Supplementary Material

1 U.S. Military

**1.1 Study participants were antipsychotic-drug-naïve**

Patient samples derived from the US Department of Defense Serum Repository (DoDSR) are considered as pre-diagnostic and antipsychotic naïve as the U.S. military applicants must pass a medical evaluation which includes a review of their medical history and medications. Psychiatric diagnoses such as major depressive disorder, bipolar disorder and schizophrenia and medications used to treat them are disqualifying for military service. It is unlikely that antipsychotic drugs would be prescribed without establishing a proper diagnosis, which as a rule, is done during a hospitalization. All serum specimens for the DoDSR study subjects were obtained before the cases first psychiatric hospitalization. Hence there is a high level of confidence that DoDSR study participants were antipsychotic-drug-naïve. Unfortunately there is no information (direct or indirect) available regarding non-psychotropic medications. DoDSR study controls did not have any psychiatric diagnoses including substance abuse.

**1.2. Controls are unlikely to have exhibited symptoms of behaviours associated with major depressive disorder, bipolar disorder or schizophrenia**

No questionnaires were used as subjects were not and could not be contacted for privacy reasons without informed consent which was waived because it was practically impossible. Military service is highly demanding, particularly during these periods of armed conflict. Service members are under close observation from their peers, supervisors, and commanding officers, and have ready access to health care. Individuals exhibiting symptoms or behaviours associated with major depressive disorder, bipolar disorder or schizophrenia are unlikely to go undetected, and if they did not self-seek medical care they are very likely to be referred by their commanders. Thus controls, who were selected from the population of active duty service members, were unlikely to experience symptoms consistent with a diagnosis of major depressive disorder, bipolar disorder or schizophrenia that would go unevaluated and undocumented in medical records during their entire service.