**Materials and Methods**

A retrospective population-based case-control study on depression and psoriasis occurrence was carried out between April 9, 2008 and January 1, 2016 based on data from electronic medical records (EMR) and the Swedish Prescribed Drug Register (PDR). In this study the target population included all residents in the Region of Jönköping in southern Sweden alive and above 18 years of age (*n* = 273,536) on January 1, 2016. Jönköping Region holds both rural and urban areas and is a representative region for Sweden as a whole [32].

Patients were identified via an EMR covering the entire population of the Region of Jönköping County. In the EMR, data on all primary care and specialized outpatient and inpatient care is continuously registered for individuals living in the Jönköping Region including personal identification number (PIN), age, sex, healthcare provider, date of visits, and diagnostic codes according to the World Health Organization (WHO) International Classification of Diseases ICD-10-SE. Private and public care visits are registered in the same way.

The PDR covers data on all dispensed pharmaceuticals in Sweden since July 2005, including drug identity registered using Anatomical Therapeutic Chemical (ATC) codes. The PDR was used to identify ATC codes of dispensed medical drugs for each individual in Region Jönköping from July 4, 2007 until December 31, 2016. In Sweden a prescription is valid up to 12 months after the prescription date. The proportion of invalid dispensation entries in the PDR is expected to be below 2% [33]. ATC codes used to search for individual prescriptions are provided in Table I.

All patients with WHO ICD-10-SE codes marking psoriasis (L40.\*) and depression (F32.\* and F33.\*) from April 9, 2008 until January 1, 2016 were identified in the EMR. Two different criteria were used to define patients as cases with psoriasis. First, patients were counted as cases if there were one or more visits to a dermatologist with the diagnostic codes L40.\*. Secondly, patients with two or more visits to any physician other than a dermatologist with L40.\* codes and topical or systemic treatment for psoriasis as listed in Table I were counted as cases. All individuals in the EMR not meeting the study criteria for psoriasis served as controls. Patients were counted as cases with depression if there were one or more visits to any physician with the diagnostic codes F32.\* or F33.\* combined with at least one dispensation of an anti-depressive drug as listed in Table I. The study protocol was approved by the ethical committee at Linköping University, Linköping, Sweden (Dnr. 2014/481-31).

*Statistical Methods*

Descriptive statistics were used and prevalence rates for depression and psoriasis were calculated. Sub-analyses were performed after dividing the population into five age group strata (composed of a similar numbers of individuals) and sorting for gender. χ2 tests were performed to assess differences in depression occurrence. Odds ratios (ORs) with 95% confidence intervals were calculated to quantify the association of psoriasis and depression for both sexes and each sex separately as well as for age groups. ORs were adjusted for age and sex using a binominal logistic regression. Statistical analyses were performed using IBM SPSS Statistics (Version 22). *p* < 0.05 was considered statistically significant.