

# Incidence of Facial Palsy and its Impact on Quality of Life of Patients

FAREENA AHMAD<sup>1</sup>, MAHWISH SAEED<sup>2</sup>, IRAM RANI HASHMI<sup>3</sup>, MUHAMMAD KHURRAM ILYAS<sup>4</sup>, NOOR FATIMA HAROON<sup>5</sup>, SHAMIMA ABDULLAH<sup>6</sup>, AMINA TARIQ<sup>7</sup>

<sup>1</sup>Demonstrator, Department of Physiology, Fatima Memorial Hospital College of Medicine and Dentistry, Lahore

<sup>2,3,4</sup>Senior Demonstrator, Department of physiology, Fatima Memorial Hospital College of Medicine and Dentistry, Lahore

<sup>5</sup>Postgraduate resident, Department of Surgery, Shaikh Zayed Hospital, Lahore.

<sup>6</sup>Assistant Professor, Department of Community Dentistry, Bakhtawar Amin Medical and Dental College, Multan

<sup>7</sup>Research coordinator, Research cell, University College of Medicine & Dentistry, University of Lahore, Lahore

Corresponding author: Amina Tariq, Email: [aminatariq8@gmail.com](mailto:aminatariq8@gmail.com)

## ABSTRACT

**Objective:** This study was planned to assess the frequency of facial palsy in general population and its impact on the quality of life of patients.

**Method:** This descriptive cross-sectional investigation was conducted in Neurology department of a tertiary care hospital of Lahore from March, 2021 to June, 2022. Sample size was 168 patients with facial palsy out of 246. Data was collected using purposive sampling technique. Frequencies and percentages were calculated for gender, incidence of facial palsy and quality of life. Mean and standard deviation was calculated for age.

**Results:** Total number of patients had facial palsy were 168 out of 246 which was 68.29%. Males were 36.90% whereas females were 63.10%. Face palsy of left side was found among 34.25% patients and 65.75% patients had facial palsy of right side.

**Conclusion:** Incidence rate of facial palsy was above average and patients reported poor quality of life after facial palsy.

**Keywords:** Facial Palsy, Quality of Life, Depression, Facial nerve.

## INTRODUCTION

Facial expression play an important role in having an influential interpersonal communication. In understanding this aspect, evolutionary<sup>1</sup> as well as social<sup>2</sup> point of view is involved at same pace. The generation of facial expressions are based on complex mechanisms of contraction of facial muscles while working in coordination under the influence of stimulus from brain via innervation on face.<sup>3</sup> But due to the interruption in the functioning of facial nerve, a noteworthy facial movement may change which is quite problematic in having direct interpersonal communication.<sup>3</sup>

Facial expression could be affected due to several causes among which face palsy is the commonest.<sup>4-6</sup> Other etiologies are neoplastic,<sup>7</sup> lyme disease, otitis media<sup>7-9</sup>, traumatic<sup>11-12</sup> and neurologic diseases.<sup>8,10</sup> Clinical implications of face palsy has been assessed in numerous research investigations.<sup>13-15</sup>

It was reported in literature that for vestibular schwannoma patients, rehabilitation services can improve their quality of life.<sup>15</sup> Incidence of facial palsy in Peshawar was reported in a research study was 56.63%.<sup>16</sup> Literature is deficient in terms of incidence of facial palsy in general population of Pakistan, so there is need to assess the incidence of facial palsy in Pakistan. Therefore this study was planned to assess the frequency of facial palsy in general population and its impact on the quality of life of patients.

## METHODOLOGY

This descriptive cross-sectional investigation was conducted in Neurology department of a Tertiary Care Hospital of Lahore from March, 2021 to June, 2022. Sample size was 168 patients of facial palsy. Data was collected using purposive sampling technique. The age of patients ranged from 18 years to 40years. After the ethical approval from the institution, permission was taken from medical superintendent and head of department for data collection. Before recruitment of patients for the study, written consent form was signed by all participants and brief introduction of the study was also given. Patients' demographic data, clinical investigations and progress was taken. To assess the associated lifestyle factors, questionnaire to measure quality of life was used which had a dichotomous response recording way. Data was entered in SPSS version 25.0. Frequencies and percentages were calculated for gender, incidence of facial palsy and quality of life. Mean and standard deviation were calculated for age.

## RESULTS

Total number of patients who had facial palsy were 168 out of 246 which turned out the sample to be 68.29%. Males were 36.90%

whereas females were 63.10%. The mean age of patients was 26.6±4.13. Facial palsy of left side was found in 34.25% patients and 65.75% patients had facial palsy of right side.

Table 1: Incidence of facial palsy

	Frequency (%)
Patients diagnosed with facial palsy	168(68.29%)
Gender	
Male	108(43.55%)
Female	140(55.45%)
Mean Age	26.6±4.13
Facial Palsy	
Right	96(65.75%)
Left	50(34.25%)

Majority of patients (66.44%) reported that they experience mood swings for more than 2 weeks. Depressive mood experiences along with stress recognition was reported by 58.22% patients. Majority of patients were employed (54.79%).

Table 2: Quality of life of patients with face palsy

	Yes	No
Mood Swings for more than 2 weeks	66.44%	33.56%
Depressive mood experience and stress recognition	58.22%	41.78%
	Employed	Unemployed
Status of economic activities	54.79%	45.21%

Subjective feelings were reported to be poor by majority of patients 51.37%. Majority of patients experience higher hindrance in performing daily activities (69.86%).

Table 3: Quality of life of patients with face palsy

	Good	Fair	Poor
Self-reporting subjective feeling about general health	39.73%	8.9%	51.37%
	No	Some trouble	Not able to carry out daily activities
Hindrance of daily activities	19.86%	10.28%	69.86%

## DISCUSSION

Current study investigated the incidence of facial palsy and its impact on quality of life of patients coming to neurology department of a tertiary care hospital. However, many aspects came under the

consideration while evaluating the survey outcomes. Due to the cross-sectional survey, duration of facial palsy was not evaluated.

As it was a descriptive study, comparison was not made related to the quality of life of patients with facial palsy and with/without facial palsy.

Current study is first epidemiological research about incidence of facial palsy in Lahore, Pakistan. Interpersonal communication is based on the facial expressions,<sup>3</sup> which changes with the abnormal movement of facial muscles resulting in change in perceiving ability of others in terms of understanding the expression. So, it is very important to address this health issue. The age range of patients in the study showed that its prevalence in middle age is higher and it is more prevailing in females as compared to males.<sup>17</sup> Literature reported that other prevailing diseases also causes facial palsy.

Quality of life was also assessed in current study which revealed that facial palsy patients reported history of depressive mood for more than 2 weeks which is in line with findings of a similar study.<sup>16</sup> The study reported that patients with facial palsy had serious problems in performing daily activities which is not in accordance with the findings of a similar study.<sup>16</sup>

Overall, poor quality of life was found among patients of facial palsy as per the findings of the study assessed by using quality of life scale EQ-5D which is in line with the findings of previous literature.<sup>18-20</sup>

In conclusion, the incidence of facial palsy reported in current study conducted in single center of Lahore was more than 50%. So, there is a need to perform such studies at higher level to have a prevalence rate of facial palsy in Pakistan as it is prevailing at a higher rate in one center. Majority of patients of facial palsy have a poor quality of life for which proper department to perform rehabilitation of facial palsy should be introduced.

## REFERENCES

1. Darwin C, Ekman P, Prodger P. The expression of the emotions in man and animals. New York: Oxford University Press, 1998.
2. McGrouther DA. Facial disfigurement. *BMJ* 1997;314:991.
3. Bradbury ET, Simons W, Sanders R. Psychological and social factors in reconstructive surgery for hemi-facial palsy. *J Plast Reconstr Aesthet Surg* 2006;59:272-8.
4. Kahn JB, Gliklich RE, Boyev KP, et al. Validation of a patient-graded instrument for facial nerve paralysis: the FaCE scale. *Laryngoscope* 2001;111:387-98.
5. Bleicher JN, Hamiel S, Gengler JS, et al. A survey of facial paralysis: etiology and incidence. *Ear Nose Throat J* 1996;75:355-8.
6. Katusic SK, Beard CM, Wiederholt WC, et al. Incidence, clinical features, and prognosis in Bell's palsy, Rochester, Minnesota, 1968-1982. *Ann Neurol* 1986;20:622-7.
7. Moore GF. Facial nerve paralysis. *Prim Care* 1990;17:437-60.
8. Ratanaprasatporn S, Rizza A, Lapidot A. Facial nerve palsy: five year survey. *J Laryngol Otol* 1972;86:155-9.
9. Dennis DT. Lyme disease. Tracking an epidemic. *JAMA* 1991;266:1269-70.
10. May M. Facial paralysis, peripheral type: a proposed method of reporting. (Emphasis on diagnosis and prognosis, as well as electrical and chorda tympani nerve testing). *Laryngoscope* 1970;80:331-90.
11. Kamerer DB. Intratemporal facial nerve injuries. *Otolaryngol Head Neck Surg* 1982;90:612-15.
12. Cannon CR, Jahrsdoerfer RA. Temporal bone fractures. Review of 90 cases. *Arch Otolaryngol* 1983;109:285-8.
13. Ho AL, Scott AM, Klassen AF, et al. Measuring quality of life and patient satisfaction in facial paralysis patients: a systematic review of patient-reported outcome measures. *Plast Reconstr Surg* 2012;130:91-9.
14. Coulson SE, O'Dwyer NJ, Adams RD, et al. Expression of emotion and quality of life after facial nerve paralysis. *Otol Neurotol* 2004;25:1014-19.
15. Leong SC, Lesser TH. A national survey of facial paralysis on the quality of life of patients with acoustic neuroma. *Otol Neurotol*, 2015;36:503-9.
16. Haq MAU, Khan MI, Haq MIU, Alam UA, Ali S. Assessing clinical out-comes of cases of Bell's palsy in a tertiary care hospital. *J Postgrad Med Inst* 2022;36(1):44-6. <http://doi.org/10.54079/jpmi.36.1.2957>.
17. Peitersen E. Bell's palsy: the spontaneous course of 2,500 peripheral facial nerve palsies of different etiologies. *Acta Otolaryngol Suppl* 2002;549:4-30.
18. Bradbury ET, Simons W, Sanders R. Psychological and social factors in reconstructive surgery for hemi-facial palsy. *J Plast Reconstr Aesthet Surg* 2006;59:272-8.
19. Fu L, Bundy C, Sadiq SA. Psychological distress in people with disfigurement from facial palsy. *Eye (Lond)* 2011;25:1322-6.
20. Weir A, Pentland B, Crosswaite A, et al. Bell's palsy: the effect on self-image, mood state and social activity. *Clin Rehabil* 1995;9:121-5.