

Supplementary Table 1 Evidence on mental disorders in Gujarat

Sr. no.	Author / year	Location	Target population	Study type	Design / tool	Sample	Mental health outcome	Key findings
A General population								
1	Gururaj et al., 2016 [10]	India; Gujarat included in NMHS	General population	National population-based epidemiological study	Cross-sectional survey; MINI, MINI-Kid, GHQ, SDQ and other structured tools	34,802 nationally	Mental morbidity, CMD, SMD, substance use, suicide	National current prevalence was 10.6%; Gujarat-specific estimate was approximately 7.8%. Gujarat showed higher rural than urban mental morbidity.
2	Dadwani & Thomas, 2014 [11]	Gujarat	Community population	Epidemiological study	Community-based epidemiological survey	1,600	Mental morbidity and help-seeking	Overall mental morbidity was approximately 5.7%; anxiety 2.4%, psychosis 0.8%, and mood disorder 2.1%.
B Children adolescents and students								
3	Nair et al., 2017 [12]	Anand district, Gujarat	School-going adolescents aged 13–17 years	Epidemiological study	School-based cross-sectional study; SDQ and TSQ	693	Emotional and behavioural difficulties	Approximately 15% had high SDQ scores; girls had more emotional problems, and rural adolescents had higher overall difficulties.
4	Puwar et al., 2018 [13]	Sabarkantha district, Gujarat	School-going adolescents	Epidemiological study	Cross-sectional study; SDQ	477	Emotional and behavioural difficulties	Approximately 14% were vulnerable to mental health problems; internalising and externalising difficulties were identified.
5	Patel & Patel, 2020 [14]	Rajkot, Gujarat	School-going adolescents	Epidemiological study	Cross-sectional study; BAI and BDI	1,026	Anxiety and depression	Moderate-to-severe anxiety was 9.9% and depression was 18.5%; depression varied by age, sex and socioeconomic position.
6	Chokshi et al., 2021 [15]	Gujarat	Higher-secondary students	Epidemiological study	Comparative cross-sectional study; DASS-42	460	Depression, anxiety and stress	Science-stream students had higher depression and anxiety scores; academic pressure, gender, family type and stream choice were associated with distress.
7	Chauhan et al., 2022 [16]	Rajkot, Gujarat	Higher-secondary science students	Epidemiological study	Cross-sectional study; modified PHQ-9 for adolescents	1,219	Depression, dysthymia and suicidal risk	Depression was 31.99%, dysthymia 20.59%, and suicidal risk 1.64%; higher burden was observed among girls (37.28%), class 12 students (38.06%).
8	Patel et al., 2024 [17]	Mehsana district, Gujarat	Undergraduate students	Epidemiological study	Cross-sectional study; DASS-21	1,330	Depression, anxiety and stress	Depression was 59.47%, anxiety 66.84%, and stress 41.05%; convenience sampling limits generalisability.
9	Yogesh et al., 2024 [18]	Gujarat	Adolescents aged 15–19 years	Epidemiological Behavioural study	Cross-sectional study; SAS-SV, PSDQ, DASS-21	560	Smartphone addiction and mental wellbeing	Smartphone addiction was 64.6%; urban residence, higher socioeconomic status, prolonged smartphone use and authoritarian/permissive parenting were associated with higher risk.
C Middle aged and older adults								
10	Perianayagam et al., 2022 [19]	India and 35 states/UTs, including Gujarat	Adults aged 45 years or older	Population-based epidemiological study	LASI Wave 1; multistage probability sampling; CIDI-SF	72,250 nationally 2,341 Gujarat	Major depressive episodes	Depression: 3.26% (95% CI: 2.52–3.99); higher among women (3.7%) than men (2.3%) and in rural areas (3.5%) than urban areas (2.7%).
11	Zalavadiya et al., 2017 [20]	Rajkot city, Gujarat	Adults aged 60 years or older in old-age homes and the community	Epidemiological study	Comparative cross-sectional study; Gujarati GDS-Short Form	88 old-age-home residents; 180 community residents	Depressive symptoms	Depressive symptoms were found in 46.6% of old-age-home residents and 32.2% of community residents (OR 1.84; 95% CI 1.09–3.06). Age, weak family ties, economic difficulty, chronic illness, loneliness and impaired sleep were associated factors.
12	Gandhi et al., 2024 [21]	Urban slums, coastal Saurashtra	Adults aged ≥60 years	Epidemiological study	Community-based cross-sectional study; GDS-30 and Sheehan Disability Scale	450	Geriatric depression	Any depression was 36.0% (mild 28.67%; severe 7.33%); mental-health service use and awareness of relevant programmes were low.
D Tuberculosis affected populations								
13	Sharma et al., 2022 [22]	Ahmedabad city; all 23 tuberculosis units	Adults registered with multidrug-resistant TB	Epidemiological study	Cross-sectional study; probability-proportional-to-size sampling; Gujarati HAM-D-17	251 sampled; 185 contacted	Depression	Depression prevalence was 16.2%; family problems, discrimination, financial or other stressors, and adverse drug events were associated factors.

14	Patel et al., 2024 [23]	Jamnagar, Gujarat	Pulmonary TB patients and household contacts	Epidemiological study	Cross-sectional study; PHQ-9 and HAM-A	272 TB patients and 544 households	Depression and anxiety	Depression was 36.0% among TB patients and 24.8% among household contacts; anxiety was 31.3% among TB patients and 20.6% among contacts. Low income, stigma and low social support were predictors.
15	Chauhan et al., 2024 [24]	Gandhinagar and Surat, Gujarat	TB patients	Epidemiological study	Cross-sectional study; PHQ-4, Perceived TB Stigma Scale and risk-factor tool	7,056 TB patients	Anxiety and depression	Anxiety symptoms were 10.5% and depressive symptoms 5.0%; perceived TB stigma, longer illness duration, gender, occupation and socioeconomic status were associated factors.
16	Murugan et al., 2024 [25]	Gujarat	MDR-TB patients and household contacts	Epidemiological study	Mixed-methods study; PHQ-9, HAM-A and qualitative interviews	403 MDR-TB patients and 403 household contacts	Depression, anxiety and psychosocial burden	MDR-TB patients experienced substantial depression and anxiety; household contacts also reported psychological burden. Qualitative findings highlighted stigma, treatment stress and need for integrated psychosocial care.
E Women & Postpartum women								
17	Soni et al., 2016 [26]	Rural western India / Gujarat	Women	Epidemiological study	Cross-sectional survey; SRQ-20	658	Common mental disorder symptoms	22.8% screened positive for CMD symptoms; most symptomatic women were undiagnosed despite previous health-system contact.
18	Fahey et al., 2016 [27]	Rural Anand district, Gujarat	Reproductive-aged women	Determinant study	Cross-sectional survey; SRQ-20 and multivariable regression	700 enrolled; 663 analysed	Common mental disorder symptoms and determinants	A positive CMD screen was found in 23.7%. Stress, poverty, food insecurity and traumatic thoughts increased risk, while education attenuated the stress–CMD relationship. This analysis overlaps with the Soni et al. cohort but addresses a distinct determinant question.
19	Desai, Mehta & Ganjiwale, 2012 [28]	Gujarat	Postpartum women up to one year after delivery	Postpartum depression study	Cross-sectional study; DSM-IV-TR diagnostic criteria and predictive index of postnatal depression	200	Postpartum depression	Reported postpartum depression prevalence of 12.5%; predictors included birth of a girl child, multigravida status, history of miscarriage, pregnancy tension, inability to confide in husband, and lack of trusted support.
20	Patel et al., 2015 [29]	Anand district, Gujarat	Postpartum mothers	Postpartum depression study	Hospital-based cross-sectional study; Gujarati EPDS	134	Postpartum depression	Reported postpartum depression prevalence of 48.5% using Gujarati EPDS cut-off of 10.5; associated factors included maternal age, socioeconomic status, family type, violence from husband, gravida, parity and sex of infant.
21	Bansal et al., 2018 [30]	Anand/Karamsad, Gujarat	Mothers in postnatal ward / NICU setting	Postpartum depression and newborn care study	Hospital-based survey; Gujarati EPDS	205	Postpartum depressive symptoms and newborn care	Reported postpartum depressive symptoms and association with poorer newborn care and infant feeding practices.
22	Modi, Parikh & Valipay, 2018 [31]	Ahmedabad, Gujarat	Postpartum women	Postpartum depression study	Cross-sectional study; EPDS	250	Postpartum depression	Reported postpartum depression prevalence of 20.4% and examined correlation with risk factors.
23	Amipara, Baria & Nayak, 2020 [32]	Valsad district, Gujarat	Mothers attending Anganwadi centres	Community-based postpartum depression study	Cross-sectional study; Gujarati EPDS	116	Postpartum depression	Postpartum depression prevalence was 6.8%; associated with family relationship, childcare support, literacy, age at marriage, desired sex of child, infant feeding and child nutritional status.
24	Tanna & Unadkat, 2023 [33]	Gujarat	Women at six months postpartum	Postpartum depression and anxiety study	Cross-sectional study; EPDS	100	Postpartum depression and anxiety	Reported postpartum depression and/or anxiety in approximately 23.2%; correlates included socioeconomic position, past depression/anxiety, education, occupation, family support and stress.
25	Surati et al., 2024 [34]	Gujarat	Postpartum women within 12 months of delivery	Postpartum depression study	Cross-sectional study; EPDS, social support, breastfeeding attitudes and self-efficacy measures	403	Postpartum depression	No depression 49.9%, mild depression 28.8%, moderate depression 16.6% and severe depression 4.7%; PPD was associated with social support, breastfeeding attitudes and self-efficacy.
26	Kansagra et al., 2025 [35]	Rajkot, Gujarat; tertiary-care hospital	Women 1–12 months postpartum	Epidemiological study	Cross-sectional study; systematic random sampling; EPDS	450	Postpartum depression	Postpartum depression prevalence was 14.2%; maternal age, education, family type, age at first pregnancy, parity and history of abortion were associated factors.
F Socially vulnerable population								
27	Prajapati et al., 2014 [36]	Ahmedabad city, Gujarat	Men who have sex with men	Epidemiological study	Descriptive cross-sectional study;	410	Psychiatric morbidity	Psychiatric morbidity prevalence was 52.9%; anxiety/insomnia and severe-depression subscale scores were prominent. No eligible

			attending NGO drop-in centres		purposive sampling; GHQ-28			Gujarat-specific female-sex-worker study was identified in the supplied references.
G Determinants service gaps and intervention evidence								
28	Patel et al., 2023 [37]	Rajkot, Gujarat	Higher-secondary science students	Determinant study	Analytical cross-sectional study; same/similar Rajkot science-stream student dataset	1,219	Determinants of depression	Identified academic and sociodemographic determinants of depression.
29	Nagar et al., 2025 [38]	Tribal district, Gujarat	Tribal community stakeholders and PHC providers	Qualitative public health study	Qualitative interviews / stakeholder discussions	14 in-depth interviews: 2 Panchayati Raj Institution members, 4 PHC medical officers and 8 local practitioners	Mental health perspectives and service gaps	Identified low mental health literacy, supernatural/stress explanations, reliance on traditional healers, and need for PHC-level training, OPD access and medicines.
30	Pathare et al., 2023 [39]	Rural Gujarat	Rural adults with depression/anxiety symptoms	Intervention study	Stepped-wedge cluster randomised controlled trial; PHQ-9, GAD-7, SRQ-20 and other measures	1,191	Recovery from depression/anxiety symptoms	Atmiyata community champion-led psychosocial intervention improved recovery from depression/anxiety symptoms at 3 and 8 months.
31	Comptroller and Auditor General of India, 2020 [40]	Gujarat	Public mental health services	Government audit	Review of records, programme implementation and service delivery	State audit evidence	Implementation, workforce and service integration	Identified gaps in staffing, infrastructure, programme implementation and integration of mental health care across public facilities.
32	Directorate General of Health Services, 2025 [41]	India, including Gujarat	National and district mental health programmes	Programme framework	National Mental Health Programme and District Mental Health Programme guidance	Not applicable	Service organization, early detection, treatment and referral	Defines the national programme architecture for community-based care, district services, workforce development and referral linkages.
33	Government of Gujarat, 2024 [42]	Gujarat	Ayushman Arogya Mandirs and their catchment populations	State implementation plan	Screening, counselling, referral, follow-up, mentoring and community activities	Statewide implementation framework	Primary-care integration of mental health services	Provides a structured pathway for screening and primary management through Ayushman Arogya Mandirs, with referral and follow-up mechanisms.
34	Department of Health and Family Welfare, Gujarat, 2024 [43]	Gujarat	Primary-care users requiring mental health, elderly or palliative services	Government resolution	Administrative authorization for screening and primary management services	Not applicable	Strengthening of primary-level screening and management	Formalizes the expansion of screening and primary management for mental health disorders within Gujarat's public health system.