**Supplementary Table 2:** Excluded articles with reasons

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| **Study ID** | **Author name** | **Study title** | **Reason for exclusions** |
| 1 | Bahat etal., 2014 | Comorbidities, polypharmacy, functionality and nutritional status in Turkish community-dwelling female elderly | Population irrelevant |
| 2 | Bhattacharjee et al., 2016 | Prevalence, Patterns and Predictors of Psychotropic Polypharmacy Among Elderly Individuals with Parkinson’s Disease In Long Term Care Settings in The United States | Outcome is irrelevant |
| 3 | Bhattacharjee et al., 2018 | Patterns and Predictors of Depression Treatment among Older Adults with Parkinson’s Disease and Depression in Ambulatory Care Settings in the United States | Outcome is irrelevant |
| 4 | Bose et al., 2017 | Age- and gender-related differences in drug utilization patterns among patients in neurology ward of a tertiary care hospital | Outcome is irrelevant |
| 5 | Crispo et al., 2015 | Trends in inpatient antiparkinson drug use in the USA, 2001–2012 | Outcome is irrelevant |
| 6 | Garcia et al., 2017 | Comorbid conditions associated with Parkinson's disease: A longitudinal and comparative study with Alzheimer disease and control subjects | Outcome is irrelevant |
| 7 | Rey et al., 2012 | Relationship between polypharmacy and frequency of adverse events to antiparkinsonian drugs: a preliminary study | Conference abstract |
| 8 | Rey et al., 2012 | Relationship between polypharmacy and frequency of adverse events to antiparkinsonian drugs: a preliminary study | Duplicated |
| 9 | Santos García | Comorbid conditions associated with Parkinson's disease: A longitudinal and comparative study with Alzheimer disease and control subjects | Outcome is irrelevant |
| 10 | Sganga et al., 2016 | Impact of hospitalization on modification of drug regimens: Results of the criteria to assess appropriate medication use among elderly complex patients study | Outcome is irrelevant |
| 11 | Rivera et al., 2019 | Comorbidity and Polypharmacy in Parkinson’s disease: comparative study with control group. Results from the COPPADIS Study Cohort. (P5.8-040) | Conference abstract |