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DECISION MAKING AND PSYCHOTIC-LIKE EXPERIENCES

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Individuals with schizophrenia have been shown to make decisions differently than healthy individuals, and often in ways that are less effective or accurate. These individuals often make decisions based on their previous experience rather than thinking based on planning for the future. In psychology, these different types of learning are called model-free and model-based learning systems. A model-free learning system is a habitual learning system that is based on prior experience and a model-based learning system is goal-directed that relies on prospective information. Previous studies have found that people with schizophrenia show intact model-free learning, but a reduced model-based learning system. This study examined whether this same pattern of learning was true for individuals in the general population who experienced psychotic like experience, but did not have a clinical diagnosis of schizophrenia. This was achieved by asking 57 healthy participants to complete tasks and questionnaires. The study had participants perform a “space-alien” task that has been used in previous research to measure model-based and model-free learning decisions. The task asks participants to first choose a spaceship to take them to one of two planets, and then pick an alien for a chance of a reward. This measures decision making by looking at what the person would decide to do once they either received a reward or did not receive a reward. The participants also filled out questionnaires asking about depression, hedonic experiences and psychotic-like experiences. We found that those individuals that experienced psychotic-like experiences showed intact model-free learning, but impaired model-based learning, with a similar pattern to that seen among individuals with schizophrenia. This means that in a healthy population, individuals that have psychotic-like experiences make decisions in a similar fashion to those with schizophrenia.