

South Africa - AHRI:Sesikhona! (we are here) mental health

Nompumelelo Mkwazi

Report generated on: December 4, 2025

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Identification

SURVEY ID NUMBER

AHRI.Sesikhona.Mental.Health.Survey

TITLE

AHRI:Sesikhona! (we are here) mental health

COUNTRY

Name	Country code
South Africa	ZA

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 mental health surveys bi-weekly and monthly to explore the role of psychological well-being related to depression (PHQ-2: 22760), anxiety (GAD-2: 22761), stress (PSS-4: 22762), alcohol use (AUDIT-C: 22763) or trauma (PC-PTSD-5: 22764) and understand how mental health affects HIV risk and engagement with HIV care services

KIND OF DATA

Survey data

UNIT OF ANALYSIS

Young adults aged 20-30 years old

Version

VERSION DESCRIPTION

v1.0.0

Scope

TOPICS

Topic	Vocabulary	URI
GPS technology, smartphone-based GPS, human mobility, young adults, HIV, mobile health, digital technology, mental health	Africa Health Research Institute	www.ahri.org

KEYWORDS

Keyword	Vocabulary	URI
Human mobility, HIV, GPS technology, digital technology, mental health	Africa Health Research Institute	www.ahri.org

Coverage

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 resident in Southern PIPSA, participated in the 2019 HIV surveillance and consented to participate in Sesikhona study and opted in for the mental health surveys

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
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

PRODUCERS

Name	Abbreviation
Africa Health Research Institute	AHRI

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Role
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

DATES OF DATA COLLECTION

Start	End
2024-09-01	2025-06-30

Data Processing

DATA EDITING

Mental health survey responses from Sesikhona participants via the Avicenna app

Access policy

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) mental health [Data set]. Africa Health Research Institute.

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

Metadata production

DDI DOCUMENT ID

DDI.AHRI.Sesikhona.Mental.Health.Survey

PRODUCERS

Name	Abbreviation
Africa Health Research Institute	AHRI

Data Dictionary

Data file	Cases	Variables
AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1	488	7
AHRI.Sesikhona.Mental.Health.GAD.Survey.2025.v1	946	6
AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1	88	10
AHRI.Sesikhona.Mental.Health.PHQ.Survey.2025.v1	943	6
AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1	488	8

Data file: AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1

Cases:	488
Variables:	7

Variables

ID	Name	Label	Question
V74	pid_22763	Participant ID	
V75	sched_time	Scheduled Time	
V76	saq2_22763	How often do you have a drink containing alcohol?	
V77	saq3_22763	How many drinks containing alcohol do you have on a typical day when you are drin	
V78	saq4_22763	How often do you have six or more drinks on one occasion?	
V79	record_time_22763	Record Time 22763	
V80	status_22763	Status 22763	

Total: 7

Data file: AHRI.Sesikhona.Mental.Health.GAD.Survey.2025.v1

Cases:	946
Variables:	6

Variables

ID	Name	Label	Question
V81	pid_22761	Participant ID	
V82	sched_time	Scheduled Time	
V83	saq1_22761	Feeling nervous, anxious, or on edge	
V84	saq2_22761	Not being able to stop or control worrying	
V85	record_time_22761	Record Time 22761	
V86	status_22761	Status 22761	

Total: 6

Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1

Cases: 88
 Variables: 10

Variables

ID	Name	Label	Question
V87	pid_22764	Participant ID	
V88	sched_time	Scheduled Time	
V89	saq1_22764	Have you ever experienced this kind of event?	
V90	saq2_22764	Had nightmares about the event(s) or thought about the event(s) when you did not	
V91	saq3_22764	Tried hard not to think about the event(s) or went out of your way to avoid situa	
V92	saq4_22764	Been constantly on guard, watchful, or easily startled?	
V93	saq5_22764	Felt numb or detached from people, activities, or your surroundings?	
V94	saq6_22764	Felt guilty or unable to stop blaming yourself or others for the event(s) or any	
V95	record_time_22764	Record Time 22764	
V96	status_22764	Status 22764	

Total: 10

Data file: AHRI.Sesikhona.Mental.Health.PHQ.Survey.2025.v1

Cases: 943

Variables: 6

Variables

ID	Name	Label	Question
V97	pid_22760	Participant ID	
V98	sched_time	Schedule Time	
V99	saq1_22760	Little interest or pleasure in doing things	
V100	saq2_22760	Feeling down, depressed, or hopeless	
V101	record_time_22760	Record Time 22760	
V102	status_22760	Status 22760	

Total: 6

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Cases:	488
Variables:	8

Variables

ID	Name	Label	Question
V117	pid_22762	Participant ID	
V118	sched_time	Scheduled Time	
V119	saq1_22762	felt that you were unable to control the important things in your life?	
V120	saq2_22762	felt confident about your ability to handle your personal problems?	
V121	saq3_22762	felt that things were going your way?	
V122	saq4_22762	felt difficulties were piling up so high that you could not overcome them?	
V123	record_time_22762	Record Time 22762	
V124	status_22762	Status 22762	

Total: 8

PID_22763: Participant ID**Data file: AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1****Overview**

Valid: 488 Invalid: 0 Minimum: 39636 Maximum: 100921 Mean: 52139.992 Standard deviation: 12099.164

Type: Continuous Decimal: 0 Width: 12 Range: 39636 - 100921 Format: Numeric

SCHEM_TIME: Scheduled Time**Data file: AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1****Overview**

Valid: 488 Minimum: 2024-10-03 Maximum: 2025-03-03

Type: Discrete Width: 11 Range: - Format: character

SAQ2_22763: How often do you have a drink containing alcohol?**Data file: AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1****Overview**

Valid: 488 Invalid: 0

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Never	258	52.9%
1	Monthly or less	123	25.2%
2	2 - 4 times per month	71	14.5%
3	2 - 3 times per week	27	5.5%
4	4+ times per week	9	1.8%

SAQ3_22763: How many drinks containing alcohol do you have on a typical day when you are drin**Data file: AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1****Overview**

Valid: 487 Invalid: 1

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	1 - 2	365	74.9%
1	3 - 4	75	15.4%
2	5 - 6	30	6.2%
3	7 - 9	6	1.2%
4	10+	11	2.3%
Sysmiss		1	

SAQ4_22763: How often do you have six or more drinks on one occasion?

Data file: AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1

Overview

Valid: 487 Invalid: 1

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Never	288	59.1%
1	Less than monthly	115	23.6%
2	Monthly	40	8.2%
3	Weekly	35	7.2%
4	Daily or almost daily	9	1.8%
Sysmiss		1	

RECORD_TIME_22763: Record Time 22763

Data file: AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1

Overview

Valid: 488 Minimum: 2024-10-03 Maximum: 2025-04-01

Type: Discrete Width: 11 Range: - Format: character

STATUS_22763: Status 22763

Data file: AHRI.Sesikhona.Mental.Health.AUDIT C.Survey.2025.v1

Overview

Valid: 488 Invalid: 0

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 6 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Unknown	0	0%
1	Completed	487	99.8%
2	Canceled	1	0.2%
3	Expired	0	0%
4	Blocked	0	0%
5	Invalid Criteria	0	0%
6	In Progress	0	0%

PID_22761: Participant ID**Data file: AHRI.Sesikhona.Mental.Health.GAD.Survey.2025.v1****Overview**

Valid: 946 Invalid: 0 Minimum: 39636 Maximum: 95065 Mean: 51842.798 Standard deviation: 11834.214
 Type: Continuous Decimal: 0 Width: 12 Range: 39636 - 95065 Format: Numeric

SCHEM_TIME: Scheduled Time**Data file: AHRI.Sesikhona.Mental.Health.GAD.Survey.2025.v1****Overview**

Valid: 946 Minimum: 2024-09-26 Maximum: 2025-02-27
 Type: Discrete Width: 11 Range: - Format: character

SAQ1_22761: Feeling nervous, anxious, or on edge**Data file: AHRI.Sesikhona.Mental.Health.GAD.Survey.2025.v1****Overview**

Valid: 946 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 3 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Not at all	490	51.8%
1	Several days	286	30.2%
2	More than half the days	135	14.3%
3	Nearly every day	35	3.7%

SAQ2_22761: Not being able to stop or control worrying**Data file: AHRI.Sesikhona.Mental.Health.GAD.Survey.2025.v1****Overview**

Valid: 944 Invalid: 2
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 3 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Not at all	432	45.8%

1	Several days	291	30.8%
2	More than half the days	160	16.9%
3	Nearly every day	61	6.5%
Sysmiss		2	

RECORD_TIME_22761: Record Time 22761

Data file: AHRI.Sesikhona.Mental.Health.GAD.Survey.2025.v1

Overview

Valid: 946 Minimum: 2024-09-26 Maximum: 2025-03-12

Type: Discrete Width: 11 Range: - Format: character

STATUS_22761: Status 22761

Data file: AHRI.Sesikhona.Mental.Health.GAD.Survey.2025.v1

Overview

Valid: 946 Invalid: 0

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 6 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Unknown	0	0%
1	Completed	945	99.9%
2	Canceled	1	0.1%
3	Expired	0	0%
4	Blocked	0	0%
5	Invalid Criteria	0	0%
6	In Progress	0	0%

PID_22764: Participant ID**Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1****Overview**

Valid: 88 Invalid: 0 Minimum: 39636 Maximum: 95065 Mean: 52087.08 Standard deviation: 11734.08
 Type: Continuous Decimal: 0 Width: 12 Range: 39636 - 95065 Format: Numeric

SCHEM_TIME: Scheduled Time**Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1****Overview**

Valid: 88 Minimum: 2024-10-04 Maximum: 2024-10-04
 Type: Discrete Width: 11 Range: - Format: character

SAQ1_22764: Have you ever experienced this kind of event?**Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1****Overview**

Valid: 88 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Yes	32	36.4%
2	No	56	63.6%

SAQ2_22764: Had nightmares about the event(s) or thought about the event(s) when you did not**Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1****Overview**

Valid: 32 Invalid: 56
 Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Yes	20	62.5%
2	No	12	37.5%

Sysmiss		56	
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SAQ3_22764: Tried hard not to think about the event(s) or went out of your way to avoid situa

Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1

Overview

Valid: 32 Invalid: 56

Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Yes	24	75%
2	No	8	25%
Sysmiss		56	

SAQ4_22764: Been constantly on guard, watchful, or easily startled?

Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1

Overview

Valid: 32 Invalid: 56

Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Yes	16	50%
2	No	16	50%
Sysmiss		56	

SAQ5_22764: Felt numb or detached from people, activities, or your surroundings?

Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1

Overview

Valid: 32 Invalid: 56

Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Yes	18	56.3%
2	No	14	43.8%
Sysmiss		56	

SAQ6_22764: Felt guilty or unable to stop blaming yourself or others for the event(s) or any

Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1

Overview

Valid: 32 Invalid: 56
 Type: Discrete Decimal: 0 Width: 12 Range: 1 - 2 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
1	Yes	15	46.9%
2	No	17	53.1%
Sysmiss		56	

RECORD_TIME_22764: Record Time 22764

Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1

Overview

Valid: 88 Minimum: 2024-10-04 Maximum: 2024-11-20
 Type: Discrete Width: 11 Range: - Format: character

STATUS_22764: Status 22764

Data file: AHRI.Sesikhona.Mental.Health.PC PTSD.Survey.2025.v1

Overview

Valid: 88 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 6 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Unknown	0	0%
1	Completed	88	100%
2	Canceled	0	0%
3	Expired	0	0%
4	Blocked	0	0%
5	Invalid Criteria	0	0%
6	In Progress	0	0%

SAQ2_22760: Feeling down, depressed, or hopeless**Data file: AHRI.Sesikhona.Mental.Health.PHQ.Survey.2025.v1****Overview**

Valid: 941 Invalid: 2

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 3 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Not at all	394	41.9%
1	Several days	319	33.9%
2	More than half the days	164	17.4%
3	Nearly every day	64	6.8%
Sysmiss		2	

RECORD_TIME_22760: Record Time 22760**Data file: AHRI.Sesikhona.Mental.Health.PHQ.Survey.2025.v1****Overview**

Valid: 943 Minimum: 2024-09-26 Maximum: 2025-03-09

Type: Discrete Width: 11 Range: - Format: character

STATUS_22760: Status 22760**Data file: AHRI.Sesikhona.Mental.Health.PHQ.Survey.2025.v1****Overview**

Valid: 943 Invalid: 0

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 6 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Unknown	0	0%
1	Completed	941	99.8%
2	Canceled	1	0.1%
3	Expired	1	0.1%
4	Blocked	0	0%
5	Invalid Criteria	0	0%

6	In Progress	0	0%
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PID_22760: Participant ID

Data file: AHRI.Sesikhona.Mental.Health.PHQ.Survey.2025.v1

Overview

Valid: 943 Invalid: 0 Minimum: 39636 Maximum: 95065 Mean: 51862.609 Standard deviation: 11852.343
 Type: Continuous Decimal: 0 Width: 12 Range: 39636 - 95065 Format: Numeric

SCHEM_TIME: Schedule Time

Data file: AHRI.Sesikhona.Mental.Health.PHQ.Survey.2025.v1

Overview

Valid: 943 Minimum: 2024-09-25 Maximum: 2025-02-26
 Type: Discrete Width: 11 Range: - Format: character

SAQ1_22760: Little interest or pleasure in doing things

Data file: AHRI.Sesikhona.Mental.Health.PHQ.Survey.2025.v1

Overview

Valid: 943 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 3 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Not at all	475	50.4%
1	Several days	303	32.1%
2	More than half the days	120	12.7%
3	Nearly every day	45	4.8%

PID_22762: Participant ID

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Overview

Valid: 488 Invalid: 0 Minimum: 39636 Maximum: 95065 Mean: 51949.959 Standard deviation: 11775.133
 Type: Continuous Decimal: 0 Width: 12 Range: 39636 - 95065 Format: Numeric

SCHEM_TIME: Scheduled Time

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Overview

Valid: 488 Minimum: 2024-10-02 Maximum: 2025-03-02
 Type: Discrete Width: 11 Range: - Format: character

SAQ1_22762: felt that you were unable to control the important things in your life?

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Overview

Valid: 488 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Never	198	40.6%
1	Almost Never	65	13.3%
2	Sometimes	189	38.7%
3	Fairly Often	19	3.9%
4	Very Often	17	3.5%

SAQ2_22762: felt confident about your ability to handle your personal problems?

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Overview

Valid: 487 Invalid: 1
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
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0	Never	138	28.3%
1	Almost Never	61	12.5%
2	Sometimes	193	39.6%
3	Fairly Often	50	10.3%
4	Very Often	45	9.2%
Sysmiss		1	

SAQ3_22762: felt that things were going your way?

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Overview

Valid: 487 Invalid: 1

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Never	120	24.6%
1	Almost Never	58	11.9%
2	Sometimes	226	46.4%
3	Fairly Often	50	10.3%
4	Very Often	33	6.8%
Sysmiss		1	

SAQ4_22762: felt difficulties were piling up so high that you could not overcome them?

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Overview

Valid: 486 Invalid: 2

Type: Discrete Decimal: 0 Width: 12 Range: 0 - 4 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Never	147	30.2%
1	Almost Never	84	17.3%
2	Sometimes	189	38.9%
3	Fairly Often	44	9.1%

4	Very Often	22	4.5%
Sysmiss		2	

RECORD_TIME_22762: Record Time 22762

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Overview

Valid: 488 Minimum: 2024-10-02 Maximum: 2025-04-01
 Type: Discrete Width: 11 Range: - Format: character

STATUS_22762: Status 22762

Data file: AHRI.Sesikhona.Mental.Health.PSS.Survey.2025.v1

Overview

Valid: 488 Invalid: 0
 Type: Discrete Decimal: 0 Width: 12 Range: 0 - 6 Format: Numeric

Questions and instructions

CATEGORIES

Value	Category	Cases	
0	Unknown	0	0%
1	Completed	486	99.6%
2	Canceled	2	0.4%
3	Expired	0	0%
4	Blocked	0	0%
5	Invalid Criteria	0	0%
6	In Progress	0	0%

Download related resources

Technical documents

DDI:AHRI.Sesikhona.Mental Health

Title	DDI:AHRI.Sesikhona.Mental Health
Author(s)	Nompumelelo Mkwanazi
Date	2025-12-04
Country	South Africa
Language	English
Publisher(s)	Nompumelelo Mkwanazi
Filename	AHRI.Sesikhona.Mental Health.pdf
