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Analysis of the Current Situation and Factors Influencing the Stigma of Facial Palsy Patients

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Abstract: *Objective: To investigate the current stigma status in patients with facial palsy and analyze the factors influencing it. Methods: The General Information Questionnaire, the Facial Disability Index Rating Scale, the General Self-Efficacy Scale, and the Social Influence Scale were used to investigate 220 patients with facial palsy admitted to the Department of Acupuncture and Moxibustion of Shaanxi Provincial Hospital from December 2021 to April 2022. Results:The stigma score for patients with facial palsy was (58.89±11.45), with a mean entry score of (2.45±0.48), and 95% (209 cases) of patients with facial palsy had moderate or high level of stigma. Gender, per capita monthly income, medical payment method, self-efficacy level, and facial disability index were the factors influencing factors of morbidity stigma in patients with facial palsy. Conclusion:Patients with facial palsy have a high level of morbidity stigma. Health care professionals should provide health education to patients with facial palsy so that they can accept the changes in their facial image, conduct regular communication sessions for patients with facial palsy and encourage patients to actively confide in their feelings, improve the level of self-efficacy of patients with facial palsy, reduce their negative emotions and reduce their sense of stigma.*

Keywords: *Facial Palsy, Stigma, Self-Efficacy, Facial Disability Index, Analysis of Influencing Factors*

1. Introduction

Facial palsy[1,2], Also known as facial neuritis, is characterized by paralysis of the expression muscles on the affected side of the face, distorted mouth and eyes, incomplete eyelid closure, etc. If facial palsy is not treated in time or treated improperly during the acute attack, it is very likely to develop into a posterior phase with facial muscle spasm and atrophy, which greatly affects the quality of life of patients. Sickness stigma [3]refers to the patient's experience of discrimination and the resulting limited social participation, which leads to the internalization of shame, blame, guilt and fear, resulting in increased negative emotions that seriously affect the patient's psychological state and social life. Patients with facial palsy experience significant negative emotions, shame, anxiety, guilt, and even the development of serious psychological disorders because of the altered facial image, reducing the quality of life of patients with facial palsy, therefore, psychological interventions for patients with facial palsy are extremely important. At present, there are relatively more studies on shame in China, while fewer studies on shame in patients with facial palsy have been reported. This study aims to investigate the current situation of shame in patients with facial palsy and analyze the factors influencing shame in patients with facial palsy to provide a theoretical basis for the development of targeted nursing interventions.

2. Objects & Methods

2.1. Research peopel

Subjects Using the convenience sampling method, 220 patients with facial palsy were admitted to

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each ward of the Department of Acupuncture and Moxibustion of Shaanxi Provincial Hospital of Traditional Chinese Medicine from December 2021 to April 2022 were selected as study subjects. Inclusion criteria vertebrae: (1) met the Chinese and Western medical criteria for the diagnosis of facial palsy[4,5] ; (2) no comprehension or expression impairment; (3) those who voluntarily participated in this study. Exclusion criteria: (1) those with other serious diseases such as combined tumor and heart failure; (2) the presence of a history of mental illness; (3) the presence of diseases such as hearing impairment and visual impairment.

2.2. Research tools

1) General information questionnaire Designed by the investigator, it included demographic information such as gender, age, education level, per capita monthly income, and disease information such as the number of occurrences of the patient's disease and facial nerve function classification.

2) Social Impact Scale (SIS), The SIS scale consists of 24 items, including 4 dimensions of social exclusion, economic discrimination, intrinsic shame, and social isolation, and is scored on a 4-point Likert scale. The total score is 24 to 96. The higher the total score of the scale, the more severe the stigma, with a total score of 20-39 being low stigma; 40-59 being moderate stigma; and 60-80 being severe stigma. The scale in this study was adopted from domestic scholars[6] The Chinese version of the scale was used. The scale has been widely used in various fields, such as in studies of patients with chronic diseases, cancer, stoma, and other diseases[7, 8, 9] The scale has been widely used in various fields, such as chronic diseases, cancer, stoma, and other diseases, and has been tested to have good reliability. In this study, Cronbach's alpha coefficient of the scale was 0.85.

3) General Self-Efficacy Scale (GSES) This scale has 10 items and is scored on a 4-point Likert scale, with the higher the scale score, the stronger the self-efficacy. 10-23 is the low self-efficacy level, 24-31 is the medium self-efficacy level, and 32-40 is the high self-efficacy level. The scale of this study was adopted from the Chinese version of Wang, Cai-Kang[10] The Chinese version of the scale was used in this study. The Cronbach's alpha coefficient of the scale in this study was 0.83.

4) Facial Disability Index (FDI) This scale consists of two subscales, the Facial Disability Index-Physical Functioning Score (FDIP) and the Facial Disability Index-Social Functioning Score (FDIS). The FDIP assesses patients' functions in eating, speaking, and brushing teeth on a Likert 5-point scale, with higher scores indicating better physical functioning; the FDIS assesses patients' social functions such as social life, emotional state, and sleep quality on a Likert 6-point scale, with higher scores indicating lower social functioning.

2.3. Method of data collection

The purpose of the survey was explained in detail to the surveyed patients before the survey, and the patients agreed to fill out the survey anonymously by themselves, and if they could not complete it by themselves, the surveyors assisted in completing it according to their answers. After completion, the questionnaires were checked on the spot and collected after they were error-free. In this study, 226 questionnaires were distributed and 220 were valid, with an effective rate of 97.6%.

2.4. Statistical methods

SPSS 26.0 software was used for data analysis in this study. Frequency, mean and standard deviation were used to describe the measurement data, and independent sample t-test and one-way ANOVA were used to analyze the influencing factors. Multiple linear regression was used to analyze the factors influencing stigma in patients with facial palsy. Differences were considered statistically significant at $P< 0.05$.

3. Results

3.1. Stigma scores for patients with facial palsy

Among the 220 patients with facial palsy investigated, there were 92 males and 128 females, aged 21-72 (50.53±11.92) years. The total score of the Social Impact Scale for patients with facial palsy was (58.89±11.45), and the mean score of the entries was (2.45±0.48), which means that the stigma of patients with facial palsy was at a medium level. There were 11 patients with low level, accounting for

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5% of the total; 109 patients with medium level, accounting for 49.5%; and 100 patients with high level, accounting for 45.5%. 95% of the patients with facial palsy had a medium or high level of morbidity stigma.

3.2. Analysis of factors related to stigma in patients with facial palsy

1) Univariate analysis of stigma scores in patients with facial palsy

A univariate analysis was performed using the Social Impact Scale scores of patients with facial palsy as the dependent variable and general demographic information as the independent variable. The results showed that when the stigma scores of facial palsy patients with different demographic data were compared, the differences in stigma scores of facial palsy patients with different gender, education levels, per capita monthly income, medical payment methods, and current residence were statistically significant (P< 0.05). There was no statistically significant difference between the scores of facial palsy patients with different ages, occupational status, disease knowledge, marital status, number of episodes, and facial nerve function classification (P> 0.05). See Table 1.

Table 1: A univariate analysis of stigma scores in patients with facial palsy (n=240).

Projects	numbers	stigma（Score）	*t/F*	*P*
Gender				
Male	92	52.55±9.73	0.935	0.000
Female	128	63.44±10.41		
Age（years）				
18～45	68	58.05±11.28		
46～60	104	59.24±11.45	0.295	0.745
≥61	48	59.38±11.88		
Education level				
Primary school and below	17	56.41±11.14		
Lower Secondary	37	56.22±11.74		
High School and Secondary School	51	59.69±10.09	3.941	0.004
College	70	59.89±11.72		
Bachelor's degree and above	45	64.22±10.90		
Per capita monthly income				
≤3000RMB	42	52.33±10.38		
RMB 3001-5000	56	59.20±10.32	13.257	0.000
5001～8000RMB	64	59.98±11.06		
≥8001RMB	58	65.02±10.46		
Occupational status				
Working	85	59.51±11.76		
Unemployed	6	63.17±12.01	1.078	0.359
Unemployed	59	56.81±11.14		
Retired	70	59.51±11.27		
Knowledge of disease				
Not at all	31	61.16±12.32		
Somewhat aware	57	58.33±11.37	0.646	0.587
Partially aware	74	59.22±10.59		
Basically	58	58.89±11.45		
How to pay for medicine				
medical insurance	143	58.97±11.26		
Self-payment	58	60.62±10.89	3.291	0.039
Rural health insurance	19	52.95±10.05		
Marital status				
Unmarried	16	56.94±13.03	1.646	0.481
Married	204	59.04±11.34		
Number of episodes				
First episode	182	58.76±11.57	0.175	0.717
Two or more	38	59.50±11.03		
Facial nerve function classification				
Grade 2	5	62.80±5.98		
Grade 3	85	57.75±12.87	0.781	0.506
Grade 4	108	59.13±10.45		
Grade 5	22	61.18±11.30		
Current place of residence				
Rural	67	55.24±11.06	0.001	0.002
Urban	153	60.48±11.29		

2) Analysis of stigma and general self-efficacy factors in patients with facial palsy

The general self-efficacy score of the patients in this study was (29.60±5.22), Pearson correlation analysis showed that the level of stigma in patients with facial palsy was negatively correlated with the general self-efficacy of the patients (r=-0.181, p< 0.05).

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3) Factor analysis of stigma and facial disability index in patients with facial palsy

The facial disability index score of the patients in this study was (34.69±9.09), and Pearson correlation analysis showed that the level of stigma in patients with facial palsy was negatively correlated with the patients' FDI ($r = -0.719$, $P < 0.05$).

3.3. Multiple linear regression analysis of factors influencing stigma in patients with facial palsy

Variables that were statistically different on the stigma of patients with facial palsy were used as independent variables, and the social influence scale was used as the dependent variable in multiple linear regression. The results showed that gender, monthly income per capita, medical payment method, self-efficacy, and facial disability index entered the regression equation ($p< 0.05$). See Table 2 Table 3.

Table 2: Assignment of independent variables.

Independent variable	Assignment situation
Gender	1=Male, 2=Female
Place of residence	1=rural, 2=urban
Education level	1=Elementary school and below, 2=Junior high school, 3=High school and secondary school, 4=College, 5=Bachelor and above
Monthly income per capita	1=≤3000RMB, 2=3001 to 5000RMB, 3=5001 to 8000RMB, 4=≥8001RMB
Method of payment of medical bills	1=Medicare, 2=Self-pay, 3=Rural Health Insurance
General self-efficacy	Original value carry-in
Facial Disability Index	Original value brought in

Table 3: Multiple linear regression analysis of factors influencing stigma scores in patients with facial palsy.

Variables	Regression coefficient	Standard error	Standard Error Coefficient of Regression	*t*	*p*	95%*CI*
constants	71.419	5.787	-	12.341	0.000	60.011～82.827
Gender	5.265	1.058	0.227	4.978	0.000	3.181～7.350
Monthly income per capita	1.581	0.539	0.148	2.931	0.004	0.518～2.645
Medical payment method	1.518	0.748	0.116	2.029	0.044	0.043～2.994
Self-efficacy	-0.260	0.094	-0.119	-2.773	0.006	-0.446～-0.075
Facial Disability Index	-0.709	0.060	-0.563	-11.806	0.000	-0.827～-0.590

Note: F=49.506,P<0.001,R^2=0.620,After adjustment R^2=0.608,"-"Indicates no data

4. Discussion

4.1. High level of stigma in patients with facial palsy

From the results in Table 1, it is clear that patients with facial palsy have a stigma score of (58.89±11.45), which is in line with chronic kidney disease[9] which is more consistent with the results of the study compared to chronic kidney disease, and is at a moderate level, compared to cancer patients[11] The stigma was slightly higher in patients with facial palsy compared to patients with cancer. Some studies have shown that[12] The attractiveness of paralyzed faces is significantly lower

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than that of normal faces, and the sudden change in the appearance of patients with facial palsy will increase the negative emotions of patients and lead to psychological problems such as shame, depression, anxiety and depression, and even suppression of serious psychological diseases; Some studies have shown that[12] The attractiveness of paralyzed faces is significantly lower than that of normal faces, and the sudden change in the appearance of patients with facial palsy will increase the negative emotions of patients and lead to psychological problems such as shame, depression, anxiety and depression, and even suppression of serious psychological diseases; When patients have persistent facial palsy, they need long-term intermittent treatment, which increases the economic burden on patients and further increases their negative emotions.

Therefore, clinical psychological care for patients with facial palsy is particularly important, and early psychological interventions for patients can play a guiding role, and nurses should adopt individualized intervention care programs to effectively reduce patients' negative emotions, ensure better treatment compliance, and help patients recover their physical and mental health faster.

4.2. Different gender, per capita monthly income, medical payment method, self-efficacy level, and facial disability index are the influencing factors of the stigma of facial palsy patients

1) Gender

The results of this study showed that the level of stigma in female patients with facial palsy was slightly higher than that in male patients with facial palsy, which was consistent with the stigma in patients recovering from neocoronary pneumonia[14] and shame in patients with postoperative rectal cancer[15] This is consistent with the findings of the study that female patients have higher levels of shame than males. For patients with facial palsy, due to the social and cultural emphasis on women's appearance and attractiveness, women pay more attention to changes in their appearance compared to men, and women with facial palsy, who have more severe body image disorders, are less satisfied with their appearance and speech and experience more stigma. In addition in previous surveys[16, 17] , women with head and facial disorders had higher stigma, more severe body image disturbances, more severe psychological distress, and a higher incidence of anxiety and depression compared to men. Therefore, there is a need for nursing staff to prevent and intervene in female facial palsy patients' stigma to address the risks associated with stigma and body image disturbance, and these measures should include health education for female patients themselves, and should also include emotional education for family members to instruct them to give more emotional support to patients.

2) Monthly income per capita

The present outcome study showed that patients with facial palsy with a per capita monthly income of $5001 to $8000 and ≥$8001 had higher stigma scores, which was consistent with the stigma of patients recovering from neoconjunctive pneumonia[12] and morbidity stigma among patients with cervical cancer[18,19] The results of the study are consistent with the higher monthly per capita income of patients with higher sickness stigma scores. Because patients have higher economic income and are surrounded by a social circle with relatively higher education and economic income, pay more attention to their health status, invest more in their body image, and need more self-satisfaction, during the process of socialization, such people pay more attention to others' perceptions of themselves and have a higher sense of morbidity and shame. Therefore, the nursing staff is prompted to focus on low-income patients with facial palsy when giving them an admission assessment and give them more emotional support and psychological counseling to reduce low self-esteem, guilt, and shame.

3) Pharmaceutical payment methods

The present outcome study showed that patients with facial palsy who paid for their health care had a higher level of stigma than those with health insurance, and this result is more consistent with the results of the domestic scholars[20] This result is more consistent with the findings of national scholars, where self-pay patients had higher levels of stigma compared to those with medical insurance. Patients with facial palsy who had low medical reimbursement rates were more likely to feel guilt due to the expensive medical costs and the impact on their families. Gradually decreasing confidence, increasing financial burden, and decreasing emotional support from family members as the patient's illness progresses may lead to an increase in negative emotions. Therefore, further improvement in health insurance would be needed to reduce patients' negative emotions, and social support could help patients improve their psychological status and reduce negative emotions.

4) General self-efficacy

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The present outcome study showed that patients with facial palsy with higher self-efficacy had a lower sense of morbidity stigma. The results of the present study are consistent with the findings of morbidity stigma in patients with enterostomy[8] The results of the study are consistent with the findings that patients with lower levels of self-efficacy have a higher sense of morbidity and shame. Some studies suggest that[21] People with high self-efficacy are more successful in performing specific behaviors because, even in difficult situations, tend to consider the positive outcomes associated with the behavior, and they are more likely than others to persist until their goals are achieved. In contrast, people with low self-efficacy are prone to thoughts of low self-esteem, leading to problems of anxiety and depression, and ultimately less likely to achieve their goals. People with facial palsy who have high self-efficacy are more likely to approach their condition with a positive mindset, adopt positive coping strategies for their facial image, actively cooperate with treatment, and have fewer negative emotions generated by themselves, and therefore have a low sense of illness stigma. On the contrary, patients with low self-efficacy are more likely to treat their condition with pessimism, adopt negative coping strategies, and even become disappointed with medical care, believing that they cannot cure their facial palsy, generating great negative emotions and increasing their sense of shame accordingly. Therefore, we nursing staff should pay more attention to patients with low self-efficacy, encourage them to communicate more with the outside world, and use personalized interventions such as peer support and family support to enhance their self-confidence to overcome the disease, have hope for the future, and improve their self-efficacy.

5) Facial Disability Index

The present outcome study showed that the lower the FDI of facial disability index the higher the patient's morbidity stigma and the significantly lower social functioning relative to physical functioning[22] This could be explained by the fact that patients with facial palsy experience greater social disability due to their inability to express emotions through facial movements. The results of a study showed[23] that personality traits characterized by positive affects, such as extraversion and emotional stability, are associated with higher FDIS scores in people with facial palsy, while personality traits characterized by negative affect are associated with lower FDIS scores. Facial palsy is difficult to hide from others, has high levels of social avoidance and distress, and can experience severe psychological problems[24], negative stress, anxiety, and depression, often leading to stigma and social exclusion, patients avoid social contact, which, in turn, reinforces sociability barriers, and higher levels of depression are associated with lower FDIS scores[25] The higher the level of depression, the lower the FDIS score. Some studies have pointed out that[26] , negative emotions such as sensitivity, anxiety, and depression may lead to dysregulation of psycho-neuro-immune pathways, resulting in immune dysfunction and aggravating facial palsy. Therefore, we should focus on patients with facial palsy with low FDIS scores, and various methods of inducing emotions will be found in previous studies, and constraint-induced movement therapy has been used extremely effectively to treat various post-stroke symptoms[27] In this type of therapy, the patient practices moving the affected body part very intensively and the possibility of moving the non-affected body part is severely limited, which also prevents learning not to use the affected body part, so the use of this therapy is very promising for patients with facial palsy[24] Therefore, the use of this therapy is very promising for patients with facial palsy. In clinical practice, it is important to establish an interdisciplinary rehabilitation platform for patients with facial palsy, where the combination of proven physical therapy and modern methods can be very beneficial.

5. Conclusion

Patients with facial palsy have higher levels of morbidity stigma, among which gender, per capita monthly income, medical payment method, self-efficacy, and facial disability index are the influencing factors of morbidity stigma in patients with facial palsy. These influencing factors suggest that clinical nurses should provide early psychological interventions and emotional guidance, personalized nursing interventions, focus on improving patients' self-efficacy level, and do a good job of health guidance when formulating care plans for patients with facial palsy, so that Patients should correctly understand and accept the changes in their facial image, enhance their confidence in overcoming the disease, and reduce their sense of shame.

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