The concept of “atypical psychoses” was proposed in the twentieth century under the influence of “the theory of localization of brain function” by Wernicke in opposition to Kraepelin’s “two-entities principle” of schizophrenia and bipolar disorder. Atypical psychoses have been given different names, including cycloid psychosis, acute schizoaffective psychosis, postpartum psychosis, bouffée délirante, and reactive psychosis. In Japan, Hisatoshi Mitsuda assumed the heterogeneity of schizophrenia and bipolar disorder. Atypical psychoses have been given historical under the inclusions of electroconvulsive therapy were sometimes used and found to be effective by 19421 and Stauder in the modern entity of antibody-mediated encephalitis, especially anti-NMDA receptor encephalitis: A review of the literature in the mid-twentieth century. 

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Table 1. Mitsuda’s comparison of clinical courses and outcomes between the “typical” group and “atypical” group of schizophrenia patients

|                        | Typical group (%) | Atypical group (%) |
|------------------------|-------------------|--------------------|
| Acute onset            | 0                 | 49                 |
| Subacute inset         | 21                | 32                 |
| Lethal in acute phase  | 0                 | 8                  |
| Recovery               | 0                 | 48                 |
| Remission and recurrence | 0             | 32                 |

Regarding atypical group, if the patients survived the acute phase, they recovered fully without sequelae. Mitsuda stated the atypical group might be caused somatically by parts of the body other than the brain in the first report.

The “atypical group” was compared with the “typical group” by reviewing 153 patients with schizophrenia who were hospitalized in April 1940 at Kyoto University Hospital. Of these 153 patients, 68 were categorized into the atypical group (Table 1). Within the atypical group, acute or subacute onset occurred in 81%, acute-phase lethality in 8%, complete recovery in 48%, and remission and recurrence in 32%. No patient in the typical schizophrenia group showed acute onset, lethality in the acute phase, or complete recovery during the observation period of 2 years. Eight representative atypical cases were described in Mitsuda’s original paper (Table S3).

Stauder’s lethal catatonia syndrome featured acute onset psychosis with abnormal movement, cyanosis, fluctuation of autonomic functions, and lethal outcomes. A summary of the Stauder’s cases presented in the original report is shown in Table S4. Psychosis, akinetic and hyperkinetic symptoms, mood fluctuation, consciousness and language disturbances, and family histories of various mental disorders were commonly recorded in both Mitsuda’s and Stauder’s patients. The mean age was in the early twenties, and the ratio of men to women was 1:1 in the populations. Mitsuda’s atypical group had less frequent autonomic failure than Stauder’s catatonia syndrome and might involve a broader spectrum.

Anti-NMDAR encephalitis patients have characteristic combinations of neuropsychiatric symptoms with or without teratoma. With unique presentations, clinical diagnostic criteria for anti-NMDAR encephalitis have been proposed. Our historical review lacked evidence of laboratory tests, teratoma antibodies, and conclusive diagnoses could not be made retrospectively among the groups. However, Mitsuda’s patients shown in Table S3 and Stauder’s patients shown in Table S4 had at least four characteristic combinations of six major symptoms of anti-NMDAR encephalitis. Atypical psychoses as secondary or organic diseases have been discussed in relation to the borderline of epilepsy and the analysis of endocrinological functions during the mid-twentieth century. We proposed that patients who were diagnosed with atypical psychoses in the twentieth century might include some of those with anti-NMDAR encephalitis.

In a retrospective study, most patients with atypical psychoses could be reclassified according to the ICD-10 standards as having acute polymorphic psychotic disorder with or without symptoms of schizophrenia, but some patients met the criteria for schizophrenia due to the longer duration of the episodes. Anti-NMDAR antibodies have been detected among some patients with first-episode psychosis who were initially diagnosed with schizophrenia with atypical presentations. The continuous spectrum of anti-NMDAR encephalitis should not be restricted to patients with severe respiratory dysregulation.

Recently, “autoimmune psychosis” has been suggested as an emergent diagnostic category for isolated psychotic presentations of suspected autoimmune origin. The epidemiology of autoimmune psychosis has not been elucidated. Patients with first-episode psychosis who initially exhibit an “atypical psychoses” phenotype should undergo cerebrospinal fluid analysis to determine whether antibodies against neuronal cell surface or synaptic receptors are present to rule out a possible diagnosis of autoimmune psychosis.
Significance of a psychiatry rotation for subjective achievement of competencies related to psychiatry in the Japanese postgraduate residency system

The current Japanese postgraduate residency system started in 2004 and aimed to improve residents’ treatment skills in primary care. This curriculum included a psychiatry rotation of more than 1 month to ensure that all doctors achieved a certain level of proficiency in assessing psychiatric disorders. However, this curriculum was relaxed in 2010 to prepare residents for various post-residency careers, and the psychiatry rotation became elective. Some residents chose psychiatry, but those who were not interested in psychiatry or strongly interested in another career did not. In 2020, the psychiatry rotation again became mandatory following further revision of the residency system, which reflected the increased need for all doctors to be able to broadly treat psychiatric symptoms and diseases. Residents are required to complete basic skills in psychotherapy. Few studies have focused on the impact of psychiatry rotations during residency training. Therefore, this study aimed to clarify whether a psychiatry rotation affected residents’ subjective achievement of competency items related to psychiatry. Text S1 is full version of this text.

This cross-sectional study was conducted among postgraduate residents from Nagasaki University Hospital and cooperating hospitals across two academic years (2019–2020). The survey was administered at the end of the residency curriculum; 417 residents from 32 training hospitals were invited to participate.

We selected nine psychiatry-related competency items (dependence, mood disorders, agitation and delirium, disorders of growth and development, schizophrenia, dementia, insomnia, memory deficit, and depression) from the guideline of Japanese residency system (up to 2019 and after 2020). Mood disorders and insomnia were selected from the pre-2019, and the other items were from the guideline after 2020. Residents were asked to evaluate their subjective understanding and confidence in initiating treatment for these competency items using a 6-point Likert scale. Unpaired t-tests were used to compare the average scores for each item between residents who completed the psychiatry rotation and those who did not. This study was judged unnecessary for examination by the Ethical Review Board of Nagasaki University.

In total, 280 residents (67.1%) responded to this survey, 203 (72.5%) of which had completed the psychiatry rotation (Table S1). Tables 1 and 2 show the average scores for subjective understanding and confidence in initiating treatment. Residents who had completed the psychiatry rotation had significantly higher scores in eight of the nine competency items than those who had not: dependence, mood disorders, agitation and delirium, schizophrenia, dementia, insomnia, memory deficit, and depression. Residents who had completed the psychiatry rotation had significantly higher scores for confidence in initiating treatment than those that had not completed the rotation in six competency items: mood disorders, agitation and delirium, schizophrenia, insomnia, memory deficit, and depression. Additional analysis is shown in Table S3.

This study supported psychiatry being a mandatory rotation. However, experiencing a psychiatry rotation showed no significant educational effect for disorders of growth and development. This item reflects a broad