Agreement Study in Clinical Research

Step-by-step

on Data Analysis and Interpretation Using

SPSS

Mohamad Rodi Isa | Nazar Mohd Zabadi Mohd Azahar | Muhammad Muaz Shahriman Teruna

In the name of Allah, the Most Gracious, the Most Merciful.

All praise is due to Allah, whose guidance and blessings have made this work possible. Peace and blessings be upon Prophet Muhammad (ﷺ), whose teachings continue to inspire knowledge and wisdom.

This book is dedicated to all researchers, students, and healthcare professionals striving for excellence in clinical research and statistical analysis.

To my mentors and colleagues—your support and guidance have been invaluable. To my family—your patience, love, and encouragement have been my greatest strength.

May this book serve as a beneficial resource for all seeking to deepen their understanding of agreement studies in clinical science.

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PREFACE

Agreement between measurements refers to the level of concordance between two or more sets of measurements. Statistical methods designed to test agreement are essential for assessing interrater variability and determining whether one measuring technique can replace another. Ensuring high agreement is crucial in clinical research, as inconsistencies in measurement can lead to misleading conclusions and affect patient care.

Agreement test statistics play a vital role in various fields, particularly in clinical and epidemiological research. They help evaluate the degree of agreement or reliability among different measurements or observers, offering valuable insights into data consistency and accuracy. A proper statistical analysis in agreement studies allows researchers to establish the reliability of diagnostic tools, medical tests, and clinical assessments. This book explores the significance of agreement test statistics and their practical applications in health sciences.

This book serves as an introductory guide to conducting agreement studies in clinical research. It provides a structured, step-by-step approach for performing statistical analyses using SPSS, ensuring that each step is presented in sequential order. Readers are encouraged to follow the numbered steps while conducting their analyses. Additionally, all output tables generated from SPSS will be thoroughly explained, with clear interpretations to help readers understand the results in a meaningful way.

The primary audience for this book includes postgraduate students, clinicians, lecturers, and health professionals interested in conducting

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This book introduces statistical methods for assessing agreement between measurements in medicine, epidemiology, and health sciences. It is designed for undergraduate and postgraduate students, as well as young researchers in fields such as medicine, dentistry, physiotherapy, nursing, and pharmacy, with little statistical background. The book covers numerical and categorical data analysis, emphasising proper statistical approaches for the accurate interpretation and presentation of results. Key features include statistical computation methods for clinical research, relevant formulas, SPSS hands-on guidance, simplified result tables, and guidelines for writing agreement study manuscripts.

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