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No conflict of interest

<https://doi.org/10.1016/j.nsa.2025.106842>

PS02-1278

NEUROSCIENCE APPLIED 5 (2026) 106841

VALIDATION OF THE TURKISH VERSION OF THE ABERRANT SALIENCE INVENTORY IN PATIENTS WITH PSYCHOSIS AND NONCLINICAL PARTICIPANTS

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Background: Kapur's "salience" hypothesis suggests that psychosis results from dysregulation in the dopaminergic system. Abnormal dopamine release leads to the excessive attribution of meaning to irrelevant stimuli, contributing to delusions and psychotic symptoms [1]. The Aberrant Salience Inventory (ASI), developed by Cicero et al., is a self-report scale that assesses salience attribution processes [2]. Psychometric studies in various languages indicate that the ASI may be useful in the early diagnosis of psychosis, and recent meta-analytic evidence supports its reliability, validity, and potential utility in both clinical and nonclinical populations, enhancing its value as a screening and research tool. [3] **Aim:** This study aimed to adapt the ASI into Turkish and evaluate its psychometric properties, including validity and reliability.

Methodology: The study included a total of 150 participants, comprising 75 patients diagnosed with schizophrenia in accordance with DSM-5-TR criteria who were clinically in remission, and 75 healthy individuals matched with the patient group in terms of age, gender, and educational level. Participants completed the Aberrant Salience Inventory (ASI), Positive and Negative Syndrome Scale (PANSS), Magical Ideation Scale (MIS), Community Assessment of Psychic Experiences (CAPE), and Global Assessment Scale (GAS). Validity was assessed using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA), while reliability was determined through the Test-Retest method and Cronbach's α coefficient. The discriminative ability of the ASI was examined using Receiver Operating Characteristic (ROC) analysis.

Results: The mean age (43.67 ± 11.76), duration of education (10.75 ± 3.69), and gender distribution (F/M: 25/50) of the patient group did not significantly differ from the control group ($p > 0.05$). Participants diagnosed with schizophrenia had significantly higher ASI scores (11.47 ± 6.06) compared to controls (6.51 ± 5.34). To improve the factor structure of the ASI, items 8 and 15 were removed from the scale; this adjustment resulted in improved model fit and reliability. Factor analyses demonstrated that the ASI's single-factor structure exhibited adequate goodness-of-fit indices (CFI = 0.99, RMSEA = 0.01, SRMR = 0.05). Internal consistency analysis indicated Cronbach's $\alpha = 0.89$, suggesting high internal consistency. Correlation analyses revealed a significant association between ASI scores and PANSS positive symptom scores in the patient group ($r = 0.232$, $p = 0.045$). Test-retest reliability was also high ($r = 0.939$, $p < 0.001$). ROC analysis indicated that the ASI had moderate accuracy in differentiating participants with schizophrenia from healthy controls (AUC = 0.735), with an optimal cutoff score of 7.5 (sensitivity = 72%, specificity = 65%).

Conclusions: The Turkish version of the ASI demonstrated strong validity and reliability as a measurement tool. The scale showed significant associations with variables related to psychosis risk and exhibited strong discriminative ability in distinguishing patients with psychosis from healthy controls. These findings indicate that the ASI can be effectively utilized for assessing individuals at risk for psychosis and for clinical assessment.

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No conflict of interest

<https://doi.org/10.1016/j.nsa.2025.106841>

PS02-1279

NEUROSCIENCE APPLIED 5 (2026) 106842

PROBABILISTIC REASONING (JTC) BIAS IN SCHIZOPHRENIA: META-ANALYSIS OF ITS ASSOCIATION WITH DELUSIONS, NEGATIVE SYMPTOMS AND IQ

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Background: Probabilistic reasoning bias—commonly referred to as ‘jumping to conclusions’ (JTC)—was first proposed in the 1980s as a cognitive abnormality potentially underlying delusions in schizophrenia [1]. It refers to the tendency to make rapid decisions based on limited evidence and is typically evaluated using the beads task, and other conceptually similar tasks. JTC has been consistently demonstrated in patients with schizophrenia spectrum disorders (SSD) compared to healthy controls. However, whether there is an association between JTC and delusions remains debated, and the majority of studies have failed to find evidence of a relationship [2]. Additionally, emerging evidence suggests that JTC may be linked to negative symptoms, and to cognitive impairment. Although several meta-analyses have addressed JTC in schizophrenia [3–5], several new studies have appeared since then, some of them large. Meta-analyses to date have not examined the association of JTC bias with negative symptoms and cognitive functioning.

Aim: This meta-analysis aimed to evaluate the association of JTC bias in SSD with delusions, negative symptoms, and cognitive functioning as measured by current IQ.

Methods: A systematic search was conducted using PubMed, Embase, PsycINFO, and ProQuest Dissertations and Theses, along with grey literature sources and manual review of relevant articles. Keywords included schizophrenia, psychosis, schizoaffective, delusion, JTC, probabilistic reasoning, draws to decision, beads task, fish task, and box task. Inclusion criteria were adults diagnosed with SSD (according to DSM, ICD-10 or other criteria), use of standard probabilistic reasoning tasks and measures of delusions, negative symptoms, or current IQ. Exclusion criteria included mixed affective and non-affective psychosis samples (unless SSD data were extractable) and interventional studies targeting JTC. Effect sizes were calculated for both ‘easy’ and ‘hard’ task versions. The meta-analysis is preregistered on OSF (DOI: 10.17605/OSF.IO/89RTV). Of 2,947 records screened, 2,746 were excluded after title and abstract review, leaving 225 reports for full-text screening.

Results: Of these, 224 were retrieved, and 64 studies met inclusion criteria. Nineteen studies examined JTC and delusions, 11 examined negative symptoms, and 8 assessed current IQ. JTC bias, measured by draws to decision (with fewer draws indicating greater JTC bias), showed a small but significant negative association with delusions (easy: $r = -0.084$, $p = 0.044$; hard: $r = -0.114$, $p = 0.001$). A moderate negative association was found between draws to decision and negative symptoms for the easy version ($r = -0.158$, $p = 0.024$), with a trend-level association for the hard version ($r = -0.110$, $p = 0.077$). Draws to decision showed a positive association with current IQ (easy: $r = 0.221$, $p = 0.029$; hard: $r = 0.313$, $p < 0.001$).

Conclusions: This updated meta-analysis finds that JTC bias is associated with delusions in SSD, though the effect size for correlation is small, and is also with negative symptoms and cognitive functioning, at least as measured by current IQ. These findings suggest that JTC may reflect a broader cognitive vulnerability relevant to multiple symptom domains. Further analyses will examine the association between JTC bias and neuropsychological test performance.

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No conflict of interest

<https://doi.org/10.1016/j.nsa.2025.106842>

PS02-1280
NEUROSCIENCE APPLIED 5 (2026) 106843
HEALTHCARE RESOURCE UTILIZATION AND COST BURDEN IN PATIENTS WITH SCHIZOPHRENIA WITH AND WITHOUT EVIDENCE OF TARDIVE DYSKINESIA

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Introduction: Prolonged treatment with antipsychotics (APs) may lead to tardive dyskinesia (TD), which is linked to low treatment adherence and resultant poor clinical outcomes. We analysed real-world data to examine evidence of TD, AP use among patients with and without TD, healthcare resource utilization (HCRU), and the economic burden of TD among patients with schizophrenia.
Methods: This retrospective analysis of PharMetrics Plus (01/2009 to 9/2023) and MarketScan Medicaid (01/2014 to 12/2022) claims databases included patients aged ≥18 years with a diagnosis of schizophrenia and ≥12 months of continuous enrolment before and after the earliest schizophrenia diagnosis (index date). Patients with and without evidence of TD, defined by a TD diagnosis or VMAT-2 inhibitor use, were propensity matched by age, gender, race (MarketScan Medicaid only), Elixhauser comorbidity index (ECI), and index year. Distribution of and treatment persistence to APs, healthcare costs, and HCRU for 1 year post index date were compared between patients with and without evidence of TD.

Results: In the PharMetrics Plus and MarketScan Medicaid claims databases, 43,411 and 47,796 individuals with schizophrenia were identified, with 2.2% and 2.6% showing evidence of TD, respectively. After matching, a total of 16.7% of individuals in the PharMetrics Plus (964 of 5784) and 44.1% of those in the MarketScan Medicaid (1205 of 2730) cohorts had evidence of TD. In both datasets, a higher proportion of patients in the matched TD group used APs during follow-up compared with the matched no TD group (PharMetrics Plus: first-generation APs=27.9% vs 15.8%; second-generation APs=85.8% vs 72.9%; MarketScan Medicaid: first-generation APs=30.7% vs 15.1%; second-generation APs=97.4% vs 83.7%). In MarketScan Medicaid, the matched TD group demonstrated a higher rate of treatment persistence (ie, proportion of days covered ≥80% during follow-up) to any AP (66.8% vs 61.2%), second-generation oral APs (66.5% vs 60.9%), and second-generation long-acting injectable (LAI) APs (78.5% vs 72.0%), and lower rates of adherence to first-generation LAI APs (55.2% vs 64.8%) and first-generation oral APs (64.5% vs 65.3%) compared with the matched no TD group. Similar results were observed in PharMetrics Plus, except that the matched TD group demonstrated a greater rate of adherence to first-generation oral APs (71.6% vs 67.5%) and a similar rate of adherence to second-generation oral APs (68.0% vs 68.3%) compared with the matched no TD group. The matched TD group incurred higher total all-cause and psychiatric-related HCRU and health-related costs during follow-up in both databases.

Discussion: Compared with the matched no TD group, the matched TD group was more likely to use any type of AP and showed greater adherence to second-generation oral/LAI APs but lower adherence to first-generation LAI APs during follow-up. In both matched groups, second-generation oral APs were the most commonly used AP, while adherence to second-generation LAIs was greatest. Additionally, the matched TD group incurred greater healthcare cost and HCRU burden relative to the matched no TD group, underscoring the need for increased attention to these cohorts among patients with schizophrenia.

Conflict of interest

Disclosure statement DK, WG, TS, AC, and MS are employees of Bristol Myers Squibb. RP has participated in a Scientific Advisory Board for Boehringer Ingelheim, has received grant funding from Janssen, and has received consulting

fees from Holmusk, Akriavia Health, Columbia Data Analytics, Clinilabs, Social Finance, Boehringer Ingelheim, Bristol Myers Squibb, Teva and Otsuka.

<https://doi.org/10.1016/j.nsa.2025.106843>

PS02-1281
NEUROSCIENCE APPLIED 5 (2026) 106844
SOCIETAL HEALTH UTILITIES FOR PATIENT-REPORTED EXPERIENCE OF COGNITIVE IMPAIRMENT IN SCHIZOPHRENIA (PRECIS)

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Introduction and aim: New treatments are in development for cognitive impairment associated with schizophrenia, a common symptom inadequately targeted by current antipsychotics. However, economic evaluations may underestimate the benefits of these treatments, as they often rely on generic health-related quality of life (HRQoL) measures, such as the EQ-5D, which can be used to estimate utilities, but are not designed to capture changes in cognition. The Patient-Reported Experience of Cognitive Impairment in Schizophrenia (PRECIS) instrument specifically assesses cognitive experiences in individuals with schizophrenia. The purpose of this study was to select and value key items of the PRECIS to better capture the health utility impact of any new treatment aiming to improve cognition.

Methods: A two-step approach was undertaken. First, psychometric analysis of the 28-item version of the PRECIS was performed using phase-2 clinical trial data (NCT02832037) to identify the best-performing items of the instrument. Analyses included descriptive statistics, correlation analysis, exploratory factor analysis (EFA), and item-response theory (IRT) analysis. In addition, the relevance of domains/items was discussed with experts and the suitability of items for inclusion in a valuation study was evaluated. Second, health states based on the final selected PRECIS items (each with five levels of severity) were valued by the UK general public through an online discrete choice experiment (DCE) and composite time trade-off (cTTO) interviews. To estimate a utility scoring algorithm for the PRECIS, the DCE data were analyzed using a mixed logit (MXL) model and rescaled onto a 0-1 utility scale, anchored by the cTTO utility scores for the best and worst health states as defined by the selected PRECIS items.

Results: Four key items of the PRECIS were selected for the valuation study, representing the following cognitive domains: memory, communication, executive function and attention. Five-hundred respondents completed the online DCE survey, while 100 of the 500 participants also participated in a cTTO interview. The cTTO utility for the best health state (level_1, not at all hard, for all four domains) was valued at 0.992 (standard deviation [SD] 0.038) and the worst state (level_5, very hard, for all four domains) at 0.292 (SD 0.479). The final scoring algorithm showed that all four domains were significant predictors of utility, with increasing levels of severity resulting in higher utility decrements indicating more negative impact on HRQoL.

Table 1 Scoring algorithm utility decrements by domain and severity level

Domain	Level_2 (A little bit hard)	Level_3 (Somewhat hard)	Level_4 (Quite hard)	Level_5 (Very hard)
Memory	-0.0376	-0.0568	-0.1121	-0.1866
Communication	-0.0074	-0.0521	-0.0790	-0.1940
Executive function	-0.0541	-0.0819	-0.1211	-0.1891
Attention	-0.0212	-0.0224	-0.0590	-0.1303

Conclusions: This study demonstrates the feasibility of quantifying health utility values for patient-reported cognitive impairment domains using the validated PRECIS instrument. The resulting utilities can capture the HRQoL impact of cognitive impairment and potential treatment-related improvements in cognition, supporting more accurate future economic evaluations of therapies targeting cognitive function in schizophrenia.

Conflict of interest

Disclosure statement This study was funded by Boehringer Ingelheim International GmbH.