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REVIEW ARTICLE

MENTAL STATUS EXAMINATION: AN ASSESSMENT KEY TO REHABILITATION WITH IMPLICATION IN NURSING

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ABSTRACT
The aim of review article is to explore the need of assessment mental status and strategies to practice mental status examination as an assessment key in the rehabilitation with the need for implication in nursing field. The study material collected from various sources like books, journals, online database of last ten years. The online search engines were Pubmed, CINHAL, psychoINFO and Google scholar. The article revealed about the need of mental status assessment, tools & techniques used for mental status assessment, existing practices, problems & limitations, strategies to improve the issues, nursing implication with available resources to handle the situation. The study concluded that mental status examination is a crucial and challenging part and responsibilities of the health professionals before the patient sending for rehabilitation services. Besides mental status examination, various other cognitive screening assessment tools are used to assess cognitive skill of a person, most commonly used are MMSE, MoCA, Mini Cog.

KEYWORDS: Mental status examination, Rehabilitation, MSE, MMSE, MoCA, Mini Cog

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INTRODUCTION
Psychiatric rehabilitation is a significant component in mental health services. The rehabilitation reflects the focus on person's abilities to achieve vocational, residential, educational, and social skills. Rehabilitation is defined as: "A recovery approach from disability, and symptoms management to gain high quality of life and social inclusion which leads to successful community living through appropriate support.(1)

The Mental Status Examination is one of essential diagnostic tool to obtain information to make an accurate diagnosis for a person's mental health. It is a core skill of all health professionals and requires systematic collection of data based on patient's behaviour interviewing the patient under clinical evaluation.(2)

Mental status examination (MSE) is a full mental status examination of different aspects of patient's behaviour taken place during a psychiatric interview or health assessment. The examination is usually, divided into few subheadings i.e. appearance and behaviour, psychomotor activity, speech, language, mood, affect, thought content, thought process, perception, and cognition/ sensorium, of a person. Usually, mental status examination includes a risk assessment.(3) Mental status examination comprises a number of components as given below in table no. 1.

Table 1: Areas, techniques & clinical implication in mental status examination (4)

Areas of MSE	Elements to assess	Techniques of assessment	Clinical implication
Appearance and behaviour	Age, grooming, posture, facial expression, attitude, level of consciousness & behaviour	Observation	Depression: poorly groomed, looks older than real, stooped/ closed posture, blunt/ dull face, lethargic. Mania/ BPAD: over groomed, looks younger, restlessness, elated/ blunt/ inappropriate expression, alert Schizophrenia: suspicious/ bizarre look, vigilant, suspicious/ apathetic, alert, mannerism Neurosis: stiff, tensed, alert, fearful, anxious, defensive/ easily distracted In delirium: disorientation, stupor Dementia: confused, inability to follow commands
Psychomotor activity	Retardation, agitation, unusual movements, gait & catatonia	Observation	Dementia: slowness/ loss of spontaneity Depression: decrease psychomotor activity, retardation Mania: increase psychomotor activity,

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			agitation Schizophrenia: echopraxia, negativism, automatic obedience, catatonia behavior OCD: stereotype activity, compulsive behaviour
Speech and language	Coherence, relevance, volume, tone, manner, reaction time	Observation	Dementia/ Depression: loss of spontaneity, slow reaction time Mania: rapid & pressure speech, increased reaction time Schizophrenia : mutism, aphonia, clang association
Emotional state - mood and affect	Stability, range , quality, appropriate-ness, intensity	Observation (affect)/ Interview (mood)	Mania/ BPAD: labile mood, euphoric mood, blunt/ inappropriate affect to mood Depression: restricted mood, dysphoric mood, inappropriate affect to mood Schizophrenia: blunt/ inappropriate affect
Thought Content	Suicidal ideations, obsessions, ruminations, phobias, ideas of reference, paranoid ideation, magical ideation, delusions, reality impairment, overvalued ideas, thought broadcasting, insertion or withdrawal, depersonalize-tion & other stream of thought disorder	Interview/ Observation	Psychotic disorder: reality impairment Depression: suicidal ideation Somatoform disorder: depersonalization OCD: obsession Neurotic disorder: phobia
Thought Process	Circumstantiali ty, tangentiality, neologism, ambivalence, loose association, perseveration	Interview/ Observation	Psychotic disorder/ Schizophrenia/ Dementia: commonly represent formal thought disorder
Perception	Hallucinations, illusions, déjà vu & jamais vu	Interview/ Observation	Schizophrenia/ Psychotic disorder: auditory/ visual/ gustatory hallucination Organic mental disorder: visual/ olfactory/ gustatory hallucination, illusion
Cognition/ sensorium	Orientation, memory, intellect, attention & concentration, abstraction, insight & judgement	Interview/ Observation	Delirium/ Organic mental disorder: disorientation, memory impairment Head injury: disorientation, retrograde amnesia Dissociative disorder: confabulation Dementia: memory impairment, abstraction impairment Psychotic disorder: abstraction impairment, poor insight, impaired judgement

Methodology

The aim of review article is to explore the need of mental status assessment before rehabilitation and strategies to practice mental status examination as an assessment key in rehabilitation with the need for implication in nursing field. The study material collected from various sources like books, journals, online database of last ten years since 2008-2018. Online search engine were Pubmed, CINHAL, psychoINFO and Google scholar by searching the keywords: "mental status examination", "mental status assessment", "rehabilitation AND mental status examination", "cognitive mental health assessment", "MSE", "MMSE", "Mini Cog", MoCA.

Findings

Findings of the review article are based on the concepts are discussed in following headings:

Need of Mental Status Assessment Before Rehabilitation

Mental health illness affect 450 million people worldwide and 80% in middle and lower income countries.[5] 13.7 % of Indian population affecting with variety of mental illness out of which 10.6% of this requires abrupt intervention.[6] Patient suffering with severe and persistent mental illness require psychosocial rehabilitation. The main objective of psychosocial rehabilitation is to recover the disabled individuals with helping them to develop emotional, social, intellectual and vocational skills with the least professional support. Need of mental status examination can be understood under following headings:

Need to assess functional and social skill before rehabilitation

Severe mental illness affects difficulty in social interaction, vocational functioning skills, recreation and activities of daily living (ADLs) including self-care. Poor performance on neurocognitive tasks has been observed to be associated with low performance of daily living, and improper social functioning.[7]

Need to assess cognitive skill before rehabilitation

Meta-analyses study reveals that cognitive treatment consider most beneficial when embedded in a comprehensive program of psychiatric rehabilitation.[8] The mini mental status examination (MMSE) is designed to provide a rapid cognitive screen. The MMSE attempts to provide a description of an individual's cognitive abilities in terms of attention, memory, calculation, language, motor skill, and judgment. Trivedi J.K.

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(2008) conducted a study and identified few cognitive areas affected in schizophrenia patients i.e. impaired social functioning (Declarative memory, vigilance, executive function), impaired occupational functioning (Executive function, vigilance, declarative and working memory), impaired independent functioning (Executive function, declarative and working memory). [9)]

Need to assess vocational skill before rehabilitation

Vocational rehabilitation emerged as the most required skill for patients with severe mental illness. The administration of MSE & MMSE used as a screening tool in the vocational evaluation has benefits of identifying the problem areas and sensitize the person's about functioning level. 148 schizophrenic spectrum disorder patients were selected in a study to examine the effect of vocational rehabilitation program and found that patients coped with some kind of work and their vocational activity increased from 17 to 77% and 33% patients had sheltered work & 36% got placement in ordinary workplaces.[(10)]

Existing Knowledge/ Practices/ Situation of Mental Health Assessment Before Rehabilitation

Commonly used cognitive mental health assessment test before rehabilitation

Various cognitive screening tests are used to measure patient's functional cognitive performance. Frequently use cognitive test are MMSE, Mini Cog, MoCA as shown in table no. 2.

Table 2: cognitive screening assessment tool: comparative analysis [(9)]

Test	Cognitive screening tools				
	Administration duration (minutes)	Sensitivity (95% CI)	Specificity (95% CI)	Total score	Domains assessed
Mini-Mental State Examination (MMSE)	6 to 10	81%	89%	0-30	Attention, language, memory, orientation, visospatial proficiency
Mini cognitive assessment instrument (Mini-Cog)	≤ 5	91%	86%	0-5	Executive functioning, memory, visuospatial proficiency
Montreal Cognitive Assessment (MoCA)	≤ 10	91%	81%	0-30	Attention, executive functioning, language, memory, orientation

Techniques of Mental Status Examination Before Rehabilitation

The basic techniques for mental status examination formed by "observing" the patient during interview and by "exploring" the patient's complaints and experiences.(11) During the mental status examination one has to focus on three techniques consecutively, namely: Exploration, Observation and Self-observation as shown in figure no 1.

Figure 1: Techniques of mental status examination

Exploration - During the interview the interviewer explores the complaints, and experiences of a patient. The exploration include: nature, severity, emergence, setting, associated factors, associated symptoms, and, patient's own experience of complaints.

Observation & self-observation - Observations and self observation are method of assessment of behavior of patient by the context in which the psychiatric interview takes place and by the interaction between the patient and interviewer.

Existing Problems/ Shortcoming/ Limitations Regarding Mental Status Examination

Following are the few challenges to conduct mental status examination before rehabilitation:

1. Mental status examination is self-report instrument, so participants are frequently asked to express distressing symptoms in detail and discuss their traumatic events. Addressing such direct questions about often horrific experiences as a part of data collection, necessitating more "clinical" expertise and skills.[(12)]
2. Questions asked under each domains of MSE are not standardized and depends on individual for perception and interpretation, so result may vary.
3. Interview techniques of health professional, perception of questions & answer pattern of patient, communication technique, and personal & socio-demographic variables depend on individual.
4. Interpretation of MSE findings is a difficult and expertise job, training is required.
5. Assessment needs of a mental patient undergoing rehabilitation services are not assessed alone by mental status examination, other instruments are also required.

Limitation of Mental Status Examination

There are also few limitations of mental status examination like requirement of deeper understanding of brain functioning, difficulties in performing mental assessment of deaf patients, few issues involved in evaluating for hallucinations, delusions, and disorganized thinking[17], skill, training, and experience of the health professionals.

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Limitation of Using Cognitive Screening Tests

Research evidence show some limitations of poor sensitivity, poor specificity, incorrect administration, incorrect scoring, and false positive errors while using cognitive screening tests. A detailed comparative analysis of limitation of cognitive screening tests is given below in table no. 3.

Table 3: comparative analysis of limitation of cognitive screening tests

Limitation of MMSE(13-15)	Limitation of Mini Cog(16)	Limitation of MoCA(17)
• Not effective in mild cognitive impaired conditions. • Strongly influenced by age, gender, level of education, culture, socio-economic status. • Not sensitive test. • Poor specificity. • Ceiling and flooring effect. • Limited examination of visuosatial cognitive ability.	• Unsuitable for moderate to severe dementia conditions • Inappropriate for populations with extremely low education or literacy level. • Not useful in monitoring disease progression.	• Requires longest administration time. • Low specificity. • No assessment of intellectual functioning • Not consider a substitute for more in-depth neuropsychological assessment

Strategies to improve the situation / minimize or solve THE problems in Mental Status Examination before Rehabilitation

Facing the challenges

Health professionals must develop adequate knowledge, skills, and training in conducting mental status examination.(18) Besides every institution should provide comfortable environment and strict policy for patients undergoing rehabilitation services.

Abilities to Conduct Mental State Examination (19)

Mental health personnel in health care delivery system should have following abilities while conducting mental status examination.

Knowledge of the aims of the Mental State Examination

An ability to draw on knowledge about MSE to identify evidence for and against a diagnosis of mental illness, to present MSE in a standardized format, to draw on detailed observations of the child/young including observations of their appearance, behaviour and speech pattern, to tailor questions to their likely level of understanding, to introspect and assess their thoughts, perceptions, and feelings to structure the interview by asking general and specific follow-up questions to respond empathetic when asking about the child/young person's internal experiences to record the child/young person's description of significant symptoms in their words to avoid colluding with any delusional beliefs by making it clear to the child/young person and to avoid being drawn into arguments about the truth of a delusion.

Ability to enquire into specific symptom areas

An ability to ask the specific symptoms about uni-polar and bi-polar depression, about thoughts of self-harm, about symptoms characteristic of the different anxiety disorders, about abnormal perceptions, about interpretation of the nature of abnormal beliefs in the context of the child/young person's developmental stage, family, social, and cultural context, about cognitive functioning, and about the child/young person's insight into their difficulties.

Nursing Implications

Advanced practice nurse work in a variety of settings including: hospitals, and community programs, they assess mentally ill patients for their diagnosis, for conducting psychotherapies session, for providing expertise consultation, and for prescribing treatment services.

Nursing Education

Knowledge of mental status examination may be used in assessment neurological examination. Knowledge and clinical application of mental status examination should be in cooperating all nursing program. In service education can be provided on mental status examination and its application. Specific training should be provided to conduct and interpret the mental status examination to undergraduate and post graduate students.

Nursing Practice

Assessment of components of mental status examination helps to identify patient's skills, need and deficit before his/ her entry into rehabilitation. Nurses frequently assess a patient's orientation to person, place and time to determine as a part of neurological status. Assessment tools enable the nursing practitioner to efficiently evaluate a patient's current level of functions, cognition and safety. Mental status examination of patient help to identify the overall intellectual and cognition function. Mental assessment of patient help to decide whether he/she is ready to receive rehabilitation services? Cognitive mental assessment i.e. Mini MSE, Mini Cog, MoCA can be used as screening tool for elderly in dementia, Alzheimer, memory loss and confusion. Mental health nurses should use three core skills to conduct mental status examination, i.e. looking, listening, and asking.(20)

Nursing Research

Knowledge, attitude and practice of nurses regarding mental status examination before rehabilitation is a matter of research. Exploratory studies to find out skills, issues, and challenges required in administrating mental status examination among special population. Comparative study may also use to assess effectiveness of the best cognitive screening among specific population.

CONCLUSION

The purpose of the article is to highlight the existing methods and techniques for mental status examination before psychiatric rehabilitation. Our interest was also to recognize the cognitive screening tools, to identify existing knowledge or practice regarding MSE and to recognize the limitation of mental status examination and to understand the strategies to overcome these limitations.

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Mental status examination is not alone sufficient to consider a patient for rehabilitation. Other functional instruments are also play a vital role in the assessment of skills & resources of person undergoing for rehabilitation services. Mental status examination is a crucial and challenging part and responsibilities of health professional before patient is send for rehabilitation services. MSE, MMSE, Mini Cog, MoCA are widely used mental assessment instruments are used for mentally ill-patients undergoing psychiatric rehabilitation services. To be used efficiently, nurses must be incorporated into the broader context of psychosocial rehabilitation and adequate knowledge and practice of mental status examination.

Ethical Permission: Not required

Conflict Of Interest: Nil

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