

South Africa

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AHRI:Sesikhona! (we are here) Sexual Behaviour

Study Documentation

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Metadata Production

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Overview	
Identification	AHRI.Sesikhona.SexualBehaviour.Survey
Version	v1.0.0
Abstract The Sesikhona study is the first of its kind study using smartphone-based GPS technology to record ultra-high resolution mobility patterns of over 200 young adults aged 20-30 years in rural KwaZulu Natal. The study seeks to identify distinct movement typologies within this highly mobile, HIV hyper-endemic population and to quantify travel in and out of known high-risk locations, with the long-term goal of developing a location-intelligent smartphone intervention that delivers real-time, precision messaging to individuals at heightened risk of HIV acquisition, transmission or treatment interruption. Conducted in three phases between 2021 and 2025, the study used the Avicenna Research Platform to collect GPS and survey data. Between 2023 and 2025, consenting individuals self-completed monthly sexual behavior surveys to understand the associations between mobility patterns and engagement in sexual risky behavior.	
Kind of Data	Survey data
Unit of Analysis	Young adults aged 20-30 years old

Scope & Coverage	
Keywords	Human mobility, HIV, GPS technology, digital technology, sexual behaviour
Topics	GPS technology, smartphone-based GPS, human mobility, young adults, HIV, mobile health, digital technology, sexual health, sexual behavior
Time Period(s)	2023-2025
Countries	South Africa
Geographic Coverage Residents from uMkhanyakude in KwaZulu Natal but move anywhere in South Africa	
Universe A random sample of adults aged 20-30 years old who were residents in Southern PIPSA, participated in the 2019 HIV surveillance and consented to participate in Sesikhona study and opted in for the sexual behavior surveys	

Producers & Sponsors	
Primary Investigator(s)	Prof. Frank Tanser(Principal Investigator), Africa Health Research Institute/ Stellenbosch University Prof Adrian Dobra, University of Washington Prof Till Barnighausen, Africa Health Research Institute/Medical Faculty and University Hospital, Heidelberg University, Heidelberg Institute of Global Health, Heidelberg, Germany
Other Producer(s)	Africa Health Research Institute (AHRI)
Funding Agency/ies	National Institute of Health (NIH) , Funder German Science Foundation (DFG) , Funder Academy of Medical Sciences Newton Fund (NAF) , Funder

Sampling
Sampling Procedure

Participants were randomly selected from the 2019 AHRI HIV surveillance program if they were aged 20-30 years old and had participated in the HIV survey in 2019 and were resident members in the southern PIP and owned a smartphone that supported the study app.

Data Collection

Data Collection Dates	start 2023-11-01 end 2025-06-30
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Data Processing & Appraisal

Data Editing

Sexual behavior survey responses from Sesikhona participants via the Avicenna app

Accessibility

Access Conditions

Access to the data requires accurate completion of the online data access application form accessible on the AHRI Data repository (<<https://data.ahri.org/>>). Data users are required to abide by the data use conditions stipulated on the application for access to the data. Failure to do so may result in their data access privileges being revoked by the Data Custodian. In order to recognise the effort and intellectual contributions of AHRI investigators in producing and curating the data, users of AHRI data must acknowledge the source of the data and abide by the terms and conditions under which the data is accessed and must cite the dataset in publication using the citation provided as part of this documentation. All analytical datasets published on the AHRI Data Repository are assigned digital object identifier (DOIs) and the DOIs can be found on the Data Repository under Study Description tab - Access policy. AHRI data users are required to always cite the dataset using the relevant DOI.

Citation Requirements

Tanser, F., Dobra, A., & Barnighausen, T. (2025). AHRI:Sesikhona! (we are here) Sexual Behaviour [Data set]. Africa Health Research Institute.

DOI: <https://doi.org/10.23664/AHRI.SESIKHONA.SEXUALBEHAVIOUR.SURVEY>

Files Description

Dataset contains 1 file(s)

AHRI.Sesikhona.SexualBehaviour.Survey.2025.v1	
# Cases	1733
# Variable(s)	10

Variables List

Dataset contains 10 variable(s)

File AHRI.Sesikhona.SexualBehaviour.Survey.2025.v1							
#	Name	Label	Type	Format	Valid	Invalid	Question
1	particip_..	Participant ID	continuous	numeric-12.0	1733	0	-
2	sess_time	Session Schedule Time	discrete	character-11	1733	-	-
3	record_t...	Record Time	discrete	character-11	1539	-	-
4	status	Status	discrete	numeric-12.0	1733	0	-
5	saq_1	Have you been sexually active in the last month?	discrete	numeric-12.0	1382	351	-
6	saq_2	Have you had sex without a condom?	discrete	numeric-12.0	756	977	-
7	saq_3	Have you had sex without a condom with an individual whose HIV status you did not	discrete	numeric-12.0	759	974	-
8	saq_4	Have you had an STI?	discrete	numeric-12.0	757	976	-
9	saq_5	Have you had sex with more than one partner without a condom?	discrete	numeric-12.0	758	975	-
10	saq_6	Have you had sex under the influence of alcohol and/or drugs?	discrete	numeric-12.0	746	987	-

Variables Description

Dataset contains 10 variable(s)

File : AHRI.Sesikhona.SexualBehaviour.Survey.2025.v1

participant_id: Participant ID

Information [Type= continuous] [Format=numeric] [Range= 473-103961] [Missing=*]

Statistics [NW/ W] [Valid=1733 /-] [Invalid=0 /-] [Mean=52734.013 /-] [StdDev=13566.154 /-]

sess_time: Session Schedule Time

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=1733 /-]

record_time: Record Time

Information [Type= discrete] [Format=character] [Missing=*]

Statistics [NW/ W] [Valid=1539 /-]

status: Status

Information [Type= discrete] [Format=numeric] [Range= 1-6] [Missing=*]

Statistics [NW/ W] [Valid=1733 /-] [Invalid=0 /-]

Value	Label	Cases	Percentage
1	The participant completed the activity and submitted it	1418	81.8%
2	The participant did not want to complete the activity and explicitly canceled it	24	1.4%
3	The activity was not responded to in time, so Ethica automatically closed the session and uploaded it to the server	260	15.0%
4	The session was blocked by another active session from the same activity and could not be prompted	31	1.8%
5	Based on the responses the participant has provided so far, this session's criteria is invalid and will not be presented	0	
6	The session is started by the participant but it's not completed yet	0	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

saq_1: Have you been sexually active in the last month?

Information [Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]

Statistics [NW/ W] [Valid=1382 /-] [Invalid=351 /-]

Value	Label	Cases	Percentage
1	Yes	761	55.1%
2	No	621	44.9%
Systemmiss		351	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

saq_2: Have you had sex without a condom?

Information [Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]

Statistics [NW/ W] [Valid=756 /-] [Invalid=977 /-]

Value	Label	Cases	Percentage
1	Yes	515	68.1%
2	No	241	31.9%
Systemmiss		977	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

saq_3: Have you had sex without a condom with an individual whose HIV status you did not

Information [Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]

Statistics [NW/ W] [Valid=759 /-] [Invalid=974 /-]

File : AHRI.Sesikhona.SexualBehaviour.Survey.2025.v1

saq_3: Have you had sex without a condom with an individual whose HIV status you did not

Value	Label	Cases	Percentage
1	Yes	160	21.1%
2	No	599	78.9%
Sysmiss		974	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

saq_4: Have you had an STI?

Information	[Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]
Statistics [NW/ W]	[Valid=757 /-] [Invalid=976 /-]

Value	Label	Cases	Percentage
1	Yes	106	14.0%
2	No	651	86.0%
Sysmiss		976	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

saq_5: Have you had sex with more than one partner without a condom?

Information	[Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]
Statistics [NW/ W]	[Valid=758 /-] [Invalid=975 /-]

Value	Label	Cases	Percentage
1	Yes	204	26.9%
2	No	554	73.1%
Sysmiss		975	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.

saq_6: Have you had sex under the influence of alcohol and/or drugs?

Information	[Type= discrete] [Format=numeric] [Range= 1-2] [Missing=*]
Statistics [NW/ W]	[Valid=746 /-] [Invalid=987 /-]

Value	Label	Cases	Percentage
1	Yes	140	18.8%
2	No	606	81.2%
Sysmiss		987	

Warning: these figures indicate the number of cases found in the data file. They cannot be interpreted as summary statistics of the population of interest.