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Correlation Between Quality of Life and Disability in Middle Aged Beauticians with Low Back Pain

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ABSTRACT

BACKGROUND: In the beauty industry the people who are working are named as cosmetologists, beauticians and beauty therapists. Low back pain is one of the most prevalent musculoskeletal conditions and most common cause of disability. Beauticians were found to be more affected from low back pain due to their altered posture during walking, static postures for prolonged period of time. So the purpose of this study is to correlate quality of life and disability in middle aged beauticians with low back pain.
METHODOLOGY: A convenience sampling method was used to administer questionnaires to 30 middle aged (26 to 40 years, 15 female and 15 male) beauticians with low back pain using the short form 12 and modified Oswestry disability index (MODI) and results were analysed. Beauticians were selected according to inclusion criteria which included having work experience of minimum 1-2 years and Numeric pain rating scale ≥4 and exclusion criteria included beauticians with severe spinal pathologies and previous surgeries before 6 months. Quality of life of the beauticians was assessed by SF12 and disability by Modified Oswestry disability index.
RESULTS: Spearman correlation test was used to analyse data and data was analysed by using SPSS 20.00 version. A significant negative strong correlation was found between disability and physical component score (PCS) ($r=-0.746$ and $p<0.05$), But no significant correlation was noticed between disability and mental component score (MCS) ($r=0.067$ and $p>0.05$) in middle aged beauticians with low back pain.
CONCLUSION: Disability and physical component of quality of life was correlated in beauticians with low back pain. Weak correlation was found between mental component of quality of life and disability in beauticians with low back pain.

Keywords: Disability, Quality of life, low back pain, beauticians, Modified Oswestry disability index

INTRODUCTION

According to the Cambridge Dictionary, a beautician is "a trained individual whose work is to enhance the appearance of a client's face, body, and hair, often in a beauty salon, using make-up and beauty managements"[(1)]. The most prevalent cause of occupational health issues is work-related musculoskeletal disorders (WRMSD), which also places a significant financial burden on both the individual and society [(1)]. WRMSDs are described as conditions or injuries affecting the tendons, joints, cartilage, nerves, muscles, and spinal discs that are linked to occupational risk factors. These disorders cause discomfort and functional

impairment of the body's musculoskeletal system [(1)]. The most prevalent work-related risk factors that are linked to the development of musculoskeletal problems are fast work speed, repeated movement patterns, inadequate recovery time, intense effort, poor body mechanics, the use of tools, and awkward posture. A beautician's everyday activities include cleaning faces, providing skin, nails, and body hydrotherapy and care, treating acne, doing makeup, giving massages, removing facial and body hair, doing manicures and pedicures, hairdressing, threading, waxing, and other typical procedures [(1)].

Pain, muscle strain, or stiffness in the region between the inferior border of the 12th rib and the inferior gluteal folds, with or without sciatica, is referred to as low back pain (LBP) [(2)]. There are two types of low back pain: specific and nonspecific LBP. Certain LBP can be brought on by clear-cut reasons like spinal infections or tumors. Nonetheless, 80% to 90% of cases of LBP are categorized as nonspecific, meaning they have no known cause. This type of pain is frequently chronic and can be challenging to manage [(3)]. Most people will have work-related low back pain (WRLBP) at some point in their lives. It is a common health problem. It can lead to lost productivity at work and the expenses associated with occupational disabilities, which have a major detrimental economic impact on people on an individual, family, community, and international level [(4)]. Beauticians like to work 92% of the time while standing and 15% while seated. In India, low back ache is reported by 55% of beauticians [(5)].

A number of unfavorable health consequences, including musculoskeletal disorders associated with their profession - which beauticians are particularly susceptible to - can cause pain. Workplace-related musculoskeletal diseases (MSDs) are a serious public health concern that have a detrimental effect on people's general quality of life[(5)]. As to the 2010 Global Burden of Disease Study, low back pain ranked first in terms of years lived with disability (YLDs) and sixth overall in terms of disability-adjusted living years (DALYs) [(5)].When a worker's physical limitations and the physical demands of their line of work are out of balance, WRMSDs occur. An employee may experience pain or other bodily injury as a result of prolonged exposure to ergonomic risk factors. Major risk risks for beauticians include: motion that results from bending and twisting, such as an increase in speed or acceleration; uncomfortable or unstable postures; prolonged static postures; and repeated motions. When one grasps sharp things, like tool handles, compression can concentrate force on specific body areas. excessive vibration, usually from vibrating equipment; insufficient rest periods from working overtime, not taking enough breaks, and not switching up tasks [(6)].

It has been demonstrated that beauticians are more likely to experience mechanical neck discomfort and chronic low back pain as a result of their shifting work posture, heavier workloads during holidays and special events, anxiety, and depression [(7)]. Stress on the body as well as on the mind can cause microtrauma in the connective tissues, which exacerbates pain and tension in the muscles. The physical requirements for providing high-quality services, extended work hours without breaks, improper joint and postural alignment, and so on are the main ergonomic dangers. Poor posture, repeatedly performed repetitive actions, prolonged standing, and long workdays in beauty salons all contribute to mechanical strains on the joints [(7)].

MATERIALS & METHODS

A cross-sectional observational research with middle-aged beauticians with low back discomfort was conducted. People between the ages of 26 and 40 who were willing to participate in the study were recruited. Thirty middle-aged beauticians - fifteen of them female and fifteen of them male - completed the survey and were taken into account for the analysis. After explaining the study to each beautician, agreement was obtained from those who were requested to complete

the quality of life and disability questionnaires.

Beauticians with low back pain can use the modified Oswestry Questionnaire to assess their disability and the Short Form 12 to gauge their quality of life.

The Short Form 12 is used to evaluate and adjust people's quality of life. Beauticians with low back pain might have their disability evaluated using the Oswestry Questionnaire.

The 36-item short form health survey is shortened to a 12-item variant, known as the SF-12. There are two physical and mental sub scores on the eight-dimension form. A self-reported outcome measure called the SF-12 evaluates how a person's health affects their day-to-day activities. It is frequently employed as a metric for life quality. The SF12 is a self-report tool for measuring subjective health that evaluates the following areas: general health perception, vitality, social functioning, mental health, freedom from bodily discomfort, role restrictions brought on by emotional and physical health issues, and physical functioning. PCS has a test-retest reliability of 0.89 and MCS of 0.76[(8)].

A disease-specific disability metric called the Modified Oswestry Disability Index is used to determine a person's level of disability. Ten items make up the tool: pain level, self-care, lifting, walking, sitting, clerical work, sleeping, social activities, sexual life, and travel related to every day movement. There are six sub-items in every item. The score is determined as follows: 0–20% mild disorder, 21–40% moderate disorder, 41–60% severe disorder, and 60% or more, after dividing the total score by 45 points. The degree of functional impairment increases with score. The MODI test-retest reliability is 0.90[(9)].

INCLUSION CRITERIA

- Beauticians in the age group of 26-40 years of age.
- Both the genders male and female.
- Having work experience of minimum 1-2 year.
- Numeric pain rating scale range- ≥ 4
- Subjects who are willing to participate in the study.

EXCLUSION CRITERIA

- Patients with serious spinal pathologies (fractures).
- Spinal cord compressions.
- Previous surgeries (before 6 months)
- Pregnancy
- Work experience less than 1 year.
- On medications and analgesics.
- Non co-operative subjects.
- Subjects who are not willing for study.

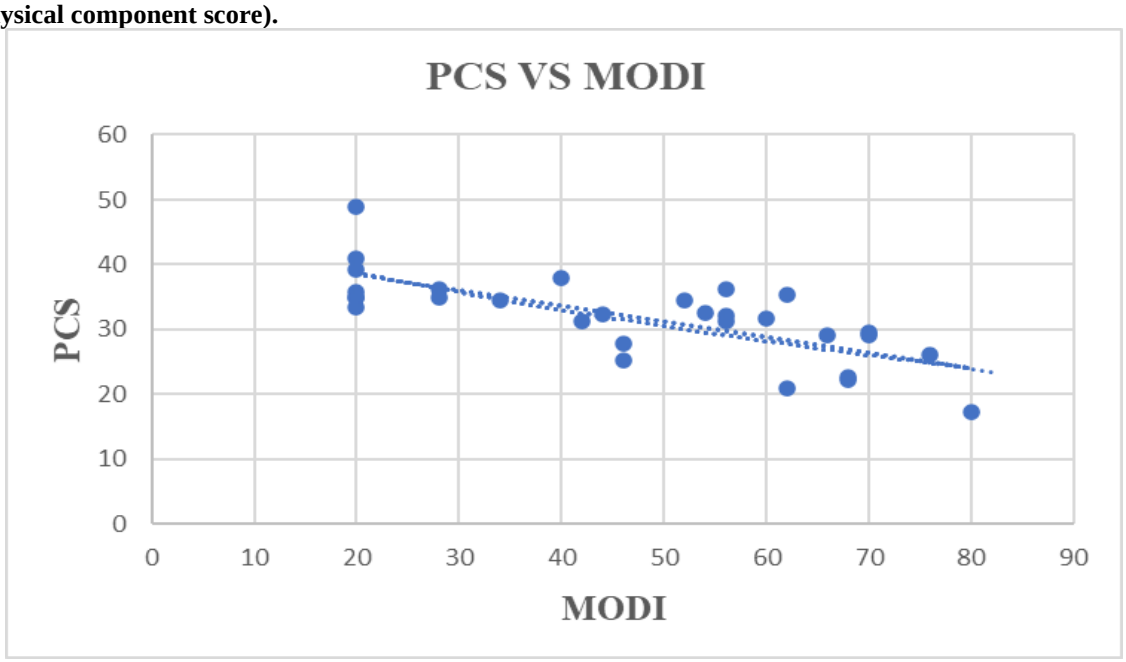
RESULT

Data was analysed using SPSS software version 20. The normality of the data was assessed using the Kolmogorov-Smirnov test. Since the data was found to be not normally distributed, it is appropriate to use non-parametric tests.

To determine correlation between quality of life and disability, Spearman's correlation test was applied. A strong significant negative correlation found between disability and physical component score of quality of life, [r value= -0.746, p value=0.01] The chosen significance level for the study was set at $p < 0.05$. This indicates that a correlation coefficient with a p-value below 0.05 would be considered statistically significant but no significant correlation was noticed between disability and mental component score of quality of life. [r value= 0.067, p value= 0.724].

		MODI	**PCS (QOL)**
MODI	Correlation coefficient Level of significance	-	-0.746 <0.01
QOLP	Correlation coefficient Level of significance	-0.746 <0.01	-

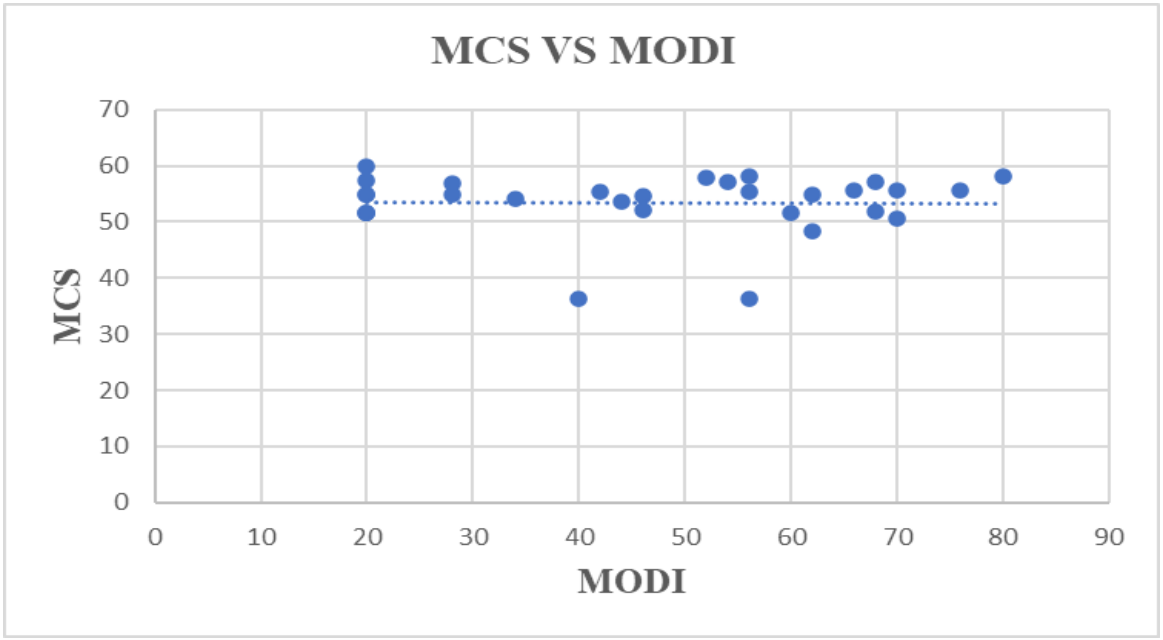
TABLE 1: - correlation between disability (modified Oswestry disability index) and quality of life (physical component score).



GRAPH 1: - r value of correlation between disability (modified Oswestry disability index) and quality of life (physical component score).

		MODI	MCS(QOL)
MODI	Correlation coefficient Level of significance	-	0.067 0.724
QOLM	Correlation coefficient Level of significance	0.067 0.724	-

TABLE 2: - correlation between disability (modified Oswestry disability index) and quality of life (mental component score).



GRAPH 2:- r value of correlation between disability (modified Oswestry disability index) and quality of life (mental component score).

DISCUSSION

The current study found that, among beauticians with low back pain, the physical component of quality of life was significantly correlated with moderate disability; however, the mental component of quality of life and disability did not significantly correlate.

In 2019, Markus Wettstein et al. verified tha t although quality of life indicators are no le ss or even greater in older patients, disabilit y in patients with chronic low back pain incr eases with age.

We may have seen high age effects on objec tive impairment outcomes, which could be mostly attributed to age differences.Cogniti ve skills are a crucial precondition for preser ving functional capacity into old life and av oiding impairment[10].

In 2013, Thias Stefane et al. came to the conclusion that, among subjects with low back pain, the physical quality of life domain appeared to be the most impaired and was strongly associated with the disability level. They also concluded that the perceived pain intensity was considered high and the disability level was found to be severe. The domain of physical quality of life (QoL) appears to have the strongest correlation with the degree of disability, suggesting that higher levels of disability may result in lower QoL [11].

Zalika Klemenc-Ketiš et al. (2011) shown that patients with somatic and mental co-morbidities, female patients, and patients with higher degrees of chronic pain may be more susceptible to increased impairment and a lower quality of life as a result of their low back pain. Physicians should concentrate on better pain treatment and actively searching for symptoms of anxiety and depression in patients with chronic low back pain, particularly when there are somatic co-morbidities. Significantly, this lowers self-reported impairment and enhances quality of life, which should lead to better patient care[12].

CONCLUSION

The current study indicated that among middle-aged beauticians with low back pain, there was a significant negative association between the physical component of quality of life and disability. Nevertheless, there was no discernible relationship between disability and the mental component of quality of life.

In light of the current study's findings, beauticians should be made more aware of the need of early detection and appropriate care to lessen the burden of low back pain and enhance quality of life while preventing disability.

Declaration by Authors

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Conflict of Interest: The authors declare no conflict of interest.

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