



Neurobehavioral Aspects of Different Forms of Multiple Sclerosis

Nadia Ben Ali, Nouria Oudja, Saloua Mrabet*, Mariem Kchaou, Slim Echabbi, Saloua Frey and Samir Belal

Department of Neurology, Charles Nicolle Hospital, Tunis, Tunisia

*Corresponding author: Saloua Mrabet, Department of Neurology, Charles Nicolle Hospital, Tunis, Tunisia, Tel: +216 97 112 062; E-mail: salsamrabet85@hotmail.fr

Received date: January 14, 2015; Accepted date: May 13, 2015; Published date: May 20, 2015

Copyright: ©2015 Ali NB. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Introduction: Multiple sclerosis (MS) is an inflammatory disease of the central nervous system in young adults. Cognitive impairment during MS has been overlooked for a long time and raises a renewed interest recently.

Objective: Determine prevalence of cognitive dysfunction in MS in a cohort hospital, particularities and factors affecting progression of cognitive dysfunction in individuals with MS.

Methods: Thirty patients (21 women and 9 men) with MS aged 18 to 43 years followed at the Neurology Department of Charles-Nicollé Hospital from 2008 to 2013 participated in this study. Patients participating in this study were chosen randomly without considering their cognitive status. Evaluation included a neuropsychological assessment, physical examination and brain and spine MRI.

Results: About 86% had cognitive impairment in at least one neuropsychological test. Predominant impaired domains were attention and information processing followed by verbal memory and executive functions. Depression was the most prevalent psychiatric disorder. Cognitive dysfunction was correlated with clinical form of MS, EDSS, radiological findings and disease's course.

Conclusion: Cognitive dysfunction might be more relevant to patients than mobility restrictions. Incorporating a systematic neuropsychological assessment in patients followed for MS allows psychosocial adaptation, monitoring disease activity and elucidating the effects of disease-modifying medications.

Keywords: Multiple sclerosis; Cognitive impairment; Tunisia

Introduction

Multiple sclerosis is an inflammatory disease of the central nervous system (CNS) in young adults with a presumed autoimmune origin. It affects more than 2.1 million people worldwide (National MS Society 2011) and is characterised by a heterogeneous broad spectrum and an unpredictable long-term outcome [1-2]. Cognitive impairment in MS has been underestimated. However, evidence emerging in the last 20 years suggests high prevalence rates of cognitive disturbances up to 70% when sensitive cognitive tests are applied. Attention, recent memory, information processing speed, executive functions, verbal intellectual ability, and visuospatial perception are the most involved [3-5].

Conflicting literature data report that cognitive impairment could be considered as an early feature of the disease or a consequence of its duration, course, and severity [6-8]. Cognitive dysfunction has important clinical implications and might be more relevant to patients than mobility restrictions. Correlation between cognitive dysfunction and disease duration isn't clearly established. Recent studies have pointed out that it may affect patients at early stages of the disease. Cognitive impairment is detectable even in clinically isolated syndrome (CIS) and with increasing frequency in relapsing-remitting MS (RR-MS) and secondary progressive MS (SP-MS) [9]. Recent imaging and pathology studies have shown that MS affects white matter as well as grey matter. Unlike white matter lesion burden or distribution, grey matter atrophy has often been linked to cognitive

impairment [10]. Nevertheless, relationship between cortical injury and diffuse white matter tracts damage and their respective contribution to cognitive dysfunction is still under investigations [11-12]. In this article we review cognitive profile in different forms of MS in a cohort hospital. Correlations with disability, clinical forms, progression and imaging findings will be discussed.

Patients and methods

Study design

Thirty MS patients (21 women and 9 men) underwent the follow up study between 2008 to 2013. Patients were diagnosed with definite MS according to Macdonald criteria 2010 MS and gave informed consent before being included in the study. Physical disability was rated using Kurtzke's EDSS score. All patients participating in this study were chosen based on a clinical history of active MS and mild to moderate physical disability at disease's onset (EDSS 0-5.0), without considering their cognitive status. As a result, mean baseline neuropsychological test scores were within the normal range on all but one test (Word List Generation). Patients were in agreement with inclusion criteria such as age > 18 years, follow up > 1 year clinical. Exclusion criteria were no other neurological disease/head trauma, no known psychiatric illness, no alcohol/drug abuse and no medication which could influence cognition.

Neurobehavioral Aspects Of Multiple Sclerosis

RJ Shavelson



Neurobehavioral Aspects Of Multiple Sclerosis:

Neurobehavioral Aspects Of Multiple Sclerosis Book Review: Unveiling the Power of Words

In a world driven by information and connectivity, the energy of words has been much more evident than ever. They have the ability to inspire, provoke, and ignite change. Such is the essence of the book **Neurobehavioral Aspects Of Multiple Sclerosis**, a literary masterpiece that delves deep into the significance of words and their effect on our lives. Published by a renowned author, this captivating work takes readers on a transformative journey, unraveling the secrets and potential behind every word. In this review, we shall explore the book's key themes, examine its writing style, and analyze its overall impact on readers.

https://pinsupreme.com/book/publication/Download_PDFS/reform%20restructuring%20of%20the%20gas%20indust.pdf

Table of Contents Neurobehavioral Aspects Of Multiple Sclerosis

1. Understanding the eBook Neurobehavioral Aspects Of Multiple Sclerosis
 - The Rise of Digital Reading Neurobehavioral Aspects Of Multiple Sclerosis
 - Advantages of eBooks Over Traditional Books
2. Identifying Neurobehavioral Aspects Of Multiple Sclerosis
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in a Neurobehavioral Aspects Of Multiple Sclerosis
 - User-Friendly Interface
4. Exploring eBook Recommendations from Neurobehavioral Aspects Of Multiple Sclerosis
 - Personalized Recommendations
 - Neurobehavioral Aspects Of Multiple Sclerosis User Reviews and Ratings
 - Neurobehavioral Aspects Of Multiple Sclerosis and Bestseller Lists

5. Accessing Neurobehavioral Aspects Of Multiple Sclerosis Free and Paid eBooks
 - Neurobehavioral Aspects Of Multiple Sclerosis Public Domain eBooks
 - Neurobehavioral Aspects Of Multiple Sclerosis eBook Subscription Services
 - Neurobehavioral Aspects Of Multiple Sclerosis Budget-Friendly Options
6. Navigating Neurobehavioral Aspects Of Multiple Sclerosis eBook Formats
 - ePub, PDF, MOBI, and More
 - Neurobehavioral Aspects Of Multiple Sclerosis Compatibility with Devices
 - Neurobehavioral Aspects Of Multiple Sclerosis Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Neurobehavioral Aspects Of Multiple Sclerosis
 - Highlighting and Note-Taking Neurobehavioral Aspects Of Multiple Sclerosis
 - Interactive Elements Neurobehavioral Aspects Of Multiple Sclerosis
8. Staying Engaged with Neurobehavioral Aspects Of Multiple Sclerosis
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Neurobehavioral Aspects Of Multiple Sclerosis
9. Balancing eBooks and Physical Books Neurobehavioral Aspects Of Multiple Sclerosis
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Neurobehavioral Aspects Of Multiple Sclerosis
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Neurobehavioral Aspects Of Multiple Sclerosis
 - Setting Reading Goals Neurobehavioral Aspects Of Multiple Sclerosis
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Neurobehavioral Aspects Of Multiple Sclerosis
 - Fact-Checking eBook Content of Neurobehavioral Aspects Of Multiple Sclerosis
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
- Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

Neurobehavioral Aspects Of Multiple Sclerosis Introduction

Neurobehavioral Aspects Of Multiple Sclerosis Offers over 60,000 free eBooks, including many classics that are in the public domain. Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. Neurobehavioral Aspects Of Multiple Sclerosis Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. Neurobehavioral Aspects Of Multiple Sclerosis : This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications. Internet Archive for Neurobehavioral Aspects Of Multiple Sclerosis : Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books. Free-eBooks Neurobehavioral Aspects Of Multiple Sclerosis Offers a diverse range of free eBooks across various genres. Neurobehavioral Aspects Of Multiple Sclerosis Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. Neurobehavioral Aspects Of Multiple Sclerosis Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific Neurobehavioral Aspects Of Multiple Sclerosis, especially related to Neurobehavioral Aspects Of Multiple Sclerosis, might be challenging as theyre often artistic creations rather than practical blueprints. However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to Neurobehavioral Aspects Of Multiple Sclerosis, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some Neurobehavioral Aspects Of Multiple Sclerosis books or magazines might include. Look for these in online stores or libraries. Remember that while Neurobehavioral Aspects Of Multiple Sclerosis, sharing copyrighted material without permission is not legal. Always ensure youre either creating your own or obtaining them from legitimate sources that allow sharing and downloading. Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow Neurobehavioral Aspects Of Multiple Sclerosis eBooks for free, including popular titles. Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free periods for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the Neurobehavioral Aspects Of Multiple Sclerosis full book , it can

give you a taste of the authors writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of Neurobehavioral Aspects Of Multiple Sclerosis eBooks, including some popular titles.

FAQs About Neurobehavioral Aspects Of Multiple Sclerosis Books

What is a Neurobehavioral Aspects Of Multiple Sclerosis PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a Neurobehavioral Aspects Of Multiple Sclerosis PDF?**

There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a Neurobehavioral Aspects Of Multiple Sclerosis PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a**

Neurobehavioral Aspects Of Multiple Sclerosis PDF to another file format? There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a Neurobehavioral Aspects Of Multiple Sclerosis PDF?**

Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Neurobehavioral Aspects Of Multiple Sclerosis :

reform restructuring of the gas indust

refresh my heart in spring meditations for women

reflections of consciousness

reflections through a moving lens

redeeming culture

refrigeration and air conditioning technology ** revised edition ** -- concepts procedures and troubleshooting techniques

reden uber erziehung

reflowering of the goddess contemporary journeys and cycles of empowerment

redhead and the preacher

rediscovery of jesus eschatological discourse

reflecting narcissus a queer aesthetic

reflexology guide to herbalism

reference grammar of modern standard arabic

reformation and scholasticism an ecumenical enterprise

reforming health care systems

Neurobehavioral Aspects Of Multiple Sclerosis :

The Bedford Handbook The eighth edition features new coverage that models how students use their own language and ideas to position sources in an academic conversation. Finally, ... The Bedford Handbook An x-Book version of The Bedford Handbook, fully online, helps you engage your students and keep the course organized. Learn more at bedfordstmartins.com ... The Bedford Handbook by Hacker, Diana Get the most recent updates on MLA citation in a convenient, 40-page resource based on The MLA Handbook, 8th Edition, with plenty of models. Browse our catalog ... The Bedford Handbook, 8th Edition - PDF Free Download ... Bedford e-Handbook, a series of online video tutorials, Preface for ... Point of view U Is the draft free of distracting shifts in point of view (from I to ... The Bedford Handbook by Hacker, Diana Edition: 8th. ... Synopsis: Built on Diana Hacker's vision and developed with the help of expert composition teachers, the seventh edition of The Bedford ... The Bedford Handbook Best Uses & Practices Look at the 'Revision Symbols' page on the next to last page of the book or inside the back cover at the 'detailed menu'. There you'll see the abbreviations in ... St.

Martin's Handbook Martin's Handbook, Seventh Edition, as a textbook for a course are authorized to duplicate portions of this manual for their students. Manufactured in the ... A Pocket Style Manual by Diana Hacker MLA Handbook for Writers of Research Papers, 7th ed. (New. York: MLA, 2009) ... electronic and online books, see items 37-39. For an illustrated citation ... 'The Bedford Handbook by Hacker, Diana by Diana Hacker. Condition: Used:Good; Edition: 8th Edition; Published: 2010-06-01; Binding: Hardcover; ISBN 10: 0312544308; Quantity Available: 1; Seller. The Bedford Handbook, 12th Edition | Macmillan Learning US Equal parts approachable and comprehensive, this book gives students the guidance and practice they need with how-to guides, model papers, exercises and class- ... Engineering Materials: Properties and Selection Encompassing all significant material systems-metals, ceramics, plastics, and composites-this text incorporates the most up-to-date information on material ... Engineering Materials: Properties and Selection ... A comprehensive survey of the properties and selection of the major engineering materials. Revised to reflect current technology and applications, ... Engineering Materials: Properties and Selection Feb 2, 2009 — Chapter 1 The Importance of Engineering Materials. Chapter 2 Forming Engineering Materials from the Elements. Engineering Materials Properties And Selection 9th Edition ... Format : PDF Size : 549 MB Authors : Michael Budinski, Kenneth G. Budinski Publisher : Pearson; 9th edition (February 3, 2009) Language : English ... Engineering Materials: Properties and Selection - 535.731 This course will concentrate on metal alloys but will also consider polymers and ceramics. Topics specific to metals will include effects of work hardening and ... Engineering Materials: Properties and Selection (9th Edition) List Price: \$233.32 ; Amazon Price: \$155.10 ; You Save: \$78.22 (34%) ; Editorial Reviews The father-son authoring duo of Kenneth G. Budinski and Michael K. Engineering Materials: Properties and Selection - Hardcover This text covers theory and industry-standard selection practices, providing students with the working knowledge to make an informed selection of materials for ... Engineering Materials Properties and Selection | Rent COUPON: RENT Engineering Materials Properties and Selection 9th edition (9780137128426) and save up to 80% on textbook rentals and 90% on used textbooks ... Engineering Materials Properties And Selection Budinski Engineering Materials: Properties and Selection (9th ... Engineering Materials Properties And Selection Covering all important classes of materials and ... Engineering Materials: Properties and Selection This text covers theory and industry-standard selection practices, providing students with the working knowledge to make an informed selection of materials for ... Essentials of Business Communication - 9th Edition Find step-by-step solutions and answers to Essentials of Business Communication - 9781111821227, as well as thousands of textbooks so you can move forward ... Essentials Of Business Communication 9th Edition Access Essentials of Business Communication 9th Edition Chapter 2 solutions now. Our solutions are written by Chegg experts so you can be assured of the ... Solution Manual For Essentials of Business ... Dear Business Communication Instructor: My coauthor Dr. Dana Loewy and I are proud to present the Ninth Edition of Essentials of Business Communication! Essentials Of Business Communication Solution Manual Get instant access to our step-by-step Essentials Of

Business Communication solutions manual. Our solution manuals are written by Chegg experts so you can ... Answers to 'Essentials of Business Communication' by ... by DDD Kyeyune · 2020 · Cited by 1 — Answers to 'Essentials of Business Communication' by Mary Ellen Guffey and Dana Loewy · Dr. Dorothy Delilah Kyeyune · Do you have negative results ... Business Communication: Process & Product (9th Edition) Access all of the textbook solutions and explanations for Guffey/Loewy's Business Communication: Process & Product (9th Edition). Essentials of Business Communication ESSENTIALS OF BUSINESS COMMUNICATION provides a four-in-one learning package: authoritative text, practical workbook, self-teaching grammar/mechanics handbook, ... Essentials of Business Communication, 10e Cengage Learning products are represented in Canada by. Nelson Education, Ltd. To learn more about Cengage Learning Solutions, visit www.cengage.com. Purchase ... Essentials of business communication [9th Canadian ed ... Be prepared to give your answers in a short presentation or in an email to your instructor. QUESTIONS: 1. How does what you've learned in this article change ... Essentials of Business Communication 9th edition Essentials of Business Communication 9th Edition is written by Guffey/Loewy/Almonte and published by Cengage Learning Canada Inc.. The Digital and eTextbook ...