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Muhammad Naveed Babur
Isra University, Islamabad

Farrukh Shahzad
isra University, Islamabad

Waqar Ahmed Awan
isra University, Islamabad

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IMPACT OF GUILLAIN BARRE SYNDROME ON PSYCHOSOCIAL FUNCTIONINGS OF PATIENTS IN ISLAMABAD

Dr. Muhammad Naveed Babur¹, Dr. Farrukh Shahzad², Dr. Waqar Ahmed Awan³

¹ Associate Professor, Isra University, Islamabad

² Research Associate, Isra University, Islamabad

³ Assistant Professor, Isra University, Islamabad

Correspondence to: Dr. Muhammad Naveed Babur, PhD (Rehab Sci) Scholar, BSPT (Pak), PDPT (Pak), Member, NCRC, Physical Therapy (HEC), PRINCIPAL, ISRA Institute of Rehabilitation sciences (IIRS) ISRA University, Islamabad Campus. Cell: 92-333-5118324. naveedphysio@gmail.com

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ABSTRACT

Background: GuillainBarre Syndrome (GBS) is a rare autoimmune disease of unknown causes that affects peripheral nervous system. **Objectives:** To review the impacts of the GuillainBarre Syndrome on the psychosocial functioning of the patients and to assess the relationship between GuillainBarre Syndrome and the psychosocial functioning **Methodology:** Comparative cross sectional survey was conducted on 100 participants (50 GBS patients from Shifa International Hospitals and 50 normal participants from Islamabad in 6 months time from February to July 2013. Data collected through Structured Questionnaire in hospital settings for GBS patients and normal persons from Islamabad through Psychosocial functioning scale and social functioning scale and analyzed by using SPSS version 17. **Results:** Results were (n= 40)% GBS patients developed poor to extremely poor self-Esteem and only (n= 12)% normal persons have poor self-esteem, (n= 82)% patients developed moderate to severe depression and only (n= 20)% normal persons have severe depression, (n= 76)% patients develop very severe anxiety and only (n= 20)% normal participants have severe anxiety, only (n= 10)% patients develop poor to very poor decision making confidence while normal participants retain their normal decision making confidence level, (n= 54)% patients develop moderate to severe hostility level and only (n= 12)% normal participants have severe hostility, (n= 92)% patients have moderate to very high risk taking ability and (n= 90)% normal people have moderate to very high risk taking ability, (n= 42)% patients have develop bad to very bad social conformity and only (n= 24)% people have bad social conformity. **Conclusion:** It is revealed that Guillain Barre Syndrome has very bad impact on psychosocial functioning of patients. Normal persons also have psychosocial problems but as compared to normal persons, patients with GuillainBarre Syndrome face more psychosocial problems in their life

Key words: GaullianBarre Syndrome, Psychosocial Functioning

INTRODUCTION

GuillainBarre Syndrome is basically a weakness of the muscles or paralysis which may lead to complete inability to perform or use a particular muscle or group of muscles. It is also called immune mediated disorder of peripheral nervous system. This term named as Guillain-Barre Syndrome is considered to be identical with an acute inflammatory Demyelinating Polyradiculoneuropathy (AIDP). There is a higher ratio of recognition of different variants of GuillainBarre Syndrome as compared to last few years. Now it is included in axonal variants^(1, 2, 11). Most cases have some typical symptoms which may include numbness, weakness of the limbs and mostly report muscular pain. Gullianbarre syndrome also has some common features which contain weakness of limbs and mostly bilateral weakness.^(10,11) This kind of weakness in patients usually comes with or sometime without involvements of those cranial nerves which innervate skeletal muscles and respiratory muscles^(3,8). Other

signs/symptoms are like sensory impairments, disruption in the normal functions, muscles pain, numbness, loss of proprioception, loss of sensation of touch, loss of sensation of vibration, disruption in autonomic functions, cardiac arrhythmias, oropharyngeal muscles weakness, difficulty in speech, swallowing difficulty, hypotension and hypertension etc^(2, 3, 9, 12) The signs of the gullianbarre syndrome are similar to those who have neurological diseases but it can be different for different persons and mostly it is hard to diagnose GuillainBarre Syndrome in its early phase or stage^(4, 10). EMG, NCV and Spinal tap test have been performed to confirm the GBS^(5, 6, 7)

METHODOLOGY

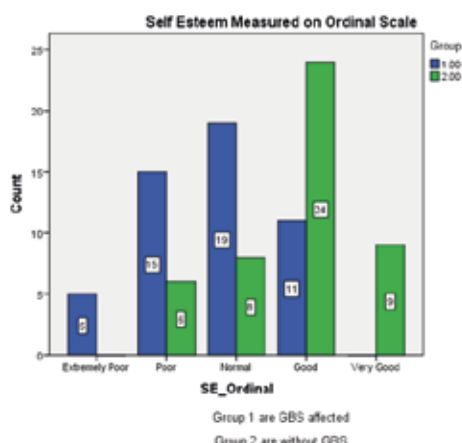
A sample of 100 participants (50 with GuillainBarre Syndrome (GBS) admitted in Shifa International Hospitals (SIH) and 50 normal persons regardless of age and gender not admitted in Shifa International Hospital having normal EMG and Nerve Conduction Velocity was

surveyed . The variables were self-esteem, depression, anxiety, decision making confidence, social functioning, risk taking and social conformity Data collected through Structured Questionnaire in hospital settings for GBS patients and normal persons from Islamabad through Psychosocial functioning scale and social functioning scale

RESULTS

All subject were included in study are from same socio-economic status but regardless of age and gender.

Graph IV-15: Self Esteem Measure on ordinal Scale



In this figure the clustered bar chart is used to depict the difference between the Self Esteem construct. In graph IV-15 in group 1, 40% GBS patients develop Poor to extremely poor self esteem while 38% GBS population retain their normal Self Esteem. As compared to group 1, in group 2 82% people which are free from GBS have normal to very good self esteem level only 12% people are in poor self esteem this data shows that GBS affects normal self esteem of GBS patients.

DISCUSSIONS

Considering all the factors psychologically in depression & anxiety very high percentage of people are affected very badly i.e. 82% & 76% respectively, while comparatively only 20% normal people have severe depression and anxiety and in other psychological variables less percentage affected very badly in GBS like self-esteem and decision making confidence i.e. 40% & 10% respectively, while 12% normal persons have very poor self esteem and their decision making confidence level is normal. Socially a moderate percentage of people are affected due to GBS like 54% & 42% in hostility and social conformity respectively, comparatively 12% & 24% people have severe hostility and very bad social conformity level. GBS patients normally maintain their

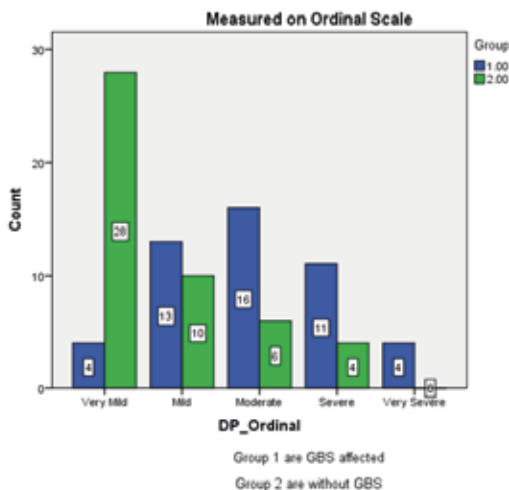
high risk taking ability level. A study has been conducted by Bernsen R.A et (13) all in 2002 on how to find long term effects of Guillain–Barré-syndrome on personal work and private life of patients and their life partners. 150 samples has selected with having three to six years of onset of GBS by applying a specific questionnaire to assess their psychosocial functioning. From 122 patients who participated in this study 31% showed fair to severe physical residual after assessment of their functions. Less than 50% patients i.e. 38% of job holding patients had to change it, beside it 44% changed their free time activities, 37% patients couldn't do their functions as they was doing before this disease at the end 39% of patients were affected due to change in their partner's life. Approximately half of the patients still had negative remarks on their current psychological and social state. This study clearly supported that GBS Patients have strong influence of this syndrome on their life patterns.⁽¹³⁾ Another study was conducted by Khan F in 2010 (14) which was related to inspect those factors that are impacting prolonged health related outcomes in those patients who were alive after this disease. Overall 76 patients with GBS assess in neurorehabilitation clinic. The scales which were used for it are Depression Anxiety Stress Scale (DASS), Perceived Impact of Problem Profile (PIPP) and Functional Independence Measure (FIM). The 76 patients [60% male, time having guillainbarre syndrome by six years and their age ranges from 1-14, these respondents showed over all good recovery pattern which was in functional way . Although around 16% people from the sample had shown normal to extreme kind of impacts regarding their daily activities. Around twenty two Percent patients showed significantly good results on their confidence regarding their own self's and greater mood in their daily life's routines. Most of them were in fair to severe stress (17%), anxiety (22%) and depression (18%), compared to Australian population (13%).there were no relations within the scales regarding motor abilities and medical research council reports s when got admitted in hospital, till the time of diagnosis of guillainbarre syndrome in their outputs. Results determined that basically GBS can be considered as very complex and it need prolonged assessment and monitoring of different psychosocial and psychological wellbeing activities if the patients.⁽¹⁴⁾ Research has been conducted by Bernsen RA in 2010(15) about the dysfunction regarding psychosocial element at the very first year of after having GBS. The study was conducted in 12 months in which individual's assessment was done through the daily life general questionnaire patients. Almost 85 individuals took part in the study with containing different stressful signs and symptoms which was already there. Later on it has been well managed and got good improvement within few months. On the next twelve month assessment it has

been seen that social and psychological health still has impairment. It can be resulted as that almost the growing or most commonly seen improvement occurred during 1st six months. Psychological and social care which was impaired till the 1 year, as it seems that there is no role of any kind of signs or symptoms regarding depression.⁽¹⁵⁾

CONCLUSION & SUGGESTIONS

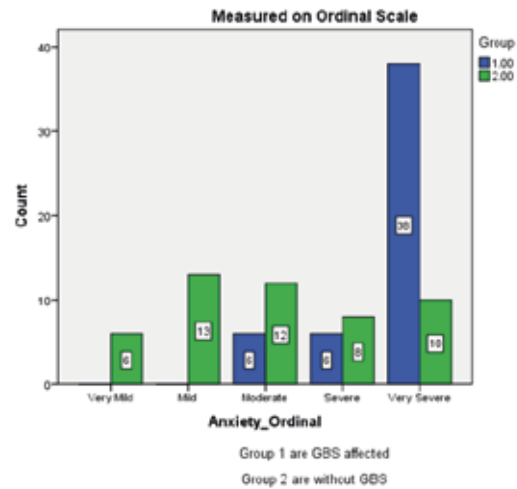
It is concluded that GBS has very bad impact on psychosocial functioning's of patients. Seven constructs were used to assess psychosocial functioning of patients i.e. Self-Esteem, Depression, Anxiety, Decision-Making Confidence, Hostility, Risk-Taking, and Social Conformity. Out of 7 constructs 6 constructs are affected by GBS except Risk taking ability. Regarding Self Esteem construct 40% GBS patients develop Poor to extremely poor self esteem while 38% GBS population retain their normal Self Esteem. And in depression most of the patients (82%) develop moderate to severe depression after GBS, all of the patients develop moderate to severe anxiety after GBS (76% very severe, 12% severe, 12% moderate anxiety), few patients (10%) develop very poor to poor decision making after GBS while 90% people retain their decision making level in normal to very good range. 54% patients develop moderate to severe hostile behavior after GBS (26 very severe, 16% severe, 12% moderate hostility), most of the patients (92%) have moderate to very high risk taking ability, approximately 42% patients develop bad to very bad social conformity after GBS while 58% patients retain their social conformity status, The study conducted was limited to Islamabad city and a private tertiary care hospital it is suggested that new study should conduct on national level and in public sector tertiary hospitals for generalized results in Pakistan.

Graph IV-16: Depression Measure on ordinal Scale



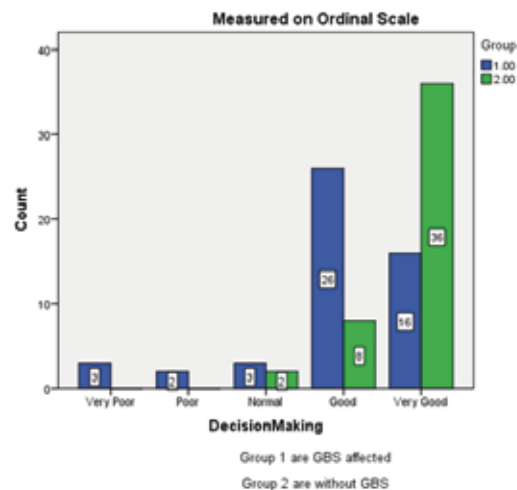
In this figure the clustered bar chart is used to depict the difference between the Depression construct. Using the Depression Scale discussed in the previous section. In graph IV-16, in group 1 most of the patients (82%) develop moderate to severe depression after GBS As compared to group 1, in group 2 only 20% people which are free from GBS have severe Depression and 76% people have very mild to mild depression.

Graph IV-17: Anxiety Measure on ordinal Scale



In this figure the clustered bar chart is used to depict the difference between the Anxiety construct. Using the Anxiety Scale discussed in the previous section. In graph IV-17 in group 1 all of the patients develop moderate to severe anxiety after GBS (76% very severe, 12% severe, 12% moderate anxiety) As compared to group 1, in group 2 only 20% people which are free from GBS have severe anxiety and 62% people have very mild to moderate anxiety.

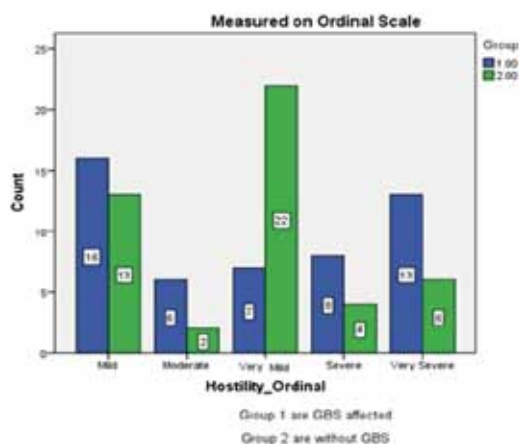
Graph IV-18: Decision making Measure on ordinal Scale



In this figure the clustered bar chart is used to depict the difference between the decision making construct. Using the decision making Scale discussed in the previous section. In graph IV-18 in group 1. Few patients 10% develop very poor to poor decision making after GBS while 90% people retain their decision making level in normal to very good range. As compared to group 1, in group 2 all people which are free from GBS have normal decision making level.

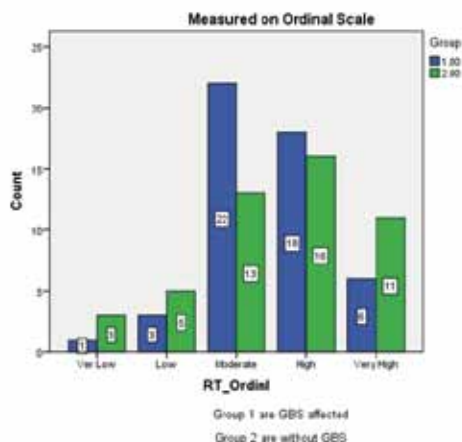
This shows that GBS mildly affect decision making level of patients.

Graph IV-19: Hostility Measure on ordinal Scale



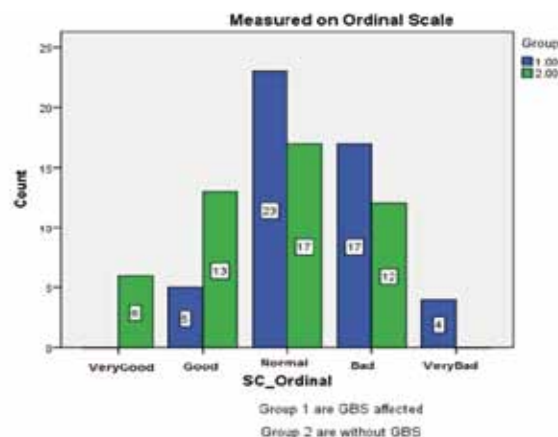
In this figure the clustered bar chart is used to depict the difference between the hostility construct. Using the hostility Scale discussed in the previous section. In graph IV-17 in group 1, 54% patients develop moderate to severe hostile behavior after GBS (26 very severe, 16% severe, 12% moderate hostility) As compared to group 1, in group 2 only 12% people which are free from GBS have severe hostility and 74% people have very mild to moderate hostility. This shows that GBS affects hostility behavior too.

Graph IV-20: Risk Taking Measure on ordinal Scale



In this figure the clustered bar chart is used to depict the difference between the Risk Taking construct. Using the Risk Taking Scale discussed in the previous section. In graph IV-17 in group 1 most of the patients (92%) have moderate to very high risk taking ability. As compared to group 1, in group 2 approximately 90% people which are free from GBS have moderate to very high risk taking ability. This data shows that GBS doesn't change risk taking behavior of patients.

Graph IV-21: Social Conformity Measure on ordinal Scale



In this figure the clustered bar chart is used to depict the difference between the Social Conformity construct. Using the Social Conformity Scale discussed in the previous section. In graph IV-17 in group 1 approximately 42% patients develop bad to very bad social conformity after GBS while 58% patients retain their social conformity status, As compared to group 1, in group 2 only 24% people which are free from GBS have bad social conformity and 72% people have normal to very good social conformity status.

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Author's Contribution:

Dr. Muhammad Naveed Babur: Study concept and design, protocol writing, data collection, data analysis, manuscript writing, manuscript review

Dr. Farrukh Shahzad: Study concept and design, data collection, data analysis, manuscript writing, manuscript review

Dr. Waqar Ahmed Awan: data collection, data analysis, manuscript writing, manuscript review