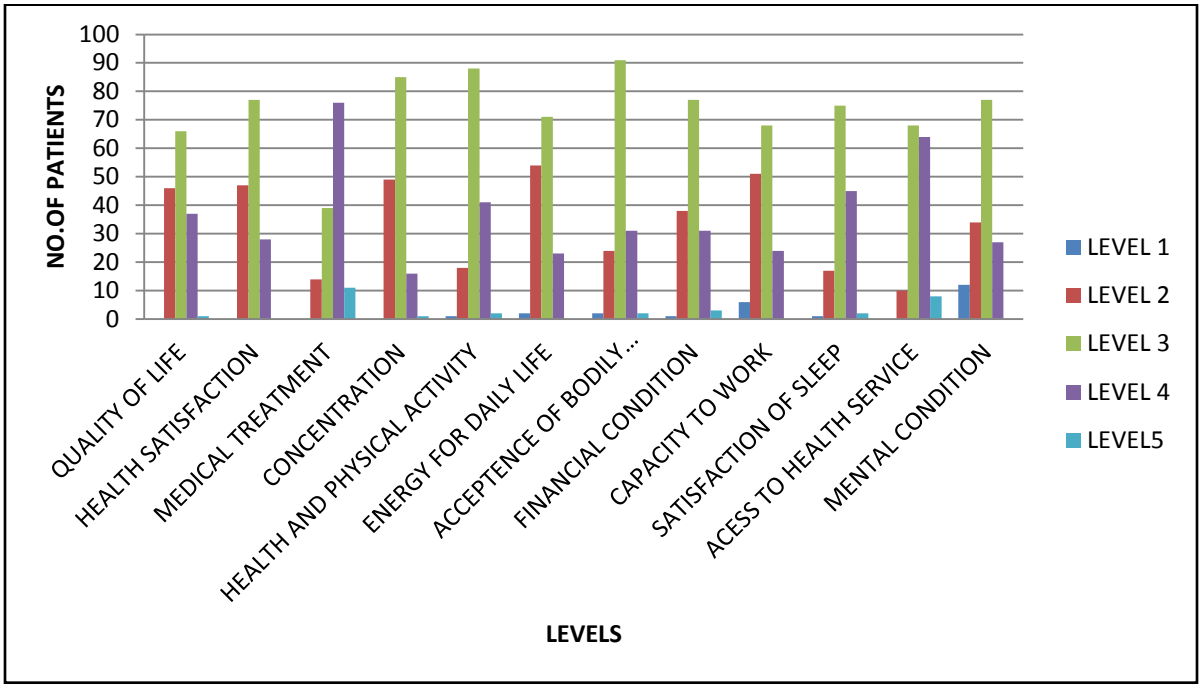

Figure 13: Graphical representation

COUNSELLING:

Association complications after counselling:

Table 14: Association complications after counselling:

Complications	Before counselling	After counselling
Severe pain	94	40
Reduced movement	57	25
Physical condition	107	50
Mental condition	123	70
		P Value=0.0003

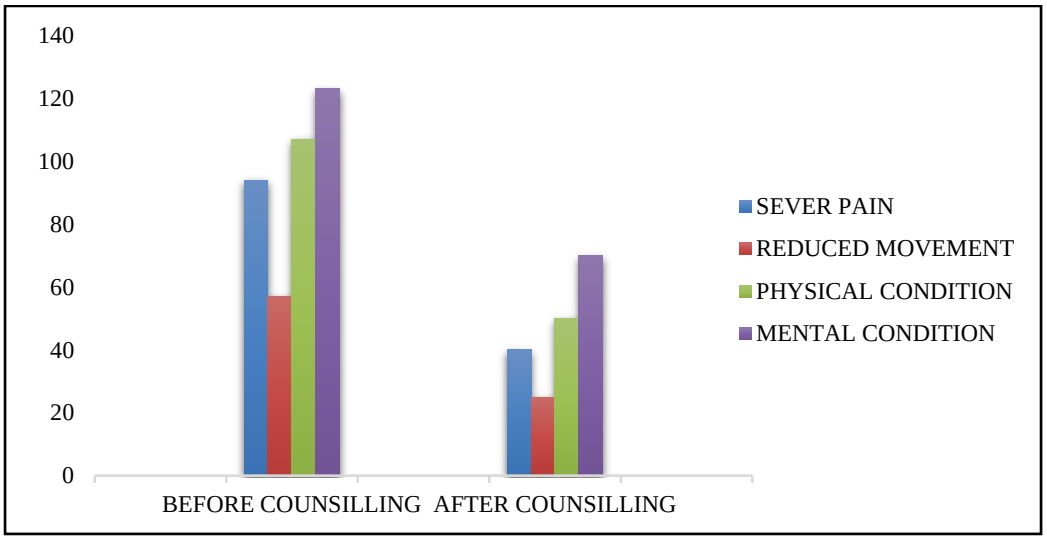

Figure 14: Association of complications after counselling:

Table 15: Association of complications with levels before and after counselling:

	Before counselling	After counselling
Complications	Level 4	Level 4
Concentration	16	50
Capacity to work	24	70
Health satisfaction	28	80
		P Value =0.0002

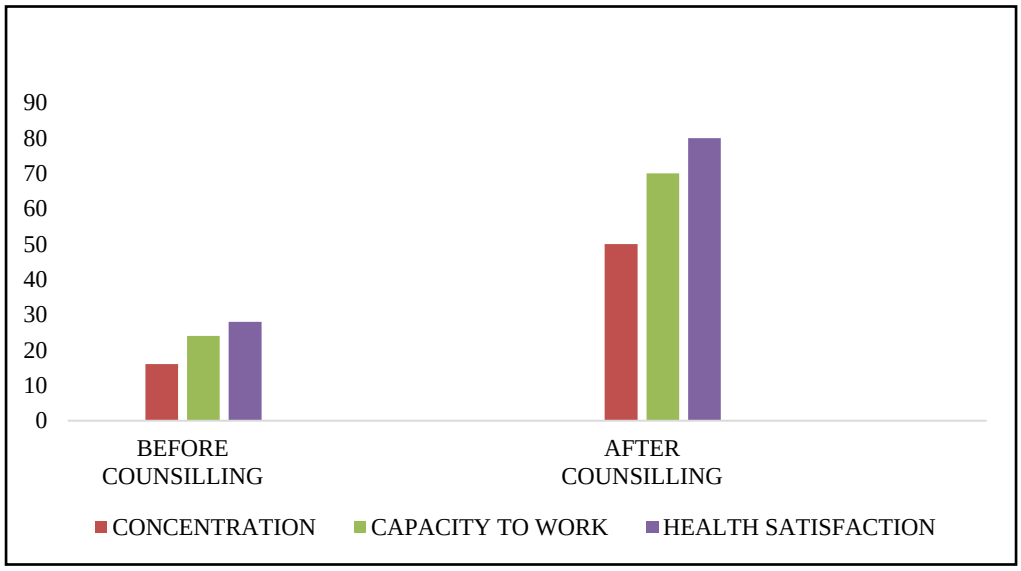

Figure 15: Representation of Level 4

Table 16: Association of Complications with Level 5:

	Before counseling	After counseling
Complications	Level 5	Level 5
Concentration	1	15
Capacity to work	0	25
Health satisfaction	0	30
		P Value=0.0008

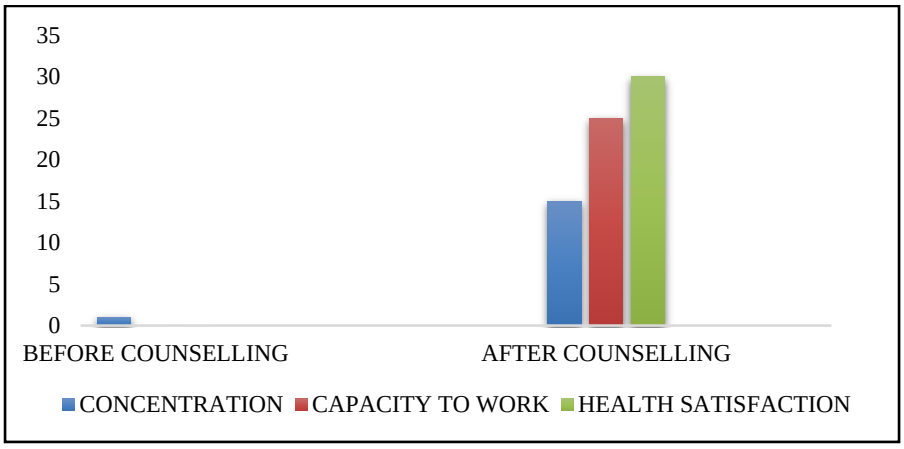

Figure 16: Representation of Level 5

Table 17: Assessment of Comparison of Quality of Life Before and After Counseling:

Sl.no	Qol	Before counseling (L-1,2)	After Counseling (L-4,5)
1	Acceptance of bodily appearance	53	97
2	Satisfactory Health	37	113
3	Satisfactory Sleep	45	105
4	Ability to perform your daily living activities	56	94
5	Access to health services	72	106
6	Satisfaction with personal relationships	112	135
7	Satisfaction with yourself	96	123
9	Having Negative feelings, such as blue mood, Despair, Anxiety, Depression	128	52
10	Adequate Rest	84	112
11	Regular Medications/ Regular checkups	64	120
			P-Value=0.008

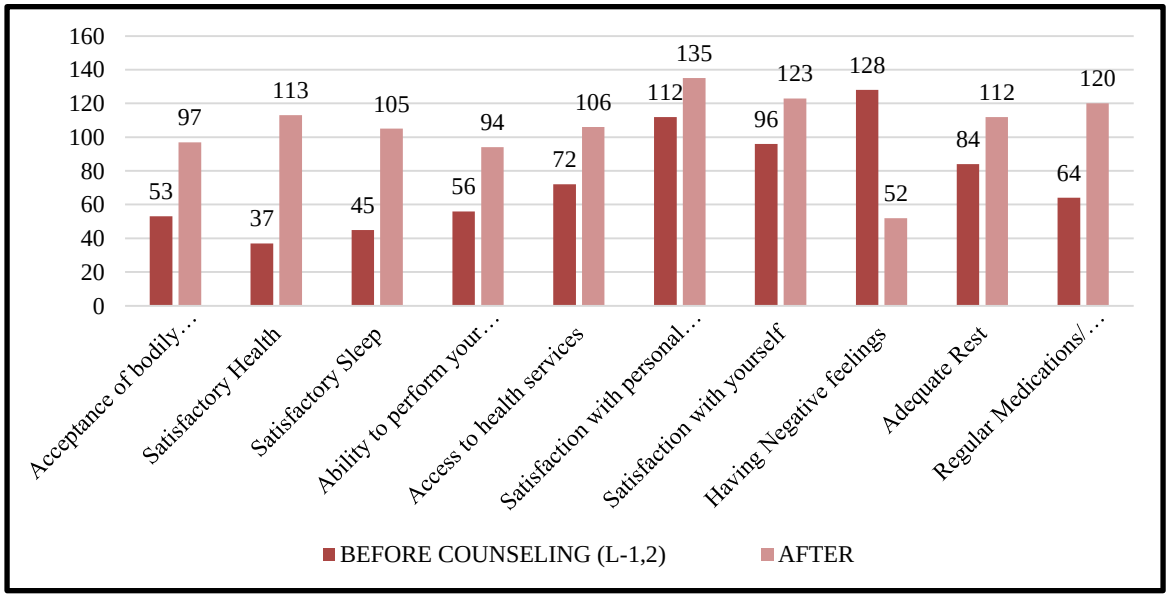

Figure 17: Quality of life

Table 18: Comparison on factors before and after counseling:

Sl.no	Factors	Before counseling	After counseling
1	Immediate surgeries	2	0
2	Care on previous injuries	12	0
3	Smokers	49	25
4	Alcohol	63	32
5	Infections	34	10
6	Depression	26	12
7	Anxiety	21	8
9	Financial condition/ Hospital visit	98	135
10	Schooling/ Awareness	49	78
			P-Value=0.008

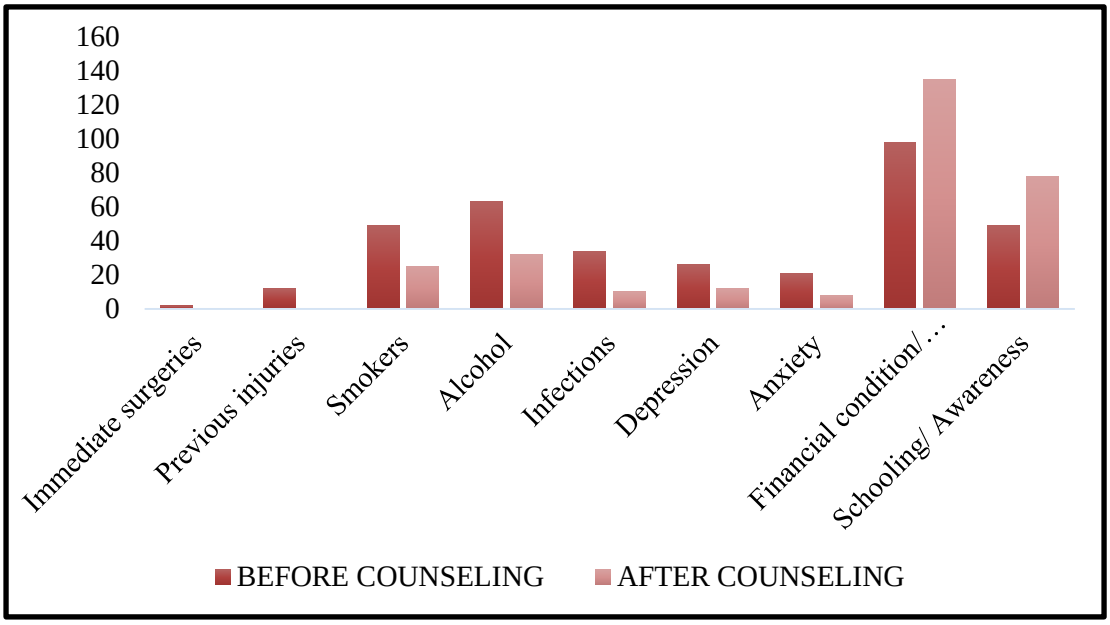

Figure 18: Factors

In the present study, found that the Females are more when compare to males. Dislocation and infection are the complication which is less seen in the study. In our study a greater number of complications are seen in age group between 50-59years, followed by 40-49 and followed by 30-39. In our study highest recovery is seen in the age groups between 18-45 and lowest recovery rate is seen between the age groups 50-75. We found that majority of the females have more percentage distribution with severe pain, reduced movement and ligament injury when compared to males. In Urban areas a greater number of cases were reported in our study. Patients educational level like up to Schoolings have disturbed quality of life in our study. Middle class patients and patients who are employed have more disturbed quality of life. These are the factors improved after patient counseling from level-1,2 to level-4,5 like acceptance of bodily appearance, satisfactory of sleep and health, ability to perform daily activities, Regular checkups/ hospital visits. Parameters like

having negative feelings, despair, anxiety, depression, alcohol, smoking, infections, immediate surgeries are reduced after counselling.

CONCLUSION

This study involved 150 Orthopedic patients who underwent surgical procedures and they were interviewed using WHO BREF questionnaire to assess the HRQOL and to know how the factors influence HRQOL. Several factors and some complications have disturbed their HRQOL, thereby we have incorporated counseling as a supportive measure in their care. Ultimately leading to enhanced patient outcomes and overall satisfaction and data was analyzed by using SPSS software. Special care, education and counseling were needed to improve the quality of life. It is the responsibility of all health care professionals to bring awareness and to improve the community health services. Regular medication, knowledge and easy availability of medications are necessary to avoid complications. Statistical Analysis was done by using SPSS software, and P value is found to be less than standard value [0.05].

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