



بسم الله الرحمن الرحيم

∞∞∞∞

تم رفع هذه الرسالة بواسطة / سامية زكى يوسف

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى

مسئولية عن محتوى هذه الرسالة.

ملاحظات: لا يوجد



# **Solicitude of Caregivers toward their Children with Guillain-Barre Syndrome**

Thesis

*Submitted in Partial Fulfillment of the Requirement  
of Master Degree in Pediatric Nursing*

By

**Sara Mohamed Ata**

B.Sc. Nursing (2015)

Demonstrator of Pediatric Nursing Department

Faculty of Nursing

Ain Shams University

**Faculty of Nursing  
Ain Shams University  
2022**

# **Solicitude of Caregivers toward their Children with Guillain-Barre Syndrome**

**Thesis**

*Submitted in Partial Fulfillment of the Requirement  
of Master Degree in Pediatric Nursing*

*Under Supervision of*

**Dr. Safy Salah Eldin Al-Rafay**

*Professor of Pediatric Nursing*

*Faculty of Nursing – Ain Shams University*

**Dr. Asmaa Nasr El Din Mosbeh**

*Professor of Pediatric Nursing*

*Faculty of Nursing – Ain Shams University*

**Faculty of Nursing  
Ain Shams University  
2022**



## Acknowledgment

*First and forever, thanks to **ALLAH**, Almighty for giving the strength and faith to complete my thesis.*

*I wish to express my deepest gratitude and sincere appreciation toward **Prof. Safy Salah ElDin AlRafay**, Professor of Pediatric Nursing, Faculty of Nursing, Ain Shams University, for her constructive, criticism, unlimited help and giving me the privilege to work under her supervision, I will never forget what she had done for my sake.*

*I would like to express my sincere gratitude to **Prof. Asmaa Nasr El Din Mosbeh**, Professor of Pediatric Nursing Department, Faculty of Nursing, Ain Shams University, for her supervision, , valuable guidance and sincere advice.*

*Last but not least I would like to thank all the studied caregivers for being the study subject in this study were the corner stone for reaching the current conclusion.*

## **List of Contents**

<b><i>Subject</i></b>	<b><i>Page No.</i></b>
<b>List of Tables.....</b>	<b>i</b>
<b>List of Figures .....</b>	<b>iii</b>
<b>Abstract .....</b>	<b>v</b>
<b>Theoretical Definition .....</b>	<b>vii</b>
<b>Introduction .....</b>	<b>1</b>
<b>Aim of the Study .....</b>	<b>6</b>
<b>Review of Literature</b>	
<b>Part I: Overview about Guillain Barre Syndrome.....</b>	<b>7</b>
<b>Part II: Solicitude of Caregivers toward their Children with Guillain-Barre Syndrome ...</b>	<b>43</b>
<b>Part III: Nursing Intervention for children having Guillain Barre Syndrome.....</b>	<b>56</b>
<b>Subject and Methods.....</b>	<b>64</b>
<b>Results.....</b>	<b>72</b>
<b>Discussion .....</b>	<b>99</b>
<b>Conclusion.....</b>	<b>110</b>
<b>Recommendations .....</b>	<b>111</b>
<b>Summary .....</b>	<b>112</b>
<b>References .....</b>	<b>120</b>
<b>Appendices .....</b>	<b>I</b>
<b>Arabic Summary .....</b>	<b>—</b>

---

## List of Abbreviations

<i>Abbr.</i>	<i>Full-term</i>
<b>AIDP</b>	: The Acute Inflammatory Demyelinating Polyradiculoneuropathy
<b>AMAN</b>	: Acute Motor Axonal Neuropathy
<b>AMSAN</b>	: Acute Motor Sensory Axonal Neuropathy
<b>CDC</b>	: Center for Disease Control And Prevention
<b>Cidps</b>	: Chronic Inflammatory Demyelinating Poly-Radiculo-Neuropathies
<b>CSF</b>	: Cerebrospinal Fluid
<b>DVT</b>	: Deep Vein Thrombosis
<b>ECG</b>	: Electro-Cardio Gram
<b>GBS</b>	: Guillain-Barre Syndrome
<b>HIC</b>	: High-Income Countries
<b>Hrs</b>	: Hours
<b>ICU</b>	: Intensive Care Unit
<b>Ig</b>	: Immunoglobulin
<b>Igs</b>	: Immunoglobulins
<b>IVIG</b>	: Intravenous Immunoglobulin
<b>LMIC</b>	: Low-Income And Middle-Income Countries
<b>MRI</b>	: Magnetic Resonance Imaging
<b>NG</b>	: Nasogastric
<b>R</b>	: Pearson Correlation

---

*List of Abbreviations*

---

---

<b>SARS-Cov-2</b>	: Severe Acute Respiratory Syndrome Coronavirus 2
<b>SD</b>	: Standard deviation
<b>SLE</b>	: Systemic Lupus Erythematosus
<b>SPSS</b>	: Statistical Package for Social Sciences

## **List of Tables in result**

<b>Table No.</b>	<b>Title</b>	<b>Page No.</b>
(1):	Distribution of the studied caregivers according to their socio-demographic characteristics .....	72
(2):	Distribution of the studied children according to their characteristics. ....	74
(3):	Distribution of the studied caregivers according to their knowledge about Guillian Barre syndrome. ....	75
(4):	Distribution of the studied caregivers according to their attitude toward children with Guillain-Barre syndrome. ....	78
(5):	Distribution of the studied caregivers according to their attitude toward their children having Guillain-Barre syndrome. ....	80
(6):	Distribution of the studied caregivers according to their reported-practices towards sensory impairments and personal care. ....	83
(7):	Distribution of the studied caregivers according to their reported-practices towards nutrition. ....	85
(8):	Distribution of the studied caregivers according to their practices towards bladder and bowel training and self-care. ....	86
(9):	Distribution of the studied caregivers according to their practices towards prevention of complications and medication management. ....	88



(10):	Relationship between caregivers' characteristic and their total knowledge about Guillian Barre syndrome. ....	92
(11):	Relationship between caregivers' characteristic and their total attitude towards children with Guillian Barre syndrome .....	94
(12):	Relationship between caregivers' characteristic and their total reported practices towards their children with Guillian Barre syndrome .....	96
(13):	Correlation between caregivers' knowledge, attitude and their reported-practices towards their children with Guillian Barre syndrome .....	98

## List of Figures

<b>Figure No.</b>	<b>Title</b>	<b>Page No.</b>
(1):	Guillain, Barre and Strohl. ....	8
(2):	Octave Landry.....	10
(3):	Components of immune system and anatomy of each part.....	15
(4):	Cell components of Immune System.....	16
(5):	Physiology of Immune System.....	19
(6):	Compares between normal neuron and demyelination of myelin sheath. ....	20
(7):	Pathophysiology of Guillain Barre Syndrome .....	21
(8):	Pathophysiology of Guillian Barre syndrome .....	23
(9):	Types of Guillian Barre Syndrome.....	25
(10):	Sub types of Guillian Barre Syndrome.....	26
(11):	Clinical picture of guillain barre syndrome .....	29
(12):	Thickening of the cauda-equina.....	32
(13):	Image of intra-theal nerve root with gadolinium enhancement .....	33
(14):	Chronic inflammatory demyelinating poly-neuropathy (CIDP).....	34
(15):	Ten- step approach to the diagnosis and management of Guillain–Barré syndrome. nt of GBS.....	42

**Figures in Results:**

- (1): Percentage Distribution of the Studied Caregivers According to their Program Attendance Regarding to Gullain Barre Syndrome in Children ..... 76
- (2): Percentage Distribution of the Studied Caregivers According to their Total Knowledge about Guillian Barre Syndrome ..... 77
- (3): Percentage Distribution of the Studied Caregivers According to their Total Attitude toward their Children . ..... 82
- (4): Percentage Distribution of the Studied Caregivers According to their Total Subscales of Self-Reported Reported-Practices toward Children with Guillain-Barre Syndrome . ..... 90
- (5): Percentage Distribution of the Studied Caregivers According to their Total Reported Practices toward their Children with Guillain-Barre Syndrome ..... 91

---

## Abstract

---

**Background:** Guillain-Barré syndrome is the most common and most severe acute paralytic neuropathy that affects all aspects of a child's life. **Aim** of the study was to assess solicitude of caregivers toward their children with Guillain-Barre syndrome. **Method:** A descriptive research design was utilized in this study, **A Convenient sample** comprised of 44 caregivers with their children that have Guillain-Barre syndrome. This study was carried out at outpatient clinic in Children's Hospital and physiotherapy unit affiliated of Ain Shams University Hospitals, Egypt. **Three tools** were used to conduct the study. **Tool I:** Pre-designed Questionnaire Format, to assess caregiver's knowledge about Guillain-Barre syndrome, **Tool II:** Caregiver's attitude toward children with Guillain-Barre syndrome rating scale. **Tool III:** Caregivers self-reported practices format. **Results:** the study revealed that studied caregivers their mean of age was  $33.5 \pm 8.08$  years, and 77% of them were female. Also, (72.7%) of the studied caregivers had unsatisfactory level of total knowledge about GBS, (59.1%) of them had positive attitude toward their children and (63.6%) of them had unsatisfactory level of total practice towards children with GBS. **Conclusion:** The majority of studied caregivers had unsatisfactory level of total knowledge about GBS, positive attitude toward their children having GBS, and most of them have unsatisfactory level of total practice towards children with GBS. There was significant positive correlation between total caregivers' knowledge, total practices, and their total attitude towards children with GBS. **Recommendations:** Providing training program for caregivers about GBS, Additional studies should be done for to further investigating the factors affecting caregivers' knowledge and practice about GBS.

**Key Words:** Caregiver's Solicitude, Gullain Barre Syndrome.

## **Theoretical Definition**

For the aim of this study, the following definition was used:

**Solicitude:** the state of being concerned and attentive care and protectiveness also: an attitude of earnest concern or attention expressed solicitude for someone health.

## Introduction

**G**uillain-Barre Syndrome (GBS) which known as Landry's palsy is a classic lower motor neuron disorder. It is a reactive self-limited auto-immune disease in which the body's immune system attacks part of the peripheral nervous system. It is described as a syndrome because it represents a group of demyelinating inflammatory poly radiculo-neuropathies (*Dirlikov et al., 2018*).

The disorder of the peripheral nervous system that describing GBS is the most common cause of severe, acute weakness in children, and acute inflammatory demyelinating polyradiculoneuropathy which is the most common subtype in the western world. GBS is characterized by a monophasic, ascending, and symmetrical paralysis that progresses over days to weeks and is associated with areflexia (*Nguyen & Taylor, 2022*).

The acute inflammatory demyelinating polyradiculo-neuropathy (AIDP) is typically a post infectious autoimmune process believed to be caused by molecular mimicry to peripheral nerves leading to inflammation and destruction of myelin. Preceding infection can be identified in the majority of cases. The most common infectious triggers are minor respiratory illness, but gastrointestinal illnesses, other viral syndromes, and immunizations have also been associated with GBS (*Estrade et al., 2019*).

The exact cause of GBS is unknown; GBS and its variants are considered post-infectious, immune-mediated-neuropathies. Many infections have been linked with GBS. The most common are gastrointestinal or respiratory illnesses. Up to 70% of cases have reported an antecedent illness in the 1 to 6 weeks before the presentation of GBS. Zika virus outbreak associated with many GBS cases. Other possible etiologies linked to GBS including medications and surgeries (*Dirlikov et al., 2022*).

Four main subtypes are well defined of GBS: acute inflammatory demyelinating polyradiculoneuropathy (AIDP), acute motor axonal neuropathy (AMAN), acute motor sensory axonal neuropathy (AMSAN), in excitable motor nerve, and equivocal (*Padmanabhan et al., 2019*).

The typical child with GBS presents 2-4 weeks following a relatively benign gastrointestinal or respiratory illness with complaints of finger dysesthesias and proximal muscle weakness of the lower limbs. This weakness may progress over hours to days to involve the arms, trunk, cranial nerves, and muscles of respiration. Variants of GBS may present as pure motor dysfunction or acute dysautonomia. A “Typical” 'GBS is monophasic, non-febrile illness manifesting as ascending weakness and areflexia. Sensory, autonomic, and brainstem abnormalities may also be seen (*Barzegar et al., 2019*).