

# Facial nerve palsy (Bell's palsy) (a cross-sectional study)

**Frial Mohammad Mamoun Bakleh** (✉ [Bb3032618@gmail.com](mailto:Bb3032618@gmail.com))

Faculty of medicine, Al-Sham Private University, Damascus, Syria

**Joudy Ahmad samer Sherkatly**

Faculty of medicine, Al-Sham Private University, Damascus, Syria

**Maamoun Ayman Al-Fawares**

Faculty of Medicine, Syrian Private University, Damascus, Syria

**Rana Molham AlMansour**

Faculty of Medicine, Al-Sham Private University, Damascus, Syria

**Ghena Mohammed Khalid Najati** (✉ [G.n.fod@aspu.edu.sy](mailto:G.n.fod@aspu.edu.sy))

Mental Health and Behavioral Science, Al-Sham Private University, Damascus, Syria

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## Research Article

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# Abstract

**Objectives:** Our objective was to identify the possible etiologies of facial nerve palsy while highlighting the possible psychological aspects of this condition. We also reviewed treatment recommendations and provided advice on how to avoid complications and ensure rapid recovery.

**Materials and Methods:** We reviewed some of the available literature on facial nerve paralysis and conducted our own survey on general knowledge of facial nerve paralysis and its possible psychological causes in people aged 15 years and over. We also provided a summary of possible causes, symptoms, diagnosis, treatment methods, and recommendations. Our study type was cross-sectional, and data were collected through electronic questionnaires.

**Results:** The number of participants was 200, including inclusion criteria and exclusion criteria. Most of our responders were aged between 15 and 25 years. Half of them had met a person who suffered from facial nerve palsy after being exposed to some psychological distress. Most of these patients went to see a neurologist instead of seeking a psychiatrist's help. And most changed their lifestyle after their injury.

**Conclusion:** This study emphasizes the importance of mental health support, mental health is as equally important as physical health and patients must be aware of its contribution to physical illnesses. Patients must be encouraged to seek psychiatric help in order to reduce the incidence of facial nerve palsy.

## Introduction

Viral infections, ischemic injuries, and other medical conditions are often implicated in causing facial nerve palsy. However, psychological distress and emotional crises are as important as these previous factors. Patients remain unaware of the psychological factors that could play a role in causing facial nerve palsy, and often turn to neurologists rather than psychiatrists. Combining conventional treatment such as muscle relaxants with therapy and psychological support can speed up the healing process and help restore the face muscles' tone back to normal.

Facial Nerve palsy, or so-called Bell's palsy, is a common neurological condition that happens due to the facial nerve paralysis (seventh cranial nerve) which in turn leads to paralysis or weakness on one side of the face.

Most patients have a positive outcome with or without treatment while some suffer from significant facial distortions. Facial Nerve palsy is a common health problem that raises concern and has a negative impact on both patients and their families. Therefore, early diagnosis and prompt cause determination are key factors in providing quick and early treatment.<sup>1</sup>

## Methods Materials

Our objective was to identify the possible etiologies of facial nerve palsy while highlighting the possible psychological aspects of this condition. We also reviewed treatment recommendations and provided advice on how to avoid complications and ensure rapid recovery.

### **Inclusion criteria**

The sample included people from the age of 15 to over the age of 55, And those interested in our studies and scientific research and people from all educational groups.

### **Exclusion criteria**

Participants who did not give us sufficient information were excluded, and mockers, those under 18, the elderly, and those who do not know how to use social networking sites were excluded.

**Instrumentation and Procedure:** Number of participants: 200, The study was conducted by designing a cross-sectional study. The method of collecting data was using electronic questionnaires. The electronic questionnaire was sent across Syria to the general public. The questionnaire was placed in social media groups, in which all people from all groups participated. It was also done Conducting a mini interview with some participants who could not be reached via social media. The answers to the questionnaire questions were taken by the research team. The questionnaire consists of several questions and we have deleted some items from the original questionnaire. Most of the questions are closed questions to make it easier for the participants to answer. The data collection process took place during the period from 18/6/2023 to 22/9/2023, and the data was entered and analyzed using SPSS Statistics V26.

### **Data Analysis**

The data were emptied from the forms into an Excel file, and the special simple statistics were conducted, and the results were summarized and explained in tables, and the Spss-28 statistical program was used, the descriptive statistics were reviewed based on percentages and graphs, in addition to measures of central tendency (the arithmetic mean and standard deviation).

### **Ethical considerations**

Ethical approval was obtained from the Institutional Review Board (IRB) Faculty of Medicine, Al-Sham Private University.

## **Results**

The majority of participants in this questionnaire are females, from the age group 15–25, and their marital status is single. Most of the participants also hold a university degree, and have an average income.

The questions about work and economic status were asked because these two factors play an important role in the psychological state of people. If a person is not happy at work, he will be subjected to more

mental pressure that may manifest as a physical disease later on.

Most of the workers participating in this survey were happy with their work, 11% were not happy, while the vast majority of participants didn't work.

It is well known that anger has a heavy negative impact on individuals' psychological status. Most of the participants in this survey (56%) get angry easily and over non-meaningful reasons. They also hide their feelings of sadness and anger, which can affect their psychological health and can ultimately lead to physical manifestation of those feelings. Therefore, people must find healthy ways to express and overcome their anger.

When asked about the methods they use to relieve their anger, the participants' answers were varied, ranging from walking and other methods of exercise to participating in religious rituals such as reading the Qur'an and praying for forgiveness. Some of the participants preferred to smash things and scream, while others preferred to listen to music or take a car ride, other methods were also mentioned.

We found that 56 percent of participants know what facial nerve palsy is, but 84 percent do not know its types and 66 percent do not know its prevalence.

The study shows that 84 percent of participants will seek a neurologist if they suspect having facial nerve palsy, while only 15% will seek a psychiatrist. Therefore, in this research, we wanted to highlight the importance of the psychological factor and the importance of the role of the psychiatrist in some organic diseases, such as in facial nerve palsy.

We also found that 8% of participants believe that the cause of facial nerve palsy is magic and sorcery, while this is a small percentage, these beliefs still exist.

Of all participants, 51% know someone who had suffered from facial nerve palsy, this is evidence of the how common this condition is.

Around 55% have experienced a psychological crisis. Only 3% of patients have consulted a psychiatrist.

About 27% of all participants did not receive treatment, 68% (most of the patients) visited a neurologist. 40% of the patients recovered completely after treatment, while 59% only recovered slightly, and 27% did not recover at all.

However, we theorize that if therapy had accompanied traditional treatment provided by the neurologist, patients would have improved further, and a slight recovery might have turned into a complete recovery.

Around 89% of the participants thought that the community surrounding palsy patients effected the treatment and recovery of said patients, so patients' families must be the first line of providing psychological support to help the patients overcome the psychological crisis.

About 53% of patients were ashamed of their condition. Moreover, 46% of patients ended up canceling job interviews or family events to avoid being asked about their faces. The face changes could affect the patient's psychological state.

61% of patients changed their lifestyle after the injury.

most of the patients, 53%, were not bullied, while 46% were, this is considered a high percentage. The bullying impact was severe on 26% of the patients, moderate on 39% of the patients (the highest), and mild on 33% of patients. 69% of participants know that the nerve palsy could have a psychological not physical cause, but still they would not seek a psychiatrist help, believing that only the mentally ill or the crazy people go the psychiatrist.

## Discussion

The sample of males and females was studied, and the most common percentage of females was 69%. Among the age group, the most common percentage was for ages between 15 to 25, at a rate of 66%. The most common percentage of marital status was single people, at a rate of 68%. As for educational level, the most common percentage was those with a university degree, at a rate of 64%. The most common were non-workers, at a rate of 64%, and they were happy to work, at a rate of 60%. As for those who were angry for ridiculous reasons, the most common were those who got angry sometimes, at a rate of 74%. The most common in the economic situation was average, at a rate of 82%.

The most common percentage was those who knew what facial nerve paralysis was, at a rate of 56%, and the largest percentage did not know the types of facial nerve paralysis, at a rate of 84%, and the majority of participants did not know the prevalence of facial nerve paralysis, at a rate of 66%. Most participants would see a neurologist if they were afflicted with facial nerve paralysis, at a rate of 84%. Most of them do not believe that the cause of facial nerve paralysis is magic, at a rate of 92%, and most believe that the cause of facial nerve paralysis is psychological, not organic, at a rate of 68%.

Most of the participants know people who suffered from facial nerve paralysis, at a rate of 51%. Most of them suffered a psychological crisis, at a rate of 44%. The majority of those affected saw a neurologist, at a rate of 86%. Most of them recovered completely, at a rate of 40%. Most of them agreed that the environment has an impact on the patient, at a rate of 89%. The most common patients were ashamed of The condition is 53%, and most of them changed their lifestyle by 60%, and most of them were not exposed to bullying, 53%, and did not cancel a job interview due to illness, 52%.

## Conclusion

Treatment of facial nerve palsy can be improved with combination therapy. Neurological treatment with psychotherapy .This research emphasizes the relationship between psychological stress and physical diseases, as each of them affects the other, and that the treatments used to treat one side positively affect the other side. This is what prompted us to clarify the relationship between mental and physical

health and the necessity of treating both sides together, He urged the medical staff to take a clinical history and carefully examine each patient, educating neurological patients on the importance of seeing a psychiatrist and Ensure that mental health is maintained to the same degree as physical health.

## **Declarations**

### **Ethics approval and consent to participate**

The Research Ethics Committee at Al-Sham Private University approved the study protocol. Verbal informed consent was obtained from each participant prior to participation. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

### **Consent for publication**

Not applicable.

### **Availability of data and materials:**

All data related to this paper's conclusion are available and stored by the authors. All data are available from the corresponding author on a reasonable request.

### **Conflict of interest:**

The authors declare that they have no conflict of interest.

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### **Authors' contributions:**

F.B. and J.S. and R.A. conceptualized the study, F.B. and J.S. and R.A. wrote the study protocol, performed the statistical analysis, participated in data collection, and did the literature search. M.A. participated in the literature search, interpret the results, wrote the main manuscript, and prepared the Tables. G.N. revised the draft. All authors read and approved the final draft.

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**Competing interests:** The authors declare no competing interests.

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## Tables

Table 1  
Basic and demographic information

<b>Male</b>	<b>62 (31%)</b>
Female	138(69%)
Age	
15–25	132(66,3%)
25–35	25(12,6%)
35–45	20(10,1%)
45–55	12(6%)
> 55	10 (5%)
Marital status	
Single	137 (68,8%)
Married	53 (26,6%)
Widowed	2(1%)
Divorced	7(35%)
Education level	
No education at all	3(1,5%)
Middle school education	21(10,6%)
High school education	47(23,7%)
Collage education	127(64,1%)

Table 2  
Factors affecting the participants' psychology

<b>Economic status</b>	
excellent	18(9%)
average	164(82,4%)
poor	17(8,5%)
<b>Work status</b>	
Doesn't work	128(64,3%)
work	71(35,7%)
<b>Happiness at work</b>	
Happy at work	120 (60,3%)
Not Happy at work	22(11,1%)
Doesn't work	57(28,6%)
<b>Anger over little things</b>	
Get angry easily	112(56,6%)
Don't get angry easily	86(43,4%)
<b>Hiding anger</b>	
sometimes	149(74,5%)
never	16(8%)
always	35(17,5%)



Table 3  
Participants' knowledge about facial nerve palsy

<b>Do you know what facial nerve palsy is?</b>	
yes	112(56%)
no	88(44%)
<b>Do you know what the types of facial nerve palsy are?</b>	
yes	31(15,5%)
no	169(84,5%)
<b>Do you know its prevalence?</b>	
yes	68(34%)
no	132(66%)
<b>If you suffered from facial nerve palsy would you visit a neurologist or a</b>	
psychiatrist	31(15,5%)
neurologist	169(84,5%)
<b>Did you believe that facial nerve palsy is caused by magic or lack of faith?</b>	
yes	16(8%)
no	184(92%)
<b>Do you think that the cause of facial nerve palsy could be psychological not physical?</b>	
yes	109(68,6%)
no	50(31,4%)

Table 4  
People who had suffered from facial nerve palsy:

<b>Do you know anyone who had suffered from facial nerve palsy?</b>	
Yes	101(51,8%)
No	94(48,2%)
Have they experienced any psychological crisis?	
Yes	81(44,9%)
No	66(44,9%)
Had they received any medical treatment?	
visited a neurologist	101(68,7%)
visited a psychiatrist	6(4,1%)
Haven't receive any treatment	40(27,2%)
Recovery	
Complete	54(40,6%)
Slight	42(31,6%)
Not yet recovered	37(27,8%)
the surrounding community role in treatment	
Has a role	153(89%)
Doesn't have a role	19(11%)
Have they felt ashamed of their condition?	
Yes	76(53,1%)
No	67(46,9%)
Did they change their lifestyle after injury?	
Yes	88(60,7%)
No	57(39,3%)
Were they bullied?	
Yes	66(46,5%)
Not	76(53,5%)
Did it effect their mental health?	
Mildly	36(33,3%)

<b>Do you know anyone who had suffered from facial nerve palsy?</b>	
Moderately	43(39,8%)
Severely	29(26,9%)
Have they ever canceled a job interview or a family gathering to avoid being asked about their faces?	
Yes	65(47,4%)
No	72(52,6%)