

Prevalence, Persistence, and Severity of 12-Month and 30-Day DSM-5 Disorders in the Turkish World Mental Health Survey



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ABSTRACT

Objective: No national mental health survey was conducted in Türkiye in the last 30 years. We implemented such a survey in a representative sample of 1.790 adults in the Turkish household population using the World Mental Health Initiative Composite International Diagnostic Interview for DSM-5 (CIDI-5). The current report presents data on 12-month and 30-day prevalence, persistence, severity and sociodemographic correlates of disorders in this Turkish World Mental Health (WMH) Survey.

Methods: Adults in a nationally representative sample of 4.067 Turkish households were selected for interview in October 2019. Fieldwork ended prematurely on March 17, 2020, due to COVID-19 pandemic travel restrictions. The 1.790 interviews completed as of that date represent a survey cooperation rate of 44.0% and a survey response rate of 25.6%.

Results: The 12-month and 30-day prevalences of any DSM-5/CIDI disorder were 23.9% and 18.3%, respectively. Anxiety disorders (17.2%) were the most common class of disorders followed by mood disorders (12.4%). Most profiles were either severe (32.8%) or moderate (43.8%). Anxiety and mood disorders were more common among females than males, while externalizing disorders were more common among males than females. Overall disorder prevalence was associated with being female, younger age and low education.

Conclusion: Nearly 1 in 4 Turkish adults meet criteria for one or more common 12-month DSM-5 disorders. These results underscore the need for improved mental health services for vulnerable groups and for longitudinal research to understand the mental health effects of stressors such as the COVID-19 pandemic, forced migration, or the recent earthquakes.

Keywords: DSM-5, epidemiology, mental health, prevalence, Türkiye

INTRODUCTION

According to the World Health Organization (WHO)'s global health estimates, depressive and anxiety disorders -the two most common groups of mental disorders- rank among the leading causes of Years Lived with Disability (YLD) in all WHO regions (WHO 2017). The burden of these and other mental disorders is compounded by the fact that only a minority of the people living with these disorders receive

adequate treatment and often receive no treatment at all (Vigo 2023, WHO 2020). To address these challenges, epidemiological surveys are indispensable tools for assessing the scope of mental disorders across diverse populations. The largest coordinated series of mental health needs assessment surveys worldwide is the World Mental Health (WMH) Survey Initiative, conducted in over 30 countries (McGrath et al. 2023). These surveys provide valuable data on the type, frequency, and severity of mental disorders, while also

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providing information that can help guide public health policy (Kessler and Üstün 2004). A major strength of the WMH surveys is their use of a common instrument –the Composite International Diagnostic Interview (CIDI)– and standardized methodology across participating countries, which enables robust cross-cultural comparisons.

To date, few nationally representative population-based surveys have been conducted in Türkiye to determine the prevalence of mental disorders. The first field surveys in the 1960 s suggested that around 20% of the population had mental health problems requiring treatment but the criteria for defining need for treatment were not consistent with current diagnostic standards (Küey et al. 1987). Research on the epidemiology of mental disorders since the 1980 s has shifted towards specific disorders, most often depression (Küey 2010, Binbay et al. 2014, Kılıç 2020, Aydın et al. 2025). Although some large-scale surveys reported data on mental health issues, most were not specifically designed to assess mental disorders. For instance, the Türkiye Household Health Surveys on the Prevalence of Risk Factors for Noncommunicable Diseases (The Ministry of Health of Türkiye, 2025b) assessed only alcohol and tobacco use and did not employ diagnostic criteria. In a multi-center WHO study conducted in 14 countries, the prevalence of mental disorders was reported at 17.6%, though the participants were limited to primary health care patients in Ankara (Rezaki et al. 1995). At the national level, the Mental Health Profile of Türkiye (“the Profile”), coordinated by the International Consortium for Psychiatric Epidemiology (ICPE, Kessler et al. 1999) was the first nationally representative study on mental health-related prevalence rates (Kılıç 1998). The results of that study, which used an earlier version of CIDI in a household sample of 7,479 adults, found that mental disorder prevalence was lower than those in most Western countries (Andrade et al. 2000, 2003). However, these prevalence data have not been updated in nearly three decades. Currently, existing prevalence estimates for Türkiye primarily come from the Global Burden of Disease (GBD) Study (Institute for Health Metrics and Evaluation 2021), which identifies mental disorders as the leading cause of nonfatal disease burden in the Eastern Mediterranean Region (Charara et al. 2017). However, the GBD relies heavily on modeled estimates extrapolated from other countries, and often incorporates fragmented or partial local data (Casella et al. 2025). Thus, while the GBD provides a valuable benchmark, its reliance on modeling assumptions may obscure local cultural factors, reporting biases, and context-specific risks, ultimately giving an incomplete or erroneous picture of the true burden of disease.

In the thirty years since the first Mental Health Profile of Türkiye, no national-scale mental health survey has been conducted. This is despite the fact that several regional and global events likely to negatively affect mental health took

place. These include natural disasters (Başoğlu et al. 2004, Boztaş et al. 2019, Kılıç and Ulusoy 2003), forced migration due to the civil war in Syria (Kaya et al. 2019), and other social or economic stressors. Türkiye has begun to respond through policy initiatives such as the National Mental Health Action Plan, introduced in 2011 to promote a user-centered, community-based model of care (The Ministry of Health of Türkiye 2011). The Turkish healthcare system has also undergone structural reform, with primary care clinics replaced by family health centers and the establishment of community mental health centers (Öcek et al. 2014). However, it is unclear how these changes have contributed to the country’s mental health landscape in recent years given that the low rates of help-seeking make it impossible to estimate need for treatment from data on demand and that factors outside the health system also affect mental health.

The present Turkish WMH survey, conducted as part of the World Mental Health Surveys, aims to obtain reliable data for policy planning on the prevalence and correlates of common mental disorders in the Turkish household population. The current report presents data on 12-month and 30-day prevalence, persistence, severity and basic sociodemographic correlates of common mental disorders. Subsequent reports will focus on lifetime prevalence, lifetime treatment and age of onset of DSM-5 disorders.

METHODS

Sample

The Turkish WMH survey sample was based on a stratified, clustered, multistage probability design targeting adults aged 18 or older residing in Turkish households. The Turkish Statistical Institute (TURKSTAT) drew the sample from its February 2019 enumeration of all 24,038,158 address-based households in the country. The population was divided for this purpose into clusters of 100 households. A probability sample of 350 clusters was selected, stratified across the 12 economic regions of the country (Fig. 1). From each cluster, 20 households were randomly selected (i.e., $350 \times 20 = 7,000$ households), yielding the target survey sample. The goal was to interview one randomly selected adult from each chosen household without replacement.

A minimum of 10 visits was made to each household (before classifying the household as “non-contact”) to enumerate residents, select one eligible resident at random, and complete the interview. Only Turkish citizens aged 18 years or older were eligible. As required by the exclusion criteria, 12 respondents with a mental illness severe enough to hinder participation (e.g., dementia, intellectual disability, psychosis), 13 with a physical illness severe enough to hinder participation (e.g., severe frailty, hearing or speech impairments), and 27 who



Figure 1. NUTS-1 regions of Türkiye *. * Some regions have been combined due to low response rates.

were unable to speak Turkish were excluded. A further 16 respondents, for whom no explanation was given for their ineligibility, were excluded as well (a total of 68 people). Notably, only a very small minority (likely less than 1%) of Turkish citizens is unable to speak Turkish, either as their primary language (approximately 90%) or as a second language acquired through public schooling. The selection of the person to be interviewed was not left to the interviewers. After enumerating all household residents and entering eligibility information provided by a household informant into a handheld tablet, the software installed on the tablet randomly selected the target respondent to be interviewed from among all eligible residents.

Field Procedures

Interviews were carried out by trained lay interviewers who completed the standard WMH interviewer training program (Kessler et al. 2018) and passed a test involving completing practice interviews to confirm proficiency in administration. Interviews were conducted using tablets. Standardized remote quality control monitoring was conducted using sample management and field quality software linked to computerized interview scripts (Pennell et al. 2008). Supervisors conducted follow-up assessments with probability subsamples of respondents, repeating selected key questions to check interviewer accuracy. A WMH protocol was also applied to data cleaning and coding.

The survey start date was October 16, 2019. Fieldwork was terminated five months later, on March 17, 2020, when travel restrictions were implemented by the Turkish government in response to the COVID-19 pandemic. Contacts were made

with 4,067 households and 2374 respondents completed interviews as of that date, for a household contact rate of 58.1% (4,067/7,000), a cooperation rate of 58.4% (2,374/4,067), and a response rate of 33.9% (2,374/7,000). Quality control review resulted in 1,790 of the interviews being accepted, with the others flagged for recontact to obtain additional information. It was not possible to make those recontacts, though, due to the strict COVID-19 restrictions imposed at the time fieldwork ended, resulting in only the 1,790 completed interviews being included in our analysis. Respondents whose interviews that did not pass the quality checks reported were similar to others in terms of age and sex; however they reported much lower prevalence rates. The modified survey cooperation and response rates based on this decision were 44.0% (the response rate among those contacted) (1,790/4,067) and 25.6% (1,790/7,000). The weighted sample was 49.5% female and had a median (inter-quartile range) age of 40 (28–54) years.

Measures

Diagnostic assessments were made using the fully structured, lay-administered Composite International Diagnostic Interview (CIDI). Developed initially to make diagnoses according to the definitions and criteria of both the DSM-IV and ICD-10 diagnostic systems, the CIDI was subsequently updated for DSM-5. The DSM-5 version was used in the current study and diagnostic results are presented using DSM-5 criteria. Blinded clinical reappraisal studies carried out in Asia (Ghimire et al. 2013, Lu et al. 2015), Europe (Haro et al. 2006, 2008), Latin America (Montoya Gonzalez et al. 2016), the Middle East (Kessler et al. 2020), and the US (Kessler

et al. 2004) found consistently good concordance between diagnoses based on the CIDI and those based on blinded gold standard clinical diagnostic interviews using DSM-IV criteria (First et al. 2002). Although the WMH survey in Qatar (Khaled et al. 2024a) has been the only one so far to evaluate concordance of CIDI diagnoses with clinical diagnoses using DSM-5 criteria (Amro et al. 2023), concordance was found to be generally good using the SCID for DSM-5 (First et al. 2002) as the gold standard (AUCs range from 0.67 for mania/hypomania at the lower end to a high of 0.81 for PTSD).

We used the TRAPD (Translation, Review, Adjudication, Pretesting, and Documentation) method stipulated by WMH to adapt the CIDI to Turkish (Harkness et al. 2008) (See Methodology-Appendix for details). TRAPD reduces the errors in cultural adaptation that can occur when using the conventional translation and back-translation method (Brislin 1986) by having multiple translators from different professional backgrounds carry out independent translations and then come together to discuss and reconcile differences using cognitive interviewing techniques such as thinking aloud and paraphrasing (Walde and Völlm 2023).

We focus in the current report on 30-day and 12-month prevalence and persistence of seven 12-month DSM-5 anxiety disorders (generalized anxiety disorder [GAD], panic disorder [PD], agoraphobia [AGO], specific phobia [SP], social anxiety disorder [SAD], post-traumatic stress disorder [PTSD], and obsessive-compulsive and related disorders [OCRD]), three mood disorders (major depressive disorder [MDD], persistent depressive disorder [PDD], and bipolar spectrum disorder [BSD], where the latter included either bipolar I disorder, bipolar II disorder, or subthreshold bipolar disorder; (Merikangas et al. 2011), and three externalizing disorders (intermittent explosive disorder [IED], alcohol use disorder [AUD], and substance use disorder [SUD]). While DSM-5 reclassified PTSD and OCD into separate diagnostic categories, we maintained their grouping under anxiety disorders to ensure consistency for comparisons with other WMH surveys using prior DSM-IV classifications. Findings on lifetime prevalence, services use and age-of-onset distributions of these disorders will be presented in a separate report.

Comorbidity was defined as the number of concurrent disorders (1, 2, or ≥ 3) in the 30-days and at any time in the 12-months before the survey. Twelve-month persistence was defined as the proportion of respondents who continued to meet criteria for a given disorder at some time in the 12 months before interview among those who met lifetime criteria for the disorder according to retrospective reports. 30-day disorder persistence was defined as the proportion of respondents who continued to meet criteria in the 30-days before interview among those who met 12-month criteria. Severity was categorized both for 12-month and 30-day cases with a three-tier distinction among severe, moderate,

and mild cases used for many years in the WMH Surveys (See Methodology Appendix for details). DSM-5 organic exclusion rules were not applied in making diagnoses. Diagnostic hierarchy rules were not applied other than for MDD and PDD with BSD.

Sociodemographic characteristics of respondents considered here include sex, age (18–34, 35–49, 50–64, 65+), marital status (married, never married, previously married), employment status (working versus all others), educational attainment, and family income. Educational attainment and income were both classified into four levels. For education, these were low (primary education or below), low-average (secondary education or post-secondary diploma), high-average (associate degree or bachelor's degree), and high (master's degree or above); high-average and high were combined to improve statistical power. For income they were low (less than half the sample median), low-average (up to the median), high-average (up to two times the median) and high (more than two times the median).

Analysis Methods

A series of weights was applied to the data before analysis: 1) a weight at the cluster level to adjust for between-cluster variation in response rates; 2) a second weight at the respondent level to adjust for differential within-household probability of selection due to only one interview being carried out in each household regardless of the number of eligible household residents; 3) a calibration weight based on a logistic regression analysis applied to the doubly-weighted respondent-level data based on the first two weights to adjust for discrepancies between the sample and the Census population on the distributions of key sociodemographic variables (Kott 2015).

We estimated 12-month and 30-day prevalence with these triply weighted data, generating separate estimates for any disorder, three broad disorder categories (anxiety, mood, and externalizing disorders), and each disorder. The models for persistence were estimated by assessing 12-month prevalence among lifetime cases and 30-day prevalence among 12-month cases. Severity was assessed for 12-month and 30-day disorders. Sociodemographic correlates of 12-month and 30-day prevalence, persistence, and severity were examined using logistic regression analysis. Standard errors of estimates were obtained using the Taylor series linearization method implemented in SAS version 9.4 (SAS Institute Inc 2013). Logits and their 95% confidence intervals (CIs) were exponentiated to produce odds ratios (ORs) and design-based 95% CIs. Multivariable significance tests of predictor sets were conducted using Wald chi-square tests with Taylor series design-based coefficient variance-covariance matrices. All significance tests were evaluated at $\alpha=0.05$ level with two-sided tests.

Role of Funding Sources

This survey was conducted with financial support from the Turkish Ministry of Health, while the design and implementation of the study were coordinated and supervised by the WMH Surveys Initiative. The funders of the study had no role in the design or conduct of the study; collection, management, analysis, or interpretation of the data; preparation, review, or approval of the manuscript; or the decision to submit the manuscript for publication.

RESULTS

Prevalence Estimates

The 12-month prevalence estimate of any DSM-5 CIDI disorder was 23.9%, with anxiety disorders (17.2%) the most common, followed by mood disorders (12.4%) and externalizing disorders (2.2%) (Table 1). The three disorders with highest estimated 12-month prevalence were PTSD (9.8%), MDD (7.1%), and OCD (6.3%). Overall, 13.9% of respondents met criteria for exactly one 12-month disorder, 5.2% two, and 4.8% three or more. These 12-month cases represented 63.5% of estimated lifetime cases, with anxiety disorders (63.0%) having higher 12-month persistence than mood disorders (58.9%) or externalizing disorders (47.5%). The highest 12-month persistence was found for SAD (80.2%) and the lowest for AUD (29.8%). Twelve-month

persistence of at least one disorder ranged between a low of 48.8% among respondents with one lifetime disorder and 87.9% among respondents with three or more lifetime disorders. The 30-day prevalence estimate of any disorder was 18.3%, with anxiety disorders (13.9%) again more common than either mood disorders (8.9%) or externalizing disorders (1.6%) and 30-day persistence among 12-month in the range 61.7% (AUD) to 100% (AGO) across disorders. Among respondents with three or more 12-month disorders, nearly all (98.2%) had at least one 30-day disorder.

Disorder Severity

One-third (32.8%) of respondents with 12-month disorders were classified as severe, 43.8% moderate, and 23.4% mild (Table 2). Higher proportions of externalizing disorders (55.3%) and mood disorders (49.7%) were rated severe than anxiety disorders (33.2%). The individual 12-month disorders most likely to be rated severe were BSD (60.3%), GAD (58.1%), and MDD (53.1%) (See Supplementary Table 1 for disorder distributions by severity). Comorbidity was strongly associated with severity, as 73.7% of respondents with three or more 12-month disorders were classified severe compared to 38.5% of those with two and 16.7% of those with one 12-month disorders. These overall patterns were quite similar for 30-day cases, with highest proportions severe for GAD, BSD, MDD, and high comorbidity.

Table 1. Twelve-month and 30-day prevalence and persistence of DSM-5/CIDI disorders in the WMH Türkiye survey (n=1,790)

	Prevalence		Persistence	
	12-month % (SE)	30-day % (SE)	12-month % (SE) ^a	30-day % (SE) ^b
Anxiety disorders				
Panic disorder	0.8 (0.2)	0.6 (0.1)	52.1 (11.2)	73.3 (12.4)
Generalized anxiety disorder	3.0 (0.7)	2.1 (0.4)	78.4 (5.6)	68.9 (5.0)
Specific phobia	2.5 (0.4)	1.6 (0.3)	64.3 (5.8)	66.8 (7.1)
Agoraphobia	0.3 (0.1)	0.3 (0.1)	61.5 (18.5)	100 (-)
Social anxiety disorder	0.9 (0.3)	0.7 (0.3)	80.2 (7.2)	74.5 (16.5)
Post-traumatic stress disorder	9.8 (1.0)	8.4 (0.7)	60.8 (4.7)	86.2 (3.3)
Obsessive-compulsive and related disorders	6.3 (1.3)	4.8 (1.2)	57.2 (6.9)	75.6 (5.8)
Any anxiety disorder	17.2 (1.0)	13.9 (1.0)	63.0 (2.3)	80.9 (3.4)
Mood disorders				
Major depressive disorder	7.1 (0.8)	4.5 (0.6)	59.1 (2.8)	64.2 (5.2)
Persistent depressive disorder	6.1 (0.6)	5.1 (0.6)	61.7 (3.2)	82.5 (3.3)
Bipolar spectrum disorders	2.8 (0.3)	1.9 (0.2)	66.6 (8.0)	65.5 (5.8)
Any mood disorder	12.4 (1.2)	8.9 (1.0)	58.9 (3.3)	71.3 (3.0)
Externalizing disorders				
Intermittent explosive disorder	1.2 (0.4)	0.9 (0.4)	75.9 (9.8)	74.6 (11.0)
Alcohol use disorder	0.9 (0.3)	0.6 (0.2)	29.8 (9.1)	61.7 (13.3)
Substance use disorder	0.2 (0.1)	0.2 (-)	31.5 (9.4)	63.3 (24.3)
Any externalizing disorder	2.2 (0.5)	1.6 (0.3)	47.5 (7.4)	71.9 (7.1)
Number of disorders				
One disorder	13.9 (0.6)	10.9 (1.1)	48.8 (1.3) ^c	63.4 (4.1) ^d
Two disorders	5.2 (0.6)	3.9 (0.6)	73.3 (2.8) ^c	92.4 (1.9) ^d
Three or more disorders	4.8 (0.6)	3.5 (0.4)	87.9 (3.3) ^c	98.2 (1.7) ^d
Any mental disorder	23.9 (1.3)	18.3 (1.5)	63.5 (1.6) ^c	76.6 (2.9) ^d

SE: standard error.

^a The 12-month persistence is calculated as the 12-month prevalence among lifetime cases.

^b The 30-day persistence is calculated as the 30-day prevalence among 12-month cases.

^c Cases with at least one 12-month mental disorder, stratified by number of (1, 2, ≥3, or any) lifetime disorder (s).

^d Cases with at least one 30-day mental disorder, stratified by number of (1, 2, ≥3, or any) 12-month disorder (s).

Table 2. Severity distribution for 12-month and 30-day DSM-5 disorders in the WMH Türkiye survey

	12-month disorder ^a			30-day disorder ^a		
	Severe % (SE)	Moderate % (SE)	Mild % (SE)	Severe % (SE)	Moderate % (SE)	Mild % (SE)
Anxiety disorders	52.0 (9.7)	48.0 (9.7)	0.0 (-)	— ^b	— ^b	— ^b
Panic disorder	58.1 (4.2)	41.9 (4.2)	0.0 (-)	64.2 (5.6)	35.8 (5.6)	0.0 (-)
Generalized anxiety disorder	35.8 (4.5)	27.3 (5.5)	36.9 (6.2)	49.2 (7.1)	17.8 (6.5)	33.1 (8.8)
Specific phobia	84.6 (14.0)	15.4 (14.0)	0.0 (-)	— ^b	— ^b	— ^b
Agoraphobia	70.4 (15.8)	25.4 (16.8)	4.2 (3.7)	— ^b	— ^b	— ^b
Social anxiety disorder	35.2 (2.2)	50.1 (3.9)	14.7 (4.5)	38.2 (1.8)	49.1 (4.1)	12.7 (4.1)
Post-traumatic stress disorder	43.9 (5.5)	22.0 (5.4)	34.1 (3.3)	51.8 (4.2)	20.2 (5.1)	28.0 (4.6)
Obsessive-compulsive and related disorders	33.2 (2.3)	41.9 (2.2)	24.9 (2.6)	38.7 (2.2)	41.0 (1.7)	20.4 (3.1)
Any anxiety disorder						
Mood disorders	53.1 (4.1)	43.1 (4.2)	3.8 (1.7)	72.5 (7.6)	27.5 (7.6)	0.0 (-)
Major depressive disorder	46.4 (4.4)	44.8 (7.0)	8.8 (4.6)	54.2 (5.2)	40.4 (5.9)	5.5 (2.7)
Persistent depressive disorder	60.3 (4.1)	27.4 (6.1)	12.4 (3.8)	65.5 (9.0)	27.4 (8.8)	7.1 (5.6)
Bipolar spectrum disorders	49.7 (2.4)	41.2 (3.5)	9.1 (3.2)	60.2 (4.3)	35.2 (4.1)	4.6 (2.4)
Any mood disorder						
Externalizing disorders	35.5 (12.1)	39.2 (4.7)	25.4 (10.2)	— ^b	— ^b	— ^b
Intermittent explosive disorder	77.0 (10.1)	9.7 (9.4)	13.3 (9.3)	— ^b	— ^b	— ^b
Alcohol use disorder	100 (-)	0.0 (-)	0.0 (-)	— ^b	— ^b	— ^b
Substance use disorder	55.3 (11.3)	25.4 (6.1)	19.3 (7.8)	— ^b	— ^b	— ^b
Any externalizing disorder						
Number of disorders^c	16.7 (2.3)	46.1 (2.6)	37.2 (3.2)	19.5 (3.1)	51.5 (1.2)	29.0 (3.9)
One disorder	38.5 (2.9)	56.5 (3.3)	5.1 (2.0)	53.0 (5.3)	42.4 (6.2)	4.6 (2.0)
Two disorders	73.7 (3.1)	23.3 (2.4)	3.0 (1.5)	82.7 (2.6)	16.0 (2.3)	1.3 (0.9)
Three or more disorders	32.8 (2.2)	43.8 (2.1)	23.4 (2.1)	38.8 (2.7)	42.7 (1.7)	18.4 (2.9)
Any mental disorder						

SE: standard error.

a Percentages indicate the distribution of each severity category by disorder.

b Distributions are not reported for disorders with fewer than n=30 cases.

c A significant difference in disorder severity by number of 12-month disorders is observed ($F(4,3)=84.10, p=0.002$). Respondents with two comorbid disorders are significantly more likely to be serious compared to those with only one disorder ($F(1,6)=36.96, p<0.001$). Respondents with three or more disorders are significantly more likely to be serious compared to those with two disorders ($F(1,6)=46.71, p<0.001$). Respondents with three or more disorders are significantly more likely to be serious compared to those with only one disorder ($F(1,6)=86.05, p<0.001$). A significant difference in disorder severity by number of 30-day disorders is observed ($F(4,3)=21.68, p=0.015$). Respondents with two comorbid disorders are significantly more likely to be serious compared to those with only one disorder ($F(1,6)=23.41, p=0.003$). Respondents with three or more disorders are significantly more likely to be serious compared to those with two disorders ($F(1,6)=36.79, p<0.001$). Respondents with three or more disorders are significantly more likely to be serious compared to those with only one disorder ($F(1,6)=89.34, p<0.001$).

Sociodemographic Correlates

Prevalence: Overall disorder prevalence was significantly elevated among women (only for 12-month prevalence), the young, and those with lower education (only for 30-day prevalence) (Table 3). There was a nonmonotonic (non-linear) association between income and 30-day prevalence. Disaggregation by class of disorders was possible only for 12-month prevalence due to instability in disaggregated 30-day estimates. This disaggregation showed that the elevated prevalence among women was due to anxiety and mood disorders, whereas men had higher prevalence than women of externalizing disorders (Supplementary Table 2). Higher prevalence among the young, on comparison, was found for all classes of disorders, although with the most pronounced pattern for externalizing disorders followed by anxiety disorders and the least pronounced pattern for mood disorders. A nonmonotonic association with income was found for externalizing disorders. Nonworking people had significantly elevated prevalence of mood disorders. And the previously married had elevated prevalence of externalizing disorders.

Persistence: As with prevalence, persistence was significantly elevated among the young (Table 3). However, in the case of 12-month persistence this elevation was limited to those in the age range 18–34, whereas for 30-day persistence the elevation was seen throughout the age range 18–64 and was most pronounced for those ages 50 to 64. Low education, in comparison, was more strongly and consistently associated with persistence than with prevalence. Twelve-month persistence was elevated among respondents with all but the highest level of education, whereas the association of education with 30-day persistence was nonmonotonic. The previously married, finally, had significantly elevated 30-day persistence.

Severity: Sociodemographics were only sporadically and nonmonotonically related to severity among all 12-month (education, income) and 30-day (income) cases (Table 4). (The sample was too small to report on correlates of severity by class of disorder.) However, in the total sample (i.e., including both cases and non-cases), severe disorders were significantly elevated among women, the young and middle-aged, and the previously married. There was also a significant nonmonotonic association of education with severity.

Table 3. Sociodemographic correlates for 12-month and 30-day prevalence and persistence of DSM-5/CIDI disorders in the WMH Türkiye survey (n=1,790)

	Sociodemographic characteristics % (SE)	12-month mental disorder		30-day mental disorder	
		Prevalence	Persistence	Prevalence	Persistence
		OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Sex					
Female	49.6 (2.1)	1.7 (1.3–2.3)*	1.5 (0.9–2.8)	1.5 (1.0–2.3)	0.9 (0.4–1.9)
Male	50.4 (2.1)	(Ref)	(Ref)	(Ref)	(Ref)
X ² ₁ (p-value)	–	12.9 (<0.001)*	2.1 (0.14)	3.7 (0.05)	0.1 (0.76)
Age (years)					
18–34	36.7 (2.4)	2.5 (1.2–5.0)*	2.2 (1.2–4.3)*	2.9 (1.4–5.9)*	1.7 (0.8–3.4)
35–49	30.1 (1.4)	2.0 (0.9–4.4)	1.4 (0.7–2.8)	2.3 (1.0–5.3)*	1.7 (0.6–5.4)
50–64	21.8 (0.8)	1.2 (0.6–2.3)	0.6 (0.2–2.0)	1.5 (0.7–3.2)	2.9 (1.1–7.4)*
65 and above	11.5 (1.1)	(Ref)	(Ref)	(Ref)	(Ref)
X ² ₃ (p-value)	–	23.9 (<0.001)*	29.0 (<0.001)*	51.1 (<0.001)*	12.1 (0.007)*
Education ^a					
Low	37.2 (1.9)	1.5 (0.6–4.3)	4.6 (1.7–12.9)*	2.1 (0.5–8.8)	8.2 (1.2–54.0)*
Low average	45.5 (1.8)	1.6 (0.7–3.7)	4.2 (2.6–6.9)*	2.3 (0.7–7.8)	10.6 (1.1–107.6)*
High average	16.2 (1.0)	1.4 (0.6–3.4)	3.0 (1.4–6.8)*	1.3 (0.4–4.7)	3.3 (0.9–12.5)
High	1.1 (0.2)	(Ref)	(Ref)	(Ref)	(Ref)
X ² ₃ (p-value)	–	2.2 (0.53)	63.3 (<0.001)*	11.9 (0.008)*	5.1 (0.17)
Income ^b					
Low	29.8 (1.2)	1.3 (0.9–2.0)	2.6 (1.4–4.8)*	1.4 (0.9–2.0)	1.4 (0.6–3.0)
Low average	21.2 (0.8)	1.2 (0.8–1.7)	1.6 (0.7–4.1)	0.9 (0.6–1.4)	0.6 (0.2–1.7)
High average	26.8 (0.9)	1.3 (0.8–2.1)	1.8 (1.0–3.2)*	1.4 (0.8–2.3)	1.6 (0.9–3.1)
High	22.2 (0.8)	(Ref)	(Ref)	(Ref)	(Ref)
X ² ₃ (p-value)	–	6.1 (0.11)	20.6 (<0.001)*	36.1 (<0.001)*	18.9 (<0.001)*
Employment status					
Others ^c	60.6 (2.5)	1.0 (0.8–1.3)	0.7 (0.4–1.1)	1.0 (0.7–1.4)	0.5 (0.2–1.2)
Working	39.4 (2.5)	(Ref)	(Ref)	(Ref)	(Ref)
X ² ₁ (p-value)	–	0.0 (0.84)	3.0 (0.08)	0.0 (0.85)	2.1 (0.15)
Marital status					
Never married	22.3 (1.9)	1.2 (0.9–1.7)	0.6 (0.3–1.1)	1.2 (0.9–1.6)	0.7 (0.3–1.7)
Previously married ^d	8.3 (0.6)	1.5 (0.8–2.7)	1.1 (0.4–3.0)	1.7 (1.0–3.0)	1.9 (0.9–4.0)
Married	69.4 (2.0)	(Ref)	(Ref)	(Ref)	(Ref)
X ² ₂ (p-value)	–	4.7 (0.09)	3.4 (0.19)	4.2 (0.12)	7.0 (0.030)*
Number of 12-month disorders					
Three or more	4.8 (0.6)	–	–	–	39.3 (3.6–427.5)*
Two	5.2 (0.6)	–	–	–	9.8 (5.5–17.5)*
One	13.9 (0.6)	–	–	–	(Ref)
X ² ₂ (p-value)	–	–	–	–	60.9 (<0.001)*
Number of lifetime disorders					
Three or more	8.7 (0.9)	–	7.5 (3.7–15.2)*	–	–
Two	8.8 (0.6)	–	3.0 (1.9–4.8)*	–	–
One	20.3 (1.0)	–	(Ref)	–	–
X ² ₂ (p-value)	–	–	32.2 (<0.001)*	–	–
Total model	–	123.9 (<0.001)*	2652.7 (<0.001)*	2811.6 (<0.001)*	18.1 (0.26)
X ² _{13/15} (p-value)					

OR: odds ratio; CI: confidence interval.

^a Educational attainment is defined as low (completed 5 years of school or below), low-average (completed 6–8 years of school, high school, university/college), high-average (bachelor's degree or post-graduate education with no degree), and high (master's degree or above).^b Income is categorized into low, low-average, high-average, and high, based on the ratio of income per capita to the median income (low defined as less than half the median, low-average as up to the median, high-average as up to two times the median, and high as more than two times the median).^c Others include students, homemakers, retirees and others.^d Previously married includes separated, widowed and divorced individuals.

* Significant at the 0.05 level, two-sided test.

Table 4. Sociodemographic correlates for 12-month and 30-day severe mental disorders in the WMH Türkiye survey

	12-month severe mental disorder		30-day severe mental disorder	
	In total sample	Among 12-month cases	In total sample	Among 30-day cases
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Sex				
Female	1.5 (1.1–2.1)*	0.9 (0.5–2.0)	1.5 (1.1–2.1)*	1.1 (0.5–2.4)
Male	(Ref)	(Ref)	(Ref)	Ref
X ² ₁ (p-value)	5.4 (0.020)*	0.0 (0.88)	5.5 (0.019)*	0.0 (0.88)
Age (years)				
18–34	4.0 (2.1–7.4)*	1.9 (0.4–8.7)	4.5 (2.2–9.0)*	2.0 (0.2–19.0)
35–49	2.4 (1.6–3.8)*	1.3 (0.5–3.0)	2.7 (1.6–4.5)*	1.2 (0.5–3.0)
50–64	1.4 (0.6–3.2)	1.3 (0.3–5.7)	1.6 (0.6–3.9)	1.2 (0.2–8.2)
65 and above	(Ref)	(Ref)	(Ref)	Ref
X ² ₃ (p-value)	47.7 (<0.001)*	1.2 (0.75)	41.7 (<0.001)*	1.0 (0.81)
Education^a				
Low	1.1 (0.2–7.0)	1.0 (0.2–5.7)	1.0 (0.1–6.7)	1.3 (0.1–11.7)
Low average	1.4 (0.2–9.0)	1.6 (0.3–8.0)	1.1 (0.2–7.7)	1.6 (0.2–13.7)
High average	0.8 (0.1–4.4)	0.9 (0.2–4.7)	0.6 (0.1–4.1)	1.3 (0.1–19.9)
High	(Ref)	(Ref)	(Ref)	Ref
X ² ₃ (p-value)	53.3 (<0.001)*	11.2 (0.011)*	8.2 (0.043)*	2.1 (0.56)
Income^b				
Low	1.4 (0.8–2.4)	1.5 (1.0–2.4)	1.6 (0.8–3.3)	1.5 (0.8–2.9)
Low average	1.4 (1.0–2.0)	1.9 (1.1–3.2)*	1.5 (0.8–2.5)	2.0 (1.4–2.9)*
High average	1.3 (0.8–2.1)	1.3 (0.7–2.4)	1.4 (0.7–2.8)	1.3 (0.6–2.6)
High	(Ref)	(Ref)	(Ref)	Ref
X ² ₃ (p-value)	3.0 (0.39)	9.2 (0.027)*	2.0 (0.57)	22.4 (<0.001)*
Employment status				
Others ^c	1.2 (0.7–2.1)	0.8 (0.4–1.5)	1.3 (0.8–2.1)	1.1 (0.7–1.8)
Working	(Ref)	(Ref)	(Ref)	Ref
X ² ₁ (p-value)	0.7 (0.41)	0.5 (0.50)	1.3 (0.25)	0.3 (0.61)
Marital status				
Never married	1.2 (1.0–1.6)	0.8 (0.4–1.7)	1.3 (1.0–1.8)*	1.2 (0.5–2.8)
Previously married ^d	2.6 (1.2–5.7)*	2.1 (0.8–5.9)	2.8 (1.2–6.5)*	1.9 (0.6–6.7)
Married	(Ref)	(Ref)	(Ref)	Ref
X ² ₂ (p-value)	25.0 (<0.001)*	2.7 (0.26)	16.2 (<0.001)*	1.3 (0.53)
Number of 30-day disorders				
Three or more	–	–	–	20.7 (11.2–38.2)*
Two	–	–	–	4.6 (2.6–8.3)*
One	–	–	–	Ref
X ² ₂ (p-value)	–	–	–	95.6 (<0.001)*
Number of 12-month disorders				
Three or more	–	15.4 (8.4–28.3)*	–	–
Two	–	3.0 (1.9–5.0)*	–	–
One	–	(Ref)	–	–
X ² ₂ (p-value)	–	87.0 (<0.001)*	–	–
Total model X ² _{13/15} (p-value)	130.5 (<0.001)*	94.0 (<0.001)*	111.0 (<0.001)*	46.6 (<0.001)*
(n)	(1,790)	(420)	(1,790)	(322)

OR: odds ratio; CI: confidence interval.

a Educational attainment is defined as low (completed 5 years of school or below), low-average (completed 6–8 years of school, high school, university/college), high-average (bachelor's degree or post-graduate education with no degree), and high (master's degree or above); high-average and high were combined to improve statistical power.

b Income is categorized into low, low-average, high-average, and high, based on the ratio of income per capita to the median income (low defined as less than half the median, low-average as up to the median, high-average as up to two times the median, and high as more than two times the median).

c Others include students, homemakers, retirees and others.

d Previously married includes separated, widowed and divorced individuals.

* Significant at the 0.05 level, two-sided test.

DISCUSSION

The current report presented data on 12-month and 30-day prevalence of common mental disorders in Türkiye from the recently completed Turkish WMH survey. We assessed a wide range of mental disorders, capturing their prevalence, severity and persistence according to the latest DSM-5 criteria. Our findings were consistent with previous WMH reports, which found that mental disorders are highly prevalent (Kessler et al. 2005, 2009), with 23.9% adults in our sample meeting criteria for at least one mental disorder in the past 12 months. The demographic correlates found in our survey were also consistent with those found in other WMH surveys. Women had higher prevalence of anxiety and mood disorders than men, which is consistent with robust evidence from other countries (Andrade et al. 2003, Baxter et al. 2013, Ferrari et al. 2013, Steel et al. 2014). By contrast, men had a higher prevalence of externalizing disorders. Several biological and genetic hypotheses have been proposed to explain these patterns (Merikangas and Almasry 2020), while a “gender roles” explanation also remains influential (Seedat et al. 2009). Furthermore, all classes of disorders were more prevalent among younger respondents. Although no comparable recent data exist on the mental health status of young people in Türkiye, this trend is likely influenced by economic stressors and future uncertainties. The significant increase in suicide rates (TURKSTAT 2025) and low levels of life satisfaction among Turkish youth (UNICEF Innocenti 2025) are consistent with this observation. Mental disorders result from a complex –and bilateral– interaction of genetic and environmental vulnerability factors, so it is therefore unsurprising that, consistent with WMH data in other countries, low educational attainment, being divorced, and non-working status were associated with higher prevalence in our sample.

Around two thirds of the respondents (63.5%) with lifetime mental disorders showed persistence of symptoms in the past 12 months, suggesting significant chronicity of mental disorders in this population. SAD, GAD, and BSD were among the conditions showing the highest persistence (66.6–80.2%). AUD, on the other hand, was among the least prevalent and least persistent 12-month disorders. Though it is not easy to ascertain what specific factors are responsible for the high chronicity of mental disorders in Türkiye, some possible causes include the cumulative effects of ongoing population-level stressors and problems in accessing mental health care.

Twelve-month disorders were also found to have high severity and multimorbidity. Regarding severity, three-quarters of cases were either moderate (43.8%) or severe (32.8%), with severe cases more than twice as common among respondents with three or more than fewer 12-month disorders. This finding diverges from previous WMH surveys, in which mild disorders typically outnumbered severe ones (Demyttenaere et

al. 2004). The greater severity of mental disorders in Türkiye than elsewhere may reflect the enduring psychological toll of major population events and inadequate community-based mental health and social services (Bilir-Uslu 2022), which may allow early signs of mental problems to go unchecked until they reach higher levels of severity. This constitutes an important area that clearly warrants further research.

Comparing our results with those from the previous national-level epidemiological study of Türkiye (Kılıç 1998) is useful because the earlier study was the first in Türkiye to use a nationally representative household sample and, like the current survey, used the Composite International Diagnostic Interview (CIDI), albeit an earlier version, to assess disorders. The 12-month prevalence of any mental disorder in the earlier survey (conducted 30 years ago using CIDI 1.1) was much lower (8.4% vs. 23.9%) than in the current survey (Andrade et al. 2000). There are several potential explanations that might account for this difference. The most obvious is coverage, in that the earlier study included somewhat fewer disorders. In addition, the previous survey utilized DSM-III-R diagnostic criteria, which are generally more restrictive than those of DSM-5. However, there were also important similarities between the two surveys, including similar demographic correlates and high persistence (above 60%) in both surveys. As mentioned above, it is possible that the cumulative effect of ongoing, population-level stressors –such as natural disasters, forced displacement in neighboring countries, as well as economic and social stress factors– may have negatively affected the mental health of the society between the two surveys. However, there were also developments in the interim period that could have been expected to act in the opposite, protective direction, including reforms in mental health care provision, such as efforts to increase mental health literacy among the public, training of family physicians on mental health issues, establishment of Community Mental Health Centers and Healthy Living Centers, and easier access to secondary and tertiary level mental health care. A more objective comparison between the two surveys requires examining changes in the prevalence of individual disorders, which we will report in subsequent papers.

The Turkish WMH survey is one of the first national epidemiological surveys of mental disorders in the world to use DSM-5 criteria. It is therefore important to compare our findings with the three other WMH surveys that have so far reported results based on CIDI-5 criteria: Norway (Knudsen et al. 2021), Qatar (Khaled et al. 2024b) and Hong Kong (Wong et al. 2025). The 12-month prevalence of mental disorders in Türkiye was higher than the other surveys. The Qatar survey reported a 12-month prevalence of 21.1% of any disorder, which was somewhat lower than that found in our survey, but the Qatar survey assessed somewhat fewer disorders than our survey. Similarly, the Norwegian survey

reported a pre-pandemic 30-day prevalence of 15.4% but assessed a more limited number of disorders. Unlike Türkiye and Qatar, none of the demographic variables in the Norway sample correlated with having a mental disorder. The Hong Kong study reported the lowest 12-month prevalence among the three studies (10.6%); prevalence did not correlate with sex, education or income.

The present study had several limitations. First, although we employed standardized diagnostic criteria, the reliance on self-reported symptom assessments potentially introduced bias, particularly for stigmatized conditions like SUD. Indeed, previous evidence suggests that people with mental disorders are less likely to participate in surveys about mental illness (Torvik et al. 2012) and tend to underreport disorders (Mason et al. 2023), which implies that our prevalence estimates should be considered conservative. Second, we only included Turkish citizens, whereas millions of refugees in Türkiye are known to suffer high rates of mental disorders due to their war trauma and forced displacement experiences (Kaya et al. 2019, Kılıç et al. 2024). Although some refugees have returned to their countries, the majority will remain, and it is important to include them in future surveys. Third, due to practical constraints, we did not assess psychotic or personality disorders, which limited the number of disorders included, and which suggests that the prevalence figures we found are conservative. Finally, our data were collected just before the COVID-19 pandemic. Our findings therefore do not reflect the mental health effects of the pandemic. Similarly, this study was conducted before the Turkish population was affected by the twin earthquakes of February 6, 2023 that killed more than 50,000 people. Conducting a follow-up survey on the current sample would help demonstrate the mental health effects of the pandemic and the earthquakes.

The low response rate is worth mentioning. Our response rate was lower (25.6%, 44.0% of contacted households) than other CIDI-5 WMH surveys. Low response rate, which was mainly due to non-contacted clusters, precluded the estimation of prevalence rates for each of the economic regions. The number of non-contacted clusters was higher in rural/eastern parts of the country. The Previous Turkish Mental Health Survey indicated that more rural participants have lower rates of mental health problems (Kılıç 1998), which suggests that non-contact may have inflated the prevalence figures.

In conclusion, the current study found that nearly 1 in 4 adults in Türkiye meet criteria for one or more 12-month DSM-5 disorders, with high severity and multimorbidity. These results reveal a significant mental health burden in the Turkish population. Our results underscore the need for improved mental health services for vulnerable groups such as women, younger adults, individuals with lower educational attainment, those who are non-working or previously married, and people with multiple co-occurring disorders. Follow-up

longitudinal research is needed to better understand the risk and protective factors regarding mental disorders in Türkiye, and to inform sustainable, population-level mental health strategies. The Ministry of Health, informed by previous experience, has sought to expand access to psychosocial support services and mental health care. The existing network of Community Mental Health Centers (CMHCs) has provided an innovative model for patients with chronic mental disorders such as schizophrenia and bipolar disorder. Services designed for those with more common and less severe problems are provided by the Healthy Life Centers established in many cities (currently numbering 286). It is essential to set up a sustainable and interdisciplinary system with sufficient numbers of professionals to ensure improvements in population mental health. Equally essential issues include addressing community mental health as a component of not only health policies but all policies, rigorously evaluating the effectiveness of new policies and services, and ensuring that future policies are based on scientific evidence.

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Ronald C. Kessler, PhD: "In the past 3 years, Dr. Kessler was a consultant for Cambridge Health Alliance, Child Mind Institute, Massachusetts General Hospital, RallyPoint LLC., Sage Therapeutics, University of Michigan, and University of North Carolina. He has stock options in Cerebral Inc., Mirah, PYM (Prepare Your Mind), and Verisense Health. He owns an interest in Menssano LLC."

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SUPPLEMENTARY

https://www.turkpsikiyatri.com/upload/19_27855_EN_Methodology_Appendix.pdf

REFERENCES

- Amro I, Ali A, Hassan M et al. (2023) Design and field procedures for the clinical reappraisal of the Composite International Diagnostic Interview version 3.3 in Qatar's national mental health study. *Int J Methods Psychiatr Res* 32:e1958. <https://doi.org/10.1002/mpr.1958>
- Andrade LHSG, Caraveo-Anduaga J, Berglund P et al. (2000) Cross-national comparisons of the prevalences and correlates of mental disorders. *Bull World Health Organ* 78:413–26.

- Andrade L, Caraveo-Anduaga JJ, Berglund P et al. (2003) The epidemiology of major depressive episodes: results from the International Consortium of Psychiatric Epidemiology (ICPE) Surveys. *Int J Methods Psychiatr Res* 12:3–21. <https://doi.org/10.1002/mpr.138>
- Aydın K, Yıldız NG, Aydın HZ et al. (2025) Türkiye’de depresif belirtilerin yaygınlığı ve ilişkili etmenler: 2016 ve 2019 Türkiye sağlık araştırması sonuçları. *Türk Psikiyatri Derg* 36:204–15. <https://doi.org/10.5080/u27341>
- Başoğlu M, Kılıç C, Şalcıoğlu E et al. (2004) Prevalence of posttraumatic stress disorder and major depression in earthquake survivors in Turkey: two epidemiological studies. *J Trauma Stress* 17:133–41. <https://doi.org/10.1023/B:JOTS.0000022619.31615.e8>
- Baxter AJ, Scott KM, Vos T et al. (2013) Global prevalence of anxiety disorders: a systematic review and meta-regression. *Psychol Med* 43:897–910. <https://doi.org/10.1017/S003329171200147X>
- Bilir-Uslu MK (2022) Mental healthcare policy reform in Turkey: a qualitative study on the perspectives of user groups. *Toplum ve Sosyal Hizmet* 33:113–32. <https://doi.org/10.33417/tsh.977939>
- Binbay T, Direk N, Aker T et al. (2014) Psychiatric epidemiology in Turkey: main advances in recent studies and future directions. *Türk Psikiyatri Derg*. 25(4): 264–81. <https://doi.org/10.5080/u7463>
- Boztaş MH, Aker AT, Munir K et al. (2019) Post traumatic stress disorder among adults in the aftermath of 2011 Van-Ercis earthquake in Turkey. *Turkish J Clinical Psychiatry* 22:380–8. <https://doi.org/10.5505/kpd.2019.62534>
- Brislin R (1986) The wording and translation of research instruments. In W. Lonner & J. Berry (Eds.), *Field Methods in Cross-Cultural Research* (pp. 137–64). Sage Publications.
- Casella CB, Kousoulis AA, Kohrt BA et al. (2025) Data gaps in prevalence rates of mental health conditions around the world: a retrospective analysis of nationally representative data. *Lancet Glob Health* 13:e879–87. [https://doi.org/10.1016/S2214-109X\(24\)00563-1](https://doi.org/10.1016/S2214-109X(24)00563-1)
- Charara R, Forouzanfar M, Naghavi M et al. (2017) The burden of mental disorders in the eastern mediterranean region, 1990–2013. *PLoS One* 12:e0169575. <https://doi.org/10.1016/j.eurpsy.2017.01.2023>
- Demyttenaere K, Bruffaerts R, Posada-Villa J et al. (2004) Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization world mental health surveys. *JAMA* 291:2581–90. <https://doi.org/10.1001/jama.291.21.2581>
- Dünya Sağlık Örgütü (2017) *Depression and Other Common Mental Disorders: Global Health Estimates*. WHO Publications, Geneva. <https://www.who.int/publications/i/item/depression-global-health-estimates>
- Dünya Sağlık Örgütü (2020). *Supporting Turkish Mental Health Policy and Service Delivery*. WHO. Retrieved September 24, 2025, from <https://www.who.int/about/accountability/results/who-results-report-2020-mtr/country-story/2020/supporting-turkish-mental-health-policy-and-service-delivery>
- Ferrari AJ, Somerville AJ, Baxter AJ et al. (2013) Global variation in the prevalence and incidence of major depressive disorder: a systematic review of the epidemiological literature. *Psychol Med* 43:471–81. <https://doi.org/10.1017/S0033291712001511>
- First MB, Spitzer RL, Gibbon ML et al. (2002) Structured Clinical Interview for DSM-IV Axis I Disorders: research version, non-patient edition (SCID-I/NP). In *New York, NY. Biometrics Research*, New York State Psychiatric Institute.
- Ghimire DJ, Chardoul S, Kessler RC et al. (2013) Modifying and validating the Composite International Diagnostic Interview (CIDI) for use in Nepal. *Int J Methods Psychiatr Res* 22:71–81. <https://doi.org/10.1002/mpr.1375>
- Harkness J, Pennell B, Villar A et al. (2008) Translation procedures and translation assessment in the World Mental Health Survey Initiative. In Kessler RC and Üstün TB (Eds.) *The WHO World Mental Health Surveys: Global Perspectives on the Epidemiology of Mental Disorders* (pp. 91–114). Cambridge University Press.
- Haro J, Arbabzadeh-Bouchez S, Brugha T et al. (2008) Concordance of the Composite International Diagnostic Interview Version 3.0 (CIDI 3.0) with standardized clinical assessments in the WHO World Mental Health Surveys. In Kessler RC and Üstün TB (Eds.) *The WHO World Mental Health Surveys: Global Perspectives on the Epidemiology of Mental Disorders* (pp. 114–27). Cambridge University Press.
- Haro JM, Arbabzadeh-Bouchez S, Brugha TS et al. (2006) Concordance of the Composite International Diagnostic Interview Version 3.0 (CIDI 3.0) with standardized clinical assessments in the WHO World Mental Health surveys. *Int J Methods Psychiatr Res* 15:167–80. <https://doi.org/10.1002/mpr.196>
- Institute for Health Metrics and Evaluation. (n.d.). Turkey profile [Health data by location]. IHME. Retrieved September 24, 2025, from <https://www.healthdata.org/research-analysis/health-by-location/profiles/turkey>
- Kaya E, Kılıç C, Karadağ Çaman Ö et al. (2019) Posttraumatic stress and depression among Syrian refugees living in Turkey: findings from an urban sample. *J Nerv Ment Dis* 207:995–1000. <https://doi.org/10.1097/NMD.0000000000001104>
- Kessler RC (1999) The World Health Organization International Consortium in Psychiatric Epidemiology (ICPE): initial work and future directions – the NAPE Lecture 1998. Nordic Association for Psychiatric Epidemiology. *Acta Psychiatr Scand* 99:2–9. <https://doi.org/10.1111/j.1600-0447.1999.tb05378.x>
- Kessler RC and Üstün TB (2004). The World Mental Health (WMH) Survey Initiative Version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *Int J Methods Psychiatr Res* 13:93–121. <https://doi.org/10.1002/mpr.168>
- Kessler RC, Berglund P, Demler O et al. (2005) Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 62:593–602. <https://doi.org/10.1001/archpsyc.62.6.593>
- Kessler RC, Aguilar-Gaxiola S, Alonso J et al. (2009) The global burden of mental disorders: an update from the WHO World Mental Health (WMH) surveys. *Epidemiol Psichiatr Soc* 18:23–33. <https://doi.org/10.1017/S1121189X00001421>
- Kessler R, Heeringa S, Pennell B et al. (2018) Methods of the World Mental Health surveys. In Scott K, de Jonge P, Stein D, Kessler R (Eds.) *Mental Disorders Around the World: Facts and Figures from the WHO World Mental Health Surveys* (pp. 9–40). Cambridge University Press. <https://doi.org/10.1017/9781316336168.003>
- Kessler RC, Al-Desouki M, King AJ et al. (2020) Clinical reappraisal of the Composite International Diagnostic Interview Version 3.0 in the Saudi National Mental Health Survey. *Int J Methods Psychiatr Res* 29:e1828. <https://doi.org/10.1002/mpr.1828>
- Khaled SM, Amro I, Abdelkader M et al. (2024a) Clinical reappraisal of the Composite International Diagnostic Interview version 3.3 in Qatar’s National Mental Health Study. *Int J Methods Psychiatr Res* 33:e2013. <https://doi.org/10.1002/mpr.2013>
- Khaled SM, Al-Thani SM, Sampson NA et al. (2024b) Twelve-month prevalence, persistence, severity, and treatment of mood and anxiety disorders in Qatar’s national mental health study. *Int J Methods Psychiatr Res* 33:e2012. <https://doi.org/10.1002/mpr.2012>
- Kılıç C, Kaya E, Karadağ Ö et al. (2024) Barriers to accessing mental health services among Syrian refugees: a mixed-method study. *Türk Psikiyatri Derg* 35:87–94. <https://doi.org/10.5080/u27044>
- Kılıç C (1998) *Türkiye Ruh Sağlığı Profili, Erişkin Nüfus Sonuçları*. Sağlık Bakanlığı, Ankara.
- Kılıç C and Ulusoy M (2003) Psychological effects of the November 1999 earthquake in Turkey: an epidemiological study. *Acta Psychiatr Scand* 108:232–8. <https://doi.org/10.1034/j.1600-0447.2003.00119.x>
- Kılıç C (2020) Türkiye’de ruhsal hastalıkların yaygınlığı ve ruhsal tedavi ihtiyacı konusunda neredeyiz? *Toplum ve Hekim* 35:179–87.
- Knudsen AKS, Stene-Larsen K, Gustavson K, et al. (2021) Prevalence of mental disorders, suicidal ideation and suicides in the general population before and during the COVID-19 pandemic in Norway: a population-based repeated cross-sectional analysis. *Lancet Reg Health Eur* 4:100071. <https://doi.org/10.1016/j.lanepe.2021.100071>
- Kott PS (2015) Calibration weighting in survey sampling. *WIREs Computational Statistics* 8:39–53. <https://doi.org/10.1002/wics.1374>
- Küey L, Üstün TB and Güleç C (1987) Türkiye’de ruhsal bozukluklar epidemiyolojisi araştırmaları üzerine bir gözden geçirme çalışması. *Toplum ve Hekim* 44:16–30.
- Küey L (2010) Dünyada ve Türkiye’de psikiyatrik epidemiyolojinin tarihsel gelişimi üzerine kısa bir derleme. *Türkiye Psikiyatri Derneği Bülteni* 13:6–11.

- Lu J, Huang YQ, Liu ZR et al. (2015) Validity of Chinese version of the Composite International Diagnostic Interview-3.0 in psychiatric settings. *Chin Med J (Engl)* 128:2462–6. <https://doi.org/10.4103/0366-6999.164930>
- Mason J, Laporte A, McDonald JT et al. (2023) Health reporting from different data sources: does it matter for mental health? *J Ment Health Policy Econ* 26:33–57.
- McGrath JJ, Al-Hamzawi A, Alonso J et al. (2023) Age of onset and cumulative risk of mental disorders: a cross-national analysis of population surveys from 29 countries. *Lancet Psychiatry* 10:668–81. [https://doi.org/10.1016/S2215-0366\(23\)00193-1](https://doi.org/10.1016/S2215-0366(23)00193-1)
- Merikangas KR, Jin R, He JP et al. (2011) Prevalence and correlates of bipolar spectrum disorder in the world mental health survey initiative. *Arch Gen Psychiatry* 68:241–51. <https://doi.org/10.1001/archgenpsychiatry.2011.12>
- Merikangas AK and Almasy L (2020) Using the tools of genetic epidemiology to understand sex differences in neuropsychiatric disorders. *Genes Brain Behav* 19:e12660. <https://doi.org/10.1111/gbb.12660>
- Montoya Gonzalez LE, Restrepo Bernal DP, Mejía-Montoya R et al. (2016) Sensitivity and specificity between the Composite International Diagnostic Interview Version 3.0 (World Mental Health, CIDI) and the Standardised Clinical Evaluation version I (SCID-I) in a mental health survey of the city of Medellin, 2012. *Rev Colomb Psiquiatr* 45:22–7. <https://doi.org/10.1016/j.rcp.2015.07.001>
- Öcek ZA, Çiçeklioğlu M, Yücel U et al. (2014) Family medicine model in Turkey: a qualitative assessment from the perspectives of primary care workers. *BMC Fam Pract* 15:38. <https://doi.org/10.1186/1471-2296-15-38>
- Pennell B, Mneimneh ZN, Bowers A et al. (2008) Implementation of the World Mental Health Surveys In Kessler R and Üstün T (Eds.) *The WHO World Mental Health Surveys: Global Perspectives on the Epidemiology of Mental Disorders* (pp. 33–57). Cambridge University Press.
- Rezaki MS, Özgen G, Kaplan İ et al. (1995) *Results from the Ankara Centre. Mental Illness in General Health Care: An International Study*. TB Üstün, N Sartorius (Eds.) John Wiley & Sons, s: 39–56.
- SAS Institute Inc. (2013) SAS®Software 9.4 [computer program]. In SAS Institute Inc. https://documentation.sas.com/doc/en/pgmsascdc/9.4_3.5/whatsnew/p07ec8vqwr6i9n1ptnai8ui5ebo.htm
- Seedat S, Scott KM, Angermeyer MC et al. (2009) Cross-national associations between gender and mental disorders in the World Health Organization World Mental Health Surveys. *Arch Gen Psychiatry* 66:785–95. <https://doi.org/10.1001/archgenpsychiatry.2009.36>
- Steel Z, Marnane C, Iranpour C et al. (2014) The global prevalence of common mental disorders: a systematic review and meta-analysis 1980-2013. *Int J Epidemiol* 43:476–93. <https://doi.org/10.1093/ije/dyu038>
- T.C. Sağlık Bakanlığı (2011) *Ulusal Ruh Sağlığı Eylem Planı* (2011-2023). Sağlık Bakanlığı Yayını, Ankara.
- T.C. Sağlık Bakanlığı (2025a) *Sağlık İstatistikleri Yıllığı 2023* (pp. 207). Sağlık Bilgi Sistemleri Genel Müdürlüğü, Sağlık Bakanlığı Yayınları.
- T.C. Sağlık Bakanlığı (2025b) *Türkiye Hanehalkı Sağlık Araştırması: Bulaşıcı Olmayan Hastalıkların Risk Faktörleri Prevalansı 2025 (STEPS)*. Editörler: Gökler ME, Bağcı HH, Keklik K et al. (Eds.) T.C. Sağlık Bakanlığı, Ankara.
- Torvik FA, Rognmo K and Tambs K (2012). Alcohol use and mental distress as predictors of non-response in a general population health survey: the HUNT study. *Soc Psychiatry Psychiatr Epidemiol* 47:805–16. <https://doi.org/10.1007/s00127-011-0387-3>
- TURKSTAT (2025) *Completed suicide rates by 100,000 by years*. Retrieved from <https://biruni.tuik.gov.tr/medas/?kn=115&locale=tr>
- UNICEF Innocenti (2025) *Innocenti Report Card 19: Child Well-Being in an Unpredictable World*. UNICEF Innocenti: Global Office of Research and Foresight.
- Vigo DV (Ed) (2023) Mental health services research: Lessons from the WHO-World Mental Health Surveys Initiative [Special issue]. *Int J Ment Health Syst*. <https://www.biomedcentral.com/collections/WHOWMHsurveys>
- Walde P and Völm BA (2023) The TRAPD approach as a method for questionnaire translation. *Front Psychiatry* 14:1199989. <https://doi.org/10.3389/fpsyt.2023.1199989>
- Wong CSM, Leung CMC, Wu S et al. (2025) Prevalence, persistence, and severity of 12-month and 30-day DSM-5 disorders in the World Mental Health Hong Kong Study. *Lancet Reg Health West Pac* 65:101757. <https://doi.org/10.1016/j.lanwpc.2025.101757>