A Dataset on Adolescent Mental Health in Kenya

Rosine Baseke[1*], Rachael Kilonzo[1], Maureen Ngesa[1], Purity Mwende[1], and Tom Osborn[1]

[1]Shamiri Institute, 13th Floor CMS Africa, Chania Avenue, Nairobi, Kenya.

*Corresponding author:
Rosine Baseke (rosine.baseke@shamiri.institute)
P.O. Box 21634 – 00506
Nairobi, Kenya

Abstract

Despite the growing recognition of the mental health crisis among adolescents in low-and middle-income countries (LMICs), there remains insufficient reliable data on youth mental health challenges in Kenya and other LMICs. This dataset presents one of the most comprehensive mental health data from N=17,089 adolescents collected in 2023 across 63 public secondary schools in four counties in Kenya. Data were collected through self-report paper-based questionnaires and include depression and anxiety symptoms as well as twelve other psychosocial measures capturing adverse childhood experiences, digital stressors, family and emerging stressors, and help-seeking behaviors. Additionally, the dataset includes comprehensive socio-demographic data. The dataset addresses a significant gap in contextually representative data on adolescent mental health as well as possible protective and risk factors and provides useful insights in the experience of depression and anxiety among Kenyan adolescents. The dataset supports psychometric validation of widely used mental health instruments in sub-Saharan African contexts and offers valuable resources for researchers, practitioners, and policymakers working on adolescent mental health interventions and policy development.

Keywords

Adolescent mental health, Kenya, low and middle-income countries (LMICs), depression, anxiety, psychosocial stressors, sub-Saharan Africa

Specifications Table

Subject	Social Sciences
Specific subject area	Epidemiology, psychosocial functioning, psychosocial and sociodemographic determinants of mental health outcomes
Type of data	Survey data, raw and processed (.csv format)
Data collection	Self-reported paper-based questionnaires administered in schools using validated instruments: PHQ-8 (depression), GAD-7 (anxiety), SDQ (behavioral screening), CATS (trauma), BL (bullying), ACES (adverse childhood experiences), MSPSS (social support), AI (aspirations), FSS (financial stress), CSS (COVID-19 stress), CCAS (climate anxiety), SMD (social media disorder), EPV (political violence exposure), NOK (culturally adapted African scale). Multi-stage stratified sampling across sixty-three schools in four counties.
Data source location	Kenya (Nairobi, Kiambu, Machakos, Makueni counties)
Data accessibility	Publicly Available. Repository Name: A Dataset on Adolescent Mental Health in Kenya Data identification number: DOI 10.17605/OSF.IO/K3XTD Direct URL to data: https://osf.io/k3xtd/files/osfstorage Instructions for accessing these data: Data available on the public repository. Individuals interested in conducted research analyses should contact the corresponding author to ensure that appropriate ethical approvals and data sharing agreements are in place.
Related research article	https://trialsjournal.biomedcentral.com/articles/10.1186/s13063-023-07539-y

Value of the data

- Addresses critical data gaps: This represents one of the largest adolescent mental health datasets from Kenya (n=17,089), addressing significant gaps in nationally representative data from sub-Saharan Africa where such comprehensive assessments are rare.
- Enables multi-dimensional analysis: The dataset includes fourteen validated scales covering traditional mental health measures, emerging stressors (digital, climate, political), and culturally adapted assessments, allowing researchers to examine complex interactions between various risk and protective factors.
- Supports cross-cultural validation: Researchers can use this dataset to validate Western-developed mental health instruments in African contexts and compare their performance against culturally adapted measures.

Background

Mental health disorders among adolescents represent a critical global public health challenge, with particularly severe impacts in low- and middle-income countries where treatment resources remain scarce [1]. In Kenya, studies suggest that up to 37% of adolescents experience depression symptoms, yet comprehensive data on youth mental health challenges remain limited [2]. The establishment of a national taskforce in 2019 [3] highlighted the urgent need for large-scale surveys to inform resource allocation and intervention planning, but few subsequent comprehensive studies have been conducted.

Kenyan adolescents face unique psychosocial challenges including poverty, educational pressures, family disruption, exposure to violence, and emerging stressors such as climate change and digital technology impacts[4]. Traditional Western-developed mental health assessments may not adequately capture culturally specific expressions of distress, necessitating validation of both international and culturally adapted instruments in sub-Saharan African contexts.

This dataset was compiled as part of a larger research initiative evaluating scalable mental health interventions, funded by the Fund for Innovation in Development. The data collection was designed to provide comprehensive insights into mental health and psychosocial characteristics of Kenyan adolescents to support evidence-based intervention design, assessment tool validation, and policy formulation in low-resource school settings.

Data Description

The dataset contains comprehensive mental health and sociodemographic data from 17,089 Kenyan adolescents collected through six survey versions (Survey A-F) administered across sixty-three public secondary schools in four counties. Each survey version includes core depression and anxiety measures alongside specific additional scales to reduce participant burden while maintaining comprehensive coverage.

The data files[5] contain an R script called Analysis Script.R which outlines the analysis done on the merged dataset from all the six surveys. Codebooks and Documentations are second in the folder, containing codebooks for each of the surveys in portable document format (.pdf). The last file contains the Data in comma separated value (.csv) format, including the merged dataset containing all the six survey data, as well as individual csv

files for each of the surveys. Table 2 shows the distribution of participants across the six surveys.

The merged dataset contains sets of measures that capture multiple dimensions of adolescent mental health and wellbeing. Depression symptoms are assessed using eight items from the Patient Health Questionnaire (PHQ-1 to PHQ-8), while anxiety is measured through seven items from the Generalized Anxiety Disorder scale (GAD-1 to GAD-7).

Behavioral challenges are screened using ten items from the Strengths and Difficulties Questionnaire (SDQ-1 to SDQ-10), and childhood trauma is captured through twenty items from the Childhood Trauma Screener (CATS-1 to CATS-20). The dataset further includes ten items on experiences of bullying (BL-1 to BL-10), ten items on adverse childhood experiences (ACES-1 to ACES-10), and fifteen items assessing aspirations (AI-1 to AI-15). Perceived social support is measured using four items from the Multidimensional Scale of Perceived Social Support (MSPSS-1 to MSPSS-4), while financial stress is captured by four items (FSS-1 to FSS-4). Stressors related to climate change and the COVID-19 pandemic are assessed through ten (CCAS-1 to CCAS-10) and eleven items (CSS-1 to CSS-11), respectively. Social media use is evaluated using items from the Media and Eating Image Scale (MEIS) and the Body Esteem Scale for Adolescents (BESSA), focusing on body comparison and body esteem, while problematic social media use is measured through nine items from the Social Media Disorder Scale (SMD-1 to SMD-9). Additional domains include exposure to political violence (EPV-1 to EPV-7), supplementary depression and anxiety screening items (NOK), help-seeking behaviors (NFOH), and help-seeking barriers (HSB). The codebooks provided can be referenced for additional clarification.

Table 1 provides sample characteristics, with the following variables:

- Age: Refers to the age distribution of the students within the recruited schools. The mean age was 15.89 years (SD=1.41), with most students aged between 11 and 24 years.
- Gender: Refers to the gender of the students. Female students made up majority of the sample (53.6%). Male students made up 46.4% of the sample.
- Religion: Indicates the students' self-reported religious affiliation. Protestants made up majority (58.6%). Traditional African and Buddhist religions had the least percentages of students (1.9% and 0.1% respectively).
- Boarding day: Refers to the student classification by school residency as either boarding or day (students returning home daily). In this sample, day students constituted the majority (59.3%), compared to boarders (29.4%).
- School type: Refers to the classification of the school by the Kenyan Ministry of Education, with four-tiered levels: national, county, extra-county, and sub-county.

The sample had 71.2% of students enrolled in subcounty schools while county and extra-county schools had the least enrollments (16.4% and 12.4% respectively).

- Form: Refers to the grade level of the students, with Form 1 being the first year of high school and form four being the fourth and last year of high school. The sample was made up of Form 1s and 2s (37.7 and 32.5% respectively), while Form 4 had the least percentage of students (11.0%).
- Parents Home: Refers to how many parents are living at home with the student at the time of the data collection. Students living with both parents had the highest percentage (65.3%) in the sample.
- Parents Dead: Indicates whether the students' mother or father are dead or alive. Most students in the sample have both parents alive (84.9%) while students who have lost both parents had the lowest percentage (2.2%).
- County: Refers to Nairobi (36.6%), Kiambu (23.5%), Machakos (12.2%), Makueni (11.5%)

Experimental Design, Materials and Methods

Setting and Recruitment

Study participants (n = 17,089) were recruited from 63 public secondary schools across four counties in Kenya: Nairobi, Kiambu, Machakos and Makueni. The recruitment and selection capture the diversity of the Kenyan educational system, as classified by the Ministry of Education [6], ensuring that the sample reflects the varied educational environments.

Procedures

Data collection occurred as an after-school activity in small groups of 10-15 students supervised by a trained group leader. The group leader was available to support in case participants have clarifications regarding any item on the questionnaire. Each participant completed the questionnaire individually and handed it to the group leader. The study team then collected all complete questionnaires and processed them.

Survey design and instruments used.

The measures used in this study are described below and specific questions for each measure can be found in the Supplementary Materials. The survey employed a six-survey design where participants completed one of six questionnaire batteries.

Core measures were depression and anxiety symptoms which were administered to all students:

- Depression was measured by the Patient Health Questionnaire – 8 (PHQ-8), an 8-item validated tool used to assess the severity of depressive symptoms. It omits the item on suicidality from the PHQ-9 and has been widely validated for use among adolescent populations [7].
- Anxiety was measured by The Generalized Anxiety Disorder Screener –7 (GAD-7) is a 7-item self-report scale used to screen for symptoms of generalized anxiety disorder. It has been validated for use among adolescents in various contexts, including Kenya and demonstrated strong internal consistency and convergent validity [8].

Additional measures were distributed across version based on thematic relevance as described below:

Survey A: Trauma and behavioral problems.

This survey contained measures assessing behavioral problems and exposure to trauma. The following measures were used:

a. The Strengths and Difficulties Questionnaire (SDQ) - a behavioral screening tool for children and adolescents. This study used the 5-item conduct and 5-item hyperactivity subscales. The scale has been validated across diverse settings with adequate internal consistency [9].
b. The Child and Adolescent Trauma Screen (CATS) - a validated instrument used to assess exposure to potentially traumatic events and post-traumatic stress disorder among children and adolescents. This study included items on trauma exposure and excluded impairment questions [10].

Survey B: Bullying and adverse childhood experiences.

This survey assessed the level and experiences of bullying as well as the exposure to childhood adversity. The instruments used are as follows:

a. A Bullying Questionnaire (BL) developed by researchers using items adapted from previously validated instruments assessing peer victimization and bullying behaviors. It captures both victim and perpetrator experiences across vernal, physical, and relational domains (7,8).

b. The Adverse Childhood Experiences Scale (ACES) - a 10-item widely used tool for measuring exposure to various forms of childhood adversity, including abuse, neglect and household dysfunction [13].

Survey C: Social support and financial strain.

This survey captures the levels of perceived social support and the relationship with financial stress and aspirations. The survey included the following measures:

a. The Multidimensional Scale of Perceived Social Support (MSPSS) – a validated self-reporting tool for assessing perceived social support from friends, family and significant others using the family subscale. The tool has been approved for use among young individuals, such as adolescents and young adults [14].
b. Aspirations Index (AI) - A 15-item measurement scale used to assess participants' life aspirations based on the perceived relevance of their future goals. The scale has been approved for use in diverse environments and has displayed internal consistency [15,16].
c. The Financial Stress Scale (FSS) – A 4-item measurement scale used to access financial stress levels among participants. The scale has shown internal consistency and has been approved for use in various contexts.

Survey D: Covid-19 and climate change stressors.

This survey contained measures that assess the levels of stress caused by the COVID-19 pandemic and climate change, as emerging stressors. The tools used are:

a. The COVID-19 Stressor Scale (CSS) - A 36-item tool used to assess stressors associated with the COVID-19 pandemic among individuals [17].
b. The Climate Change Anxiety Scale (CCAS) - A 22-item tool used to measure anxiety and emotional distress related to climate change. It is used to understand how environmental issues affect mental health [18].

Survey E: Social media and political stress.

This survey looked at the usage of social media and the stress caused by exposure to political violence and unrest, either directly or indirectly. The measures used are described below:

a. The Social Media Use Scale – A 17-item scale used to measure the frequency, intensity, and patterns of social media usage in relation to its impact on mental health and wellbeing [19]. The Media and Eating Image Scale (MEIS) [20]and the

Body Esteem Scale for Adolescents (BESSA)[21], focusing on body comparison and body esteem were also used.

b. The Political and Social Stress Scale (PSSS) - A scale used to measure the perceived stress of an individual in response to political and social events or conditions. It is especially relevant during times of civil unrest or policy change.

Survey F: Validating the Ndetei-Othieno-Kathuku scale for depression and anxiety.

This survey focused on using the Ndetei-Othieno-Kathuku scale for assessing depression and anxiety, in comparison to the common Patient Health Questionnaire. The NOK was developed as a tool with cultural relevance within the African context and ethnographically grounded. This was captured using the Ndetei-Othieno-Kathuku Scale (NOK) – A 15 item subscale to measure depression and anxiety that is culturally adapted for African and Kenyan individuals in the context of culturally specific idioms of distress [22].

In addition to the outcomes, all participants (n=17,089) in all the surveys completed a self-report socio-demographic questionnaire, which contained basic information such as age and gender, and socio-demographic information (e.g., level of parent education, religion, parents alive).

Data processing

Physical questionnaires were processed using Papersurvey.io software with automated scanning and data entry, followed by systematic verification against original responses. Data cleaning included range checking, consistency verification, and missing data pattern analysis.

Limitations

Several limitations should be considered when using this dataset. The sampling was restricted to public secondary school students, excluding private school attendees and out-of-school youth who may experience different mental health patterns. Geographic coverage was limited to four of Kenya's 47 counties, potentially limiting national generalizability despite diverse county selection.

All measures were self-reported, introducing potential recall bias and social desirability effects. Some contextual measures showed lower reliability coefficients, reflecting cultural adaptation challenges. Cross-sectional design prevents causal inference and assessment of mental health trajectories over time.

School-based sampling may underrepresent adolescents with the most severe mental health challenges who may have dropped out of education. Rural-urban differences within counties were not systematically examined, and seasonal variations in mental health symptoms could not be assessed due to single time-point collection.

Declaration of Competing Interest

All authors are employed by Shamiri Institute, a non-profit organization committed to developing evidence-based interventions to improve mental health outcomes for young people in sub-Saharan Africa.

Ethics Statement

This study was approved by the Kenyatta University Ethics Review Committee (application number PKU/2627/E1752). The research was conducted in accordance with the Declaration of Helsinki. Informed consent and assent were obtained from all participants and their guardians through school administration prior to data collection. Participation was voluntary, and participants could withdraw at any time. Confidentiality was maintained throughout the study process, with all data de-identified for analysis and reporting.

Credit Author Statement

Rosine Baseke Writing – original draft, Writing – review & editing; Maureen Ngesa Writing – review & editing; Rachael Kilonzo Writing – original draft, Writing – review & editing; Purity Mwende Writing – original draft; Tom Osborn Conceptualization, Investigation, Writing – review & editing.

Acknowledgements

We acknowledge the contributions of participating schools, teachers, students, and Shamiri Institute research staff who facilitated data collection. We thank school administrators and educators who supported this research and the adolescents who participated.

Funding: This work was supported by the Fund for Innovation in Development (FID), Paris Cedex 12, France [grant number 971_301121]. FID supports innovative solutions to reduce global poverty and inequality by providing grants to test, evaluate, and scale impactful projects in low- and middle-income countries.

References

[1] WHO, Adolescent health, (2023). https://www.who.int/health-topics/adolescent-health (accessed October 12, 2023).

[2] APHRC, Kenya - National Adolescent Mental Health Survey (K-NAMHS): A Report on Key Findings., African Population and Health Research Center (APHRC), Nairobi, Kenya, 2022.

[3] MoH, Mental Health Task Force Report - Mental Health and Wellbeing Towards Happiness & National Prosperity, Taskforce Ment. Health (n.d.). https://mental.health.go.ke/download/mental-health-and-wellbeing-towards-happiness-national-prosperity-a-report-by-the-taskforce-on-mental-health-in-kenya/ (accessed October 5, 2023).

[4] C.W. Musyimi, V.N. Mutiso, D.M. Ndetei, I. Unanue, D. Desai, S.G. Patel, A.M. Musau, D.C. Henderson, E.S. Nandoya, J. Bunders, Mental health treatment in Kenya: task-sharing challenges and opportunities among informal health providers, Int. J. Ment. Health Syst. 11 (2017) 45. https://doi.org/10.1186/s13033-017-0152-4.

[5] OSF | A Dataset on Adolescent Mental Health in Kenya, (n.d.). https://osf.io/k3xtd/files/osfstorage?view_only=7718b4cd404b438fab4987bb19dd367e (accessed October 2, 2025).

[6] senior-schools-in-kenya.pdf, (n.d.). https://selection.education.go.ke/files/senior-schools-in-kenya.pdf (accessed August 20, 2025).

[7] K. Kroenke, T.W. Strine, R.L. Spitzer, J.B.W. Williams, J.T. Berry, A.H. Mokdad, The PHQ-8 as a measure of current depression in the general population, J. Affect. Disord. 114 (2009) 163–173. https://doi.org/10.1016/j.jad.2008.06.026.

[8] R.L. Spitzer, K. Kroenke, J.B.W. Williams, B. Löwe, A brief measure for assessing generalized anxiety disorder: the GAD-7, Arch. Intern. Med. 166 (2006) 1092–1097. https://doi.org/10.1001/archinte.166.10.1092.

[9] R. Goodman, The Strengths and Difficulties Questionnaire: a research note, J. Child Psychol. Psychiatry 38 (1997) 581–586. https://doi.org/10.1111/j.1469-7610.1997.tb01545.x.

[10] D. Nilsson, I. Dävelid, S. Ledin, C.G. Svedin, Psychometric properties of the Child and Adolescent Trauma Screen (CATS) in a sample of Swedish children, Nord. J. Psychiatry 75 (2021) 247–256. https://doi.org/10.1080/08039488.2020.1840628.

[11] D. Olweus, Revised Olweus Bully/Victim Questionnaire, (2012). https://doi.org/10.1037/t09634-000.

[12] E. Deniz, P. Derinalp, I. Gulkanat, C. Kaz, N. Ozhan, U. Toseeb, Sibling Bullying in Turkish Adolescents:Translation and Cross-Cultural Validation of the Sibling Bullying Questionnaire, J. Fam. Violence (2022). https://doi.org/10.1007/s10896-022-00360-2 (accessed July 31, 2025).

[13] B. Oláh, Z. Fekete, I. Kuritárné Szabó, B. Kovács-Tóth, Validity and reliability of the 10-Item Adverse Childhood Experiences Questionnaire (ACE-10) among adolescents in the child welfare system, Front. Public Health 11 (2023) 1258798. https://doi.org/10.3389/fpubh.2023.1258798.

[14] G.D. Zimet, N.W. Dahlem, S.G. Zimet, G.K. Farley, The Multidimensional Scale of Perceived Social Support, J. Pers. Assess. 52 (1988) 30–41. https://doi.org/10.1207/s15327752jpa5201_2.
[15] T. Kasser, R.M. Ryan, A dark side of the American dream: correlates of financial success as a central life aspiration, J. Pers. Soc. Psychol. 65 (1993) 410–422. https://doi.org/10.1037//0022-3514.65.2.410.
[16] T. Kasser, R.M. Ryan, Further Examining the American Dream: Differential Correlates of Intrinsic and Extrinsic Goals, Pers. Soc. Psychol. Bull. 22 (1996) 280–287. https://doi.org/10.1177/0146167296223006.
[17] S. Taylor, C.A. Landry, M.M. Paluszek, T.A. Fergus, D. McKay, G.J.G. Asmundson, Development and initial validation of the COVID Stress Scales, J. Anxiety Disord. 72 (2020) 102232. https://doi.org/10.1016/j.janxdis.2020.102232.
[18] (PDF) A meta-analysis on the relationship between climate anxiety and wellbeing, ResearchGate (n.d.). https://doi.org/10.31234/osf.io/eaq4k.
[19] A.B. Tuck, R.J. Thompson, The Social Media Use Scale: Development and Validation, Assessment 31 (2024) 617–636. https://doi.org/10.1177/10731911231173080.
[20] D.R. Puglia, Social Media Use and its Impact on Body Image: The Effects of Body Comparison Tendency, Motivation for Social Media Use, and Social Media Platform on Body Esteem in Young Women, (n.d.).
[21] L. Beltrán-Garrayo, E. Mercado-Garrido, F.J. Román, M. Rojo, A.R. Sepúlveda, Assessing Body Esteem in Adolescents: psychometric properties of the Spanish version of the Body Esteem Scale (BESAA-S), Child Youth Care Forum 52 (2023) 683–701. https://doi.org/10.1007/s10566-022-09705-w.
[22] C.A. Denckla, D.M. Ndetei, V.N. Mutiso, C.W. Musyimi, A.M. Musau, E.S. Nandoya, K.K. Anderson, S. Milanovic, D. Henderson, K. McKenzie, Psychometric properties of the Ndetei-Othieno-Kathuku (NOK) Scale: A mental health assessment tool for an African setting, J. Child Adolesc. Ment. Health 29 (2017) 39–49. https://doi.org/10.2989/17280583.2017.1310729.

TABLES

Table 1: Shows the distribution of participants based on socio-demographic factors:

Variable	N	Mean	SD	Min	Max
Age	12778	15.89	1.41	11	24

Variable	Categories	N = 14182	%	% Excluding Missing	Variable	Categories	N	%	% Excluding Missing
Gender	Female	7273	51.3%	53.6%	**County**	Japan	1	<0.1%	<0.1%
	Male	6299	44.4%	46.4%		Kajiado	253	1.80%	2.20%
	Unknown	610	4.3%	-		Kakamega	63	0.40%	0.50%
	Total ex. unknown	13572	-	-		Kayole	1	<0.1%	<0.1%
Religion	Protestant	7917	55.8%	58.6%		Kenya	130	0.90%	1.10%
	Catholic	3915	27.6%	29.0%		Kericho	3	<0.1%	<0.1%
	Muslim	520	3.7%	3.9%		Kiambu	2756	19.40%	23.50%
	Buddhist	12	0.1%	0.1%		Kilifi	62	0.40%	0.50%
	Traditional African	251	1.8%	1.9%		Kirinyaga	26	0.20%	0.20%
	No religion	240	1.7%	1.8%		Kisii	30	0.20%	0.30%
	Other	645	4.5%	4.8%		Kisumu	90	0.60%	0.80%
	Unknown	682	4.8%	-		Kitale	3	<0.1%	<0.1%
	Total excluding unknown	13500	-	-		Kitui	66	0.50%	0.60%
Boarding day	Boarding	4028	28.4%	NA		Kwale	11	<0.1%	<0.1%
	Day	8403	59.3%	NA		Laikipia	21	<0.1%	<0.1%
	Day & Boarding	1751	12.3%	NA		Lamu	9	<0.1%	<0.1%
	Total excluding unknown	14182	-	NA		Machakos	1432	10.10%	12.20%
School type	County	2324	16.4%	NA		Makueni	1348	9.50%	11.50%
	Extra county	1760	12.4%	NA		Malindi	2	<0.1%	<0.1%
	Subcounty	10098	71.2%	NA		Mandera	12	0.10%	0.10%
	Total excluding unknown	14182	-	NA		Marsabit	20	0.10%	0.20%
Form	1	5202	36.7%	37.7%		Meru	35	0.20%	0.30%
	2	4485	31.6%	32.5%		Migori	25	0.20%	0.20%
	3	2607	18.4%	18.9%		Mombasa	187	1.30%	1.60%
	4	1514	10.7%	11.0%		Moyale	1	<0.1%	<0.1%
	Unknown	374	2.6%	-		Muranga	182	1.30%	1.50%
	Total excluding unknown	13808	-	-		Nairobi	4295	30.30%	36.60%
Parents Home	No Parents	378	2.7%	2.8%		Naivasha	4	<0.1%	<0.1%
	Single Parents	4391	31.0%	32.0%		Nakuru	105	0.70%	0.90%
	Both Parents	8969	63.2%	65.3%		Nandi	2	<0.1%	<0.1%
	Unknown	444	3.1%	-		Narok	15	0.10%	0.10%
	Total	14182	-	-		Nigeria	2	<0.1%	<0.1%
Parents Dead	Father	1263	8.9%	9.2%		Nyamira	12	0.10%	0.10%
	Mother	507	3.6%	3.7%		Nyandarua	47	0.3%	0.4%
	Both	300	2.1%	2.2%		Nyeri	85	0.6%	0.7%
	None	11629	82.0%	84.9%		Philippines	1	<0.1%	<0.1%

	Unknown	483	3.4%	-		Rwanda	3	<0.1%	<0.1%
	Total	14182	-	-		Samburu	3	<0.1%	<0.1%
County	America	4	<0.1%	<0.1%		Siaya	81	0.6%	0.7%
	Athi River	1	<0.1%	<0.1%		Somali	1	<0.1%	<0.1%
	Baringo	6	<0.1%	<0.1%		Somalia	2	<0.1%	<0.1%
	Bomet	1	<0.1%	<0.1%		Taita Taveta	12	0.1%	0.1%
	Bungoma	19	0.1%	0.2%		Tana River	3	<0.1%	<0.1%
	Busia	55	0.4%	0.5%		Tanzania	10	<0.1%	<0.1%
	Canada	2	<0.1%	<0.1%		Tharaka Nithi	8	<0.1%	<0.1%
	China	1	<0.1%	<0.1%		Trans Nzoia	15	0.1%	0.1%
	Congo (DRC)	2	<0.1%	<0.1%		Turkana	4	<0.1%	<0.1%
	Eldoret	1	<0.1%	<0.1%		Uasin Gishu	23	0.2%	0.2%
	Embu	45	0.30%	0.40%		Uganda	6	<0.1%	<0.1%
	Ethiopia	4	<0.1%	<0.1%		Vihiga	32	0.2%	0.3%
	Garissa	9	<0.1%	<0.1%		Voi	1	<0.1%	<0.1%
	Germany	2	<0.1%	<0.1%		Wajir	5	<0.1%	<0.1%
	Homa Bay	30	0.20%	0.30%		Zambia	1	<0.1%	<0.1%
	India	2	<0.1%	<0.1%		Nairobi	1	<0.1%	<0.1%
	Isiolo	10	<0.1%	<0.1%		Unknown	2440	17.2%	-
						Total ex. unknown	11742	-	-

Table 2: Shows the distribution of participants across the six surveys.

Survey	No of Participants
Survey A	2,843 (17%)
Survey B	2,842 (17%)
Survey C	2,905 (17%)
Survey D	2,865 (17%)
Survey E	2,727 (16%)
Survey F	2,907 (17%)

Table 3: Psychometrics (Cronbach's alpha)

Scale	No of Items	Cronbach Alpha
PHQ	8	0.641693
GAD	7	0.739542
SDQ	10	0.582104
CATS	20	0.857611
BL	10	0.809409
ACES	10	0.681129
MSPSS	4	0.787897
AI	15	0.781887
FSS	4	0.564968
CSS	11	0.840191
CCAS	10	0.774082
SMD	9	0.777542
EPV	7	0.54802

Table 4: Correlation matrix depression and anxiety with ACES, CATS, SDQ and EPV

Variable	M	SD	1	2	3	4	5
1. PHQsum	6.80	4.42					
2. GADsum	6.08	4.39	.66** [.65, .67]				
3. ACESsum	0.30	1.03	.09** [.08, .11]	.10** [.09, .12]			
4. CATSsum	2.97	8.02	.15** [.13, .16]	.16** [.14, .17]	-.11** [-.12, -.09]		
5. SDQsum	0.88	2.34	.12** [.10, .13]	.12** [.11, .14]	-.11** [-.13, -.10]	.85** [.85, .86]	
6. EPVsum	0.78	2.08	.06** [.05, .08]	.07** [.05, .08]	-.11** [-.13, -.10]	-.14** [-.15, -.12]	-.14** [-.16, -.13]

Note. M and SD are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * Indicates $p < .05$. ** indicates $p < .01$.

Table 5: Correlation matrix of depression and anxiety socio-demographic variables

Variable	M	SD	1	2	3	4
1. PHQsum	6.80	4.42				
2. GADsum	6.08	4.39	.66** [.65, .67]			
3. Age	15.90	1.42	.09** [.07, .10]	.07** [.06, .09]		
4. Gender	1.46	0.50	-.08** [-.09, -.06]	-.11** [-.12, -.09]	.21** [.19, .22]	
5. Form	2.04	1.01	.11** [.09, .12]	.08** [.06, .09]	.73** [.72, .74]	.06** [.04, .08]

Note. M and SD are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * Indicates $p < .05$. ** indicates $p < .01$.