UNDERSTANDING THE BEHAVIOURAL PATTERN OF SELF-MANAGEMENT OF METS AMONG THE URBAN SLUM POPULATION OF DELHI THROUGH THE HEALTH BELIEF MODEL

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TITLE- UNDERSTANDING THE BEHAVIOURAL PATTERN OF SELF-MANAGEMENT OF METS AMONG THE URBAN SLUM POPULATION OF DELHI THROUGH THE HEALTH BELIEF MODEL.

INTRODUCTION

Metabolic Syndrome (MetS) is a multifaceted health condition characterized by the simultaneous occurrence of several risk factors, including obesity, elevated blood pressure levels, and disruptions in lipid and glucose metabolism. This intricate interplay of metabolic abnormalities significantly escalates an individual's vulnerability to developing a constellation of life-threatening diseases, such as cardiovascular disorders, type 2 diabetes mellitus, and certain forms of cancer. The Indian subcontinent presents a particularly alarming scenario, where nearly one out of every three adults grapples with the challenges posed by MetS. Disturbingly, in some metropolitan regions, the prevalence soars beyond an astonishing 40%, underscoring the urgency of addressing this burgeoning public health crisis. Amid this disconcerting landscape, the Health Belief Model (HBM) emerges as a robust theoretical framework that elucidates the intricate interplay between health behaviours and a myriad of psychological and environmental factors.

The HBM dissects health behaviours through the lens of constructs such as perceived susceptibility, severity, benefits, barriers, self-efficacy, and cues to action. By employing this multidimensional model, the present study endeavours to unravel the intricate tapestry of socio-cultural and behavioural determinants that shape the self-management practices of individuals afflicted with MetS residing in the urban slums of Delhi. Illuminating these intricate dynamics can pave the way for the development of meticulously tailored interventions that bolster disease management within this vulnerable, high-risk population segment.

RESEARCH QUESTION- How do the Health Belief Model constructs influence self-management behaviours among adults with Metabolic Syndrome in the urban slums of Delhi, and what are the key environmental and lifestyle factors that interact with these behaviours?

OBJECTIVES

- To identify an interaction between behavioural determinants such as unhealthy diet, physical activity, stress and sleep levels, and environmental factors.
- To understand how these factors influence the self-management practices among the individuals having MetS.

MATERIALS AND METHODS-

STUDY DESIGN-

It was a cross-sectional study conducted on 120 adults identified as having MetS. A mixed method (quantitative and qualitative) approach was employed to identify an interaction between behavioural determinants such as unhealthy diet, physical activity, stress and sleep levels, and environmental factors and how this influences the self-management practices among the individuals having MetS.

SETTING-

Individuals living in urban slum settings representing different locations such as North, South, East, and West, of New Delhi were enrolled in the study. The individuals were selected based on the inclusion and exclusion criteria mentioned below

Inclusion Criteria-: The sample selection criteria included participants' willingness to be interviewed and follow up, as well as a requirement for the presence of MetS as defined by the JIS 2009 criteria for the inclusion of participants who were 18 and above. MetS diagnosis requires the presence of any three of the following five risk factors: having a WC of ≥90 cm for men and ≥80 cm for women in Asians populations, having triglyceride levels of ≥150 mg/ld. or are on treatment for it, having a HDL cholesterol of <40 mg/dL for men and <50 mg/ld. for women or are on treatment for such, having fasting glucose level of ≥100 mg/dL or 5.6 moll Moreover, the participants had to own an Android phone and be ready to intervene with technology.

Exclusion Criteria- They will be excluded if they are less than 18 years of age, they have a terminal illness, they have impaired cognition, Co-existing illness documented in the medical record (type 1 diabetes), or self-reported associated with systemic inflammation (e.g. rheumatoid arthritis, acute systemic infection), pregnant or lactating women, Involvement in other clinical trials or protocols related to MetS. Other limitations judged to interfere with study participation or the ability to follow study procedures (e.g., scheduled surgery, travel plans or scheduling difficulties that do not permit full participation).

STUDY TOOLS-

We conducted interviews using semi-structured interview guidelines based on the HBM model to understand existing MetS related self-management knowledge, attitude, and practices. A series of semi-structured questions gathered information related to the factors that would motivate patients living with MetS to adopt self-management practices. These questions relate to monitoring of blood sugar levels, adherence to medications, any lifestyle intervention including diet and physical activity. Exploratory questions were also asked to obtain information on their experience and feelings regarding self-management of their disease condition.

DURATION OF STUDY- 5th April- 5th June.

DATA COLLECTION PROCEDURE-

The individuals were screened for the MetS condition using the JIS, 2009 diagnostic criteria, and were enrolled if they were diagnosed as having MetS and met the conditions for inclusion and exclusion criteria. In-depth interviews will be among a sample population of 120 participants enrolled across urban slum settings across four zones of New Delhi (North, South, East, and West)

DATA ANALYSIS PLAN-

Content analysis: A procedure for organizing unprocessed material into groups or themes on the basis of reliable deduction , the systematic procedure of analysing and interpreting the content is termed as qualitative content analysis. This analysis incorporates deductive reasoning whereby the researcher starts with facts and continually compares them in the development of themes and categories. We will rewrite coding guidelines, code example material, and verify consistency of coding. It is an iterative process that would go on until there is adequate consistency in the code.

Data was described qualitatively by calculating the mean with standard deviations for the continuous variables and percentage for the categorical variables were calculated. Association between the continuous independent and dependent variables was conducted using the correlation analysis while association between the continuous dependent variables and categorical independent variables was conducted using either the t-statistics or analysis of variance. Association between categorical variables can be performed using Chi-square statistics. Adjusted analysis will be performed after taking into consideration potential confounders. We performed multivariate regression and logistics regression analysis for continuous and categorical dependent variables as appropriate. All statistical analysis was done using SAS v9. 3) Group characteristics will be described by frequency and percentage while continuous variables will be summarized using mean and standard deviation, and test results will be presented using 95% CI and p-values. The type of content analysis employed was the qualitative content analysis, which is actually more inductively dominant in analysing topics or themes as well as the conclusions based on them

ETHICAL CONSIDERATIONS-

Written informed consent to participate in the study was obtained from each of the selected participants. Audio recording of consent was done for uneducated individuals. Complete data confidentiality and anonymity of study participants was ensured. Study consent was available in English and Hindi.