# Supplemental Online Content

Korchia T, Achour V, Faugere M, et al. Sexual dysfunction in schizophrenia: a systematic review and meta-analysis. *JAMA Psychiatry*. Published online August 23, 2023. doi:10.1001/jamapsychiatry.2023.2696

This supplemental material has been provided by the authors to give readers additional information about their work.

## Supplementary material 1. Search paradigm

We used the following search paradigms: "(schizophrenia OR schizoaffective OR psychotic OR psychosis) AND ("sexual dysfunction" OR "sexual adverse events" OR "sexual disorder" OR "sexual side effects" OR libido OR orgasm OR anorgasm* OR sexual desire OR vulvodynia OR vestibulodynia OR vagin* OR vaginism* OR vaginal lubr* OR dyspareun* OR hypersex* OR penile OR penile dysf* OR impotence OR erect* OR priapism OR ejac* OR hyperprolactinemia OR amenorrhea OR galactorrhea OR (acronyms of each validated scale assessing sexual dysfunctions) (ASEX OR SFQ OR CSFQ OR IIEF OR FSFI OR UKU OR PRSexDQ OR ANNSERS OR GASS OR GRISS OR MGH-SFQ OR SBQ OR ASC-SR)". The English words were translated in French for Université Sorbonne Paris Cité database.

## Supplementary material 2. Extracted data

The following data were extracted: year of publication and first author, country, design, method of inclusion, primary objective, mixed outpatient/inpatient sample, inclusion of stabilized patients, inclusion of ≥95% patients treated with antipsychotics, exclusion of somatic diseases, exclusion of substance use disorder, sexual dysfunction scale used, diagnosis based on validated tool (y/n), patient-reported measure (y/n), clinical interview (y/n) or clinician-rated tool (y/n), sample size, number and proportion of sexual dysfunctions, of each specific dysfunction (loss of libido, of orgasm dysfunction, of genital pain, of sexual dysfunctions in men, of erectile dysfunction , of ejaculation dysfunction, of sexual dysfunctions in women, of amenorrhea and of galactorrhea), the proportion of men, the mean sample age, ethnicity (proportion of White, Black, Asian), proportion of partnered patients, proportion of unemployed patients, somatic and addictive comorbidities (percentage of hypertension, of diabetes, of metabolic syndrome, the proportion of patients with hyperprolactinemia, of smokers, of alcohol use disorder, of cannabis use disorder), the initial diagnosis (schizophrenia vs. schizoaffective disorder), the mean age of illness onset, the mean illness duration, the proportion of remitted subjects, the illness severity (global psychotic severity (total PANSS score), positive symptoms (PANSS positive factor), negative symptoms (PANSS negative factor score), proportion of first-generation antipsychotic, second-generation antipsychotic, proportion of antipsychotic polytherapy, of antidepressants, of anxiolytics, hypnotics, of anticholinergic agents, of mood stabilizers, the proportion of each individual antipsychotic (haloperidol, chlorpromazine, risperidone/paliperidone, olanzapine, clozapine, quetiapine and amisulpride), the proportion of antipsychotics with high anti-D2 activity (haloperidol, amisulpride and risperidone/paliperidone) and low anti-D2 activity (olanzapine, clozapine and quetiapine), the mean chlorpromazine equivalents. The continuous proportions (i.e., proportions) have been also transformed in binary variables (with various cut-offs according to the distribution of proportions) to complete the subgroup analyses.

## Supplementary material 3. Excluded studies and reason for exclusion

| Reference | Reason of exclusion |
|---|---|
| Acuña MJ, Martín JC, Graciani M, Cruces A, Gotor F. A Comparative Study of the Sexual Function of Institutionalized Patients with Schizophrenia. The Journal of Sexual Medicine. Oct 2010;7(10):3414-23. | Inpatients |
| Ahl J, Kinon BJ, Liu-Seifert H. Sexual Dysfunction Associated with Neuroleptic-Induced Hyperprolactinemia Improves with Reduction in Prolactin Levels. Annals of the New York Academy of Sciences. Déc 2004;1032(1):289-90. | Lack of extractable data |
| Ahmadzadeh G, Shahin A. Sexual dysfunctions in the patients hospitalized in psychiatric wards compared to other specialized wards in Isfahan, Iran, in 2012. Adv Biomed Res. 2015;4(1):225. | Inpatients |
| Apantaku-Olajide T, Gibbons P, Higgins A. Drug-induced sexual dysfunction and mental health patients' attitude to psychotropic medications. Sexual and Relationship Therapy. Mai 2011;26(2):145-55. | Not population-based study |
| Barchielli B, Accinni T, Ferracuti S, Carlone L, Petrini F, Biondi M, et al. Sexual Habits and Sexual Dysfunctions in a Sample of Patients with Psychotic Disorders Compared to a Group of Healthy Adults. JCM. 19 janv 2022;11(3):505. | Inpatients included in the population |
| Bebbington PE, Angermeyer M, Azorin JM, Marwaha S, Marteau F, Toumi M. Side-effects of antipsychotic medication and health-related quality of life in schizophrenia. Acta Psychiatrica Scandinavica. Févr 2009;119:22-8. | Lack of extractable data |
| Bhui K, Puffet A, Herriot P. A survey of sexual problems amongst psychiatric inpatients. Soc Psychiatry Psychiatr Epidemiol. Mars 1995;30(2):73-7. | Inpatients |
| Bobes J, Rejas J, Garcia-Garcia M, Rico-Villademoros F, Garc ??a-Portilla MP, Madrigal M, et al. Frequency of Extrapyramidal Adverse Reactions in Schizophrenic Outpatients Treated with Risperidone, Olanzapine, Quetiapine or Haloperidol: Results of the EIRE Study. Clinical Drug Investigation. 2002;22(9):609-22. | (Bobes et al, 2003) included in the analysis |

| Reference | Reason of exclusion |
|---|---|
| Bram N, Rafrafi R, Abdelghaffar W, Lakhal MH, Ouanes S, El Hechmi Z. Sexual dysfunctions in Tunisian patients with schizophrenia. Sexologies. Juill 2014;23(3):e65-70. | Inpatients included in the population |
| Brunelleschi S. Risperidone-associated hyperprolactinemia: evaluation in twenty psychiatric outpatients. Pharmacological Research. Oct 2003;48(4):405-9. | Lack of extractable data |
| Burke MA, McEvoy JP, Ritchie JC. A pilot study of a structured interview addressing sexual function in men with schizophrenia. Biological Psychiatry. Janv 1994;35(1):32-5. | Inpatients |
| Bushong ME, Nakonezny PA, Byerly MJ. Subjective Quality of Life and Sexual Dysfunction in Outpatients With Schizophrenia or Schizoaffective Disorder. Journal of Sex & Marital Therapy. Juill 2013;39(4):336-46. | Lack of extractable data |
| Byerly MJ, Nakonezny PA, Bettcher BM, Carmody T, Fisher R, Rush AJ. Sexual dysfunction associated with second-generation antipsychotics in outpatients with schizophrenia or schizoaffective disorder: An empirical evaluation of olanzapine, risperidone, and quetiapine. Schizophrenia Research. Sept 2006;86(1-3):244-50. | Lack of extractable data |
| Chaves KM, Serrano-Blanco A, Ribeiro SB, Soares LAL, Guerra GCB, do Socorro Costa Feitosa Alves M, et al. Quality of Life and Adverse Effects of Olanzapine Versus Risperidone Therapy in Patients with Schizophrenia. Psychiatr Q. mars 2013;84(1):125-35. | Lack of extractable data |
| Chikowe I, Domingo M, Mwakaswaya V, Parveen S, Mafuta C, KampiraE. Adverse drug reactions experienced by out-patients taking chlorpromazine or haloperidol at Zomba Mental Hospital, Malawi. BMC Res Notes. Déc 2019;12(1):376. | Lack of extractable data |
| Ciocca G, Usall J, Dolz M, Limoncin E, Gravina GL, Eleonora Carosa, et al. Sexual dysfunctions in people with first-episode psychosis assessed according to a gender perspective. Rivista di Psichiatria [Internet]. 1 sept 2015 [cité 10 août 2022] ;(2015Settembre-Ottobre). Disponible sur : https://doi.org/10.1708/2040.22166 | Inpatients |
| de Boer MK, Castelein S, Bous J, van den Heuvel ER, Wiersma D, Schoevers RA, et al. The Antipsychotics and Sexual Functioning Questionnaire (ASFQ): Preliminary evidence for reliability and validity. Schizophrenia Research. Nov 2013;150(2-3):410-5. | Inpatients |

| Reference | Reason of exclusion |
|---|---|
| Del Cacho N, Vila – Badia R, Butjosa A, Cuadras D, Rubio – Abadal E, Rodriguez – Montes MJ, et al. Sexual dysfunction in drug- naïve first episode nonaffective psychosis patients. Relationship with prolactin and psychotic symptoms. Gender differences. Psychiatry Research. Juill 2020;289:112985. | Inpatients |
| Edlinger M, Hofer A, Rettenbacher MA, Baumgartner S, Widschwendter CG, Kemmler G, et al. Factors influencing the choice of new generation antipsychotic medication in the treatment of patients with schizophrenia. Schizophrenia Research. Sept 2009;113(2-3):246-51. | Inpatients included in the population |
| Friedmann RC, Hurt SW, Clarkin J, Corn R, Aronoff MS. Sexual histories and premenstrual affective syndrome in psychiatric inpatients. AJP. Nov 1982;139(11):1484-6. | Inpatients |
| Friedman S, Harrison G. Sexual histories, attitudes, and behavior of schizophrenic and ?normal? women. Arch Sex Behav. Déc 1984;13(6):555-67. | Inpatients |
| Fujioi J, Iwamoto K, Banno M, Kikuchi T, Aleksic B, Ozaki N. Effect of adjunctive aripiprazole on sexual dysfunction in schizophrenia: a preliminary open-label study. Pharmacopsychiatry. 2017;50(02):74-8. | Inpatients included in the population |
| Gaber HD, El-Beeh KAM, Abd Al-Naser FAW, Hosny A. Erectile dysfunction in patients with first-episode psychosis. Andrologia [Internet]. Déc 2020 [cité 10 août 2022] ;52(11). Disponible sur : https://onlinelibrary.wiley.com/doi/10.1111/and.13793 | Inpatients |
| Ghormode D, Gupta P, Ratnani D, Aneja J. Evaluation of sexual dysfunction and quality of life in patients with severe mental illness: A cross-sectional study from a tertiary care center in Chhattisgarh. Ind Psychiatry J. 2019;28(1):75. | Not population-based study |
| Hatano M, Kamei H, Kato A, Takeuchi I, Hanya M, Uno J, et al. Assessment of the Latent Adverse Events of Antipsychotic Treatment Using a Subjective Questionnaire in Japanese Patients with Schizophrenia. Clin Psychopharmacol Neurosci. 31 mai 2017;15(2):132-7. | Inpatients included in the population |
| Huguelet P, Mohr S, Miserez C, Castellano P, Lutz C, Boucherie M, et al. An Exploration of Sexual Desire and Sexual Activities of Women with Psychosis. Community Ment Health J. févr 2015;51(2):229-38. | Lack of extractable data |
| Hummer M, Kemmler G, Kurz M, Kurzthaler I, Oberbauer H, Fleischhacker WW. Sexual Disturbances During Clozapine and Haloperidol Treatment for Schizophrenia. AJP. 1 avr 1999;156(4):631-3. | Inpatients |

| Reference | Reason of exclusion |
|---|---|
| Johnsen E, Kroken R, Løberg EM, Kjelby E, Jørgensen HA. Sexual Dysfunction and Hyperprolactinemia in Male Psychotic Inpatients: A Cross-Sectional Study. Advances in Urology. 2011;2011:1-6. | Inpatients |
| Kaneda Y. Effects of Risperidone on Gonadal Axis Hormones in Schizophrenia. Ann Pharmacother. Déc 2001;35(12):1523-7. | Lack of extractable data |
| Kelly DL, Conley RR. Evaluating sexual function in patients with treatment-resistant schizophrenia. Schizophrenia Research. Sept 2003;63(1-2):195-6. | Treatment-resistant schizophrenia population |
| Kheng Yee O, Muhd Ramli ER, Che Ismail H. Remitted Male Schizophrenia Patients with Sexual Dysfunction. The Journal of Sexual Medicine. Avr 2014;11(4):956-65. | Lack of extractable data |
| Kikuchi T, Iwamoto K, Sasada K, Aleksic B, Yoshida K, Ozaki N. Sexual dysfunction and hyperprolactinemia in Japanese schizophrenic patients taking antipsychotics. Progress in Neuro-Psychopharmacology and Biological Psychiatry. Avr 2012;37(1):26-32. | Inpatients included in the population |
| Knegtering H, van den Bosch R, Castelein S, Bruggeman R, Sytema S, van Os J. Are sexual side effects of prolactin-raising antipsychotics reducible to serum prolactin? Psychoneuroendocrinology. Juill 2008;33(6):711-7. | Inpatients included in the population |
| Konarzewska B, Wołczyński S, Szulc A, Galińska B, Popławska R, Waszkiewicz N. Effect of risperidone and olanzapine on reproductive hormones, psychopathology and sexual functioning in male patients with schizophrenia. Psychoneuroendocrinology. Janv 2009;34(1):129-39. | Inpatients |
| Lambert M, Conus P, Eide P, Mass R, Karow A, Moritz S, et al. Impact of present and past antipsychotic side effects on attitude toward typical antipsychotic treatment and adherence. Eur 8sychiatry. Nov 2004;19(7):415-22. | Inpatients |
| Lee JY, Kim SW, Lee YH, Kang HJ, Kim SY, Bae KY, et al. Factors associated with self-rated sexual function in Korean patients with schizophrenia receiving risperidone monotherapy: Sexual Function in Schizophrenia. Hum Psychopharmacol Clin Exp. Nov 2015;30(6):416-24. | Inpatients included in the population |
| Liu D, Liu S, Xiu M, Deng H, Guo H, Liu W, et al. Sexual Dysfunction in Chronically Medicated Male Inpatients With Schizophrenia: Prevalence, Risk Factors, Clinical Manifestations, and Response to Sexual Arousal. Front Psychiatry. 14 janv 2022;12:761598. | Inpatients |

| Reference | Reason of exclusion |
|---|---|
| Lucca J, Ramesh M, Ram D, Kurian J, Mathew N. Psychotropic medication-induced sexual dysfunction and its interference with patient′s daily performance: a cross-sectional study. Egypt J Psychiatr. 2016;37(1):36. | Lack of extractable data |
| Lyketsos GC, Sakka P, Maïlis A. The Sexual Adjustment of Chronic Schizophrenics: A Preliminary Study. Br J Psychiatry. Oct 1983;143(4):376-82. | Inpatients |
| Ma MC, Chao JK, Hung JY, Sung SC, Chao IHC. Sexual Activity, Sexual Dysfunction, and Sexual Life Quality Among Psychiatric Hospital Inpatients With Schizophrenia. The Journal of Sexual Medicine. Mars 2018;15(3):324-33. | Inpatients |
| Marques TR, Smith S, Bonaccorso S, Gaughran F, Kolliakou A, Dazzan P, et al. Sexual dysfunction in people with prodromal or first-episode psychosis. Br J Psychiatry. Août 2012;201(2):131-6. | Inpatients |
| McCann TV, Clark E, Lu S. Subjective side effects of antipsychotics and medication adherence in people with schizophrenia. Journal of Advanced Nursing. Mars 2009;65(3):534-43. | Lack of extractable data |
| Montejo ÁL, Rico-Villademoros F. Psychometric Properties of the Psychotropic-Related Sexual Dysfunction Questionnaire (PRSexDQ-SALSEX) in Patients with Schizophrenia and Other Psychotic Disorders. Journal of Sex & Marital Therapy. 11 avr 2008;34(3):227-39. | (Montejo et al, 2010) included in the analysis |
| Murali T, John CJ, Ramakrishnan N, Gopinath PS. Sexual behaviour in schizophrenic patients on neuroleptic medication. Indian J Psychiatry. Oct 1984;26(4):390-2. | Lack of extractable data |
| Nallani MC, Powell MM, Pugh S, Kearns AM, Adams HA, Weiner E, et al. 25-Hydroxyvitamin D and metabolic-related laboratory values in women with schizophrenia and hyperprolactinemia. Journal of Psychiatric Research. Juill 2022;151:25-9. | Lack of extractable data |
| Osasona SO, Ehimigbai M. Sexual dysfunction: prevalence and associated factors in patients with mental illness receiving psychotropic medication in Nigeria. Afr Health Sci. déc 2019;19(4):2973-84. | Not population-based study |
| Perlman CM, Martin L, Hirdes JP, Curtin-Telegdi N, Pérez E, Rabinowitz T. Prevalence and Predictors of Sexual Dysfunction in Psychiatric Inpatients. Psychosomatics. Juill 2007;48(4):309-18. | Inpatients |

| Reference | Reason of exclusion |
|---|---|
| Raboch J. Sexual development and life of psychiatric female patients. Arch Sex Behav. Août 1986;15(4):341-53. | Inpatients |
| Raja M, Azzoni A. Sexual behavior and sexual problems among patients with severe chronic psychoses. Eur psychiatr. Mars 2003 ;18(2) :70-6. | Inpatients |
| Ravichandran D, Gopalakrishnan R, Kuruvilla A, Jacob KS. Sexual Dysfunction in Drug-Naive or Drug-Free Male Patients with Psychosis: Prevalence and Risk Factors. Indian Journal of Psychological Medicine. Sept 2019;41(5):434-9. | Drug-naïve population |
| Rubio-Abadal E, Del Cacho N, Saenz-Navarrete G, Arranz B, Cambra RM, Cuadras D, et al. How Hyperprolactinemia Affects Sexual Function in Patients Under Antipsychotic Treatment. J Clin Psychopharmacol. Oct 2016;36(5):422-8. | Inpatients included |
| Sabry W, El Sayed El Taweel M, Zyada F. Sexual dysfunctions in drug-naive male patients with first-episode schizophrenia: a case–control study. Middle East Current Psychiatry. Oct 2017;24(4):168-73. | Inpatients |
| Salvan H, Stanculete M, Macrea R. Frequency of sexual dysfunction in patients with schizophrenia. European Psychiatry. Mars 2007;22:S138. | Lack of extractable data |
| Schimmelmann BG, Moritz S, Karow A, Schafer I, Bussopulos A, Golks D, et al. Correlates of subjective well-being in schizophrenic patients treated with atypical antipsychotics. International Journal of Psychiatry in Clinical Practice. Janv 2005;9(2):94-8. | Inpatients |
| Shah SK. A comparative study of sexual dysfunction in schizophrenia patients taking aripiprazole versus risperidone. Kathmandu Univ Med J (KUMJ). Juin 2013;11(42):121-5. | Inpatients included |
| Tasaki M, Yasui-Furukori N, Yokoyama S, Shinozaki M, Sugawara N, Shimoda K. Hypoprolactinemia and hyperprolactinemia in male schizophrenia patients treated with aripiprazole and risperidone and their relationships with testosterone levels. Neuropsychopharmacol Rep. sept 2021;41(3):379-84. | Lack of extractable data |
| Theleritis C, Bonaccorso S, Habib N, Stahl D, Gaughran F, Vitoratou S, et al. Sexual dysfunction and central obesity in patients with first episode psychosis. Eur 10sychiatry. Mai 2017;42:1-7. | Inpatients |
| Van Bruggen M, van Amelsvoort T, Wouters L, Dingemans P, de Haan L, Linszen D. Sexual dysfunction and hormonal changes in first episode psychosis patients on olanzapine or risperidone. Psychoneuroendocrinology. Août 2009;34(7):989-95. | Inpatients |

| Reference | Reason of exclusion |
|---|---|
| Verhulst J, Schneidman B. Schizophrenia and Sexual Functioning. PS. Avr 1981;32(4):259-62. | Inpatients |
| Westheide J, Cohen S, Bender S, Cooper-Mahkorn D, Erfurth A, Gastpar M, et al. Sexual Dysfunction in Psychiatric Inpatients The Role of Antipsychotic Medication. Pharmacopsychiatry. Juill 2007;40(4):140-5. | Inpatients |
| Westheide J, Cvetanovska G, Albrecht C, Bliesener N, Cooper-Mahkorn D, Creutz C, et al. Prolactin, Subjective Well-Being and Sexual Dysfunction: An Open Label Observational Study Comparing Quetiapine with Risperidone. The Journal of Sexual Medicine. Déc 2008;5(12):2816-26. | Inpatients |
| Wirshing DA, Pierre JM, Marder SR, Saunders CS, Wirshing WC. Sexual side effects of novel antipsychotic medications. Schizophrenia Research. Juill 2002 ;56(1-2) :25-30. | Lack of extractable data |
| Zhang Y, Tang Z, Ruan Y, Huang C, Wu J, Lu Z, et al. Prolactin and Thyroid Stimulating Hormone (TSH) Levels and Sexual Dysfunction in Patients with Schizophrenia Treated with Conventional Antipsychotic Medication: A Cross-Sectional Study. Med Sci Monit. 16 déc 2018;24:9136-43. | Inpatients |

## Supplementary material 4. Characteristics of the included studies reporting a prevalence of global sexual dysfunction in schizophrenia

| First Author | Publication year | Country | Sexual dysfunction scale | N | N Sexual dysfunction | Percentage of sexual dysfunction | High Quality |
|---|---|---|---|---|---|---|---|
| Arato | 1979 | Hungary | Semistructured interview | 27 | 17 | 63.0% | 0 |
| Ghadirian | 1982 | Quebec. Canada | Original questionnaire | 55 | 23 | 41.8% | 0 |
| Lukoff | 1986 | US | Unstructured interview | 16 | 10 | 62.5% | 0 |
| Kockott | 1996 | Germany | DSM-III-R | 100 | 49 | 49.0% | 1 |
| Bhui | 1997 | UK | DSM-III-R | 53 | 23 | 43.4% | 1 |
| Warden | 1997 | Canada | Original questionnaire | 230 | 57 | 24.8% | 0 |
| Mullen | 2001 | USA | Medical records | 54 | 50 | 92.6% | 0 |
| Smith | 2002 | England | SFQ | 101 | 45 | 44.6% | 1 |
| Bobes | 2003 | Spain | UKU | 632 | 241 | 38.1% | 1 |
| Fortier | 2003 | Quebec. Canada | Original questionnaire | 45 | 20 | 44.4% | 0 |
| Olfson | 2005 | USA | CSFQ | 139 | 63 | 45.3% | 0 |
| Bitter | 2005 | Hungary. Austria | Semistructured interview | 571 | 83 | 14.5% | 0 |
| Khawaja | 2005 | Pakistan | ASEX | 50 | 40 | 80.0% | 0 |
| Dossenbach | 2006 | Nine countries[1] | UKU | 3828 | 2665 | 69.6% | 1 |
| Fan | 2007 | US | CSFQ | 87 | 56 | 64.4% | 0 |
| Howes | 2007 | UK | SFQ | 103 | 62 | 60.2% | 1 |
| Ucok | 2007 | Turkey | ASEX | 827 | 435 | 52.6% | 0 |
| Yusufi | 2007 | England | ANNSERS | 103 | 57 | 55.3% | 1 |
| Plevin | 2007 | Australie | ASEX | 22 | 16 | 72.7% | 1 |
| Castano | 2008 | Spain | CSFQ | 100 | 60 | 60.0% | 0 |
| Liu-Seifert | 2009 | USA | CSFQ | 402 | 240 | 59.7% | 0 |
| Sibinovic | 2009 | Serbia | ASEX | 137 | 76 | 55.5% | 0 |
| Nunes | 2009 | Brazil | ASEX | 137 | 70 | 51.1% | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Hariri | 2009 | Turkey | GRISS | 84 | 29 | 34.5% | 0 |
| Nagaraj | 2009 | India | SFQ | 72 | 66 | 91.7% | 0 |
| Istikoglou | 2009 | Greece | MGH-SFQ | 40 | 7 | 17.5% | 0 |
| Fujii | 2010 | Japan | UKU | 352 | 191 | 54.3% | 1 |
| Harley | 2010 | UK | SFQ | 137 | 106 | 77.4% | 1 |
| Kokoszka | 2010 | Poland | Original questionnaire | 56 | 52 | 92.9% | 0 |
| Montejo | 2010 | Spain | PRSexDQ-Salsex | 244 | 112 | 46.0% | 0 |
| Zhang | 2011 | China | ASEX | 100 | 47 | 47.0% | 0 |
| Xiang | 2011 | Nine countries[2] | Unstructured interview | 5874 | 178 | 3.0% | 0 |
| Yasui-Furukori | 2012 | Japan | UKU | 191 | 77 | 40.3% | 1 |
| Hashimoto | 2012 | Japan | Original questionnaire | 252 | 68 | 27.0% | 0 |
| Nebhinani | 2012 | India | ASEX | 100 | 25 | 25.0% | 0 |
| Oyekanmi | 2012 | Nigeria | IIEF | 275 | 111 | 40.4% | 1 |
| Shakir | 2013 | Irak | ASEX | 104 | 57 | 54.8% | 1 |
| Ben Mahmoud | 2013 | Tunisia | SBQ | 30 | 28 | 93.3% | 0 |
| Bhat | 2013 | India | ASEX | 120 | 41 | 34.2% | 0 |
| Hocaoglu | 2014 | Turkey | ASEX | 101 | 55 | 54.5% | 1 |
| Nakhli | 2014 | Tunisia | ASEX | 100 | 55 | 5.50% | 0 |
| Millier | 2014 | Britain, Germany, France | ASC-SR | 1206 | 314 | 26.0% | 1 |
| Pairin | 2015 | France | ASEX | 24 | 10 | 41.7% | 0 |
| Sathish | 2015 | India | SFQ | 73 | 44 | 60.3. | 1 |
| Olisah | 2016 | Nigeria | IIEF. FSFI | 255 | 164 | 64.3% | 1 |
| Hou | 2016 | China | ASEX | 247 | 195 | 79.0% | 1 |
| Suresh | 2016 | India | CSFQ | 75 | 40 | 53.3% | 0 |
| Simiyon | 2016 | India | FSFI | 63 | 44 | 69.8% | 0 |
| Wang | 2016 | China | PRSexDQ-Salsex | 126 | 67 | 53.2% | 1 |
| Bellnier | 2016 | US | ASEX | 35 | 23 | 65.7% | 0 |
| Shetageri | 2016 | India | FSFI | 101 | 69 | 68.3% | 1 |
| Romero Guillena | 2016 | Spain | ASEX | 22 | 14 | 63.6% | 0 |
| Halouani | 2017 | Tunisia | FSFI | 32 | 26 | 81.3% | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Aftab Khan | 2017 | Pakistan | ASEX | 91 | 32 | 35.2% | 0 |
| Kirino | 2017 | Japan | Original questionnaire | 87 | 39 | 44.8% | 0 |
| Abhilasha | 2018 | India | FSFI | 50 | 45 | 90.0% | 0 |
| Esan | 2018 | Nigeria | ASEX | 90 | 33 | 36.7% | 1 |
| Martin | 2018 | Spain | PRSexDQ-Salsex | 57 | 46 | 80.7% | 1 |
| Fanta | 2018 | Ethiopia | CSFQ | 422 | 349 | 82.7% | 1 |
| Rowel | 2018 | Sri Lanka | IIEF-5 | 102 | 80 | 78.4% | 0 |
| Aggarwal | 2019 | India | ASEX | 76 | 31 | 40.8% | 0 |
| Fond | 2019 | France | SFQ | 237 | 96 | 40.5% | 1 |
| Huang | 2019 | China | ASEX | 418 | 310 | 74.2% | 1 |
| Souaiby | 2019 | Lebanon | PRSexDQ-Salsex | 95 | 55 | 57.9% | 0 |
| Kassew | 2019 | Ethiopia | GASS | 393 | 188 | 47.8% | 1 |
| Doane | 2020 | US | Original questionnaire | 200 | 110 | 55.0% | 0 |
| Abdelatti | 2020 | Egypt | IIEF | 20 | 15 | 75.0% | 1 |
| Gaber | 2020 | Egypt | IIEF-5 | 40 | 39 | 98.5% | 0 |
| Kantipudi | 2020 | India | FSFI | 30 | 11 | 36.7% | 1 |
| Redman | 2021 | US | Original questionnaire | 22 | 16 | 72.7% | 1 |
| Suresh Kumar | 2021 | India | CSFQ | 57 | 50 | 87.7% | 0 |
| Wu | 2021 | Taiwan | ASEX | 279 | 150 | 53.8% | 0 |

**Supplementary material 5. Characteristics of the included studies reporting a prevalence of sexual dysfunction in men with schizophrenia**

| First Author | Publication year | Country | Sexual dysfunction scale | N | N Sexual dysfunction | Percentage of sexual dysfunction | Percentage of erectile dysfunction | Percentage of ejaculation dysfunction | High Quality |
|---|---|---|---|---|---|---|---|---|---|
| Arato | 1979 | Hungary | Semistructured interview | 27 | 17 | 63.0% | | | 0 |
| Ghadirian | 1982 | Quebec. Canada | Original questionnaire | 26 | 14 | 53.8% | 38.5% | 46.2% | 0 |
| Lukoff | 1986 | US | Unstructured interview | 16 | 10 | 62.5% | 37.5% | 25.0% | 0 |
| Bhui | 1997 | UK | DSM-III-R | 40 | 19 | 47.5% | 38.0% | 17.0% | 1 |
| Warden | 1997 | Canada | SEC | 149 | 27 | 18.1% | 09.4% | 6.0% | 0 |
| Mullen | 2001 | USA | Medical records | 18 | 16 | 88.9% | 27.8% | 11.1% | 0 |
| Bobes | 2003 | Spain | UKU | 389 | 173 | 44.5% | 31.0% | 14.0% | 1 |
| Fortier | 2003 | Quebec, Canada | Original questionnaire | 25 | 14 | 56.0% | 22.0% | 26.0% | 0 |
| Olfson | 2005 | USA | CSFQ | 139 | 63 | 45.3% | | 74.1% | 0 |
| Khawaja | 2005 | Pakistan | ASEX | 50 | 40 | 80.0% | 48.0% | 46.0% | 0 |
| Dossenbach | 2006 | Nine countries[1] | UKU | 2063 | | | 46.9% | | 1 |
| Fan | 2007 | US | CSFQ | 65 | 39 | 60.0% | | | 0 |
| Howes | 2007 | UK | SFQ | 53 | 28 | 52.8% | | | 1 |
| Ucok | 2007 | Turkey | ASEX | 547 | 315 | 57.6% | 48.1% | 64.2% | 0 |
| Plevin | 2007 | Australie | ASEX | 22 | 16 | 72.7% | 36.4% | | 1 |
| Liu-Seifert | 2009 | USA | CSFQ | 255 | 153 | 60.0% | | 79.6% | 0 |
| Nunes | 2009 | Brazil | ASEX | 84 | 28 | 33.3% | 32.1% | | 1 |
| Nagaraj | 2009 | India | SFQ | 72 | 66 | 91.7% | 41.7% | 30.6% | 0 |
| Fujii | 2010 | Japan | UKU | 177 | 105 | 59.3% | 37.3% | 35.6% | 1 |
| Harley | 2010 | UK | SFQ | 81 | 60 | 74.1% | | | 1 |
| Kokoszka | 2010 | Poland | Original questionnaire | 31 | 28 | 90.3% | 45.2% | 32.3% | 0 |
| Montejo | 2010 | Spain | PRSexDQ-Salsex | 173 | 86 | 49.7% | | | 0 |
| Zhang | 2011 | China | ASEX | 100 | 47 | 47.0% | 45.0% | | 0 |
| Xiang | 2011 | Nine countries[2] | Unstructured interview | 3426 | 158 | 4.6% | | | 0 |
| Yasui-Furukori | 2012 | Japan | UKU | 108 | 26 | 24.1% | | | 1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Nebhinani | 2012 | India | ASEX | 100 | 25 | 25.0% | 17.0% | | 0 |
| Oyekanmi | 2012 | Nigeria | IIEF | 275 | 111 | 40.4% | 34.5% | | 1 |
| Shakir | 2013 | Irak | ASEX | 104 | 57 | 54.8% | 28.0% | | 1 |
| Bhat | 2013 | India | ASEX | 120 | 41 | 34.2% | 10.0% | | 0 |
| Hocaoglu | 2014 | Turkey | ASEX | 63 | 29 | 46.0% | 51.0% | | 1 |
| Sathish | 2015 | India | SFQ | 73 | 44 | 60.3% | 53.4% | 56.2% | 1 |
| Olisah | 2016 | Nigeria | IIEF/FSFI | 122 | 66 | 54.1% | 40.2% | | 1 |
| Hou | 2016 | China | ASEX | 155 | 116 | 74.8% | 58.0% | | 1 |
| Suresh | 2016 | India | CSFQ | 45 | 26 | 57.8% | 55.0% | | 0 |
| Aftab Khan | 2017 | Pakistan | ASEX | 91 | 32 | 35.2% | 35.2% | 31.9% | 0 |
| Esan | 2018 | Nigeria | ASEX | 45 | 14 | 31.1% | 17.8% | | 1 |
| Fanta | 2018 | Ethiopia | CSFQ | 290 | 246 | 84.8% | 95.5% | 89.3% | 1 |
| Rowel | 2018 | Sri Lanka | IIEF-5 | 102 | 80 | 78.4% | 78.4% | | 0 |
| Fond | 2019 | France | SFQ | 145 | 63 | 43.4% | 15.9% | 19.3% | 1 |
| Huang | 2019 | China | ASEX | 233 | 158 | 67.8% | 22.2% | | 1 |
| Souaiby | 2019 | Lebanon | PRSexDQ-Salsex | 82 | 47 | 57.3% | 37.8% | 30.5% | 0 |
| Abdelatti | 2020 | Egypt | IEEF | 20 | 15 | 75.0% | 35.0% | | 1 |
| Gaber | 2020 | Egypt | IIEF-5 | 40 | 39 | 97.5% | 97.5% | | 0 |
| Redman | 2021 | US | Original questionnaire | 22 | 16 | 72.7% | | | 1 |
| Wu | 2021 | Taiwan | ASEX | 132 | 54 | 40.9% | | | 0 |

## Supplementary material 6. Characteristics of the included studies reporting a prevalence of sexual dysfunction in women with schizophrenia

| First Author | Publication year | Country | Sexual dysfunction scale | N | N Sexual dysfunction | Percentage of sexual dysfunction | Percentage of amenorrhea | Percentage of galactorrhea | High Quality |
|---|---|---|---|---|---|---|---|---|---|
| Ghadirian | 1982 | Quebec, Canada | Original questionnaire | 29 | 9 | 31.0% | | | 0 |
| Bhui | 1997 | UK | DSM-III-R | 13 | 4 | 30.8% | | | 1 |
| Warden | 1997 | Canada | SEC | 81 | 30 | 37.0% | 23.5% | 13.6% | 0 |
| Mullen | 2001 | USA | Medical records | 36 | 34 | 94.4% | | 9.0% | 0 |
| Bobes | 2003 | Spain | UKU | 243 | 61 | 25.1% | 14.4% | 1.2% | 1 |
| Fortier | 2003 | Quebec. Canada | Original questionnaire | 20 | 6 | 30.0% | | | 0 |
| Dossenbach | 2006 | Nine countries[1] | UKU | 1765 | | | 24.4% | 7.6% | 1 |
| Fan | 2007 | US | CSFQ | 22 | 17 | 77.3% | | | 0 |
| Howes | 2007 | UK | SFQ | 50 | 34 | 68.0% | | | 1 |
| Ucok | 2007 | Turkey | ASEX | 280 | 119 | 42.5% | 25.0% | | 0 |
| Liu-Seifert | 2009 | USA | CSFQ | 147 | 87 | 59.2% | | | 0 |
| Nunes | 2009 | Brazil | ASEX | 53 | 42 | 79.2% | | | 1 |
| Fujii | 2010 | Japan | UKU | 175 | 86 | 49.1% | 20.6% | 9.7% | 1 |
| Harley | 2010 | UK | SFQ | 56 | 46 | 82.1% | | | 1 |
| Kokoszka | 2010 | Poland | Original questionnaire | 25 | 24 | 96.0% | | | 0 |
| Montejo | 2010 | Spain | PRSexDQ-Salsex | 71 | 26 | 36.6% | | | 0 |
| Xiang | 2011 | Nine countries[2] | Unstructured interview | 2448 | 19 | 0.8% | | | 0 |
| Yasui-Furukori | 2012 | Japan | UKU | 83 | 51 | 61.4% | | | 1 |
| Hocaoglu | 2014 | Turkey | ASEX | 38 | 26 | 68.4% | | | 1 |
| Olisah | 2016 | Nigeria | IIEF/FSFI | 133 | 96 | 72.2% | | | 1 |
| Hou | 2016 | China | ASEX | 92 | 78 | 84.8% | | | 1 |
| Simiyon | 2016 | India | FSFI | 63 | 44 | 72.2% | | | 0 |
| Shetageri | 2016 | India | FSFI | 101 | 69 | 84.8% | | | 1 |
| Suresh | 2016 | India | CSFQ | 30 | 14 | 46.7% | | | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Halouani | 2017 | Tunisia | FSFI | 32 | 26 | 81.3% | | 0 |
| Abhilasha | 2018 | India | FSFI | 50 | 45 | 90.0% | | 0 |
| Esan | 2018 | Nigeria | ASEX | 45 | 19 | 42.2% | | 1 |
| Fanta | 2018 | Ethiopia | CSFQ | 132 | 103 | 78.0% | | 1 |
| Fond | 2019 | France | SFQ | 92 | 33 | 35.9% | | 1 |
| Huang | 2019 | China | ASEX | 185 | 152 | 82.2% | | 1 |
| Souaiby | 2019 | Lebanon | PRSexDQ-Salsex | 13 | 8 | 61.5% | | 0 |
| Kantipudi | 2020 | India | FSFI | 30 | 11 | 36.7% | | 1 |
| Suresh Kumar | 2021 | India | CSFQ | 57 | 50 | 87.7% | 52.6% | 0 |
| Wu | 2021 | Taiwan | ASEX | 147 | 96 | 65.3% | | 0 |

[1]Austria, Turkey, Czech Republic, Egypt, Poland, Russia, Saudi Arabia, Slovakia, Australia
[2]China, Hong Kong, Japan, Korea, Singapore, Taiwan, India, Malaysia, Thailand
ASC-SR : Approaches to Schizophrenia Communication – Self Report ; ASEX : Arizona Sexual Experience Scale ; ANNSERS : Antipsychotic Non-Neurological Side Effects Rating Scale ; CSFQ : Changes in Sexual Functioning Questionnaire ; DSM3-R : Diagnostic and Statistical Manual of Mental Disorders, 3rd Edition – Revision ; FSFI : Female Sexual Function Index ; IIEF : International Index of Erectile Function ; GASS : Glasgow Antipsychotic Side-Effect Scale ; GRISS : Golombok Rust Inventory of Sexual Satisfaction ; MGH-SFQ : Massachusetts General Hospital-Sexual Functioning Questionnaire ; PRSexDQ-Salsex : Psychotropic-Related Sexual Dysfunction Questionnaire ; SBQ : Sexual Behavior Questionnaire ; SFQ : Sexual Functioning Questionnaire ; UKU : Udvalg for Kliniske Undersogelser

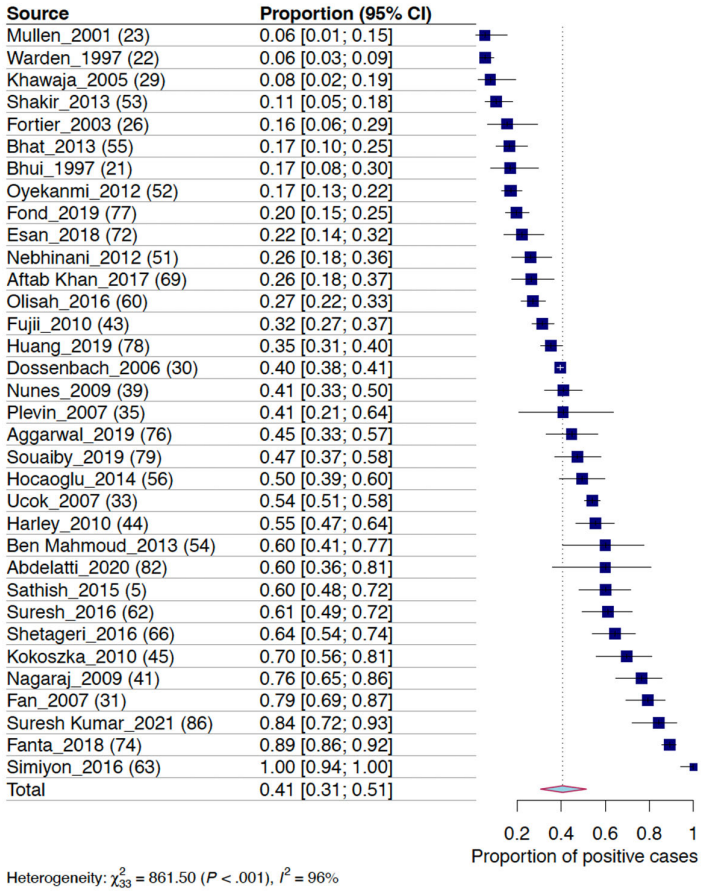
## Supplementary material 7. Study quality

| First Author | Year | *A.1 - Representativity of the sample* | *A.2 - Sample size* | *A.3 - Comparability* | *A.4 - Ascertainment of the exposure* | *B.1 - Comparability* | *C.1 - Assessment of the outcome* | *C.2 - Statistical test* | *Total number of stars* | High Quality study |
|---|---|---|---|---|---|---|---|---|---|---|
| Arato | 1979 | Selection / Undescribed | Unjustified | * | ** | NA | Incomplete | * | 4 | 0 |
| Ghadirian | 1982 | * | Unjustified | * | ** | NA | Incomplete | * | 5 | 0 |
| Lukoff | 1986 | Selection / Undescribed | Unjustified | * | ** | NA | Incomplete | Incomplete | 3 | 0 |
| Kockott | 1996 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Bhui | 1997 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Warden | 1997 | Selection / Undescribed | Unjustified | * | ** | NA | Incomplete | * | 4 | 0 |
| Mullen | 2001 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |
| Smith | 2002 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Bobes | 2003 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Fortier | 2003 | * | Unjustified | * | ** | NA | Incomplete | * | 5 | 0 |
| Olfson | 2005 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Bitter | 2005 | * | Unjustified | * | ** | NA | Incomplete | * | 5 | 0 |
| Khawaja | 2005 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Dossenbach | 2006 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |

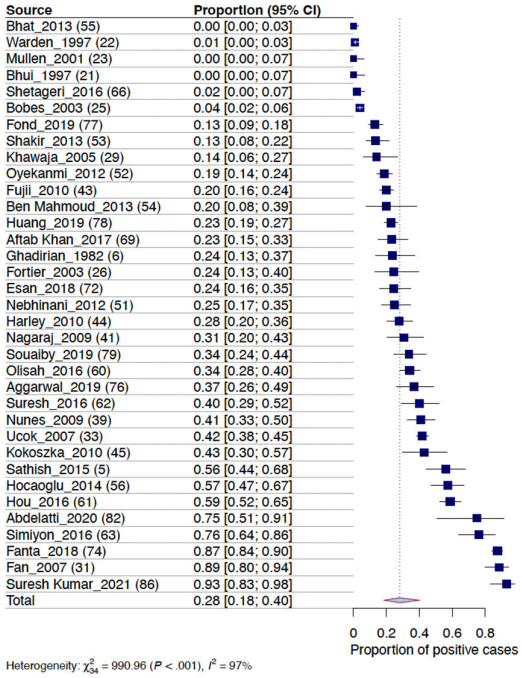
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Fan | 2007 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Howes | 2007 | * | * | * | ** | NA | ** | * | 8 | 1 |
| Ucok | 2007 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Yusufi | 2007 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Plevin | 2007 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Castano | 2008 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |
| Liu-Seifert | 2009 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Sibinovic | 2009 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |
| Nunes | 2009 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Hariri | 2009 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Nagaraj | 2009 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |
| Istikoglou | 2009 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |
| Fujii | 2010 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Harley | 2010 | * | * | * | ** | NA | ** | * | 8 | 1 |
| Kokoszka | 2010 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Montejo | 2010 | * | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Zhang | 2011 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Xiang | 2011 | * | Unjustified | * | ** | NA | Incomplete | * | 5 | 0 |
| Yasui-Furukori | 2012 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Hashimoto | 2012 | Selection / Undescribed | Unjustified | * | ** | NA | Incomplete | * | 4 | 0 |
| Nebhinani | 2012 | Selection / | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Oyekanmi | 2012 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Shakir | 2013 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Ben Mahmoud | 2013 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Bhat | 2013 | Selection / Undescribed | Unjustified | * | * | NA | ** | * | 5 | 0 |
| Hocaoglu | 2014 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Nakhli | 2014 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |
| Millier | 2014 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Pairin | 2015 | * | Unjustified | * | ** | NA | ** | Incomplete | 6 | 0 |
| Sathish | 2015 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Olisah | 2016 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Hou | 2016 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Suresh | 2016 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |
| Simiyon | 2016 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Wang | 2016 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Bellnier | 2016 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |
| Shetageri | 2016 | * | * | * | ** | NA | ** | * | 8 | 1 |
| Romero Guillena | 2016 | Selection / Undescribed | Unjustified | * | ** | NA | ** | Incomplete | 5 | 0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Halouani | 2017 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Aftab Khan | 2017 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Kirino | 2017 | * | Unjustified | * | ** | NA | ** | Incomplete | 6 | 0 |
| Abhilasha | 2018 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Esan | 2018 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Martin | 2018 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Fanta | 2018 | * | * | * | ** | NA | ** | * | 8 | 1 |
| Rowel | 2018 | * | Unjustified | * | ** | NA | ** | Incomplete | 6 | 0 |
| Aggarwal | 2019 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Fond | 2019 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Huang | 2019 | * | * | * | ** | NA | ** | * | 8 | 1 |
| Souaiby | 2019 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Kassew | 2019 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Doane | 2020 | Selection / Undescribed | Unjustified | * | No description | NA | ** | Incomplete | 3 | 0 |
| Abdelatti | 2020 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Gaber | 2020 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Kantipudi | 2020 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Redman | 2021 | * | Unjustified | * | ** | NA | ** | * | 7 | 1 |
| Suresh Kumar | 2021 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |
| Wu | 2021 | Selection / Undescribed | Unjustified | * | ** | NA | ** | * | 6 | 0 |

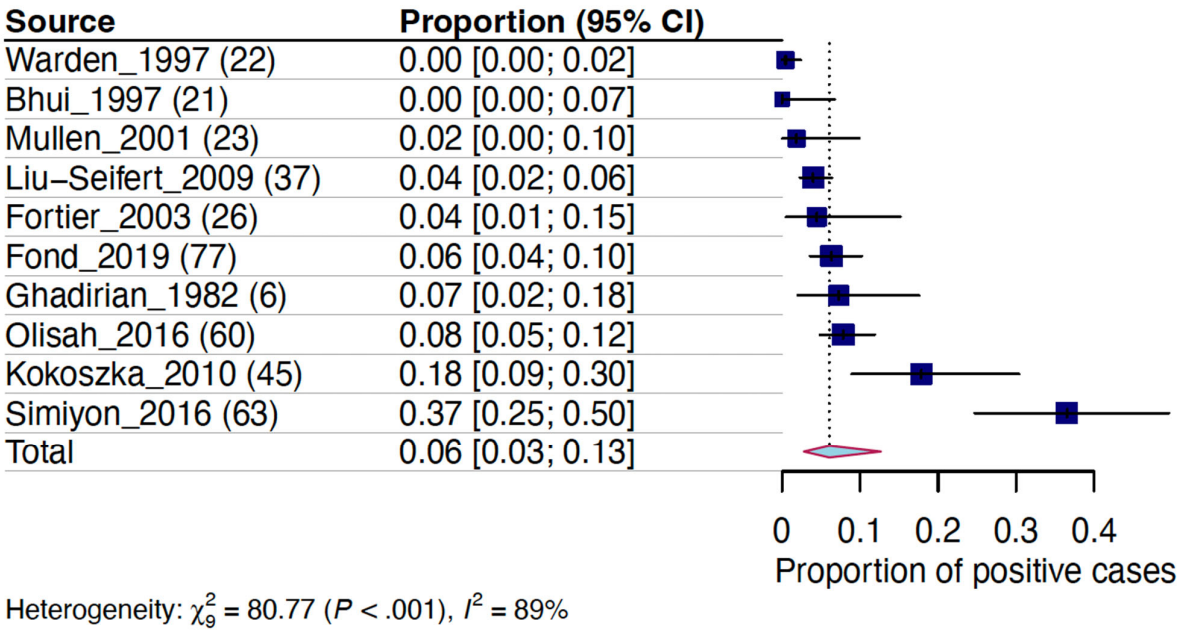
## Supplementary material 8. Forest plot of studies exploring the prevalence of loss of libido in schizophrenia



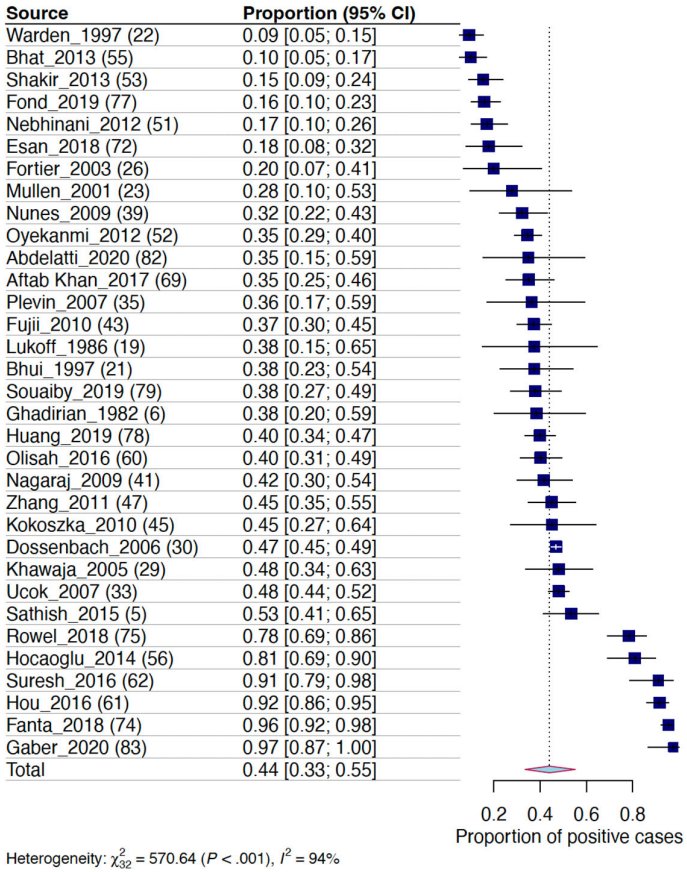
## Supplementary material 9. Forest plot of studies exploring the prevalence of orgasm dysfunction in schizophrenia



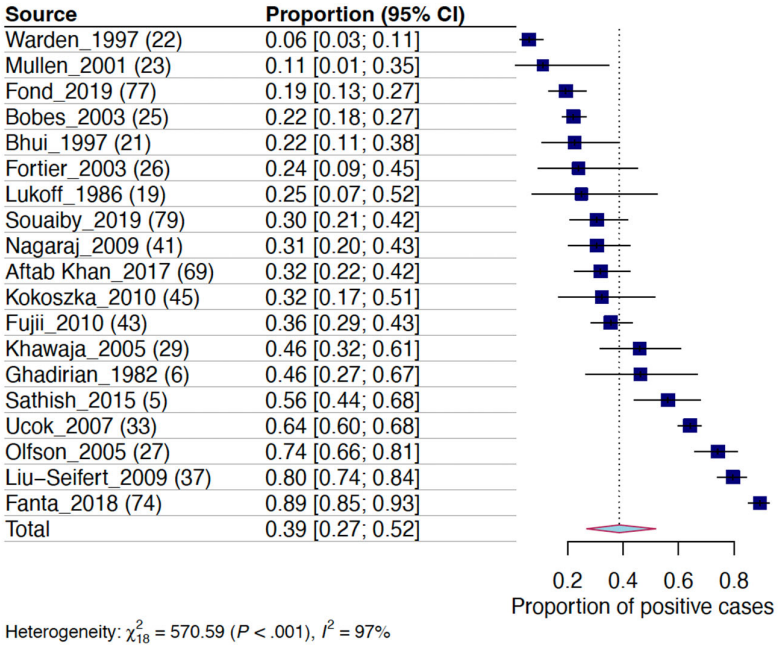
**Supplementary material 10. Forest plot of studies exploring the prevalence of genital pain in schizophrenia**



## Supplementary material 11. Forest plot of studies exploring the prevalence of erection disorder in schizophrenia

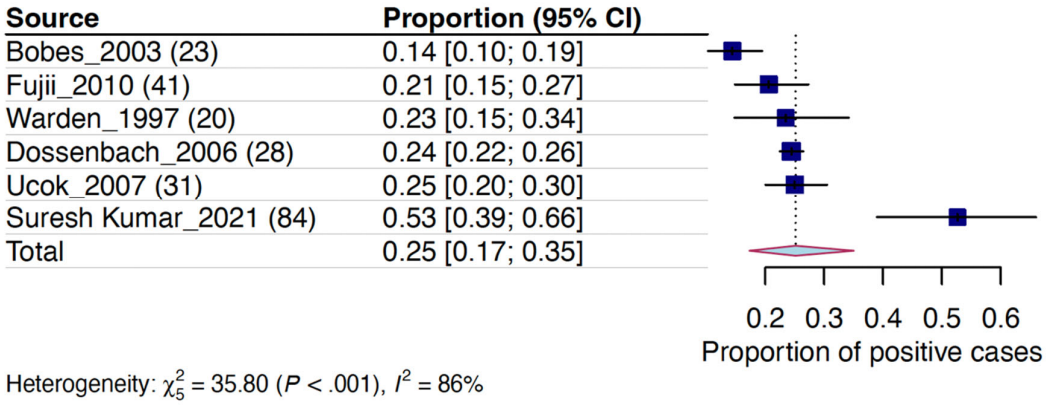


## Supplementary material 12. Forest plot of studies exploring the prevalence of ejaculation disorder in schizophrenia

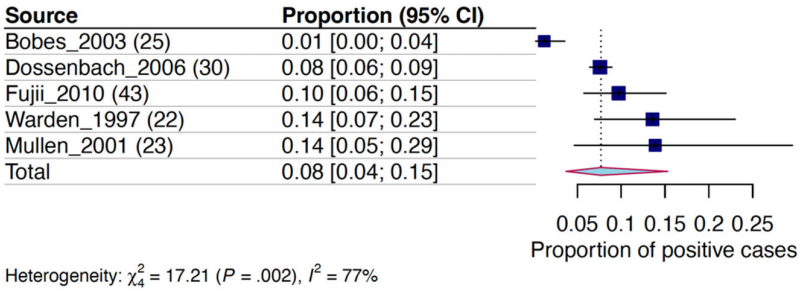



Heterogeneity: $\chi^2_{18} = 570.59$ ($P < .001$), $I^2 = 97\%$

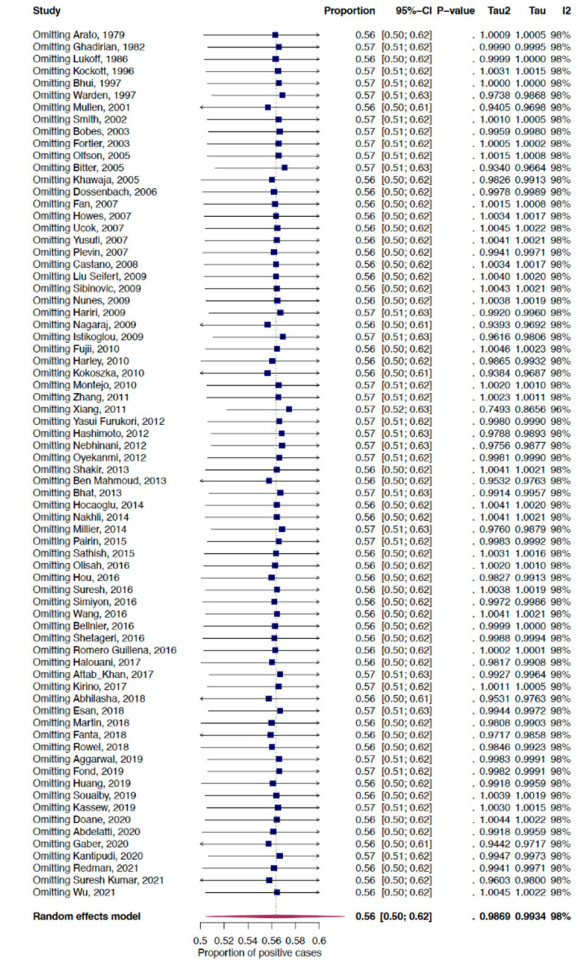
**Supplementary material 13. Forest plot of studies exploring the prevalence of amenorrhea in schizophrenia**



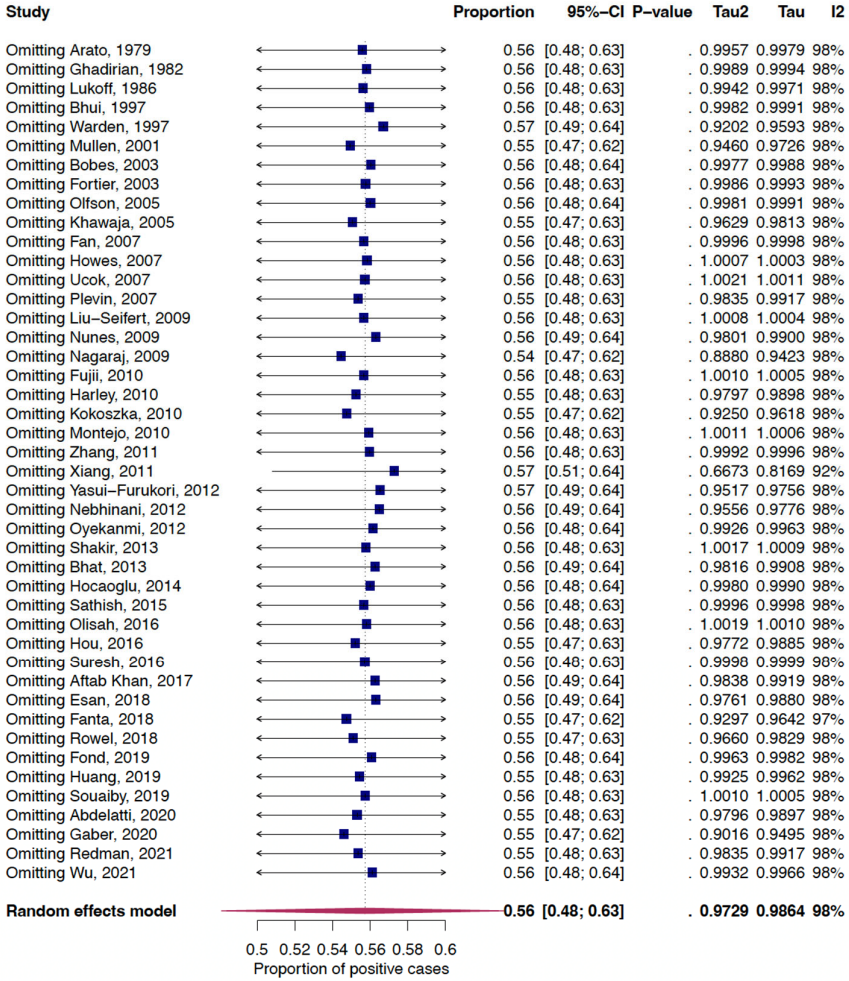

**Supplementary material 14. Forest plot of studies exploring the prevalence of galactorrhea in schizophrenia**



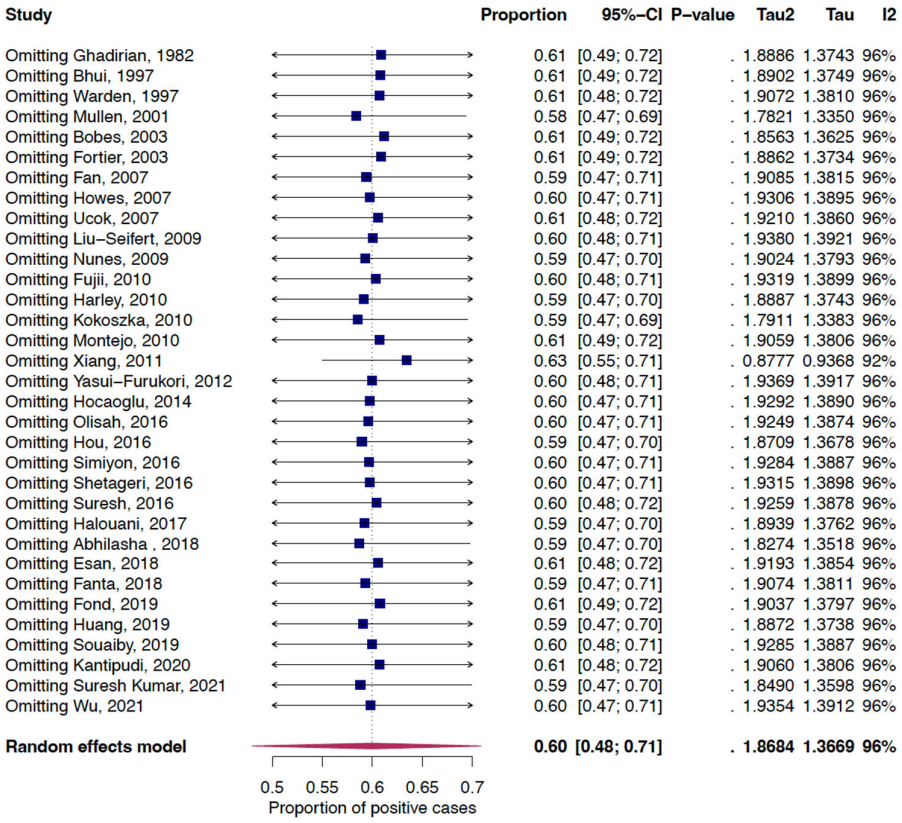
## Supplementary material 15. Leave-one-out analyses



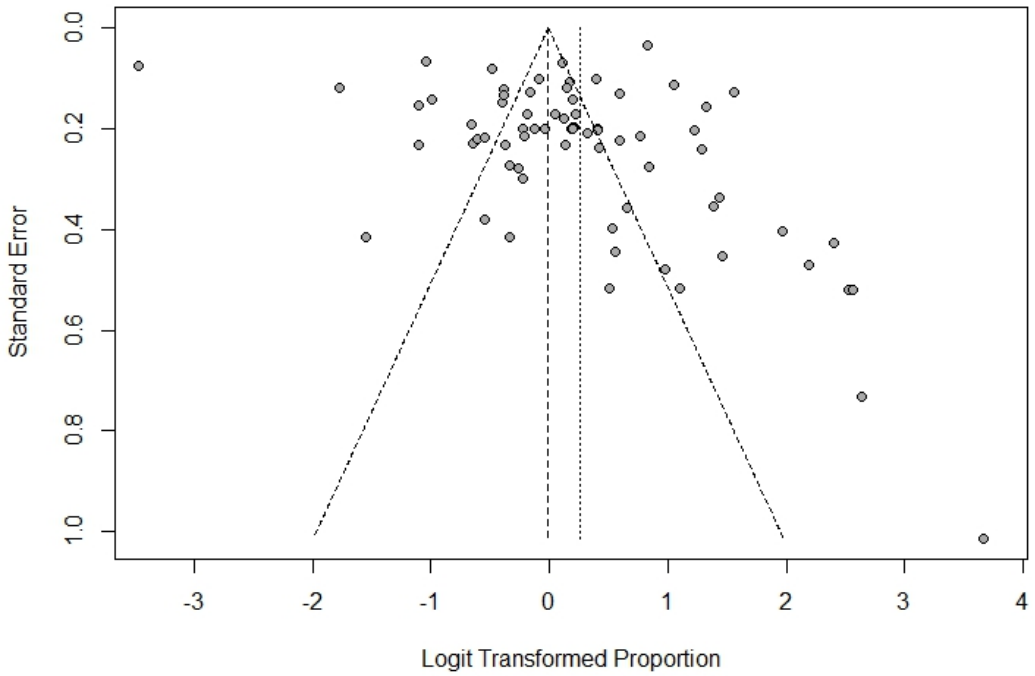
## Supplementary material 16. Leave-one-out analyses, men



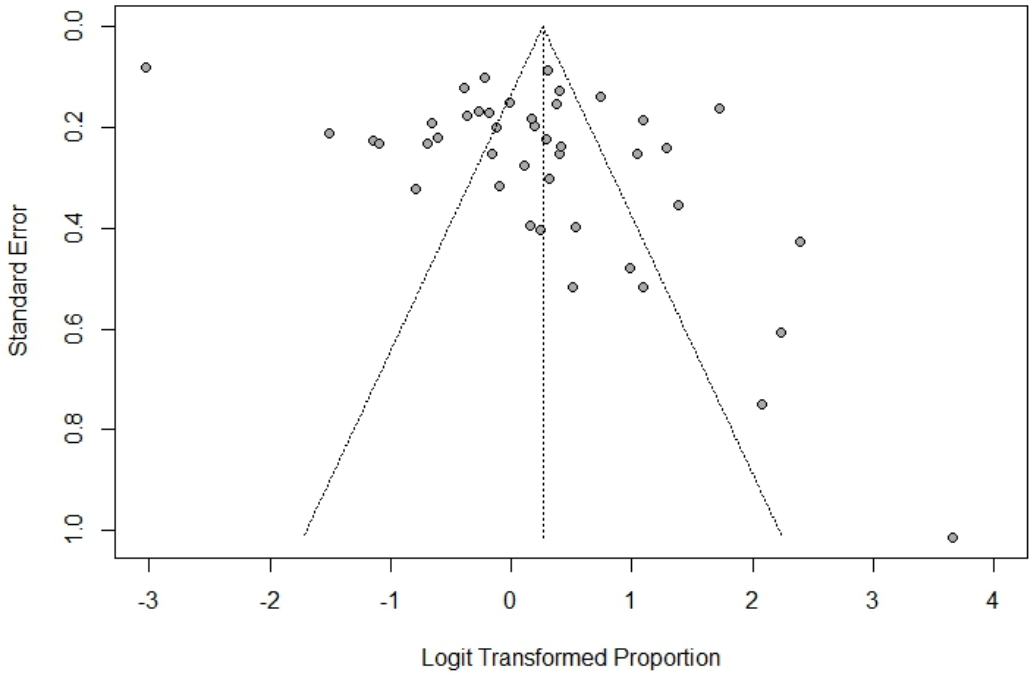
## Supplementary material 17. Leave-one-out analyses, women



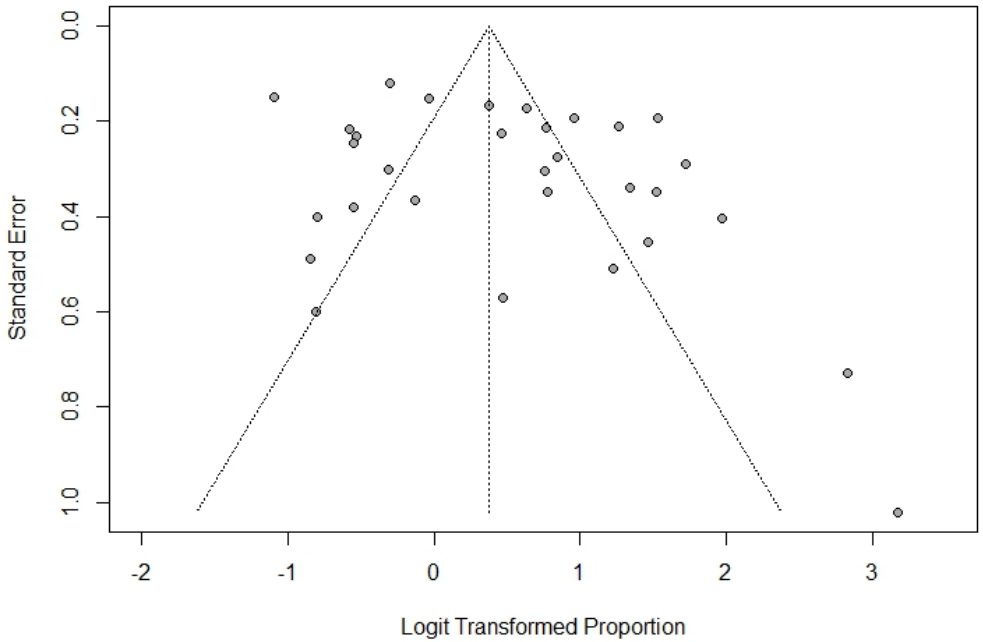
## Supplementary material 18. Funnel plot



**Supplementary material 19. Funnel plot, men**



**Supplementary material 20. Funnel plot, women**



## Supplementary material 21. Factors associated with the global prevalence of sexual dysfunctions in schizophrenia: subgroup analyses.

Subgroup analyses

| Variable | Yes, n | Pooled prevalence estimates | No, n | Pooled prevalence estimates | p value |
|---|---|---|---|---|---|
| Study design | | | | | |
| High quality study | 30 | 57.0% | 42 | 56.4% | 0.21 |
| **Cross-sectional design (vs. cohort)** | **65** | **58.2%** | **6** | **36.3%** | **0.03** |
| Consecutive Inclusions | 17 | 47.3% | 38 | 58.8% | 0.12 |
| **Sexual dysfunction as a primary objective** | **62** | **58.3%** | **8** | **41.7%** | **0.008** |
| Validated tool for diagnosis | 59 | 58.6% | 12 | 44.3% | 0.18 |
| Patient-reported diagnosis | 42 | 55.2% | 29 | 57.8% | 0.68 |
| Clinical interview diagnosis | 9 | 48.4% | 62 | 57.4% | 0.52 |
| Clinician-rated tool diagnosis | 20 | 61.7% | 51 | 54.1% | 0.20 |
| Time and location | | | | | |
| Year of publication 2010 or after | 46 | 58.1% | 26 | 53.5% | 0.45 |
| **Year of publication 2015 or after** | **30** | **63.7%** | **42** | **50.8%** | **0.02** |
| High income country | 35 | 52.4% | 34 | 62.1% | 0.07 |

| | | | | | |
|---|---|---|---|---|---|
| Western country | 32 | 53.4% | 37 | 60.7% | 0.18 |
| Asia | 20 | 57.4% | 49 | 57.4% | 0.99 |
| Western Europe | 15 | 49.5% | 53 | 59.6% | **0.05** |
| North America | 11 | 57.7% | 58 | 57.3% | 0.95 |
| Middle East | 9 | 62.5% | 60 | 56.6% | 0.50 |
| Africa | 8 | 64.6% | 61 | 56.3% | 0.34 |
| Eastern Europe | 3 | 74.3% | 65 | 57.2% | 0.20 |
| Sociodemographic variables | | | | | |
| ≥50% men | 55 | 54.5% | 13 | 64.4% | 0.20 |
| Mean age 35 years or more | 28 | 52.7% | 13 | 59.0% | 0.38 |
| Mean age 40 years or more | 14 | 50.7% | 27 | 56.7% | 0.53 |
| ≥60% white participants | 7 | 60.8% | 5 | 57.3% | 0.59 |
| ≥20% Black participants | 6 | 57.2% | 4 | 54.8% | 0.63 |
| ≥30% Black participants | 3 | 57.2% | 7 | 57.1% | 0.99 |
| ≥40% educated participants | 12 | 61.6% | 8 | 59.4% | 0.79 |
| ≥50% educated participants | 10 | 65.3% | 10 | 56.6% | 0.35 |
| Only partnered participants | 13 | 61.8% | 34 | 59.0% | 0.68 |
| ≥50% single participants | 25 | 58.5% | 22 | 61.2% | 0.67 |
| Physical health | | | | | |
| Somatic diseases excluded | 37 | 55.5% | 30 | 55.3% | 0.97 |
| Hypertension excluded | 31 | 54.9% | 3 | 57.8% | 0.86 |
| Diabetes excluded | 31 | 54.9% | 3 | 57.8% | 0.86 |
| Metabolic syndrome excluded | 24 | 55.2% | 3 | 58.9% | 0.80 |
| ≥40% hyperprolactinemia | 6 | 57.6% | 3 | 48.7% | 0.64 |

| | | | | | |
|---|---|---|---|---|---|
| Addictions | | | | | |
| Substance use excluded | 24 | 58.4% | 43 | 53.5% | 0.40 |
| Smokers included | 9 | 54.9% | 13 | 61.0% | 0.49 |
| ≥40% smokers | 7 | 54.5% | 15 | 58.7% | 0.52 |
| Alcohol use disorder included | 10 | 57.3% | 24 | 57.5% | 0.98 |
| Cannabis use disorder included | 3 | 54.1% | 23 | 59.3% | 0.60 |
| Psychiatric diagnosis and illness severity | | | | | |
| All included patients with schizophrenia diagnosis | 46 | 58.0% | 14 | 48.5% | 0.11 |
| Schizoaffective disorder included | 9 | 48.4% | 51 | 56.7% | 0.10 |
| Mean age of onset ≥27 years | 5 | 56.9% | 4 | 40.9% | 0.22 |
| Mean illness duration ≥10 years | 11 | 57.6% | 7 | 69.5% | 0.35 |
| Mean illness duration ≥15 years | 6 | 62.8% | 12 | 62.3% | 0.97 |
| Stabilization at inclusion | 38 | 57.1% | 7 | 50.0% | 0.34 |
| Mean PANSS total ≥60 | 4 | 60.4% | 8 | 51.3% | 0.37 |
| Mean PANSS positive ≥14 | 3 | 63.9% | 4 | 50.8% | 0.39 |
| Mean PANSS negative ≥14 | 5 | 64.1% | 4 | 51.9% | 0.29 |
| Antipsychotics | | | | | |
| ≥95% participants treated with antipsychotics included | 52 | 56.7% | 6 | 58.0% | 0.81 |
| ≥20% first-generation antipsychotics included | 25 | 58.1% | 20 | 54.8% | 0.64 |
| ≥40% first-generation antipsychotics included | 14 | 60.4% | 31 | 54.9% | 0.39 |
| ≥50% first-generation antipsychotics included | 13 | 61.7% | 32 | 54.5% | 0.28 |
| **≥60% first-generation antipsychotics** included | **9** | **69.0%** | **36** | **53.4%** | **0.02** |

| | | | | | |
|---|---|---|---|---|---|
| ≥**80% first-generation antipsychotics** included | **7** | **72.2%** | **38** | **53.7%** | **0.02** |
| ≥20% second-generation antipsychotics included | 25 | 45.2% | 4 | 69.9% | 0.09 |
| ≥**40% second-generation antipsychotics** included | **20** | **42.0%** | **9** | **58.9%** | **0.03** |
| ≥50% second-generation antipsychotics included | 33 | 51.5% | 14 | 63.8% | 0.09 |
| ≥60% second-generation antipsychotics included | 16 | 40.0% | 13 | 57.4% | 0.13 |
| ≥80% second-generation antipsychotics included | 10 | 37.9% | 19 | 54.3% | 0.26 |
| Antipsychotic polytherapy included | 19 | 46.1% | 26 | 58.3% | 0.10 |
| ≥20% antipsychotic polytherapy included | 13 | 42.9% | 32 | 57.2% | 0.10 |
| ≥40% antipsychotic polytherapy included | 8 | 39.4% | 37 | 56.0% | 0.17 |
| ≥60% antipsychotic polytherapy included | 3 | 53.1% | 42 | 53.2% | 0.99 |
| Amisulpride, risperidone, or haloperidol (high anti-D2 potency) included | 31 | 56.5% | 5 | 50.7% | 0.55 |
| ≥20% antipsychotics with high anti-D2 potency included | 24 | 48.1% | 12 | 56.9% | 0.95 |
| ≥40% antipsychotics with high anti-D2 potency included | 13 | 58.9% | 23 | 53.9% | 0.55 |
| ≥60% antipsychotics with high anti-D2 potency included | 4 | 62.1% | 32 | 55.1% | 0.72 |
| ≥80% antipsychotics with high anti-D2 potency included | 2 | 47.1% | 34 | 56.2% | 0.73 |
| Amisulpride included | 2 | 50.0% | 32 | 59.0% | 0.41 |
| Risperidone included | 31 | 56.5% | 6 | 58.3% | 0.89 |
| ≥20% risperidone included | 22 | 56.2% | 15 | 57.5% | 0.97 |
| ≥40% risperidone included | 6 | 57.4% | 31 | 56.6% | 0.94 |
| ≥60% risperidone included | 2 | 47.1% | 35 | 57.2% | 0.70 |
| Haloperidol included | 14 | 54.9% | 14 | 62.1% | 0.40 |
| ≥10% haloperidol included | 8 | 57.0% | 20 | 59.2% | 0.84 |
| ≥20% haloperidol included | 5 | 56.4% | 23 | 59.1% | 0.84 |
| ≥30% haloperidol included | 2 | 75.5% | 26 | 57.3% | 0.54 |
| Olanzapine, quetiapine, or clozapine (low anti-D2 potency) included | 33 | 57.5% | 8 | 56.1% | 0.90 |
| ≥20% antipsychotics with low anti-D2 potency included | 27 | 56.8% | 14 | 57.8% | 0.90 |
| ≥40% antipsychotics with low anti-D2 potency included | 16 | 57.8% | 25 | 56.6% | 0.74 |
| ≥60% antipsychotics with low anti-D2 potency included | 6 | 55.5% | 35 | 57.4% | 0.96 |

| | | | | | |
|---|---|---|---|---|---|
| ≥80% antipsychotics with low anti-D2 potency included | 2 | 54.2% | 39 | 57.3% | 0.50 |
| Olanzapine included | 28 | 55.8% | 8 | 67.1% | 0.33 |
| ≥20% olanzapine included | 18 | 56.5% | 18 | 59.6% | 0.70 |
| ≥40% olanzapine included | 5 | 47.6% | 31 | 59.6% | 0.58 |
| ≥60% olanzapine included | 2 | 30.8% | 34 | 59.6% | 0.42 |
| Quetiapine included | 14 | 56.1% | 18 | 59.0% | 0.74 |
| ≥10% quetiapine included | 7 | 51.6% | 25 | 59.3% | 0.45 |
| ≥30% quetiapine included | 3 | 67.7% | 29 | 56.5% | 0.56 |
| Clozapine included | 15 | 62.1% | 22 | 54.6% | 0.29 |
| ≥20% clozapine included | 7 | 68.7% | 30 | 54.9% | 0.09 |
| Chlorpromazine included | 6 | 64.9% | 23 | 59.3% | 0.49 |
| ≥10% chlorpromazine included | 3 | 71.7% | 25 | 58.8% | 0.30 |
| ≥40% chlorpromazine included | 6 | 57.6% | 3 | 48.7% | 0.64 |
| Aripiprazole included | 11 | 59.0% | 23 | 55.9% | 0.70 |
| Mean chlorpromazine equivalent ≥400 mg/d | 6 | 59.3% | 3 | 45.5% | 0.29 |
| Mean chlorpromazine equivalent ≥500 mg/d | 2 | 56.6% | 7 | 54.3% | 0.78 |
| Other psychotropic drugs | | | | | |
| Antidepressants included | 18 | 54.7% | 18 | 60.5% | 0.51 |
| ≥10% antidepressants included | 13 | 57.6% | 23 | 57.7% | 0.99 |
| ≥20% antidepressants included | 5 | 56.4% | 31 | 58.0% | 0.92 |
| ≥30% antidepressants included | 3 | 63.6% | 33 | 57.3% | 0.78 |
| Mood stabilizers included | 7 | 62.2% | 9 | 61.5% | 0.93 |
| ≥10% mood stabilizers included | 5 | 55.5% | 11 | 64.6% | 0.23 |
| ≥30% mood stabilizers included | 2 | 56.6% | 14 | 62.4% | 0.35 |
| Anxiolytics included | 9 | 46.2% | 6 | 67.2% | 0.17 |
| ≥10% anxiolytics included | 7 | 45.3% | 8 | 62.8% | 0.33 |

| | | | | | |
|---|---|---|---|---|---|
| ≥40% anxiolytics included | 4 | 44.7% | 11 | 52.4% | 0.47 |
| Anticholinergic agents included | 10 | 53.8% | 5 | 55.0% | 0.91 |
| ≥10% anticholinergic agents included | 9 | 57.3% | 6 | 49.5% | 0.48 |
| ≥20% anticholinergic agents included | 5 | 59.4% | 10 | 51.1% | 0.48 |
| Hypnotics included | 4 | 48.7% | 3 | 52.2% | 0.78 |
| ≥20% hypnotics included | 2 | 40.1% | 5 | 54.0% | 0.45 |

**Supplementary material 22. Factors associated with the prevalence of sexual dysfunctions in men with schizophrenia: subgroup analyses.**

| Variable | Yes, n | Pooled prevalence estimates | No, n | Pooled prevalence estimates | p value |
|---|---|---|---|---|---|
| Study design | | | | | |
| High quality study | 20 | 55.8% | 24 | 56.3% | 0.40 |
| **Cross-sectional design (vs. cohort)** | **42** | **57.3%** | **2** | **25.4%** | **0.002** |
| **Consecutive Inclusions** | **15** | **44.5%** | **22** | **62.7%** | **0.02** |
| Sexual dysfunction as a primary objective | 42 | 56.6% | 2 | 36.7% | 0.23 |
| Validated tool for diagnosis | 37 | 56.4% | 7 | 52.2% | 0.77 |
| Patient-reported diagnosis | 22 | 53.5% | 22 | 57.5% | 0.66 |
| Clinical interview diagnosis | 6 | 54.2% | 38 | 55.9% | 0.92 |
| Clinician-rated tool diagnosis | 14 | 58.0% | 30 | 54.7% | 0.76 |
| Time and location | | | | | |
| Year of publication 2010 or after | 27 | 54.3% | 17 | 58.0% | 0.63 |
| Year of publication 2015 or after | 15 | 62.7% | 29 | 51.9% | 0.14 |
| High income country | 21 | 54.7% | 22 | 59.5% | 0.46 |
| Western country | 19 | 55.1% | 25 | 55.8% | 0.92 |
| Asia | 13 | 50.0% | 31 | 57.5% | 0.37 |
| Western Europe | 6 | 51.8% | 38 | 56.5% | 0.38 |
| North America | 9 | 55.7% | 35 | 55.7% | 0.99 |
| Middle East | 8 | 62.7% | 36 | 54.0% | 0.26 |

| | | | | | |
|---|---|---|---|---|---|
| Africa | 4 | 54.7% | 40 | 55.8% | 0.88 |
| Eastern Europe | 2 | 78.9% | 42 | 54.6% | 0.08 |
| Sociodemographic variables | | | | | |
| ≥50% men | | | | | |
| Mean age 35 years or more | 13 | 52.1% | 4 | 66.3% | 0.49 |
| Mean age 40 years or more | 10 | 53.0% | 7 | 57.1% | 0.76 |
| ≥50% single participants | | | | | |
| Physical health | | | | | |
| Somatic diseases excluded | 25 | 52.5% | 17 | 58.3% | 0.52 |
| Hypertension excluded | | | | | |
| Diabetes excluded | | | | | |
| Metabolic syndrome excluded | | | | | |
| ≥40% hyperprolactinemia | 4 | 60.2% | 2 | 61.3% | 0.94 |
| Addictions | | | | | |
| Substance use excluded | 19 | 56.7% | 23 | 52.5% | 0.47 |
| ≥40% smokers | 2 | 82.8% | 2 | 40.4% | 0.32 |
| **Alcohol use disorder included** | **2** | **44.4%** | **19** | **55.6%** | **0.03** |
| Psychiatric diagnosis and illness severity | | | | | |
| All included patients with schizophrenia diagnosis | 18 | 60.6% | 9 | 49.4% | 0.26 |
| Schizoaffective disorder included | 4 | 50.5% | 22 | 63.4% | 0.14 |
| Mean illness duration ≥10 years | 6 | 47.5% | 4 | 67.0% | 0.43 |
| Mean illness duration ≥15 years | 3 | 60.3% | 7 | 50.0% | 0.44 |

| | | | | | |
|---|---|---|---|---|---|
| Only remitted subjects included | | | | | |
| Stabilization at inclusion | 23 | 52.4% | 3 | 50.3% | 0.25 |
| Mean PANSS total ≥60 | | | | | |
| Mean PANSS positive ≥14 | | | | | |
| Mean PANSS negative ≥14 | | | | | |
| Antipsychotics | | | | | |
| ≥95% treated with antipsychotics included | 34 | 56.1% | 2 | 52.8% | 0.06 |
| ≥20% first-generation antipsychotics included | 13 | 47.5% | 10 | 57.2% | 0.27 |
| ≥40% first-generation antipsychotics included | 5 | 48.8% | 18 | 53.1% | 0.60 |
| ≥50% first-generation antipsychotics included | 4 | 50.3% | 19 | 52.6% | 0.81 |
| ≥60% first-generation antipsychotics included | 3 | 56.0% | 20 | 51.5% | 0.67 |
| ≥80% first-generation antipsychotics included | 2 | 55.4% | 21 | 51.9% | 0.84 |
| ≥20% second-generation antipsychotics included | 20 | 51.6% | 3 | 51.4% | 0.98 |
| ≥40% second-generation antipsychotics included | 17 | 51.5% | 6 | 52.0% | 0.94 |
| ≥50% second-generation antipsychotics included | 17 | 51.5% | 6 | 52.0% | 0.94 |
| ≥60% second-generation antipsychotics included | 14 | 55.0% | 9 | 47.0% | 0.30 |
| ≥80% second-generation antipsychotics included | 11 | 54.8% | 12 | 47.4% | 0.38 |
| Antipsychotic polytherapy included | 6 | 46.0% | 12 | 51.5% | 0.57 |
| ≥20% antipsychotic polytherapy included | 4 | 44.2% | 14 | 51.5% | 0.48 |
| ≥40% antipsychotic polytherapy included | 4 | 44.2% | 14 | 51.5% | 0.48 |
| Amisulpride, risperidone, or haloperidol (high anti-D2 potency) included | 19 | 53.9% | 2 | 42.5% | 0.07 |
| ≥20% antipsychotics with high anti-D2 potency included | 16 | 54.8% | 5 | 45.6% | 0.23 |
| ≥40% antipsychotics with high anti-D2 potency included | 8 | 51.1% | 13 | 53.8% | 0.78 |
| ≥60% antipsychotics with high anti-D2 potency included | 5 | 61.7% | 16 | 49.8% | 0.18 |
| ≥20% risperidone included | 14 | 56.5% | 5 | 42.4% | 0.86 |
| ≥40% risperidone included | 3 | 49.2% | 16 | 52.9% | 0.83 |
| ≥60% risperidone included | 2 | 63.8% | 17 | 51.0% | 0.22 |
| Haloperidol included | 10 | 48.8% | 8 | 62.0% | 0.22 |

| | | | | | |
|---|---|---|---|---|---|
| ≥10% haloperidol included | 8 | 48.3% | 10 | 60.0% | 0.26 |
| ≥20% haloperidol included | 5 | 51.9% | 13 | 55.8% | 0.70 |
| ≥30% haloperidol included | 2 | 69.6% | 16 | 53.9% | 0.56 |
| Olanzapine, quetiapine, or clozapine (low anti-D2 potency) included | 19 | 53.0% | 2 | 62.4% | 0.19 |
| ≥20% antipsychotics with low anti-D2 potency included | 15 | 54.0% | 6 | 54.9% | 0.93 |
| ≥40% antipsychotics with low anti-D2 potency included | 9 | 57.0% | 12 | 51.5% | 0.56 |
| ≥60% antipsychotics with low anti-D2 potency included | 4 | 65.7% | 17 | 51.2% | 0.32 |
| Olanzapine included | 16 | 50.4% | 3 | 71.6% | 0.06 |
| ≥20% olanzapine included | 9 | 56.8% | 10 | 50.4% | 0.52 |
| ≥40% olanzapine included | 3 | 41.3% | 16 | 56.2% | 0.21 |
| Quetiapine included | 7 | 51.5% | 11 | 54.8% | 0.77 |
| ≥10% quetiapine included | 5 | 54.9% | 13 | 52.8% | 0.89 |
| ≥30% quetiapine included | 2 | 79.1% | 16 | 49.6% | 0.20 |
| Clozapine included | 9 | 60.4% | 11 | 47.4% | 0.13 |
| ≥20% clozapine included | 4 | 68.4% | 16 | 49.6% | 0.10 |
| Chlorpromazine included | 2 | 54.1% | 16 | 53.6% | 0.95 |
| Aripiprazole included | 5 | 48.2% | 12 | 55.3% | 0.57 |
| Mean chlorpromazine equivalent ≥500 mg/d | 3 | 42.9% | 2 | 32.8% | 0.46 |
| Other psychotropic drugs | | | | | |
| Antidepressants included | 6 | 42.8% | 16 | 56.5% | 0.16 |
| ≥10% antidepressants included | 5 | 40.7% | 17 | 56.4% | 0.14 |
| ≥20% antidepressants included | 2 | 29.3% | 20 | 55.5% | 0.09 |
| **Anxiolytics included** | **3** | **34.6%** | **3** | **79.0%** | **0.006** |
| Anticholinergic agents included | | | | | |
| ≥10% anticholinergic agent included | | | | | |

**Supplementary material 23. Factors associated with the prevalence of sexual dysfunctions in women with schizophrenia: subgroup analyses.**

| Variable | Yes, n | Pooled prevalence estimates | No, n | Pooled prevalence estimates | p value |
|---|---|---|---|---|---|
| Study design | | | | | |
| High quality study | 16 | 62.2% | 17 | 58.8% | 0.74 |
| Consecutive Inclusions | 8 | 42.9% | 20 | 58.7% | 0.35 |
| Sexual dysfunction as a primary objective | 30 | 59.4% | 2 | 48.4% | 0.27 |
| Validated tool for diagnosis | 28 | 62.7% | 4 | 27.8% | 0.29 |
| Patient-reported diagnosis | 17 | 64.7% | 15 | 51.5% | 0.26 |
| Clinical interview diagnosis | 3 | 27.2% | 29 | 61.7% | 0.44 |
| Clinician-rated tool diagnosis | 12 | 57.6% | 20 | 59.3% | 0.84 |
| Time and location | | | | | |
| Year of publication 2010 or after | 22 | 53.3% | 11 | 63,0% | 0.39 |
| Year of publication 2015 or after | 15 | 69.1% | 18 | 52,0% | 0.12 |
| High income country | 16 | 55.8% | 15 | 68.7% | 0.14 |
| Western | 15 | 56.4% | 17 | 60.0% | 0.83 |
| Asia | 11 | 55.3% | 21 | 59.7% | 0.71 |
| Western Europe | 6 | 46.8% | 26 | 61.4% | 0.20 |
| North America | 6 | 57.2% | 26 | 59.0% | 0.92 |
| Middle East | 3 | 55.7% | 29 | 58.9% | 0.66 |
| Africa | 4 | 69.6% | 28 | 57.0% | 0.22 |

| | | | | | |
|---|---|---|---|---|---|
| Sociodemographic variables | | | | | |
| ≥50% men | | | | | |
| Mean age 35 years or more | 8 | 64.0% | 4 | 53.7% | 0.34 |
| Mean age 40 years or more | 5 | 57.9% | 7 | 62.8% | 0.58 |
| ≥50% single | | | | | |
| Physical health | | | | | |
| Somatic diseases excluded | 15 | 47.8% | 16 | 65.2% | 0.11 |
| Hypertension excluded | | | | | |
| Diabetes excluded | | | | | |
| Metabolic syndrome excluded | | | | | |
| Addictions | | | | | |
| Substance use excluded | 9 | 56.6% | 22 | 57.3% | 0.92 |
| Smokers included | | | | | |
| ≥40% smokers | | | | | |
| Psychiatric diagnosis and illness severity | | | | | |
| All included patients with schizophrenia diagnosis | 16 | 60.0% | 5 | 47.0% | 0.37 |
| Schizoaffective disorder included | 4 | 41.2% | 16 | 60.0% | 0.19 |
| Mean illness duration ≥10 years | 5 | 62.2% | 3 | 70.6% | 0.14 |
| Mean illness duration ≥15 years | 2 | 62.2% | 6 | 67.5% | 0.38 |
| Only remitted subjects included | | | | | |
| Stabilization at inclusion | | | | | |
| Mean PANSS total ≥60 | | | | | |

Mean PANSS positive ≥14
Mean PANSS negative ≥14

| Antipsychotics | | | | | |
|---|---|---|---|---|---|
| ≥95% treated with antipsychotics included | 24 | 62.0% | 3 | 63.2% | 0.90 |
| ≥20% first-generation antipsychotics included | 6 | 64.1% | 6 | 63.0% | 0.94 |
| ≥40% second-generation antipsychotics included | 9 | 61.7% | 3 | 68.4% | 0.57 |
| ≥50% second-generation antipsychotics included | 9 | 61.7% | 3 | 68.4% | 0.57 |
| ≥60% second-generation antipsychotics included | 7 | 57.4% | 5 | 70.4% | 0.32 |
| ≥80% second-generation antipsychotics included | 3 | 58.4% | 9 | 64.8% | 0.77 |
| Antipsychotic polytherapy included | 4 | 64.6% | 5 | 53.4% | 0.43 |
| ≥20% antipsychotic polytherapy included | 2 | 59.2% | 7 | 58.6% | 0.97 |
| ≥40% antipsychotic polytherapy included | | | | | |
| ≥20% antipsychotics with high anti-D2 potency included | 8 | 59.0% | 3 | 60.9% | 0.91 |
| ≥40% antipsychotics with high anti-D2 potency included | 6 | 63.3% | 5 | 55.7% | 0.64 |
| ≥80% antipsychotics with high anti-D2 potency included | | | | | |
| ≥20% risperidone included | 8 | 59.0% | 3 | 60.9% | 0.91 |
| ≥40% risperidone included | 3 | 63.3% | 8 | 57.8% | 0.79 |
| ≥60% risperidone included | | | | | |
| Haloperidol included | 5 | 59.5% | 4 | 60.4% | 0.96 |
| ≥10% haloperidol included | 3 | 64.8% | 6 | 58.8% | 0.83 |
| ≥20% haloperidol included | 3 | 64.8% | 6 | 58.8% | 0.83 |
| ≥30% haloperidol included | | | | | |
| Olanzapine, quetiapine, or clozapine included | | | | | |
| ≥20% antipsychotics with low anti-D2 potency included | 8 | 60.5% | 2 | 54.7% | 0.66 |
| ≥40% antipsychotics with low anti-D2 potency included | 5 | 52.5% | 5 | 65.6% | 0.48 |
| ≥60% antipsychotics with low anti-D2 potency included | 2 | 57.9% | 8 | 60.2% | 0.88 |
| ≥20% olanzapine included | 5 | 52.5% | 5 | 65.6% | 0.48 |
| ≥40% olanzapine included | 3 | 64.6% | 7 | 56.5% | 0.70 |

| | | | | | |
|---|---|---|---|---|---|
| **Quetiapine included** | **3** | **33.7%** | **5** | **72.1%** | **0.01** |
| ≥10% quetiapine included | 2 | 38.8% | 6 | 64.4% | 0.10 |
| Clozapine included | 4 | 64.1% | 5 | 58.4% | 0.80 |
| ≥10% chlorpromazine included | | | | | |
| Aripiprazole included | 3 | 48.7% | 6 | 62.1% | 0.42 |
| Mean chlorpromazine equivalent ≥400 mg/d | | | | | |
| Mean chlorpromazine equivalent ≥600 mg/d | | | | | |
| Other psychotropic drugs | | | | | |
| Antidepressants included | 6 | 54.5% | 7 | 59.5% | 0.68 |
| ≥10% antidepressants included | 6 | 54.5% | 7 | 59.5% | 0.68 |
| ≥20% antidepressants included | 4 | 55.2% | 9 | 57.9% | 0.85 |
| Mood stabilizers included | | | | | |
| Anxiolytics included | | | | | |
| Anticholinergic agents included | | | | | |
| ≥10% anticholinergic agent included | | | | | |

## Supplementary material 24. Factors associated with the global prevalence of sexual dysfunctions in schizophrenia: metaregression analyses.

| Variables | N | Estimate | Lower limit | Upper limit | p value |
|---|---|---|---|---|---|
| **Loss of libido** | **35** | **2.168** | **1.110** | **3.227** | **< .001** |
| **Orgasmic dysfunction** | **35** | **1.312** | **0.077** | **2.547** | **0.04** |
| Genital pain | 10 | 0.061 | 0.028 | 0.127 | 0.22 |
| Year of publication | 71 | 0.018 | -0.011 | 0.047 | 0.22 |
| Sociodemographic variables | | | | | |
| Men | 67 | -0.037 | -1.031 | 0.958 | 0.94 |
| Mean age | 41 | -0.016 | -0.084 | 0.051 | 0.63 |
| White | 12 | 0.889 | -0.444 | 2.223 | 0.17 |
| Asian | 8 | -2.462 | -5.987 | 1.063 | 0.14 |
| Black | 10 | 0.228 | -1.255 | 1.712 | 0.73 |
| High education | 20 | 0.013 | -2.161 | 2.187 | 0.99 |
| Single | 46 | -0.152 | -0.987 | 0.683 | 0.72 |
| Unemployment | 32 | 0.713 | -0.635 | 2.061 | 0.23 |
| Physical health | | | | | |
| Hypertension | 33 | -4.413 | -19.562 | 10.735 | 0.56 |
| Diabetes | 36 | -4.207 | -17.923 | 9.509 | 0.54 |
| Metabolic syndrome | 27 | 0.531 | -3.954 | 5.017 | 0.81 |
| Hyperprolactinemia | 9 | 2.391 | -0.462 | 5.243 | 0.09 |
| Addictions | | | | | |
| Smokers | 23 | 0.257 | -1.154 | 1.667 | 0.71 |
| Alcohol use disorder | 33 | 0.960 | -1.413 | 3.334 | 0.42 |
| Cannabis use disorder | 25 | 0.947 | -2.210 | 4.104 | 0.54 |
| Psychiatric diagnosis and illness severity | | | | | |
| Schizophrenia | 59 | 0.354 | -1.367 | 2.075 | 0.68 |
| Schizoaffective disorders | 59 | 3.070 | -0.637 | 6.777 | 0.10 |
| Age at illness onset | 9 | 0.056 | -0.400 | 0.513 | 0.78 |
| Illness duration | 18 | -0.079 | -0.191 | 0.032 | 0.15 |

| Variables | N | Estimate | Lower limit | Upper limit | p value |
|---|---|---|---|---|---|
| Proportion of remitted subjects | 10 | 2.470 | -1.783 | 6.723 | 0.22 |
| PANSS Total Score | 12 | 0.010 | -0.021 | 0.041 | 0.49 |
| PANSS Positive Score | 7 | 0.072 | -0.152 | 0.295 | 0.44 |
| PANSS Negative Score | 9 | 0.043 | -0.131 | 0.217 | 0.58 |
| Antipsychotics | | | | | |
| Percentage of first-generation antipsychotics | 45 | 0.628 | -0.200 | 1.456 | 0.13 |
| Percentage of second-generation antipsychotics | 47 | -0.730 | -1.678 | 0.217 | 0.16 |
| Percentage of antipsychotic polytherapy | 45 | -1.150 | -2.526 | 0.227 | 0.10 |
| Percentage of amisulpride, risperidone, or haloperidol (high anti-D2 potency) | 36 | 0.018 | -1.301 | 1.338 | 0.98 |
| Percentage of amisulpride | 34 | -2.268 | -19.723 | 15.187 | 0.79 |
| Percentage of risperidone | 37 | -0.210 | -1.725 | 1.305 | 0.82 |
| Percentage of haloperidol | 28 | -0.700 | -3.755 | 2.354 | 0.69 |
| Percentage of olanzapine, quetiapine, or clozapine (low anti-D2 potency) | 41 | -0.044 | -1.164 | 1.077 | 0.94 |
| Percentage of olanzapine | 36 | -0.985 | -2.460 | 0.489 | 0.27 |
| Percentage of quetiapine | 32 | 0.016 | -3.383 | 3.416 | 0.99 |
| Percentage of clozapine | 37 | 0.768 | -0.850 | 2.387 | 0.34 |
| Percentage of chlorpromazine | 29 | 1.992 | -1.782 | 5.766 | 0.29 |
| Percentage of aripiprazole | 34 | -0.178 | -1.784 | 1.428 | 0.87 |
| **Mean chlorpromazine equivalent** | **10** | **0.002** | **< 0.001** | **0.003** | **0.03** |
| Other psychotropic drugs | | | | | |
| Percentage of antidepressants | 36 | -0.259 | -3.523 | 3.005 | 0.87 |
| Percentage of mood stabilizers | 16 | -0.823 | -4.371 | 2.725 | 0.63 |
| Percentage of anxiolytics | 15 | -1.122 | -4.900 | 2.655 | 0.53 |
| Percentage of anticholinergics | 15 | 0.706 | -2.448 | 3.860 | 0.64 |
| Percentage of hypnotics | 7 | 0.155 | -1.532 | 1.842 | 0.82 |

## Supplementary material 25. Factors associated with the prevalence of sexual dysfunctions in men with schizophrenia: metaregression analyses.

| Variables | N | Estimate | Lower limit | Upper limit | p value |
|---|---|---|---|---|---|
| **Erectile dysfunction** | **33** | **3.166** | **1.964** | **4.368** | **< .001** |
| Ejaculation dysfunction | 19 | 1.083 | -0.651 | 2.816 | 0.22 |
| Year of publication | 44 | 0.007 | -0.026 | 0.040 | 0.69 |
| Sociodemographic variables | | | | | |
| Mean age | 17 | < 0.001 | -0.087 | 0.086 | 0.99 |
| Physical health | | | | | |
| Hyperprolactinemia | 7 | 0.277 | -2.477 | 3.032 | 0.84 |
| Addictions | | | | | |
| Smokers | 4 | 3.996 | -2.867 | 10.859 | 0.25 |
| Alcohol use disorder | 21 | -6.067 | -19.800 | 7.665 | 0.39 |
| Cannabis use disorder | 17 | -6.032 | -20.483 | 8.419 | 0.41 |
| Psychiatric diagnosis and illness severity | | | | | |
| Schizophrenia | 27 | 0.480 | -2.208 | 3.197 | 0.73 |
| Schizoaffective disorders | 26 | -1.733 | -16.356 | 12.890 | 0.82 |
| Age at illness onset | 4 | -0.146 | -0.373 | 0.081 | 0.23 |
| Illness duration | 9 | -0.160 | -0.329 | 0.009 | 0.06 |
| Antipsychotics | | | | | |
| Percentage of first-generation antipsychotics | 23 | -0.090 | -1.285 | 1.105 | 0.88 |
| Percentage of second-generation antipsychotics | 23 | 0.220 | -0.792 | 1.232 | 0.67 |
| Percentage of antipsychotic polytherapy | 18 | -0.501 | -2.165 | 1.163 | 0.56 |
| Percentage of amisulpride, risperidone, or haloperidol (high anti-D2 potency) | 21 | 0.515 | -1.137 | 2.167 | 0.54 |
| Percentage of amisulpride | 17 | -6.945 | -37.778 | 23.889 | 0.66 |
| Percentage of risperidone | 19 | 1.283 | -0.927 | 3.492 | 0.26 |
| Percentage of haloperidol | 18 | -0.599 | -3.827 | 2.629 | 0.72 |
| Percentage of olanzapine, quetiapine, or clozapine (low anti-D2 potency) | 21 | 0.067 | -1.411 | 1.544 | 0.93 |
| Percentage of olanzapine | 19 | -0.878 | -2.544 | 0.788 | 0.30 |

| Variables | N | Estimate | Lower limit | Upper limit | p value |
|---|---|---|---|---|---|
| Percentage of quetiapine | 18 | 1.958 | -1.717 | 5.632 | 0.30 |
| Percentage of clozapine | 20 | 2.547 | -0.302 | 5.395 | 0.08 |
| Percentage of chlorpromazine | 18 | -1.116 | -9.673 | 7.441 | 0.80 |
| Percentage of aripiprazole | 17 | -3.508 | -8.225 | 1.208 | 0.14 |
| Mean chlorpromazine equivalent | 5 | 0.003 | -0.002 | 0.007 | 0.24 |
| Other psychotropic drugs | | | | | |
| Percentage of antidepressants | 22 | -2.671 | -6.378 | 1.037 | 0.16 |
| Percentage of mood stabilizers | 4 | -6.237 | -17.887 | 5.414 | 0.29 |
| Percentage of **anxiolytics** | **6** | **-9.388** | **-17.519** | **-1.256** | **0.02** |
| Percentage of **anticholinergics** | **3** | **-4.019** | **-5.747** | **-2.291** | **< .001** |

## Supplementary material 26. Factors associated with the prevalence of sexual dysfunctions in women with schizophrenia: metaregression analyses.

| Variables | N | Estimate | Lower limit | Upper limit | p value |
|---|---|---|---|---|---|
| **Amenorrhea** | **5** | **2.825** | **1.693** | **3.956** | **<.001** |
| Galactorrhea | 4 | 2.343 | -1.970 | 6.655 | 0.72 |
| Year | 32 | 0.041 | -0.016 | 0.098 | 0.16 |
| Sociodemographic variables | | | | | |
| Mean age | 12 | -0.015 | -0.100 | -0.070 | 0.73 |
| Addictions | | | | | |
| Alcohol use disorder | 10 | -42.279 | -123.025 | 38.466 | 0.30 |
| Cannabis use disorder | 10 | -16.912 | -49.21 | 15.386 | 0.30 |
| Psychiatric diagnosis and illness severity | | | | | |
| Schizophrenia | 20 | 0.386 | -2.781 | 3.554 | 0.81 |
| Schizoaffective disorders | 19 | -1.895 | -6.907 | 3.117 | 0.46 |
| Age at illness onset | 4 | 0.105 | -0.366 | 0.576 | 0.66 |
| Illness duration | 8 | -0.038 | -0.105 | 0.029 | 0.27 |
| PANSS Total Score | 3 | 0.021 | -0.012 | 0.054 | 0.21 |
| **PANSS Positive Score** | **3** | **0.448** | **0.174** | **0.722** | **0.001** |
| PANSS Negative Score | 3 | 0.076 | -0.047 | 0.198 | 0.23 |
| Antipsychotics | | | | | |
| Percentage of first-generation antipsychotics | 12 | 0.341 | -3.010 | 3.692 | 0.83 |
| Percentage of second-generation antipsychotics | 12 | -1.047 | -3.525 | 1.431 | 0.40 |
| Percentage of antipsychotic polytherapy | 9 | -0.820 | -4.085 | 5.725 | 0.73 |
| Percentage of amisulpride, risperidone, or haloperidol (high anti-D2 potency) | 11 | 0.439 | -2.888 | 3.767 | 0.80 |
| Percentage of amisulpride | 8 | -35.332 | -126.999 | 56.335 | 0.42 |
| Percentage of risperidone | 11 | 0.260 | -4.035 | 4.555 | 0.84 |
| Percentage of haloperidol | 9 | 1.671 | -5.884 | 9.227 | 0.66 |
| Percentage of olanzapine, quetiapine, or clozapine (low anti-D2 potency) | 10 | -0.118 | -3.036 | 2.800 | 0.94 |
| Percentage of olanzapine | 10 | -0.201 | -2.872 | 2.471 | 0.88 |

| Variables | N | Estimate | Lower limit | Upper limit | p value |
|---|---|---|---|---|---|
| Percentage of quetiapine | 8 | -4.949 | -13.782 | 3.885 | 0.27 |
| Percentage of clozapine | 9 | 5.202 | -2.777 | 13.180 | 0.20 |
| Percentage of chlorpromazine | 8 | -5.368 | -142.200 | 131.464 | 0.94 |
| Percentage of aripiprazole | 9 | -3.277 | -12.019 | 5.465 | 0.46 |
| Other psychotropic drugs | | | | | |
| Percentage of antidepressants | 13 | -1.245 | -5.230 | 2.740 | 0.54 |
| Percentage of mood stabilizers | 4 | -11.682 | -39.181 | 15.817 | 0.41 |
| Percentage of anxiolytics | 4 | -1.355 | -12.439 | 9.729 | 0.81 |

N: number of studies
PANSS: Positive And Negative Syndrome Scale
Statistically significant results ($p<0.05$) are in bold.

**Supplementary material 27. Factors associated with the prevalence of loss of libido, orgasm dysfunction, genital pain and sex specific dysfunctions in schizophrenia: subgroup analyses.**

| | Loss of libido pooled prevalence estimates (95%CI): 0.406 (0.307-0.514) | | | | | Orgasm dysfunction pooled prevalence estimates (95% CI): 0.280 (0.184-0.402) | | | | | Genital pain pooled prevalence estimates (95%CI): 0.061 (0.028-0.127) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variable | Yes, n | Pooled estimate of the prevalence | No, n | Pooled estimate of the prevalence | p value | Yes, n | Pooled estimate of the prevalence | No, n | Pooled estimate of the prevalence | p value | Yes, n | Pooled estimate of the prevalence | No, n | Pooled estimate of the prevalence | p value |
| Study design | | | | | | | | | | | | | | | |
| High quality study | 17 | 38.8% | 17 | 43.2% | 0.33 | **17** | **27.2%** | **18** | **28.5%** | **0.04** | **3** | **6.9%** | **7** | **6.2%** | **0.004** |
| Cross-sectional design (vs. cohort) | | | | | | **33** | **32.2%** | **2** | **0.7%** | **0.001** | | | | | |
| Consecutive Inclusions | **11** | **23.5%** | **19** | **53.7%** | **<.001** | 11 | 22.6% | 20 | 34.2% | 0.26 | 2 | 7.1% | 6 | 4.7% | 0.006 |
| Sexual dysfunction as a primary objective | | | | | | | | | | | 8 | 8.5% | 2 | 1.6% | 0.14 |
| Validated tool for diagnosis | **32** | **43.1%** | **2** | **10.7%** | **0.005** | | | | | | 7 | 7.3% | 3 | 3.5% | 0.35 |
| Patient-reported diagnosis | 20 | 37.4% | 14 | 43.5% | 0.60 | 22 | 29.9% | 13 | 24.7% | 0.71 | **6** | **11.2%** | **4** | **1.8%** | **0.006** |
| Clinical interview diagnosis | **3** | **0.10%** | **31** | **44.6%** | **<.001** | **3** | **3.4%** | **32** | **31.5%** | **0.02** | 2 | 1.5% | 8 | 7.4% | 0.07 |
| Clinician-rated tool diagnosis | **11** | **56.2%** | **23** | **33.0%** | **0.04** | 10 | 37.5% | 25 | 26.0% | 0.48 | 2 | 1.6% | 8 | 8.5% | 0.14 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time and location | | | | | | | | | | | | | | | |
| Year of publication 2010 or after | 23 | 45.7% | 11 | 29.9% | 0.18 | 24 | 34.6% | 11 | 15.5% | 0.12 | **4** | **14.0%** | **6** | **3.3%** | **0.009** |
| Year of publication 2015 or after | **14** | **53.8%** | **20** | **32.2%** | **0.04** | **15** | **43.4%** | **20** | **18.7%** | **0.02** | 3 | 12.9% | 7 | 4.0% | 0.12 |
| High income country | 10 | 29.4% | 23 | 45.9% | 0.17 | 11 | 14.1% | 24 | 36.0% | 0.07 | 8 | 4.5% | 2 | 18.1% | 0.14 |
| Western country | 10 | 31.5% | 23 | 44.8% | 0.28 | 12 | 17.1% | 23 | 34.5% | 0.15 | 8 | 4.5% | 2 | 18.1% | 0.14 |
| Asia | | | | | | 12 | 33.0% | 23 | 25.5% | 0.56 | | | | | |
| Western Europe | | | | | | **4** | **8.6%** | **31** | **31.9%** | **0.03** | 2 | 3.9% | 8 | 6.6% | 0.58 |
| North America | 4 | 18.6% | 29 | 43.9% | 0.23 | 5 | 14.3% | 30 | 30.5% | 0.45 | **5** | **3.9%** | **5** | **11.3%** | **0.04** |
| Middle East | 7 | 33.2% | 26 | 43.0% | 0.40 | 7 | 34.1% | 28 | 26.1% | 0.46 | | | | | |
| Africa | 5 | 43.4% | 28 | 40.2% | 0.86 | | | | | | | | | | |
| Eastern Europe | | | | | | | | | | | | | | | |
| South America | | | | | | | | | | | | | | | |
| Sociodemographics | | | | | | | | | | | | | | | |
| ≥50% of men | 28 | 38.3% | 6 | 58.0% | 0.41 | 28 | 27.5% | 7 | 29.4% | 0.92 | 6 | 4.3% | 4 | 9.9% | 0.28 |
| Mean age 35 years or more | 11 | 47.4% | 8 | 50.4% | 0.83 | 11 | 50.5% | 8 | 29.1% | 0.12 | | | | | |
| Mean age 40 years or more | 4 | 58.5% | 15 | 45.7% | 0.29 | 5 | 60.3% | 14 | 34.7% | 0.09 | | | | | |
| ≥5% of Asian participants | | | | | | | | | | | | | | | |
| ≥20% black participants | 2 | 47.2% | 2 | 40.9% | 0.86 | | | | | | | | | | |
| ≥40% educated participants | 8 | 57.8% | 3 | 39.7% | 0.44 | 8 | 50.1% | 3 | 29.5% | 0.31 | | | | | |
| ≥50% educated participants | 6 | 66.8% | 5 | 37.7% | 0.25 | 6 | 52.2% | 5 | 33.6% | 0.51 | | | | | |
| Only partnered participants | 8 | 45.8% | 20 | 46.9% | 0.95 | 8 | 29.1% | 21 | 35.1% | 0.67 | | | | | |
| ≥50% single participants | 14 | 49.2% | 14 | 43.4% | 0.63 | 14 | 34.2% | 15 | 32.6% | 0.89 | 5 | 6.3% | 2 | 16.5% | 0.35 |
| Physical health | | | | | | | | | | | | | | | |
| Somatic diseases excluded | 20 | 37.7% | 13 | 51.1% | 0.29 | 19 | 27.3% | 15 | 33.7% | 0.60 | 3 | 5.5% | 6 | 6.7% | 0.79 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hypertension excluded | 17 | 37.6% | 3 | 43.0% | 0.85 | 16 | 26.8% | 3 | 20.5% | 0.85 | | | | | |
| Diabetes excluded | 17 | 37.6% | 3 | 43.0% | 0.85 | 16 | 26.8% | 3 | 20.5% | 0.85 | | | | | |
| Metabolic syndrome excluded | | | | | | | | | | | | | | | |
| ≥40% hyperprolactinemia | | | | | | | | | | | | | | | |
| Addictions | | | | | | | | | | | | | | | |
| Substance use excluded | 14 | 37.9% | 19 | 45.7% | 0.46 | 14 | 35.9% | 20 | 25.4% | 0.35 | 2 | 4.0% | 7 | 7.2% | 0.32 |
| Smokers included | 6 | 35.2% | 7 | 44.9% | 0.51 | 6 | 33.1% | 8 | 34.9% | 0.91 | | | | | |
| ≥40% smokers | 4 | 41.7% | 9 | 39.7% | 0.89 | 4 | 34.3% | 10 | 35.0% | 0.96 | | | | | |
| Alcohol use disorder included | 5 | 48.7% | 12 | 35.1% | 0.41 | 5 | 47.4% | 12 | 32.2% | 0.42 | | | | | |
| Cannabis use disorder included | 2 | 27.7% | 11 | 42.0% | 0.29 | | | | | | | | | | |
| Psychiatric diagnosis and illness severity | | | | | | | | | | | | | | | |
| All included patients with schizophrenia diagnosis | **19** | **52.2%** | **10** | **22.6%** | **<.001** | **20** | **38.9%** | **10** | **13.6%** | **0.004** | 4 | 12.6% | 5 | 5.6% | 0.20 |
| Schizoaffective disorder included | **4** | **18.1%** | **23** | **45.2%** | **<.001** | **4** | **16.5%** | **24** | **33.4%** | **0.01** | 4 | 4.8% | 4 | 12.6% | 0.13 |
| Mean age of illness onset ≥27 years | 2 | 28.8% | 2 | 24.3% | 0.74 | 3 | 36.5% | 2 | 24.7% | 0.32 | | | | | |
| Mean illness duration ≥10 years | 6 | 46.9% | 4 | 69.3% | 0.38 | 7 | 45.4% | 4 | 27.5% | 0.45 | | | | | |
| Mean illness duration ≥15 years | 3 | 49.5% | 7 | 52.7% | 0.71 | 4 | 54.8% | 7 | 30.3% | 0.10 | | | | | |
| Only remitted subjects included | | | | | | | | | | | | | | | |
| Stabilization at inclusion | 20 | 44.3% | 4 | 30.9% | 0.24 | | | | | | | | | | |
| Mean PANSS total ≥60 | | | | | | | | | | | | | | | |
| Mean PANSS positive ≥14 | | | | | | | | | | | | | | | |
| Mean PANSS negative ≥14 | | | | | | | | | | | | | | | |
| Antipsychotics | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| >95% treated with antipsychotics included | | | | | | **27** | **28.9%** | **3** | **4.0%** | **0.02** | | | | | |
| ≥20% first-generation antipsychotics included | 14 | 37.1% | 10 | 50.8% | 0.38 | 15 | 25.5% | 9 | 39.6% | 0.40 | 3 | 4.7% | 4 | 6.2% | 0.78 |
| ≥40% first-generation antipsychotics included | 6 | 54.7% | 18 | 37.8% | 0.30 | 5 | 34.0% | 19 | 29.0% | 0.86 | | | | | |
| ≥50% first-generation antipsychotics included | 6 | 54.7% | 18 | 37.8% | 0.39 | 5 | 34.0% | 19 | 29.0% | 0.86 | | | | | |
| ≥60% first-generation antipsychotics included | **4** | **71.5%** | **20** | **36.0%** | **0.02** | 3 | 71.0% | 21 | 25.8% | 0.10 | | | | | |
| ≥80% first-generation antipsychotics included | **4** | **71.5%** | **20** | **36.0%** | **0.02** | 3 | 71.0% | 21 | 25.8% | 0.10 | | | | | |
| ≥20% second-generation antipsychotics included | 13 | 30.7% | 2 | 51.3% | 0.10 | | | | | | | | | | |
| ≥40% second-generation antipsychotics included | 10 | 28.8% | 5 | 42.4% | 0.40 | 10 | 13.1% | 4 | 34.2% | 0.26 | | | | | |
| ≥50% second-generation antipsychotics included | 16 | 38.4% | 8 | 49.5% | 0.45 | 18 | 25.8% | 6 | 45.9% | 0.29 | | | | | |
| ≥60% second-generation antipsychotics included | 7 | 27.5% | 8 | 37.9% | 0.49 | 8 | 14.4% | 6 | 23.3% | 0.59 | | | | | |
| ≥80% second-generation antipsychotics included | 4 | 25.2% | 11 | 36.3% | 0.56 | 4 | 13.5% | 10 | 19.8% | 0.67 | 2 | 1.5% | 2 | 3.8% | 0.45 |
| Antipsychotic polytherapy included | 12 | 36.7% | 12 | 35.3% | 0.92 | 12 | 28.9% | 11 | 20.9% | 0.59 | 4 | 4.5% | 3 | 3.9% | 0.89 |
| ≥20% antipsychotic polytherapy included | 9 | 38.4% | 15 | 35.6% | 0.86 | 9 | 31.7% | 14 | 21.0% | 0.48 | 3 | 6.4% | 4 | 3.7% | 0.68 |
| ≥40% antipsychotic polytherapy included | 6 | 28.5% | 18 | 39.0% | 0.34 | 6 | 27.5% | 17 | 37.0% | 0.69 | | | | | |
| ≥60% antipsychotic polytherapy included | 3 | 29.5% | 21 | 36.9% | 0.54 | 3 | 35.0% | 20 | 23.3% | 0.40 | | | | | |
| Amisulpride, risperidone, or haloperidol (high anti-D2 potency) included | | | | | | | | | | | | | | | |
| ≥20% antipsychotics with high anti-D2 potency included | 13 | 39.6% | 4 | 44.4% | 0.76 | 14 | 22.5% | 4 | 50.5% | 0.21 | | | | | |
| ≥40% antipsychotics with high anti-D2 potency included | 7 | 35.3% | 10 | 44.2% | 0.65 | 8 | 22.4% | 10 | 34.2% | 0.58 | | | | | |
| ≥60% antipsychotics with high anti-D2 potency included | **2** | **5.6%** | **15** | **48.3%** | **<.001** | **2** | **0.9%** | **16** | **37.1%** | **<.001** | **2** | **0.9%** | **3** | **4.9%** | **0.02** |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ≥80% antipsychotics with high anti-D2 potency included | | | | | | | | | | | | | | | |
| Amisulpride included | | | | | | | | | | | | | | | |
| Risperidone included | 16 | 38.3% | 2 | 51.3% | 0.31 | | | | | | | | | | |
| ≥20% risperidone included | 12 | 42.0% | 6 | 34.1% | 0.50 | 13 | 27.2% | 5 | 19.4% | 0.65 | | | | | |
| ≥40% risperidone included | 3 | 27.9% | 15 | 42.3% | 0.65 | 3 | 25.5% | 15 | 25.7% | 0.99 | | | | | |
| ≥60% risperidone included | | | | | | | | | | | | | | | |
| Haloperidol included | 7 | 35.8% | 6 | 54.3% | 0.33 | 7 | 14.1% | 6 | 46.3% | 0.12 | | | | | |
| ≥10% haloperidol included | 5 | 35.5% | 8 | 49.3% | 0.54 | 6 | 12.6% | 7 | 41.7% | 0.19 | | | | | |
| ≥20% haloperidol included | 2 | 13.6% | 11 | 51.1% | 0.05 | **3** | **6.0%** | **10** | **40.0%** | **0.03** | | | | | |
| ≥30% haloperidol included | | | | | | | | | | | | | | | |
| Olanzapine, quetiapine, or clozapine (low anti-D2 potency) included | 18 | 42.7% | 3 | 28.1% | 0.53 | 19 | 29.1% | 2 | 6.7% | 0.22 | 4 | 4.7% | 2 | 1.6% | 0.34 |
| ≥20% antipsychotics with low anti-D2 potency included | 14 | 42.0% | 7 | 37.4% | 0.78 | 15 | 29.9% | 6 | 14.8% | 0.42 | 3 | 5.7% | 3 | 2.5% | 0.11 |
| ≥40% antipsychotics with low anti-D2 potency included | 7 | 54.3% | 14 | 33.9% | 0.15 | 9 | 38.9% | 12 | 15.3% | 0.14 | | | | | |
| ≥60% antipsychotics with low anti-D2 potency included | **3** | **66.0%** | **18** | **36.2%** | **0.05** | 3 | 42.0% | 18 | 22.0% | 0.12 | | | | | |
| ≥80% antipsychotics with low anti-D2 potency included | | | | | | | | | | | | | | | |
| Olanzapine included | 14 | 48.9% | 3 | 29.2% | 0.41 | 15 | 36.7% | 2 | 5.9% | 0.19 | | | | | |
| ≥20% olanzapine included | 8 | 52.3% | 9 | 39.3% | 0.40 | 8 | 36.5% | 9 | 25.8% | 0.60 | | | | | |
| ≥40% olanzapine included | 3 | 58.2% | 14 | 42.8% | 0.55 | 3 | 63.1% | 14 | 26.1% | 0.17 | | | | | |
| ≥60% olanzapine included | | | | | | | | | | | | | | | |
| Quetiapine included | 7 | 40.5% | 8 | 37.9% | 0.86 | 8 | 20.2% | 7 | 31.1% | 0.51 | | | | | |
| ≥10% quetiapine included | 6 | 40.7% | 9 | 38.2% | 0.86 | 6 | 23.3% | 9 | 27.9% | 0.75 | | | | | |
| ≥30% quetiapine included | **2** | **69.1%** | **13** | **34.8%** | **0.002** | 2 | 35.4% | 13 | 22.8% | 0.25 | | | | | |
| Clozapine included | 9 | 34.4% | 10 | 45.7% | 0.37 | 10 | 29.2% | 9 | 22.6% | 0.67 | | | | | |
| ≥20% clozapine included | 3 | 31.6% | 16 | 41.7% | 0.66 | 4 | 31.0% | 15 | 24.5% | 0.75 | | | | | |
| Chlorpromazine included | 2 | 75.6% | 12 | 38.3% | 0.12 | **3** | **65.7%** | **11** | **21.7%** | **0.03** | | | | | |
| ≥10% chlorpromazine included | | | | | | **2** | **75.8%** | **12** | **23.5%** | **0.02** | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aripiprazole included | 4 | 27.5% | 11 | 43.3% | 0.11 | 4 | 26.3% | 11 | 23.1% | 0.82 | | | | | |
| Mean chlorpromazine equivalent ≥400 mg/d | 3 | 28.9% | 2 | 42.7% | 0.48 | 4 | 35.2% | 2 | 32.0% | 0.78 | | | | | |
| Mean chlorpromazine equivalent ≥500 mg/d | | | | | | | | | | | | | | | |
| Mean chlorpromazine equivalent ≥600 mg/d | | | | | | | | | | | | | | | |
| Other psychotropic drugs | | | | | | | | | | | | | | | |
| Antidepressants included | 11 | 35.7% | 10 | 48.7% | 0.42 | 13 | 16.9% | 10 | 41.2% | 0.15 | | | | | |
| ≥10% antidepressants included | 8 | 41.4% | 13 | 43.0% | 0.94 | 9 | 14.9% | 14 | 37.5% | 0.26 | 5 | 4.9% | 2 | 4.2% | 0.91 |
| ≥20% antidepressants included | 4 | 32.1% | 17 | 45.8% | 0.74 | 4 | 8.4% | 19 | 32.4% | 0.13 | 4 | 4.7% | 3 | 6.1% | 0.81 |
| ≥30% antidepressants included | **2** | **11.9%** | **19** | **45.5%** | **0.020** | 2 | 5.0% | 21 | 30.4% | 0.72 | 2 | 4.9% | 5 | 4.7% | 0.97 |
| Mood stabilizers included | 5 | 51.0% | 5 | 43.7% | 0.75 | 5 | 27.3% | 6 | 36.8% | 0.61 | | | | | |
| ≥10% mood stabilizers included | 3 | 30.1% | 7 | 55.4% | 0.12 | 3 | 25.5% | 8 | 35.1% | | | | | | |
| ≥30% mood stabilizers included | | | | | | | | | | 0.27 | | | | | |
| Anxiolytics included | 3 | 22.1% | 2 | 68.6% | 0.06 | 4 | 4.3% | 3 | 21.9% | 0.68 | | | | | |
| ≥10% anxiolytics included | 2 | 24.9% | 3 | 50.4% | 0.55 | 3 | 6.3% | 4 | 13.1% | | | | | | |
| ≥40% anxiolytics included | | | | | | | | | | 0.92 | | | | | |
| Anticholinergic agents included | 6 | 26.8% | 3 | 27.5% | 0.97 | 6 | 19.8% | 4 | 18.2% | 0.17 | | | | | |
| ≥10% anticholinergic agents included | 5 | 34.3% | 4 | 19.1% | 0.32 | 5 | 30.4% | 5 | 11.0% | 0.15 | | | | | |
| ≥20% anticholinergic agent included | 2 | 31.5% | 7 | 26.1% | 0.61 | 3 | 34.3% | 7 | 14.3% | 0.67 | | | | | |
| Hypnotics included | | | | | | 2 | 6.6% | 2 | 18.3% | 0.67 | | | | | |
| ≥20% hypnotics included | | | | | | 2 | 6.6% | 2 | 18.3% | 0.15 | | | | | |
| All patients treated with hypnotics | | | | | | | | | | | | | | | |

## Supplementary material 28. Factors associated with the prevalence of specific dysfunctions in men with schizophrenia: subgroup analyses.

| Variable | Men sexual Dysfunction pooled prevalence estimates (95%CI): 0.557 (0.481-0.631) | | | | | Erection Disorder pooled prevalence estimates (95%CI) : 0.440 (0.335-0.552) | | | | | Men Ejaculation Disorder pooled prevalence estimates (95%CI) : 0.386 (0.268-0.518) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes, n | Pooled estimate of the prevalence | No, n | Pooled estimate of the prevalence | p value | Yes, n | Pooled estimate of the prevalence | No, n | Pooled estimate of the prevalence | p value | Yes, n | Pooled estimate of the prevalence | No, n | Pooled estimate of the prevalence | p value |
| Study design | | | | | | | | | | | | | | | |
| High quality study | 20 | 55.8% | 24 | 56.3% | 0.40 | 16 | 46.3% | 17 | 41.8% | 0.45 | **6** | **41.3%** | **13** | **37.4%** | **0.009** |
| Study design | | | | | | | | | | | | | | | |
| Cross-sectional design (vs. cohort) | **42** | **57.3%** | **2** | **25.4%** | **0.002** | 30 | 47.3% | 3 | 18.2% | 0.06 | | | | | |
| Consecutive Inclusions | **15** | **44.5%** | **22** | **62.7%** | **0.02** | **12** | **31.6%** | **16** | **58.4%** | **0.02** | 4 | 32.1% | 11 | 41.8% | 0.39 |
| Sexual dysfunction as a primary objective | | | | | | | | | | | | | | | |
| Validated tool for diagnosis | 37 | 56.4% | 7 | 52.2% | 0.77 | 29 | 45.3% | 4 | 36.1% | 0.25 | 15 | 42.0% | 4 | 26.6% | 0.16 |
| Patient-reported diagnosis | 22 | 53.5% | 22 | 57.5% | 0.66 | 19 | 41.7% | 14 | 47.4% | 0.62 | 5 | 34.1% | 14 | 40.0% | 0.60 |
| Clinical interview diagnosis | 6 | 54.2% | 38 | 55.9% | 0.92 | 4 | 40.6% | 29 | 45.0% | 0.57 | 4 | 27.1% | 15 | 42.0% | 0.19 |
| Clinician-rated tool diagnosis | 14 | 58.0% | 30 | 54.7% | 0.76 | 8 | 54.2% | 25 | 40.7% | 0.39 | 8 | 49.4% | 11 | 31.8% | 0.21 |
| Time and location | | | | | | | | | | | | | | | |
| Year 2010 or after | 27 | 54.3% | 17 | 58.0% | 0.63 | 21 | 50.4% | 12 | 34.8% | 0.10 | 7 | 43.1% | 12 | 35.8% | 0.59 |
| Year 2015 or after | 15 | 62.7% | 29 | 51.9% | 0.14 | **13** | **61.8%** | **20** | **33.9%** | **0.02** | 5 | 46.9% | 14 | 35.7% | 0.51 |
| High income country | 21 | 54.7% | 22 | 59.5% | 0.46 | **10** | **51.6%** | **22** | **28.4%** | **0.01** | 12 | 31.2% | 7 | 51.6% | 0.11 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Western country | 19 | 55.1% | 25 | 55.8% | 0.92 | **10** | **29.4%** | **22** | **51.3%** | **0.02** | 12 | 33.4% | 7 | 47.3% | 0.29 |
| Asia | 13 | 50.0% | 31 | 57.5% | 0.37 | 10 | 51.7% | 22 | 40.3% | 0.40 | | | | | |
| Western Europe | 6 | 51.8% | 38 | 56.5% | 0.38 | 2 | 24.7% | 30 | 45.4% | 0.14 | **3** | **21.5%** | **16** | **42.4%** | **0.002** |
| North America | 9 | 55.7% | 35 | 55.7% | 0.99 | **5** | **23.7%** | **27** | **47.9%** | **0.02** | 7 | 34.8% | 12 | 40.3% | 0.73 |
| Middle East | 8 | 62.7% | 36 | 54.0% | 0.26 | 8 | 50.8% | 24 | 41.8% | 0.51 | 4 | 43.3% | 15 | 37.2% | 0.60 |
| Africa | 4 | 54.7% | 40 | 55.8% | 0.88 | 4 | 53.1% | 28 | 42.5% | 0.68 | | | | | |
| Eastern Europe | | | | | | | | | | | | | | | |
| South America | | | | | | | | | | | | | | | |
| Sociodemographics | | | | | | | | | | | | | | | |
| ≥50% men | | | | | | | | | | | | | | | |
| Mean age 35 years or more | 13 | 52.1% | 4 | 66.3% | 0.49 | 8 | 38.2% | 3 | 66.9% | 0.39 | 3 | 46.7% | 2 | 30.9% | 0.41 |
| Mean age 40 years or more | 10 | 53.0% | 7 | 57.1% | 0.76 | 5 | 35.9% | 6 | 52.9% | 0.31 | 3 | 46.7% | 2 | 30.9% | 0.41 |
| ≥50% single participants | | | | | | | | | | | | | | | |
| Physical health | | | | | | | | | | | | | | | |
| Somatic diseases excluded | 25 | 52.5% | 17 | 58.3% | 0.52 | 19 | 42.5% | 13 | 46.9% | 0.72 | 10 | 48.1% | 8 | 30.9% | 0.21 |
| Hypertension excluded | | | | | | | | | | | | | | | |
| Diabetes excluded | | | | | | | | | | | | | | | |
| Metabolic syndrome excluded | | | | | | | | | | | | | | | |
| ≥40% hyperprolactinemia | 4 | 60.2% | 2 | 61.3% | 0.94 | | | | | | | | | | |
| Addictions | | | | | | | | | | | | | | | |
| Substance use excluded | 19 | 56.7% | 23 | 52.5% | 0.47 | 15 | 47.7% | 17 | 42.1% | 0.64 | 7 | 48.5% | 11 | 35.2% | 0.29 |
| Smokers included | | | | | | | | | | | | | | | |
| ≥40% smokers | 2 | 82.8% | 2 | 40.4% | 0.32 | 2 | 71.2% | 2 | 23.4% | 0.46 | | | | | |
| Alcohol use disorder included | **2** | **44.4%** | **19** | **55.6%** | **0.03** | | | | | | 2 | 45.3% | 6 | 47.1% | 0.96 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cannabis use disorder included | | | | | | | | | | | | | | | |
| **Psychiatric diagnosis and illness severity** | | | | | | | | | | | | | | | |
| All included patients with schizophrenia diagnosis | 18 | 60.6% | 9 | 49.4% | 0.26 | **15** | **59.9%** | **8** | **28.1%** | **0.002** | 7 | 44.7% | 5 | 41.4% | 0.85 |
| Schizoaffective disorder included | 4 | 50.5% | 22 | 63.4% | 0.14 | **3** | **34.0%** | **19** | **57.6%** | **0.007** | 3 | 42.5% | 8 | 45.1% | 0.91 |
| Mean illness duration ≥10 years | 6 | 47.5% | 4 | 67.0% | 0.43 | 3 | 35.6% | 4 | 63.3% | 0.30 | | | | | |
| Mean illness duration ≥15 years | 3 | 60.3% | 7 | 50.0% | 0.44 | 2 | 37.1% | 5 | 56.2% | 0.37 | | | | | |
| Only remitted subjects included | | | | | | | | | | | | | | | |
| Stabilization at inclusion | | | | | | | | | | | | | | | |
| Mean PANSS total ≥60 | | | | | | | | | | | | | | | |
| Mean PANSS positive ≥14 | | | | | | | | | | | | | | | |
| Mean PANSS negative ≥14 | | | | | | | | | | | | | | | |
| **Antipsychotics** | | | | | | | | | | | | | | | |
| > 95% treated with antipsychotics included | | | | | | 24 | 45.4% | 2 | 24.6% | 0.15 | | | | | |
| ≥20% first-generation antipsychotics included | 13 | 47.5% | 10 | 57.2% | 0.27 | **9** | **24.5%** | **7** | **59.4%** | **0.005** | 6 | 38.7% | 3 | 37.3% | 0.93 |
| ≥40% first-generation antipsychotics included | 5 | 48.8% | 18 | 53.1% | 0.60 | 3 | 24.3% | 13 | 42.1% | 0.20 | **2** | **77.4%** | **7** | **28.0%** | **<.001** |
| ≥50% first-generation antipsychotics included | 4 | 50.3% | 19 | 52.6% | 0.81 | 3 | 24.3% | 13 | 42.1% | 0.20 | | | | | |
| ≥60% first-generation antipsychotics included | 3 | 56.0% | 20 | 51.6% | 0.67 | 2 | 34.7% | 14 | 38.9% | 0.63 | | | | | |
| ≥80% first-generation antipsychotics included | 2 | 55.4% | 21 | 51.9% | 0.84 | 2 | 34.7% | 14 | 38.9% | 0.63 | | | | | |
| ≥20% second-generation antipsychotics included | 20 | 51.6% | 3 | 51.4% | 0.98 | 14 | 38.9% | 3 | 35.0% | 0.66 | | | | | |
| ≥40% second-generation antipsychotics included | 17 | 51.5% | 6 | 52.0% | 0.94 | 12 | 37.6% | 5 | 40.1% | 0.86 | 8 | 33.1% | 2 | 52.1% | 0.56 |
| ≥50% second-generation antipsychotics included | 17 | 51.5% | 6 | 52.0% | 0.94 | 12 | 37.6% | 5 | 40.1% | 0.86 | 8 | 33.1% | 2 | 52.1% | 0.56 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ≥60% second-generation antipsychotics included | 14 | 55.0% | 9 | 47.0% | 0.30 | 10 | 42.3% | 7 | 33.0% | 0.50 | 7 | 28.0% | 3 | 60.4% | 0.10 |
| ≥80% second-generation antipsychotics included | 11 | 54.8% | 12 | 47.4% | 0.38 | 7 | 45.2% | 10 | 33.9% | 0.46 | 5 | 29.3% | 5 | 43.9% | 0.38 |
| Antipsychotic polytherapy included | 6 | 46.0% | 12 | 51.5% | 0.57 | 4 | 29.6% | 9 | 45.8% | 0.16 | | | | | |
| ≥20% antipsychotic polytherapy included | 4 | 44.2% | 14 | 51.5% | 0.48 | 3 | 28.5% | 10 | 44.3% | 0.19 | | | | | |
| ≥40% antipsychotic polytherapy included | 4 | 44.2% | 14 | 51.5% | 0.48 | 3 | 28.5% | 10 | 44.3% | 0.19 | | | | | |
| ≥60% antipsychotic polytherapy included | | | | | | | | | | | | | | | |
| Amisulpride, risperidone, or haloperidol (high anti-D2 potency) included | 19 | 54.0% | 2 | 42.5% | 0.07 | | | | | | | | | | |
| ≥20% antipsychotics with high anti-D2 potency included | 16 | 54.8% | 5 | 45.6% | 0.23 | 11 | 37.4% | 4 | 38.4% | 0.92 | | | | | |
| ≥40% antipsychotics with high anti-D2 potency included | 8 | 51.1% | 13 | 53.8% | 0.78 | 3 | 30.5% | 12 | 40.0% | 0.32 | 6 | 40.2% | 5 | 32.1% | 0.57 |
| ≥60% antipsychotics with high anti-D2 potency included | 5 | 61.7% | 16 | 49.8% | 0.18 | 2 | 23.5% | 13 | 39.6% | 0.11 | 4 | 47.5% | 7 | 30.3% | 0.39 |
| ≥80% antipsychotics with high anti-D2 potency included | | | | | | | | | | | | | | | |
| Amisulpride included | | | | . | | | | | | | | | | | |
| Risperidone included | | | | | | | | | | | | | | | |
| ≥20% risperidone included | 14 | 56.5% | 5 | 42.4% | 0.86 | **9** | **46.2%** | **4** | **22.1%** | **0.05** | 8 | 41.3% | 2 | 26.9% | 0.27 |
| ≥40% risperidone included | 3 | 49.3% | 16 | 52.9% | 0.83 | | | | | | | | | | |
| ≥60% risperidone included | 2 | 63.8% | 17 | 51.1% | 0.22 | | | | | | | | | | |
| Haloperidol included | 10 | 48.8% | 8 | 62.0% | 0.22 | 6 | 30.6% | 6 | 51.5% | 0.19 | 6 | 42.4% | 3 | 37.3% | 0.75 |
| ≥10% haloperidol included | 8 | 48.3% | 10 | 60.0% | 0.26 | 4 | 25.0% | 8 | 48.7% | 0.08 | 5 | 43.5% | 4 | 37.2% | 0.71 |
| ≥20% haloperidol included | 5 | 51.9% | 13 | 55.8% | 0.70 | 2 | 34.0% | 10 | 42.2% | 0.45 | 5 | 43.5% | 4 | 37.2% | 0.71 |
| ≥30% haloperidol included | 2 | 69.6% | 16 | 53.9% | 0.56 | | | | | | 2 | 39.4% | 7 | 40.0% | 0.99 |
| Olanzapine, quetiapine, or clozapine (low anti-D2 potency) included | 19 | 53.0% | 2 | 62.4% | 0.19 | | | | | | | | | | |
| ≥20% antipsychotics with low anti-D2 potency included | 15 | 54.0% | 6 | 54.9% | 0.93 | 11 | 38.1% | 3 | 37.2% | 0.93 | 8 | 33.1% | 3 | 46.7% | 0.50 |
| ≥40% antipsychotics with low anti-D2 potency included | 9 | 57.0% | 12 | 51.5% | 0.56 | 7 | 50.5% | 7 | 26.7% | 0.07 | 4 | 32.5% | 7 | 38.8% | 0.64 |
| ≥60% antipsychotics with low anti-D2 potency included | 4 | 65.7% | 17 | 51.2% | 0.32 | 3 | 65.7% | 11 | 31.1% | 0.09 | 2 | 43.0% | 9 | 35.1% | 0.61 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ≥80% antipsychotics with low anti-D2 potency included | | | | | | | | | | | | | | | |
| Olanzapine included | 16 | 50.4% | 3 | 71.6% | 0.06 | | | | | | 8 | 35.9% | 2 | 43.0% | 0.86 |
| ≥20% olanzapine included | 9 | 56.8% | 10 | 50.4% | 0.52 | 6 | 51.5% | 6 | 26.7% | 0.12 | 5 | 40.9% | 5 | 34.9% | 0.73 |
| ≥40% olanzapine included | 3 | 41.3% | 16 | 56.2% | 0.21 | 2 | 32.8% | 10 | 39.2% | 0.77 | | | | | |
| ≥60% olanzapine included | | | | | | | | | | | | | | | |
| Quetiapine included | 7 | 51.5% | 11 | 54.8% | 0.77 | 5 | 36.9% | 7 | 39.7% | 0.89 | 5 | 34.4% | 5 | 41.7% | 0.67 |
| ≥10% quetiapine included | 5 | 54.9% | 13 | 52.8% | 0.89 | 5 | 36.9% | 7 | 39.7% | 0.89 | 3 | 26.6% | 7 | 43.4% | 0.15 |
| ≥30% quetiapine included | 2 | 79.2% | 16 | 49.6% | 0.20 | 2 | 72.2% | 10 | 32.1% | 0.21 | | | | | |
| Clozapine included | 9 | 60.4% | 11 | 47.4% | 0.13 | 7 | 39.3% | 6 | 37.2% | 0.90 | 5 | 26.3% | 6 | 45.8% | 0.15 |
| ≥20% clozapine included | 4 | 68.4% | 16 | 49.6% | 0.10 | 4 | 53.2% | 9 | 32.0% | 0.15 | 2 | 30.9% | 9 | 37.3% | 0.81 |
| Chlorpromazine included | 2 | 54.1% | 16 | 53.6% | 0.95 | | | | | | | | | | |
| ≥10% chlorpromazine included | | | | | | | | | | | | | | | |
| ≥40% chlorpromazine included | | | | | | | | | | | | | | | |
| Aripiprazole included | 5 | 48.2% | 12 | 55.3% | 0.57 | 4 | 40.6% | 8 | 36.8% | 0.83 | 3 | 28.5% | 6 | 35.9% | 0.51 |
| Mean chlorpromazine equivalent ≥400 mg/d | | | | | | | | | | | | | | | |
| Mean chlorpromazine equivalent ≥500 mg/d | 3 | 42.9% | 2 | 32.8% | 0.46 | | | | | | | | | | |
| Mean chlorpromazine equivalent ≥600 mg/d | | | | | | | | | | | | | | | |
| Other psychotropic drugs | | | | | | | | | | | | | | | |
| Antidepressants included | 6 | 42.8% | 16 | 56.5% | 0.16 | **5** | **21.1%** | **13** | **50.3%** | **0.002** | **4** | **16.0%** | **7** | **47.9%** | **<.001** |
| ≥10% antidepressants included | 5 | 40.7% | 17 | 56.4% | 0.14 | **4** | **21.3%** | **14** | **48.2%** | **0.01** | **3** | **14.2%** | **8** | **45.3%** | **0.003** |
| ≥20% antidepressants included | 2 | 29.3% | 20 | 55.5% | 0.09 | **2** | **12.5%** | **16** | **46.4%** | **<.001** | **2** | **11.3%** | **9** | **42.6%** | **0.01** |
| ≥30% antidepressants included | | | | | | | | | | | | | | | |
| Mood stabilizers included | | | | | | | | | | | | | | | |
| Anxiolytics included | **3** | **34.6%** | **3** | **79.0%** | **0.006** | **3** | **18.3%** | **3** | **59.0%** | **0.008** | **3** | **14.2%** | **2** | **43.0%** | **0.03** |
| Anticholinergic agents included | | | | | | | | | | | | | | | |
| ≥10% anticholinergic agent included | | | | | | | | | | | | | | | |

**Supplementary material 29. Factors associated with the prevalence of specific dysfunctions in women with schizophrenia: subgroup analyses.**

| Variable | Women Sexual Dysfunction pooled prevalence estimates (95%CI) : 0.600 (0.480-0.708) | | | | | Amenorrhea pooled prevalence estimates (95%CI) : 0.251 (0.173-0.350) | | | | | Galactorrhea pooled prevalence estimates (95%CI) : 0.077 (0.037-0.153) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes, n | pooled prevalence estimates of the outcome | No, n | pooled prevalence estimates of the outcome | p value | Yes, n | pooled prevalence estimates of the outcome | No, n | pooled prevalence estimates of the outcome | p value | Yes, n | pooled prevalence estimates of the outcome | No, n | pooled prevalence estimates of the outcome | p value |
| Study design | | | | | | | | | | | | | | | |
| High quality study | 16 | 62.3% | 17 | 58.8% | 0.74 | 3 | 19.9% | 3 | 32.3% | 0.77 | 3 | 5.1% | 2 | 13.7% | 0.11 |
| Cross-sectional design (vs. cohort) | | | | | | 4 | 26.0% | 2 | 24.4% | 0.83 | 3 | 5.9% | 2 | 9.5% | 0.53 |
| Consecutive Inclusions | 8 | 42.9% | 20 | 58.7% | 0.35 | | | | | | | | | | |
| Sexual dysfunction as a primary objective | 30 | 59.4% | 2 | 48.4% | 0.27 | | | | | | | | | | |
| Validated tool for diagnosis | 28 | 62.7% | 4 | 27.8% | 0.29 | 6 | 25.1% | | | | | | | | |
| Patient-reported diagnosis | 17 | 64.7% | 15 | 51.5% | 0.26 | | | | | | | | | | |
| Clinical interview diagnosis | 3 | 27.2% | 29 | 61.7% | 0.44 | | | | | | | | | | |
| Clinician-rated tool diagnosis | 12 | 57.6% | 20 | 59.3% | 0.84 | | | | | | | | | | |
| Time and location | | | | | | | | | | | | | | | |
| Year of publication 2010 or after | 22 | 53.3% | 11 | 63,0% | 0.39 | 2 | 34.6% | 4 | 21.7% | 0.38 | | | | | |
| Year of publication 2015 or after | 15 | 69.1% | 18 | 52,0% | 0.12 | | | | | | | | | | |
| High income country | 16 | 55.8% | 15 | 68.7% | 0.14 | 3 | 18.7% | 2 | 37.3% | 0.13 | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Western country | 15 | 56.4% | 17 | 60.0% | 0.83 | 3 | 20.5% | 2 | 34.6% | 0.34 | | | | | |
| Asia | 11 | 55.3% | 21 | 59.7% | 0.71 | 2 | 34.6% | 3 | 20.5% | 0.34 | | | | | |
| Western Europe | 6 | 46.8% | 26 | 61.4% | 0.20 | | | | | | | | | | |
| North America | 6 | 57.2% | 26 | 59.0% | 0.92 | | | | | | 2 | 13.7% | 2 | 3.8% | 0.21 |
| Middle East | 3 | 55.7% | 29 | 58.9% | 0.66 | | | | | | | | | | |
| Africa | 4 | 69.6% | 28 | 57.0% | 0.22 | | | | | | | | | | |
| Eastern Europe | | | | | | | | | | | | | | | |
| South America | | | | | | | | | | | | | | | |
| Sociodemographics | | | | | | | | | | | | | | | |
| ≥50% of men | | | | | | | | | | | | | | | |
| Mean age 35 years or more | 8 | 64.0% | 4 | 53.7% | 0.34 | | | | | | | | | | |
| Mean age 40 years or more | 5 | 57.9% | 7 | 62.8% | 0.58 | | | | | | | | | | |
| ≥50% of single participants | | | | | | | | | | | | | | | |
| Physical health | | | | | | | | | | | | | | | |
| Somatic diseases excluded | 15 | 47.8% | 16 | 65.2% | 0.11 | 2 | 23.3% | 4 | 26.6% | 0.66 | | | | | |
| Hypertension excluded | | | | | | | | | | | | | | | |
| Diabetes excluded | | | | | | | | | | | | | | | |
| Metabolic syndrome excluded | | | | | | | | | | | | | | | |
| Addictions | | | | | | | | | | | | | | | |
| Substance use excluded | 9 | 56.6% | 22 | 57.3% | 0.92 | 2 | 37.3% | 4 | 20.6% | 0.18 | | | | | |
| Smokers included | | | | | | | | | | | | | | | |
| ≥40% of smokers | | | | | | | | | | | | | | | |
| Alcohol use disorder included | | | | | | | | | | | | | | | |
| Cannabis use disorder included | | | | | | | | | | | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Psychiatric diagnosis and illness severity | | | | | |
| All included patients with schizophrenia diagnosis | 16 | 60.0% | 5 | 47.0% | 0.37 |
| Schizoaffective disorder included | 4 | 41.2% | 16 | 60.0% | 0.19 |
| Mean illness duration ≥10 years | 5 | 62.2% | 3 | 70.6% | 0.14 |
| Mean illness duration ≥15 years | 2 | 62.2% | 6 | 67.5% | 0.38 |
| Only remitted subjects included | | | | | |
| Stabilization at inclusion | | | | | |
| Mean PANSS total ≥60 | | | | | |
| Mean PANSS positive ≥14 | | | | | |
| Mean PANSS negative ≥14 | | | | | |
| Antipsychotics | | | | | |
| >95% treated with antipsychotics included | 24 | 62.0% | 3 | 63.2% | 0.90 |
| ≥20% first-generation antipsychotics included | 6 | 64.1% | 6 | 63.0% | 0.94 |
| ≥40% first-generation antipsychotics included | | | | | |
| ≥50% first-generation antipsychotics included | | | | | |
| ≥60% first-generation antipsychotics included | | | | | |
| ≥80% first-generation antipsychotics included | | | | | |
| ≥40% second-generation antipsychotics included | 9 | 61.7% | 3 | 68.4% | 0.57 |
| ≥50% second-generation antipsychotics included | 9 | 61.7% | 3 | 68.4% | 0.57 |
| ≥60% second-generation antipsychotics included | 7 | 57.4% | 5 | 70.4% | 0.32 |
| ≥80% second-generation antipsychotics included | 3 | 58.4% | 9 | 64.8% | 0.77 |
| Antipsychotic polytherapy included | 4 | 64.6% | 5 | 53.4% | 0.43 |
| ≥20% antipsychotic polytherapy included | 2 | 59.2% | 7 | 58.6% | 0.97 |
| ≥40% antipsychotic polytherapy included | | | | | |
| Amisulpride, risperidone, or haloperidol (high anti-D2 potency) included | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| ≥20% antipsychotics with high anti-D2 potency included | 8 | 59.0% | 3 | 60.9% | 0.91 |
| ≥40% antipsychotics with high anti-D2 potency included | 6 | 63.3% | 5 | 55.7% | 0.64 |
| ≥60% antipsychotics with high anti-D2 potency included | | | | | |
| ≥80% antipsychotics with high anti-D2 potency included | | | | | |
| Amisulpride included | | | | | |
| ≥20% risperidone included | 8 | 59.0% | 3 | 60.9% | 0.91 |
| ≥40% risperidone included | 3 | 63.3% | 8 | 57.8% | 0.79 |
| ≥60% risperidone included | | | | | |
| Haloperidol included | 5 | 59.5% | 4 | 60.4% | 0.96 |
| ≥10% haloperidol included | 3 | 64.8% | 6 | 58.8% | 0.83 |
| ≥20% haloperidol included | 3 | 64.8% | 6 | 58.8% | 0.83 |
| ≥30% haloperidol included | | | | | |
| Olanzapine, quetiapine, or clozapine (low anti-D2 potency) included | | | | | |
| ≥20% antipsychotics with low anti-D2 potency included | 8 | 60.5% | 2 | 54.7% | 0.66 |
| ≥40% antipsychotics with low anti-D2 potency included | 5 | 52.5% | 5 | 65.6% | 0.48 |
| ≥60% antipsychotics with low anti-D2 potency included | 2 | 57.9% | 8 | 60.2% | 0.88 |
| ≥80% antipsychotics with low anti-D2 potency included | | | | | |
| Olanzapine included | | | | | |
| ≥20% olanzapine included | 5 | 52.5% | 5 | 65.6% | 0.48 |
| ≥40% olanzapine included | 3 | 64.6% | 7 | 56.5% | 0.70 |
| ≥60% olanzapine included | | | | | |
| Quetiapine included | **3** | **33.7%** | **5** | **72.1%** | **0.01** |
| ≥10% quetiapine included | 2 | 38.8% | 6 | 64.4% | 0.10 |
| ≥30% quetiapine included | | | | | |
| Clozapine included | 4 | 64.1% | 5 | 58.4% | 0.80 |

| | | | | | |
|---|---|---|---|---|---|
| ≥20% clozapine included | | | | | |
| Chlorpromazine included | | | | | |
| ≥10% chlorpromazine included | | | | | |
| Aripiprazole included | 3 | 48.7% | 6 | 62.1% | 0.42 |
| Mean chlorpromazine equivalent ≥400 mg/d | | | | | |
| Mean chlorpromazine equivalent ≥600 mg/d | | | | | |
| Other psychotropic drugs | | | | | |
| Antidepressants included | 6 | 54.5% | 7 | 59.5% | 0.68 |
| ≥10% antidepressants included | 6 | 54.5% | 7 | 59.5% | 0.68 |
| ≥20% antidepressants included | 4 | 55.2% | 9 | 57.9% | 0.85 |
| ≥30% antidepressants included | | | | | |
| Mood stabilizer included | | | | | |
| Anxiolytics included | | | | | |
| Anticholinergic agents included | | | | | |
| ≥10% anticholinergic agent included | | | | | |

**Supplementary material 30. Factors associated with the prevalence of loss of libido, orgasm dysfunction and genital pain in schizophrenia: meta-regression analyses.**

| | Loss of libido pooled prevalence estimates (95%CI) : 0.406 (0.307-0.514) | | | | | Orgasm dysfunction pooled prevalence estimates (95%CI) : 0.280 (0.184-0.402) | | | | | Genital pain pooled prevalence estimates (95%CI) : 0.061 (0.028-0.127)" | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | N | Estimate | Lower limit | Upper limit | p value | N | Estimate | Lower limit | Upper limit | p value | N | Estimate | Lower limit | Upper limit | p value |
| Sexual dysfunctions | **-** | **-** | **-** | **-** | **-** | **35** | **3.403** | **0.912** | **5.914** | **0.007** | | | | | |
| Loss of libido | 34 | **4.373** | **3.615** | **5.133** | **<.001** | - | - | - | - | - | **8** | **2.872** | **2.123** | **3.621** | **<.001** |
| Orgasmic dysfunction | | | | | | | | | | | **9** | **4.338** | **2.701** | **5.975** | **<.001** |
| Genital pain | 8 | 4.048 | -3.220 | 11.316 | 0.27 | 9 | 4.475 | -2.241 | 11.192 | 0.19 | | | | | |
| Erection Disorder | | | | | | | | | | | | | | | |
| Ejaculation disorder | | | | | | | | | | | | | | | |
| Amenorrhea | | | | | | | | | | | | | | | |
| Galactorrhea | | | | | | | | | | | | | | | |
| Year of publication | **34** | **0.091** | **0.028** | **0.155** | **0.005** | **35** | **0.087** | **0.022** | **0.151** | **0.008** | 10 | 0.050 | -0.021 | 0.122 | 0.17 |
| Sociodemographics | | | | | | | | | | | | | | | |
| Men | **34** | **-1.540** | **-3.074** | **-0.006** | **0.05** | 35 | -0.632 | -2.635 | 1.371 | 0.54 | **10** | **-3.998** | **-6.548** | **-1.448** | **0.002** |
| Mean age | 19 | 0.048 | -0.068 | 0.164 | 0.42 | 19 | 0.092 | -0.012 | 0.197 | 0.08 | 3 | 0.136 | -0.261 | 0.532 | 0.50 |
| White | 5 | 0.374 | -8.169 | 8.918 | 0.93 | 4 | -2.451 | -32.064 | 27.162 | 0.87 | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asian | 4 | -0.138 | -1.947 | 1.671 | 0.86 | | | | | | | | | | |
| Black | 4 | 1.513 | -11.442 | 14.468 | 0.82 | | | | | | | | | | |
| High education | 11 | 1.235 | -5.432 | 7.902 | 0.72 | 11 | 1.319 | -5.859 | 8.496 | 0.72 | | | | | |
| Single | 28 | -0.090 | -1.586 | 1.405 | 0.91 | 29 | -0.243 | -1.978 | 1.493 | 0.78 | **7** | **-2.832** | **-4.448** | **-1.216** | **<.001** |
| Unemployment | **21** | **2.764** | **0.685** | **4.844** | **0.009** | 21 | 1.706 | -1.233 | 4.646 | 0.26 | 4 | 3.170 | -5.703 | 12.044 | 0.48 |
| Physical health | | | | | | | | | | | | | | | |
| Hypertension | 20 | -9.484 | -25.526 | 6.558 | 0.25 | 19 | -17.452 | -39.981 | 5.078 | 0.13 | 3 | -7.483 | -30.712 | 15.745 | 0.53 |
| Diabetes | 21 | -7.331 | -21.372 | 6.711 | 0.31 | 20 | -10.045 | -28.406 | 8.316 | 0.28 | 3 | -3.148 | -27.093 | 20.797 | 0.80 |
| Metabolic syndrome | 15 | -4.407 | -12.323 | 3.509 | 0.28 | 14 | -4.876 | -12.355 | 2.603 | 0.20 | | | | | |
| Addictions | | | | | | | | | | | | | | | |
| Smokers | 13 | 0.471 | -1.938 | 2.880 | 0.70 | 14 | -0.083 | -2.802 | 2.636 | 0.95 | | | | | |
| Alcohol use disorder | 17 | 0.363 | -3.534 | 4.259 | 0.86 | 17 | 9.141 | -11.629 | 29.911 | 0.39 | 3 | 7.931 | -3.804 | 19.667 | 0.19 |
| Cannabis use disorder | 13 | -0.197 | -4.030 | 3.637 | 0.92 | 12 | -19.484 | -47.894 | 8.926 | 0.18 | 3 | 5.948 | -2.853 | 14.750 | 0.19 |
| Psychiatric diagnosis and illness severity | | | | | | | | | | | | | | | |
| Schizophrenia | 29 | 1.354 | -0.898 | 3.607 | 0.24 | **30** | **3.401** | **0.814** | **5.988** | **0.01** | 9 | 1.442 | -2.458 | 5.343 | 0.47 |
| Schizoaffective disorders | 27 | -7.248 | -16.418 | 1.921 | 0.12 | 28 | -6.406 | -17.083 | 4.271 | 0.24 | 8 | -5.513 | -13.730 | 2.705 | 0.19 |
| Mean age at illness onset | 4 | 0.296 | -0.044 | 0.635 | 0.09 | 5 | 0.174 | -0.412 | 0.760 | 0.56 | | | | | |
| Mean illness duration | 10 | -0.048 | -0.145 | 0.049 | 0.34 | 11 | 0.129 | -0.013 | 0.272 | 0.08 | | | | | |
| PANSS Total Score | 4 | -0.008 | -0.363 | 0.347 | 0.97 | 4 | 0.102 | -0.058 | 0.261 | 0.21 | | | | | |
| PANSS Positive Score | | | | | | | | | | | | | | | |
| PANSS Negative Score | 4 | -0.044 | -1.027 | 0.939 | 0.93 | 4 | 0.269 | -0.186 | 0.724 | 0.25 | | | | | |
| Hyperprolactinemia | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antipsychotics | | | | | | | | | | | | | | | |
| Percentage of first-generation antipsychotics | 24 | 0.811 | -0.950 | 2.573 | 0.37 | 24 | 0.950 | -1.605 | 3.507 | 0.47 | 7 | 0.160 | -4.784 | 5.105 | 0.95 |
| Percentage of second-generation antipsychotics | 24 | -0.195 | -1.982 | 1.592 | 0.82 | 24 | -0.519 | -2.950 | 1.912 | 0.68 | 7 | -1.461 | -4.776 | 1.854 | 0.39 |
| Percentage of antipsychotic polytherapy | 24 | -0.340 | -2.637 | 1.956 | 0.77 | 23 | 0.918 | -2.208 | 4.043 | 0.56 | 7 | 1.351 | -3.428 | 6.130 | 0.58 |
| Percentage of amisulpride, risperidone, or haloperidol | **17** | **-2.928** | **-5.678** | **-0.178** | **0.04** | **18** | **-4.961** | **-8.691** | **-1.230** | **0.01** | **5** | **-2.150** | **-3.916** | **-0.384** | **0.02** |
| Percentage of amisulpride | 16 | -25.524 | -79.585 | 28.536 | 0.35 | 16 | -23.327 | -102.951 | 56.297 | 0.57 | 4 | 10.377 | -3.534 | 24.289 | 0.14 |
| Percentage of risperidone | 18 | -1.782 | -4.521 | 0.957 | 0.19 | 18 | -2.270 | -6.528 | 1.987 | 0.30 | **5** | **-2.662** | **-4.660** | **-0.664** | **0.009** |
| Percentage of haloperidol | 13 | -5.907 | -12.892 | 1.078 | 0.09 | **13** | **-10.075** | **-19.622** | **-0.527** | **0.04** | 3 | -0.907 | -6.549 | 4.736 | 0.75 |
| Percentage of olanzapine, quetiapine, or clozapine | 21 | 1.456 | -1.084 | 3.996 | 0.26 | 21 | 2.729 | -1.244 | 6.702 | 0.18 | 6 | 2.316 | -2.044 | 6.676 | 0.30 |
| Percentage of olanzapine | 17 | 1.089 | -2.670 | 4.847 | 0.69 | 17 | 1.898 | -3.664 | 7.460 | 0.50 | 4 | 0.927 | -3.163 | 5.016 | 0.66 |
| Percentage of quetiapine | 15 | 2.765 | -2.110 | 7.641 | 0.26 | 15 | -0.597 | -8.084 | 6.890 | 0.88 | 4 | 4.717 | -1.606 | 11.040 | 0.14 |
| Percentage of clozapine | 19 | -0.999 | -5.439 | 3.441 | 0.66 | 19 | 2.175 | -4.186 | 8.535 | 0.50 | 5 | 0.084 | -6.001 | 6.170 | 0.98 |
| Percentage of chlorpromazine | **14** | **5.891** | **0.634** | **11.148** | **0.03** | 14 | 7.552 | -0.030 | 15.134 | 0.05 | 3 | 9.547 | -53.264 | 72.358 | 0.77 |
| Percentage of aripiprazole | 15 | -1.216 | -4.415 | 1.983 | 0.72 | 15 | -0.798 | -5.434 | 3.838 | 0.85 | 4 | 1.789 | -0.609 | 4.188 | 0.14 |
| Mean chlorpromazine equivalent | 6 | 0.001 | -0.001 | 0.002 | 0.36 | 7 | < 0.001 | -0.002 | 0.001 | 0.40 | | | | | |
| Other psychotropic drugs | | | | | | | | | | | | | | | |
| Percentage of antidepressants | 21 | -2.724 | -8.407 | 2.958 | 0.35 | 23 | -6.179 | -12.801 | 0.443 | 0.07 | 7 | 0.393 | -12.218 | 13.003 | 0.95 |
| Percentage of mood stabilizers | 10 | -0.655 | -9.266 | 7.957 | 0.88 | 11 | -0.058 | -11.933 | 11.816 | 0.99 | | | | | |
| Percentage of anxiolytics | 5 | -0.255 | -8.543 | 8.032 | 0.95 | 7 | -3.330 | -12.590 | 5.930 | 0.48 | | | | | |
| Percentage of anticholinergics | 9 | 1.574 | -4.052 | 7.200 | ns | | | | | | | | | | |
| Percentage of hypnotics | | | | | | 4 | 1.261 | -5.084 | 7.606 | 0.70 | | | | | |

## Supplementary material 31. Factors associated with the prevalence of sex specific dysfunctions in men with schizophrenia: meta-regression analyses.

| | Men sexual Dysfunction pooled prevalence estimates (95%CI): 0.557 (0.481-0.631) | | | | | Men Erection Disorder pooled prevalence estimates (95%CI): 0.440 (0.335-0.552) | | | | | Men Ejaculation Disorder pooled prevalence estimates (95%CI): 0.386 (0.268-0.518) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | N | Estimate | Lower limit | Upper limit | p value | N | Estimate | Lower limit | Upper limit | p value | N | Estimate | Lower limit | Upper limit | p value |
| Sexual dysfunction | | | | | | **32** | **3.771** | **1.846** | **5.696** | **<.001** | 19 | 1.944 | -0.763 | 4.651 | 0.16 |
| Erection Disorder | **33** | **3.166** | **1.964** | **4.368** | **<.001** | | | | | | **17** | **5.036** | **3.916** | **6.156** | **<.001** |
| Ejaculation disorder | 19 | 1.083 | -0.651 | 2.816 | 0.22 | **16** | **4.583** | **3.252** | **5.914** | **<.001** | | | | | |
| Year | 44 | 0.007 | -0.026 | 0.040 | 0.69 | | | | | | 19 | 0.033 | -0.021 | 0.087 | 0.23 |
| Sociodemographics | | | | | | | | | | | | | | | |
| Mean age | 17 | < 0.001 | -0.087 | 0.086 | 0.99 | 11 | -0.015 | -0.131 | 0.101 | 0.80 | 5 | 0.015 | -0.125 | 0.156 | 0.83 |
| Addictions | | | | | | | | | | | | | | | |
| Smokers | 4 | 3.996 | -2.867 | 10.859 | 0.25 | 4 | 4.190 | -6.571 | 14.950 | 0.45 | | | | | |
| Alcohol use disorder | 21 | -6.067 | -19.800 | 7.665 | 0.39 | 16 | -16.900 | -48.523 | 14.724 | 0.29 | 8 | -8.994 | -33.463 | 15.475 | 0.47 |
| Cannabis use disorder | 17 | -6.032 | -20.483 | 8.419 | 0.41 | 13 | -18.695 | -45.941 | 8.552 | 0.18 | 7 | -13.118 | -33.446 | 7.209 | 0.21 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Psychiatric diagnosis and illness severity | | | | | | | | | | | | | | | |
| Schizophrenia | 27 | 0.480 | -2.208 | 3.197 | 0.73 | **23** | **2.974** | **0.136** | **5.812** | **0.04** | 12 | 0.930 | -6.098 | 7.959 | 0.80 |
| Schizoaffective disorders | 26 | -1.733 | -16.356 | 12.890 | 0.82 | 22 | -22.057 | -56.731 | 12.618 | 0.21 | 11 | 6.219 | -9.794 | 22.233 | 0.45 |
| Mean age at illness onset | 4 | -0.146 | -0.373 | 0.081 | 0.23 | 3 | 0.064 | -0.190 | 0.318 | 0.62 | | | | | |
| Mean illness duration | 9 | -0.160 | -0.329 | 0.009 | 0.06 | **6** | **-0.236** | **-0.442** | **-0.029** | **0.03** | | | | | |
| Hyperprolactinemia | 7 | 0.277 | -2.477 | 3.032 | 0.84 | 3 | 2.397 | -0.506 | 5.299 | 0.11 | | | | | |
| Antipsychotics | | | | | | | | | | | | | | | |
| Percentage of first-generation antipsychotics | 23 | -0.090 | -1.285 | 1.105 | 0.88 | 17 | -1.107 | -2.947 | 0.733 | 0.22 | 9 | 2.568 | -0.574 | 5.709 | 0.11 |
| Percentage of second-generation antipsychotics | 23 | 0.220 | -0.792 | 1.232 | 0.67 | 18 | 0.575 | -0.962 | 2.111 | 0.51 | 10 | -0.794 | -3.245 | 1.658 | 0.53 |
| Percentage of antipsychotic polytherapy | 18 | -0.501 | -2.165 | 1.163 | 0.56 | 13 | -1.106 | -3.786 | 1.574 | 0.42 | 6 | -0.504 | -4.107 | 3.099 | 0.78 |
| Percentage of amisulpride, risperidone, or haloperidol (high anti-D2 potency) | | | | | | 16 | -0.560 | -3.677 | 2.557 | 0.72 | 11 | 1.238 | -1.657 | 4.133 | 0.40 |
| Percentage of amisulpride | 17 | -6.945 | -37.778 | 23.889 | 0.66 | 13 | -21.898 | -61.133 | 17.336 | 0.31 | 9 | -14.092 | -44.589 | 16.404 | 0.37 |
| Percentage of risperidone | 19 | 1.283 | -0.927 | 3.492 | 0.26 | 14 | 1.282 | -4.090 | 6.653 | 0.62 | 10 | -0.979 | -6.863 | 4.904 | 0.74 |
| Percentage of haloperidol | 18 | -0.599 | -3.827 | 2.629 | 0.72 | 13 | -3.445 | -8.657 | 1.767 | 0.23 | 9 | 1.528 | -3.090 | 6.146 | 0.52 |
| Percentage of olanzapine, quetiapine, or clozapine (low anti-D2 potency) | | | | | | 15 | 1.896 | -0.417 | 4.209 | 0.11 | 11 | -0.648 | -3.684 | 2.388 | 0.68 |
| Percentage of olanzapine | 19 | -0.878 | -2.544 | 0.788 | 0.30 | 13 | 0.809 | -2.583 | 4.201 | 0.73 | 10 | -0.046 | -4.834 | 4.743 | 0.99 |
| Percentage of quetiapine | 18 | 1.958 | -1.717 | 5.632 | 0.30 | 13 | 2.497 | -2.743 | 7.737 | 0.34 | 10 | -1.924 | -8.589 | 4.742 | 0.57 |
| Percentage of clozapine | 20 | 2.547 | -0.302 | 5.395 | 0.08 | 14 | 2.036 | -2.354 | 6.425 | 0.33 | 11 | -2.755 | -9.337 | 3.827 | 0.41 |
| Percentage of chlorpromazine | 18 | -1.116 | -9.673 | 7.441 | 0.80 | 13 | 1.332 | -10.483 | 13.147 | 0.81 | **10** | **68.206** | **8.646** | **127.766** | **0.03** |
| Percentage of aripiprazole | 17 | -3.508 | -8.225 | 1.208 | 0.14 | 13 | -3.822 | -11.313 | 3.670 | 0.36 | 9 | -2.726 | -8.634 | 3.181 | 0.37 |
| Mean chlorpromazine equivalent | 5 | 0.003 | -0.002 | 0.007 | 0.24 | **4** | **0.003** | **0.001** | **0.005** | **0.01** | **10** | **68.206** | **8.646** | **127.766** | **0.03** |
| Other psychotropic drugs | | | | | | | | | | | | | | | |
| Percentage of antidepressants | 22 | -2.671 | -6.378 | 1.037 | 0.16 | **18** | **-6.302** | **-10.820** | **-1.783** | **0.006** | **11** | **-6.103** | **-10.678** | **-1.527** | **0.009** |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of mood stabilizers | 4 | -6.237 | -17.887 | 5.414 | 0.29 | **3** | **-13.210** | **-17.587** | **-8.832** | **<.001** | **3** | **-11.571** | **-16.343** | **-6.798** | **<.001** |
| Percentage of anxiolytics | **6** | **-9.388** | **-17.519** | **-1.256** | **0.02** | **6** | **-10.504** | **-16.488** | **-4.519** | **<.001** | 5 | -7.255 | -14.781 | 0.271 | 0.06 |
| Percentage of anticholinergics | **3** | **-4.019** | **-5.747** | **-2.291** | **<.001** | 3 | -4.174 | -11.134 | 2.786 | 0.24 | | | | | |

## Supplementary material 32. Factors associated with the prevalence of sex specific dysfunctions in women with schizophrenia: meta-regression analyses.

| | Women Sexual Dysfunction pooled prevalence estimates (95%CI) : 0.600 (0.480-0.708) | | | | | Amenorrhea pooled prevalence estimates (95%CI) : 0.251 (0.173-0.350) | | | | | Galactorrhea pooled prevalence estimates (95%CI) : 0.077 (0.037-0.153) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | N | Estimate | Lower limit | Upper limit | p value | N | Estimate | Lower limit | Upper limit | p value | N | Estimate | Lower limit | Upper limit | p value |
| Sexual dysfunction | | | | | | **5** | **2.825** | **1.693** | **3.956** | **<.001** | 4 | 2.343 | -1.970 | 6.655 | 0 .29 |
| Amenorrhea | **5** | **7.492** | **4.639** | **10.345** | **<.001** | | | | | | **4** | **20.249** | **4.282** | **36.216** | **0.01** |
| Galactorrhea | 4 | 7.353 | -33.046 | 47.752 | 0.72 | 4 | 4.845 | -1.048 | 10.738 | 0.11 | | | | | |
| Year | 32 | 0.041 | -0.016 | 0.098 | 0.16 | **6** | **0.062** | **0.014** | **0.109** | **0.01** | 5 | -0.032 | -0.241 | 0.177 | 0.77 |
| Sociodemographics | | | | | | | | | | | | | | | |
| Mean age | 12 | -0.015 | -0.100 | -0.070 | 0.73 | | | | | | | | | | |
| Addictions | | | | | | | | | | | | | | | |
| Alcohol use disorder | 10 | -42.279 | -123.025 | 38.466 | 0.30 | | | | | | | | | | |
| Cannabis use disorder | 10 | -16.912 | -49.21 | 15.386 | 0.30 | | | | | | | | | | |
| Psychiatric diagnosis and illness severity | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Schizophrenia | 20 | 0.386 | -2.781 | 3.554 | 0.81 | | | | | | | | | | |
| Schizoaffective Disorders | 19 | -1.895 | -6.907 | 3.117 | 0.46 | | | | | | | | | | |
| Mean age at illness onset | 4 | 0.105 | -0.366 | 0.576 | 0.66 | | | | | | | | | | |
| Mean illness duration | 8 | -0.038 | -0.105 | 0.029 | 0.27 | | | | | | | | | | |
| PANSS Total Score | 3 | 0.021 | -0.012 | 0.054 | 0.21 | | | | | | | | | | |
| PANSS Positive Score | **3** | **0.448** | **0.174** | **0.722** | **0.001** | | | | | | | | | | |
| PANSS Negative Score | 3 | 0.076 | -0.047 | 0.198 | 0.23 | | | | | | | | | | |
| Antipsychotics | | | | | | | | | | | | | | | |
| Percentage of first-generation antipsychotics | 12 | 0.341 | -3.010 | 3.692 | 0.84 | 3 | -7.603 | -15.509 | 0.302 | 0.06 | 3 | 0.307 | -21.120 | 21.735 | 0.98 |
| Percentage of second-generation antipsychotics | 12 | -1.047 | -3.525 | 1.431 | 0.41 | 3 | 7.603 | -0.302 | 15.509 | 0.06 | 3 | -0.307 | -21.735 | 21.120 | 0.98 |
| Percentage of antipsychotic polytherapy | 9 | 0.820 | -4.085 | 5.725 | 0.74 | 4 | -1.079 | -6.815 | 4.658 | 0.72 | 3 | 3.037 | -5.412 | 11.486 | 0.48 |
| Percentage of amisulpride, risperidone, or haloperidol (high anti-D2 potency) | 11 | 0.439 | -2.888 | 3.767 | 0.80 | 4 | 0.471 | -7.898 | 8.840 | 0.91 | 4 | -0.663 | -8.370 | 7.044 | 0.87 |
| Percentage of amisulpride | 8 | -35.332 | -126.999 | 56.335 | 0.45 | | | | | | | | | | |
| Percentage of risperidone | 11 | 0.260 | -4.035 | 4.555 | 0.91 | 4 | 4.817 | -1.756 | 11.391 | 0.15 | 4 | -1.487 | -20.540 | 17.566 | 0.88 |
| Percentage of haloperidol | 9 | 1.671 | -5.884 | 9.227 | 0.66 | **4** | **-7.229** | **-13.899** | **-0.558** | **0.03** | 4 | -1.183 | -14.120 | 11.754 | 0.86 |
| Percentage of olanzapine, quetiapine, or clozapine (low anti-D2 potency) | 10 | -0.118 | -3.036 | 2.800 | 0.94 | 4 | 0.711 | -3.199 | 4.621 | 0.72 | 4 | -0.968 | -6.084 | 4.148 | 0.71 |
| Percentage of olanzapine | 10 | -0.201 | -2.872 | 2.471 | 0.88 | 4 | 1.152 | -2.820 | 5.124 | 0.57 | 4 | -1.253 | -5.614 | 3.108 | 0.57 |
| Percentage of quetiapine | 8 | -4.949 | -13.782 | 3.885 | 0.27 | **3** | **-20.033** | **-31.210** | **-8.855** | **<.001** | **3** | **-28.031** | **-45.692** | **-10.371** | **0.002** |
| Percentage of clozapine | 9 | 5.202 | -2.777 | 13.180 | 0.20 | | | | | | 3 | 4.632 | -5.147 | 14.411 | 0.35 |
| Percentage of chlorpromazine | 8 | -5.368 | -142.200 | 131.464 | 0.94 | | | | | | | | | | |
| Percentage of aripiprazole | 9 | -3.277 | -12.019 | 5.465 | 0.46 | 4 | -6.651 | -42.027 | 28.726 | 0.72 | 4 | 10.362 | -35.161 | 55.886 | 0.66 |
| Other psychotropic drugs | | | | | | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of antidepressants | 13 | -1.245 | -5.230 | 2.740 | 0.54 | 3 | -3.499 | -14.371 | 7.373 | 0.53 |
| Percentage of mood stabilizers | 4 | -11.682 | -39.181 | 15.817 | 0.41 | | | | | |
| Percentage of anxiolytics | 4 | -1.355 | -12.439 | 9.729 | 0.81 | | | | | |

## Supplementary material 33. Comparative pooled prevalence estimates of sexual dysfunction and its 95% confidence interval of the Inverse variance method vs. Random intercept logistic regression model

| Outcome | | Inverse variance method | Random intercept logistic regression model |
|---|---|---|---|
| **Sexual Dysfunction** | **Random Effects** | 0.5640 [0.5047; 0.6216] | 0.5701 [0.5090; 0.6291] |
| | **Heterogeneity($i^2$)** | 98.2% [98.1%; 98.4%] | 98.2% [98.1%; 98.4%] |
| **Genital Pain** | **Random Effects** | 0.0606 [0.0279; 0.1268] | 0.0488 [0.0206; 0.1115] |
| | **Heterogeneity($i^2$)** | 88.9% [81.6%; 93.2%] | 88.4% [80.8%; 93.0%] |
| **Orgasm Dysfunction** | **Random Effects** | 0.2802 [0.1839; 0.4020] | 0.2530 [0.1542; 0.3861] |
| | **Heterogeneity($i^2$)** | 96.6% [95.9%; 97.1%] | 96.5% [95.8%; 97.1%] |
| **Libido Dysfunction** | **Random Effects** | 0.4064 [0.3068; 0.5143] | 0.4154 [0.3064; 0.5335] |
| | **Heterogeneity($i^2$)** | 96.2% [95.4%; 96.8%] | 96.1% [95.3%; 96.8%] |
| **Sexual Dysfunction in Men** | **Random Effects** | 0.5573 [0.4811; 0.6308] | 0.5650 [0.4864; 0.6405] |
| | **Heterogeneity($i^2$)** | 97.6% [97.3%; 97.9%] | 97.6% [97.3%; 97.9%] |
| **Ejaculation Disorder** | **Random Effects** | 0.3858 [0.2685; 0.5181] | 0.3812 [0.2656; 0.5121] |
| | **Heterogeneity($i^2$)** | 96.8% [96.0%; 97.5%] | 96.8% [96.0%; 97.5%] |
| **Erection Disorder** | **Random Effects** | 0.4404 [0.3346; 0.5520] | 0.4437 [0.3348; 0.5584] |
| | **Heterogeneity($i^2$)** | 94.4% [93.0%; 95.5%] | 94.4% [93.0%; 95.5%] |
| **Sexual Dysfunction in Women** | **Random Effects** | 0.5997 [0.4803; 0.7084] | 0.6061 [0.4855; 0.7151] |
| | **Heterogeneity($i^2$)** | 96.3% [95.5%; 96.9%] | 96.3% [95.5%; 96.9%] |
| **Amenorrhea** | **Random Effects** | 0.2514 [0.1728; 0.3504] | 0.2494 [0.1778; 0.3380] |
| | **Heterogeneity($i^2$)** | 86.0% [71.7%; 93.1%] | 86.0% [71.7%; 93.1%] |
| **Galactorrhea** | **Random Effects** | 0.0770 [0.0370; 0.1533] | 0.0725 [0.0364; 0.1394] |
| | **Heterogeneity($i^2$)** | 76.8% [43.5%; 90.4%] | 76.8% [43.5%; 90.4%] |