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The Study of the Influencing Factors of Musculoskeletal Diseases

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Abstract*: Global health burden of musculoskeletal diseases have been in developed and developing countries. Persistent pain and restricted movements are affect the working capacity and quality of the live. The general objective of this study was to assess the influencing factors ofmajor musculoskeletal condition patients attending Free Ayurveda dispensary Kondavil. This was an observational descriptive institutional based study done in Free Ayurveda dispensary Kondavil, the data was collected from 100 samples in following method such as history was taken orally from the patients as well as joints examination and body weight measuring. Sample consisted of all recently attending musculoskeletal diseases patients who are over18 years, with or without co morbidity. Those below 18 years of age and acute traumatic pain in the musculoskeletal system patients were excluded. Data was entered and analysed by using SPSS-21 computer package.Majority of the patients demographical' factors were in males 59(59%), Sri Lankan Tamil 99(99%), 61years-70years'agegroup40 (40%), house hold workers54 (54%). The first major problem was osteoarthritis 93 (93%) followed by Low back pain 6(6%) and rheumatoid arthritis 1(1%). Among them A majority of the patient were affected by knee joint 69 (69%), followed by back pain 25 (25%), shoulder joint 22(22%), angle joint 17(17%). The age (P=0) and occupation (P=0.01) were significant influence the musculoskeletal condition. The patients' minimum age 31, maximum 82 mean age 62.94. As a conclusion of this study majority of the patients have suffered with osteoarthritis. Weight bearing joint (knee joint) was commonly affected in these patients. The risk factors of age and occupation were significant influence the musculoskeletal condition. Further studies are recommended to find out the other influencing factors of musculoskeletal condition.*

Keywords: *musculoskeletal diseases, osteoarthritis, rheumatoid arthritis, osteoporosis, and low back pain*

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I. Introduction

Hundreds of millions of peoples are affecting the musculoskeletal diseases in the world wide [(1)].These people live in the developed and developing countries [(2)].The musculoskeletal system includes bones, muscles joints and connective tissues [(3)]. While the prevalence of musculoskeletal conditions increases with age, younger people may be also affected [(3)]. Musculoskeletal diseases are a major burden on individuals, affecting people's families, the health system and society [(4)].Because most common complaint in the diseases is severe long term pain, stiffness and limitations in mobility [(3)] thus the patients were affected their working capacity and quality of live. Many musculoskeletal conditions can be managed in primary care such as exercise and psychological therapies and pharmacologic therapies [(3)].

Analgesic management is limitations in the allopathic medicine. Thereforemusculoskeletal diseases patient want to quality of treatment for this diseases. In the current situation patients believe herbal remedies are harmless [(5)]. Herbal pharmacological components are treating more ailments. Tradional medication involves the use of herbs, animal parts, and minerals, but herbs are widely used among three [(6)].Allopathy, Ayurveda, Unani, Siddha, and Homeopathy are the branches of medicine which have been practiced in Sri Lanka [(7)]. Among them Ayurveda, Unani and Siddha are called Traditional medicines [(8)]. There were 501 Traditional health centers available in Sri Lanka. Among those 48 Siddha institutions were in Jaffna district [[9]]. Traditional institutional records and monthly statistical reports say that the attending patients' first major problem was musculoskeletal diseases.

WHO papers describe the burden of four major musculoskeletal conditions such as osteoarthritis, rheumatoid arthritis, osteoporosis, and low back pain [(3)]. These diseases have some risk factors such as inadequate physical activity, obesity, smoking and poor nutrition [(3)]. Some studies focus socio-demographical factors also associated with musculoskeletal conditions [(10)]. To the best of our knowledge, there are no previous studies done in the Ayurvedic dispensary and relevant statistics are also not available. Thus, annually, large number of musculoskeletal diseases patients attending this dispensary every major musculoskeletal conditions need evident based study in the influencing factors because it is important to the diseases management.The primary investigator wants to assess thetype of major musculoskeletal condition and influencing factors of

musculoskeletal diseases in attending patients.The general objective was to assess the influencing factors of major musculoskeletalcondition.

II. Methodology

2.1 Research design
This was a descriptive institutional based study.

2.2 Place of study
Place of study was Free Ayurvedic Dispensary Kondavil.

2.3 Study population
Study population comprised of all recently attending musculoskeletal diseases patients who are over18 years, with or without co morbidity. Those below 18 years of age and acute traumatic pain in the musculoskeletal system patients were excluded.

2.4 sample size
Non-parametric samplings of 100 patients were selected from the month of December.

2.5 Sampling technique
This study included all attending musculoskeletal diseases patients who were above 18 years of age, with or without co morbidity.

2.6 Study period
Period of study was from December 2018 to January 2019. Data collection was done from December.

2.7.1 Study instrument
Histories were taken orally from the patients as well as joints examination, body weight measuring and fulfill American College of Rheumatology Criteria (ACR) for osteoarthritis and Rheumatoid arthritis but didn't take any radiographic or laboratory investigation because these are not available in thisdispensary.

2.7.2 Variables
In this study, identify following variables such as sex, ethnic group, age, occupation, musculoskeletal diseases pattern, co morbidity and body weight were given prominence.

2.9 Data collection
Medical officer was collected the answers from the patient orally, measuring the body weight and symptomatic examination and conform the musculoskeletal diseases.

2.9 Data analysis
Data entered and analysed by using SPSS -21 computer package. Data was presented by using tables and diagram. Chi-squared statistical test was used to analyse the data.

2.10 Fate of data
Data was collected and stored in my personal computer and the details will be accessible only by me. The data was used for my research work. After completing my research work, the data in my computer will be deleted.

III. Results and Discussion

This study was carried out on hundred musculoskeletal diseases patients who attended Free Ayurvedic Dispensary Kondavil. This dispensary has outpatient Department only. This dispensary have been carry out symptomatic treatment only Diagnosis ofMusculoskeletal diseases based on history, clinical examination findings and American College of Rheumatology Criteria (ACR) for osteoarthritis and Rheumatoid arthritis.Musculoskeletal diseases patients' first major problem was osteoarthritis 93 (93%) then Low back pain 6(6%) and rheumatoid arthritis 1(1%). Parsons.et.al was reported incident cases of osteoarthritis are ten times more common than rheumatoid arthritis [(10)]. Richard.et.al was informed ageing changes in the musculoskeletal system contribute to development of osteoarthritis [(11)].

Table 3.1: Distribution of affected joints of the musculoskeletal diseases patient attending Ayurveda clinic (n=100)

Affected joints		Frequency&Percentage
Knee pain	yes	69(69%)
	No	31(31%)
Angle pain	Yes	17(17%)
	No	83(83%)
Small joint pain	yes	1(1%)
	No	99(99%)
Back pain	yes	25(25%)
	No	75(75%)
Shoulder pain	yes	22(22%)
	No	78(78%)
Elbow pain	Yes	2(2%)
	No	98(98%)
Wrist pain	Yes	1(1%)
	No	99(99%)
Neckpain	yes	3(3%)
	No	97(97%)

In these patients had been sufferedone or more joints pain. A majority of the patient 69 (69%) were affected by knee joint 69 (69%),followed by back pain 25 (25%), shoulder joint 22(22%),angle joint 17(17%).

Table 3.2: Distribution of Demographical factors of the musculoskeletal diseases patient attending Ayurveda clinic (n=100)

Demographical factors		Frequency& Percentage
sex	Male	59(59%)
	Female	41(41%)
Occupation	skilled	8(8%)
	Unskilled	38(38%)
	house hold works	54(54%)
Ethnic group	Sri Lankan Tamil	99(99%)
	Indian Tamil	1(1%)
Age	Below40year	3(3%)
	40year--50year	9(9%)
	51year---60year	24(24%)
	61year---70year	40(40%)
	71year--80year	23(23%)
	Above80year	1(1%)

In this study majority of the patients 99 (99%) wereSri Lankan Tamil. proportionally highest number ofTamil peoples areliveing inthe area.

The relationship between age and Musculoskeletal diseases patients

Majority of the patients 40 (40%) were in 61-70years' age group. The Chi-squarestatistical (X^2) analysis was done to determine the association with age of musculoskeletal diseases patients. Theage (X^2=33.98, P=0) was significantinfluence the musculoskeletal condition. The patients'minimum age 31, maximum 82 mean age 62.94.most of the studies was reportedmusculoskeletal conditions increase with age.Holmstrom.et.al alsowas reported musculoskeletal diseases increase with age [(12)].

The relationship between sex and Musculoskeletal diseases patients

Majority of the patients 59 (59%) were males. In the Chi-square (X^2)statistical analysis P- value is greater than 0.05 (X^2=2.94, P=0.23).Therefore sex was not significantinfluence the musculoskeletal condition.Parsons.et.al was reported the prevalence of musculoskeletal conditions is higher in women, rises with age and is likely to continue to rise as life expectancy increases[(10)].

The relationship between occupation and musculoskeletal diseases patients

Occupation was divided in to three categories such as skill workers (professional workers), un skill workers (labourer) and house hold works. Majority of the patients 54(54%) were in household works. Chi-square statistical (X^2) analysis P- value is less than 0.05 (X^2=12.27, P=0.01) occupation was significant influence the musculoskeletal condition. Munidasa, et.al was carried out the study on musculoskeletal disorders and related factors among female nurses in the central province of Sri Lanka. He have reported occupation was

significant influence the musculoskeletal diseases and explained working pattern in years of work exposure (P<0.042), daily and weekly working hours (P< 0.001) abnormal postures (p<0.042) and hours of daily house work (p<0.001) were found to be significant contributing factors [(13)].Warnakulasuriya.et.al was reported occupation was significant influence the musculoskeletal diseases [(14)].

The relationship betweenbody weightand musculoskeletal diseases patients

Body weight was described in histogram (Figure - 1) mean---61.92, median----59, mode—56, standed deviation---15.67, minimum ---31, maximum----112

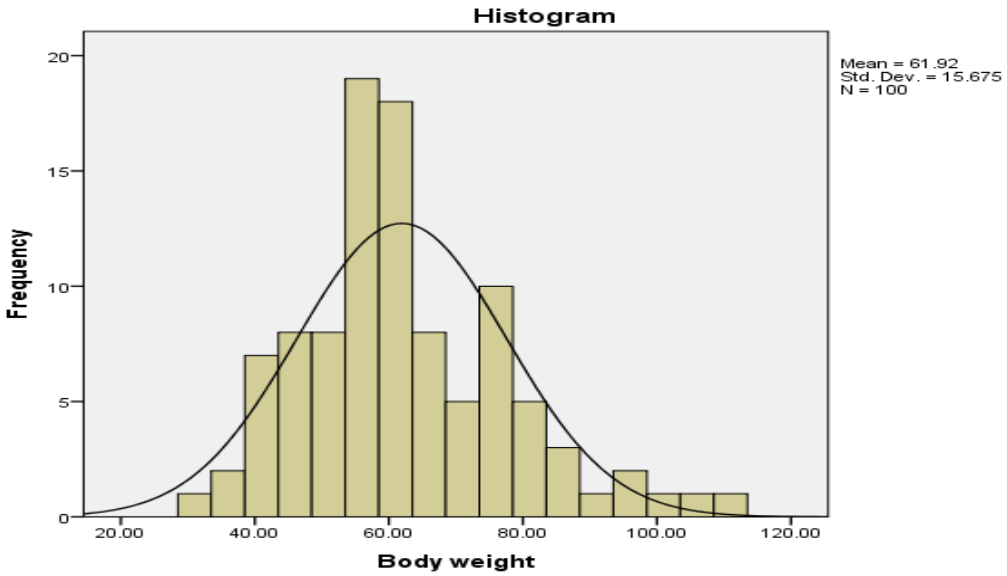

Figure 1. Frequency distributions of body weight of the musculoskeletal diseases patient

IV. Conclusion

Majority of the patients have suffered with osteoarthritis. Weight bearing joint (knee joint) was commonly affected in these patients. The risk factors of age and occupation were significant influence the musculoskeletal condition. Further studies are recommended to find out the other influencing factors of musculoskeletal condition.

References

[1]. Woolf .A.D &Pfleger.B, Burden of major musculoskeletal conditions, Bulletin of the World Health Organization 2003, 81 (9)
[2]. Briggs.A.M , Cross.M.J ,Hoy.D.G ,Riera.L.S , Blyth.F.M, &March.LMusculoskeletal Health Conditions Represent a Global Threat to Healthy Aging: A Report for the 2015 World Health Organization World Report on Ageing and Health,The Gerontologist, Volume 56, Issue Suppl_2, 1 April 2016, Pages S243–S255,
[3]. WHO (February 2018),Musculoskeletal conditionsReport Fact sheet Reviewed
[4]. Weerasekara.I and Hiller.C.E, Chronic musculoskeletal ankle disorders in Sri LankaBio Med Central(BMC) Musculoskeletal Disorders (2017) 18:219
[5]. Mobasherr.A, Intersection of Inflammation and Herbal Medicine in the Treatment of Osteoarthritis, Springer current Rheumatology reports2012 Dec: 14(6): 604-616
[6]. WHO (2000) 1General Guidelines for Methodologies on Research and Evaluation of Traditional Medicine.
[7]. Abeykoon, P.,(2016) Case-Study: Srilanka health system
[8]. WHO (2001) Legal status of Traditional Medicine and complementary/Alternative Medicine: A World wide Review.
[9]. Abeywardhana, N., Sashikala, M., and Herath, L. M.,National statistical report of 2010 on patients undergoing Ayurvedic treatment, Information Unit,Ministry of Indigenous Medicine, Sri Lanka.
[10]. Parsons.S, Symmons.D.P, The burden of musculoskeletal conditions the American journal of Medicine April 2014, Volume 42, Issue4, pages190-192
[11]. Richard.F, Loeser.M.D Age-Related Changes in the Musculoskeletal System and the Development of Osteoarthritis,HHS Public Access,Author manuscript; available in PMC 2011 Aug 1.
[12]. Holmstrom.E, Engholm.GMusculoskeletal disorders in relation to age and occupation in Swedish construction workers,2003 Oct; 44(4):377-84 Us National Library of Medicine National institutes of Health.

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