Brief Report

Assessing Medical Decision-Making Competence Using the MacArthur Competence Assessment Tool–Treatment for Schizophrenia

Hirofumi Hirakawa, MD, PhD

Decision-making capacity for treatment is a legal concept with a direct role in clinical practice. However, individuals with schizophrenia may lack the legal capacity to make treatment decisions.[1] The symptoms of schizophrenia are divided into 3 main categories: positive symptoms, negative symptoms, and disorganization. Schizophrenia is associated with poor insight and cognitive dysfunction, which may influence decisional capacity.[1] Therefore, it is important to assess decisional capacity in patients with schizophrenia. The MacArthur Competence Assessment Tool–Treatment (MacCAT-T)[2] evaluates patients' capacity to make decisions about their treatment based on given information consisting of 4 dimensions: understanding, appreciation, reasoning, and expression of a choice. A previous meta-analysis showed that schizophrenia patients had significant impairment in decision-making capacity for treatment as measured by the MacCAT in the context of clinical research and treatment compared to a healthy control group.[3] However, this meta-analysis included only 3 studies of the MacCAT-T and did not evaluate the association between psychiatric symptoms and decision-making capacity for treatment.[3] This report is a narrative review of the studies on schizophrenia that evaluated both decision-making capacity for treatment with the MacCAT-T and severity of symptoms using a clinical rating scale for schizophrenia.

METHODS

The review of the literature was conducted in February 2022. The PubMed database was searched using the search terms *MacArthur Competence Assessment Tool for Treatment* and *schizophrenia*. Only original studies that examined both decision-making capacity for treatment with the MacCAT-T and symptom severity using a clinical rating scale for schizophrenia such as the Brief Psychiatric Rating Scale (BPRS)[4] or the Positive and Negative Syndrome Scale (PANSS)[5] were included. Review articles and those not written in English were excluded. Eight published articles were identified.[2,6–12]

RESULTS

Patients with schizophrenia showed lower scores for understanding and reasoning than comparison participants without schizophrenia.[2,6] One study[11] found that schizophrenia patients exhibited lower scores in understanding, reasoning, and appreciation subscales of the

MacCAT-T than did controls, and there were nonsignificant differences in the expression of a choice. Another study[10] found that patients with schizophrenia scored significantly lower than internal medicine patients in all dimensions.

PANSS positive symptom scores were negatively associated with MacCAT-T subscale scores of understanding.[11,12] PANSS positive symptoms were associated with a lack of decision-making capacity for treatment (odds ratio [OR]: 3.88).[9] In particular, hallucinations were not associated with a lack of decision-making capacity for treatment (OR: 1.47), whereas delusions were associated with capacity (OR: 3.67).[9] Interestingly, Grisso et al[2] found strong negative correlations between understanding and conceptual disorganization and hallucinations, while no substantial correlation was found between understanding and unusual thought, contrary to the results of the study by Spencer et al.[9] Some studies[6–8] have reported no significant correlations between patients' performance on any of the MacCAT-T subscales and positive symptoms.

Negative PANSS scores were found to be negatively associated with MacCAT-T subscale scores of understanding.[8,11] Anergia negatively correlated with understanding, reasoning, and expressing a choice.[10] Another study[2] using the BPRS found that blunted affect was negatively associated with appreciation. In contrast, PANSS negative symptom scores did not correlate with understanding, appreciation, reasoning, or expressing a choice.[12]

Understanding was positively associated with the scores of depressive mood and guilt feelings and negatively associated with the scores of uncooperative behavior, disorientation, and mannerisms.[2] Another study[10] using the BPRS showed that disorientation was correlated with scores on all MacCAT-T dimensions (negatively associated with understanding, reasoning, and expressing a choice and positively associated with appreciation). The score for uncooperativeness was positively correlated with the score for appreciation.[10] PANSS general psychopathology was negatively correlated with understanding, reasoning, and appreciation.[8,11,12]

DISCUSSION

In this report, the relationship between decision-making capacity for treatment with the MacCAT-T and the severity of symptoms using a clinical rating scale for schizophrenia is summarized. The literature shows that patients with

schizophrenia were significantly less capable of making valid treatment decisions than control groups. Use of structured interviews such as the MacCAT-T is important to assess medical decision-making competence for schizophrenia. In addition, decision-making capacity for treatment in patients with schizophrenia was associated with positive and negative symptoms, general psychopathology, cognition, and insight. Therefore, when talking to patients with schizophrenia about their disease and treatment, it is important to use clear, easy to understand language and to repeat information in a manner similar to the informed consent process of Dunn et al,[13] which used a computerized slide show incorporating more structure and review of important information.

Article Information

REFERENCES

1. Jeste DV, Depp CA, Palmer BW. Magnitude of impairment in decisional capacity in people with schizophrenia compared to normal subjects: an overview. *Schizophr Bull*. 2006;32(1):121–128.
2. Grisso T, Appelbaum PS, Hill-Fotouhi C. The MacCAT-T: a clinical tool to assess patients' capacities to make treatment decisions. *Psychiatr Serv*. 1997;48(11):1415–1419.
3. Wang SB, Wang YY, Ungvari GS, et al. The MacArthur Competence Assessment Tools for assessing decision-making capacity in schizophrenia: a meta-analysis. *Schizophr Res*. 2017;183:56–63.
4. Overall JE, Gorham DR. The Brief Psychiatric Rating Scale. *Psychol Rep*. 1962;10(3):799–812.
5. Kay SR, Fiszbein A, Opler LA. The Positive and Negative Syndrome Scale (PANSS) for schizophrenia. *Schizophr Bull*. 1987;13(2):261–276.
6. Palmer BW, Dunn LB, Appelbaum PS, et al. Correlates of treatment-related decision-making capacity among middle-aged and older patients with schizophrenia. *Arch Gen Psychiatry*. 2004;61(3):230–236.
7. Capdevielle D, Raffard S, Bayard S, et al. Competence to consent and insight in schizophrenia: is there an association? a pilot study. *Schizophr Res*. 2009;108(1-3):272–279.
8. Raffard S, Fond G, Brittner M, et al. Cognitive insight as an indicator of competence to consent to treatment in schizophrenia. *Schizophr Res*. 2013;144(1-3):118–121.
9. Spencer BWJ, Gergel T, Hotopf M, et al. Unwell in hospital but not incapable: cross-sectional study on the dissociation of decision-making capacity for treatment and research in in-patients with schizophrenia and related psychoses. *Br J Psychiatry*. 2018;213(2):484–489.
10. Bilanakis N, Peritogiannis VK, Vratsista A. Treatment decision-making capacity in hospitalized patients with schizophrenia. *Psychiatriki*. 2017;28(1):37–45.
11. Aki ÖE, Ak S, Mutlu E, et al. The validity and reliability of the Turkish version of MacArthur Competence Assessment Tool for treatment decision: correlates of competence in schizophrenia patients. *Noro Psikiyatri Arsivi*. 2021;58(4):327–333.
12. Raffard S, Lebrun C, Laraki Y, et al. Validation of the French version of the MacArthur Competence Assessment Tool for Treatment (MacCAT-T) in a French sample of individuals with schizophrenia: Validation de la version française de l'instrument d'évaluation des compétences MacArthur-traitement (MacCAT-T) dans un échantillon français de personnes souffrant de schizophrénie. *Can J Psychiatry*. 2021;66(4):395–405.
13. Dunn LB, Lindamer LA, Palmer BW, et al. Improving understanding of research consent in middle-aged and elderly patients with psychotic disorders. *Am J Geriatr Psychiatry*. 2002;10(2):142–150.