South Africa - HIV

ATTC Addiction Technology Transfer Center Network
Funded by the President's Emergency Plan for AIDS Relief through
the Substance Abuse and Mental Health Services Administration

TASK SHIFTING
FOR SEVERE MENTAL ILLNESS

Northern Tygerberg Community Psychiatry, Friday Academic Presentation
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Today's talk

- South Africa HIV Addiction Technology Transfer Centre (SA HIV ATTC)
  - Brief intro
  - Offerings
  - Contact details

- Task shifting interventions for mental illness
  - Treatment partner (TP), psychoeducation and m-health intervention
  - Community health worker (CHW) mental health training intervention
  - Processes and findings
  - Take-home messages

- Questions and discussion

South Africa HIV ATTC

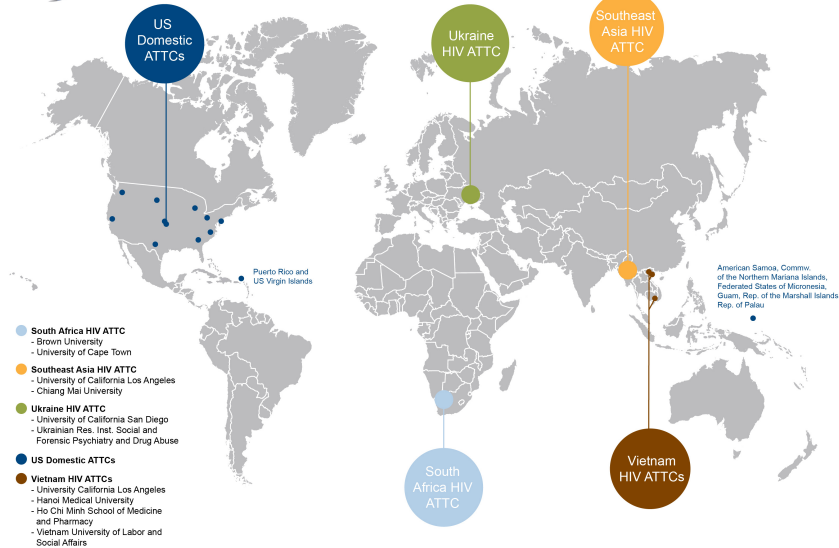|	
Funded by:	Substance Abuse and Mental Health Services Administration **✗SAMHSA**
Partnership between:	**New England** (HHS Region 1) ATTC Addiction Technology Transfer Center Network Funded by Substance Abuse and Mental Health Services Administration
Goals:	Training and Technical assistance: Substance Use/HIV/Mental health care providers/policy-makers

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ATTC Addiction Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

International ATTC Network

US Domestic ATTCs

Ukraine HIV ATTC

Southeast Asia HIV ATTC

Puerto Rico and US Virgin Islands

American Samoa, Commw. of the Northern Mariana Islands, Federated States of Micronesia, Guam, Rep. of the Marshall Islands, Rep. of Palau

South Africa HIV ATTC

Vietnam HIV ATTCs

South Africa HIV ATTC
- Brown University
- University of Cape Town

Southeast Asia HIV ATTC
- University of California Los Angeles
- Chiang Mai University

Ukraine HIV ATTC
- University of California San Diego
- Ukrainian Res. Inst. Social and Forensic Psychiatry and Drug Abuse

US Domestic ATTCs

Vietnam HIV ATTCs
- University California Los Angeles
- Hanoi Medical University
- Ho Chi Minh School of Medicine and Pharmacy
- Vietnam University of Labor and Social Affairs

Purpose of the ATTC Network

- To accelerate the diffusion of innovations (e.g., evidence-based interventions for substance use disorders and HIV prevention), the ATTC Network uses a comprehensive array of **technology transfer** strategies.
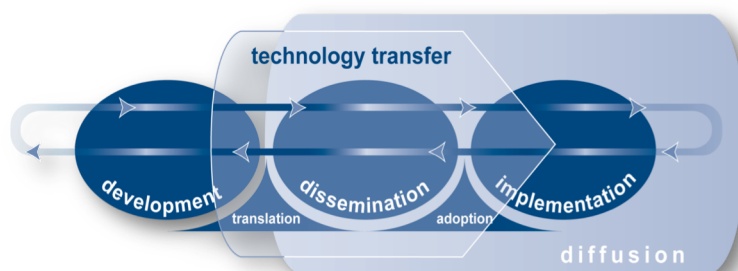

Figure from SAMHSA and ATTC network

South Africa HIV ATTC team

UCT-based SA HIV ATTC

Co-Project Directors:
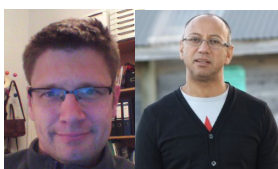Dr. Dan Stein: dan.stein@uct.ac.za
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URL: http://www.psychiatry.uct.ac.za/psych/addiction-psychiatry

UCT Addictions Division

US-based SA HIV ATTC

Objectives of South Africa HIV ATTC

|	
1	Develop and deliver training and technical assistance for individuals and organizations addressing substance use disorders, mental health, and/or HIV a) Develop and deliver training and technical assistance curricula for the workforce addressing HIV, SUD, and mental health b) Expand curriculum and capacity to train the HIV-SUD-mental health workforce c) Prepare accessible, scalable training materials to support task shifting
2	Develop, implement, and/or participate in the development of national or local standards of professional practice a) Assist at local and national level in addressing HIV, SUDs, and/or mental illness including helping policy makers in developing best practices
3	Foster provincial and national collaborations among key stakeholders addressing HIV, SUD, and mental health

27 PEPFAR Supported Districts
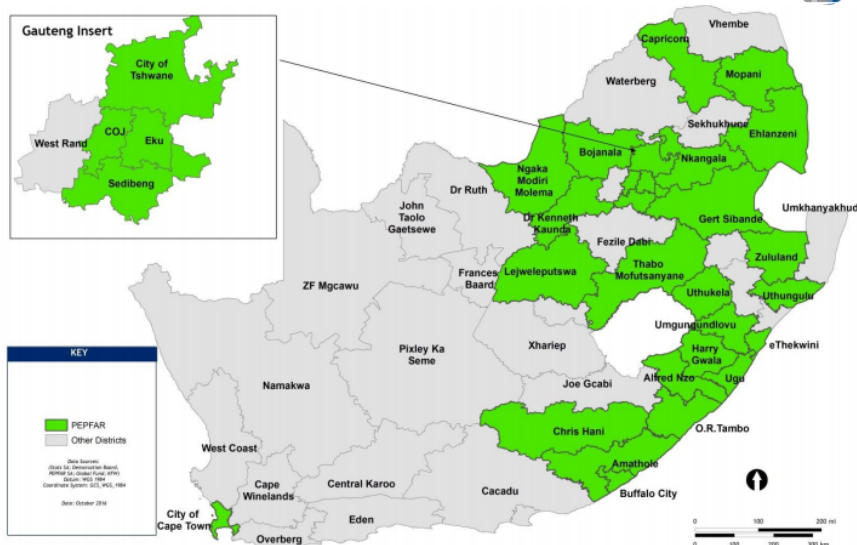
Activities

- Needs assessment through:
  - Key stakeholder survey
  - Individual organizational interactions
- Engagement with governmental and non-governmental stakeholders
- Engagement with ATTC network, PEPFAR and SAMHSA for training and technical assistance priority setting in light of needs assessments
- Established advisory board for ongoing strategic input
- Provision of both pre-service and in-service training focused on priority intervention models

Training offerings

- Screening, Brief Intervention, and Referral to Treatment (SBIRT)
- Motivational Interviewing (MI)
- Counselling Skills
- Masivukeni
- Mental Health for Community Health Workers
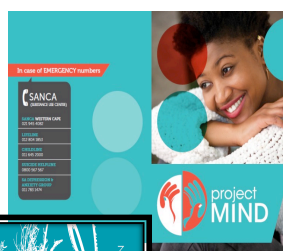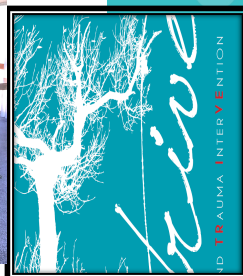
Background

- Mental health contribution to disability
- Non-adherence to treatment
- Under-resourced mental health services
- Task shifting potential solution
  - Definition
  - Cadres
- Mobile health (m-health)
- Unclear to what extent training can impact local cadre knowledge, attitudes and confidence

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BMC Research Notes

RESEARCH NOTE

Open Access

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Improving adherence in mental health service users with severe mental illness in South Africa: a pilot randomized controlled trial of a treatment partner and text message intervention vs. treatment as usual

Goodman Sibeko[1]*, Henk Temmingh[1], Sumaya Mall[1], Peter Williams-Ashman[1], Graham Thornicroft[2], Ezra S. Susser[3], Crick Lund[1,2], Dan J. Stein[1] and Peter D. Milligan[1]

RCT - Setting

- Setting
  - Valkenberg hospital (VBH)
    - 116 male, and 84 female inpatient beds
    - Average length of stay: 39 days.
    - MHSU admitted at VBH have diagnoses of schizophrenia (32,4%); schizoaffective disorder (15,5%); bipolar mood disorder (22,1%) and substance induced mood disorder 17,3%).
  - Psychiatry outpatient clinics within catchment area
    - Located with PHC CHC's
    - Mental health nurses
    - New assessments and post-discharge care
    - Routine clinical support via VBH
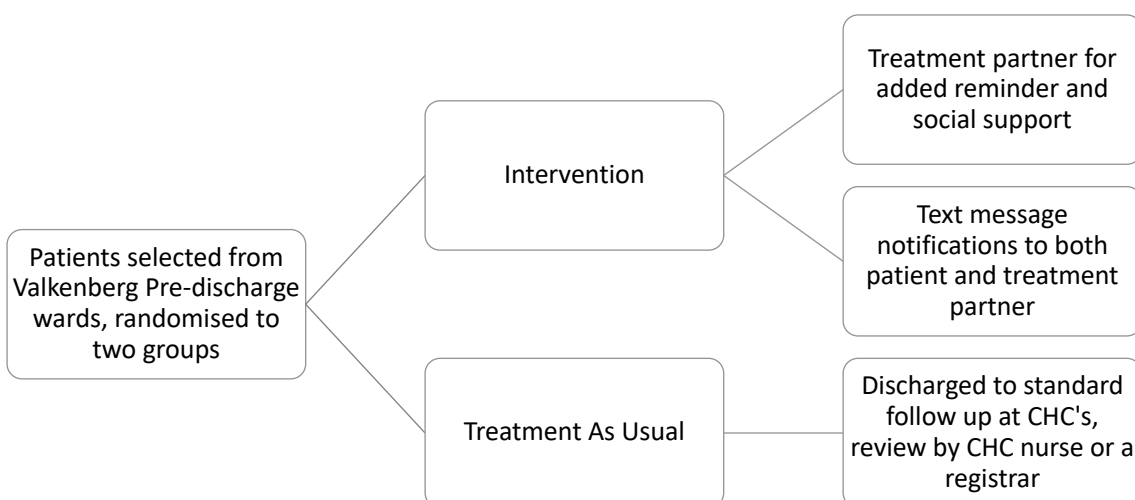
RCT - Participants

- Included
  - Adult MHSU
  - Severe mental illness
    - Schizophrenia; schizoaffective; schizophreniform; psychotic disorder NOS; SIPD; BPMD1;

- Excluded
  - Psychotic d/o due to GMC; Dementia; Moderate to severe intellectual disability
  - Suicidality/homicidality
  - Inability to give informed consent

RCT - Intervention

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Patients selected from
Valkenberg Pre-discharge
wards, randomised to
two groups
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→
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Intervention
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→ Treatment partner for added reminder and social support

→ Text message notifications to both patient and treatment partner

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Treatment As Usual
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→ Discharged to standard follow up at CHC's, review by CHC nurse or a registrar

RCT - Outcomes measures and associated instruments

| Outcome	Measure	Instrument
Acceptability and feasibility outcomes	Acceptability and Feasibility of Intervention	Qualitative interview at 3 months.
Efficacy outcomes	Adherence to first clinic follow-up visit	Data collected via Community Health Centre using text message technology for intervention for 3 months and by retrospectively checking attendance register for both intervention and TAU
	Relapse (Any readmission)	Re-admissions noted via Clinicom
	Medication adherence	Medication Adherence Rating Scale (MARS)
	Quality of Life	EUROQUOL; Camberwell Assessment of Needs (CAN)
	Symptomatic Relief	Clinical Global Impressions (CGI) Global Assessment of Function Scale (GAF)[4], Positive and Negative Syndrome Scale (PANSS)

RCT- Time frames and associated instruments

Initiation	3 Month Follow Up	9 month

1. Participant selection as per inclusion criteria
2. Randomisation
3. Consent and contract
4. Baseline instruments
Structured Clinical Interview for DSM Disorders (SCID)
CGI
GAF
MARS
CANS
PANSS
EUROQUOL
	1. Qualitative review:
	  a. MHSU perspective,
	  b. Treatment partner or carer perspective.
	2. Review appointment adherence
	3. Determine and record re-admissions via Clinicom
	4. Efficacy measures
	
	  a. MARS, CGI, GAF, PANSS, CAN and EUROQOL
		Determine and record re-admissions via Clinicom

RCT - Consort
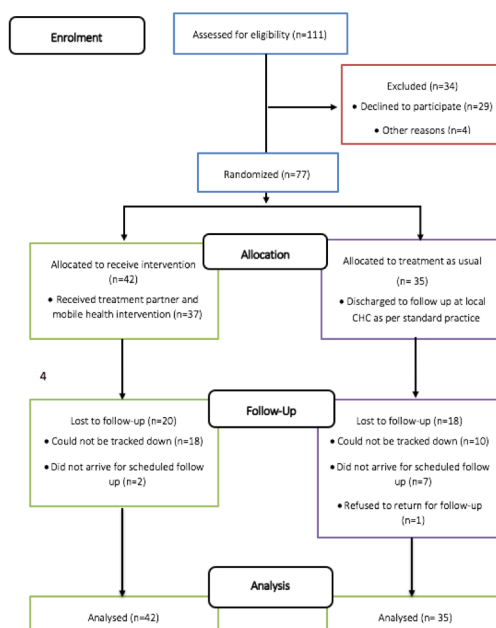
RCT - Participant characteristics

Participant characteristics	Total sample[1] (N=77)		Intervention (N=42)		TAU (N=35)		Statistic(df)	p-value
	mean	(SD)	mean	(SD)	mean	(SD)		
Age	35.5	(10.2)	35.3	10.9	35.8	9.5	t= -0.35(75)	0.726
	N	(%)	N	(%)	N	(%)		
Diagnosis								0.604
Schizophrenia Spectrum	62	80.5	32	76.2	30	85.7		
Bipolar mood disorder	11	14.3	7	16.7	4	11.4		
Substance Induced Psychotic Disorder	4	5.2	3	7.1	1	2.9		
Substance use							$\chi^2= 0.18(1)$	0.671
Lifetime Substance Use Disorder	31	40,3	16	38.1	15	42.9		
Antipsychotic								
First generation	50	64.9	26	61.9	24	68.6	$\chi^2=0.37(1)$	0.542
Second generation	19	24.7	12	28.6	7	20.0	$\chi^2= 0.75(1)$	0.385
Long acting injectable	22	28.6	10	23.8	12	34.29	$\chi^2= 1.03(1)$	0.311

RCT - Treatment partner selections

Selected Treatment Partner Type (n=37*)	n	%
Mother	21	56,8
Father	2	5,4
Sister	3	8,1
Brother	2	5,4
Aunt	1	2,7
Wife	2	5,4
Husband	1	2,7
Partner	2	5,4
Friend	1	2,7
Daughter	1	2,7
Son	1	2,7

RCT - Findings

MHSU insights and attitudes (Of the 17 reviewed in each arm) at 3 months

	Intervention (n=17)		TAU (n=17)	
	n	%	n	%
Knows diagnosis	9	52.9	5	35.3
Understands illness	6	35.3	4	23.5
Understands the cause of illness	5	29.4	4	23.5
Knows medication regimen	10	58.8	8	47.1
Adherent to medication	10	58.8	11	64.7

Treatment partner and caregiver perspective on MHSU adherence behaviour

	Intervention (n=17)		TAU (n=17)	
	n	%	n	%
Medication adherent	10	58,8	10	58,8
Clinic visit adherent	9	52,9	8	47,1
Found clinic helpful	11	64,7	5	29,4

RCT - Findings

MHSU perspective of Psychoeducation session for Intervention and Standard pre-discharge psychoeducation for TAU

	Intervention (n=17)		TAU (n=17)	
	n	%	n	%
Recalls session	8	47.1	3	17.6
Session helpful for understanding diagnosis	6	35.3	2	11.8
Session helpful for understanding treatment	6	35.3	0	0.0
Recalls information on post-discharge follow-up	3	17.6	8	47.1

Caregiver perspective of psychoeducation session for intervention and caregiver perspective of standard pre-discharge psychoeducation for TAU

	Intervention (n=17)		TAU (n=17)	
	n	%	n	%
Recall diagnosis	4	23.5	1	5.9
Understood syndromic features	8	47.1	0	0.0
Recalls medication information	2	11.8	2	11.8
Recalls post-discharge follow-up information	5	29.4	4	23.5
Found session helpful	9	52.9	1	5.9

RCT – Findings: Text message component

- Helpful when received
- Text notifications not received by 7 intervention participants and TP's
- Participant factors
  - Lost mobile phones, e.g.. theft
  - Changing mobile numbers
- Fieldworker challenges
  - Software difficulties
  - Loss of handsets through theft
  - Change of clinic staff

RCT - Efficacy findings

Intention-to-treat analysis (ITT): Non -adherence to first clinic visit, re-admission over 9 months

Outcome	n	%	Risk Ratio (ITT) Unadjusted (n=77)	Adjusted[1] (n=77)	p-value	95% CI
Non-adherence to first clinic appointment						
Intervention (n=42)	14	33.3	0.72	0.79	0.419	0.44 – 1.39
Treatment as usual (n=35)	16	45.7	-	-	-	-

	n	%	Risk Ratio (ITT) Unadjusted (n=77)	Adjusted[2] (n=77)	p-value	95% CI
Any re-admission over 9 months						
Intervention (n=42)	5	11.9	0.83	0.86	0.713	0.39 – 1.87
Treatment as usual (n=35)	5	14.3	-	-	-	-

RCT – Efficacy findings

Complete case and intention to treat analysis (ITT) of other efficacy outcomes at 3 months.

Outcome	Complete case analysis[3] (Intervention vs. TAU)				ITT (Intervention vs. TAU)			
	Mean difference [4]		p-value	95% CI	Mean difference[5] (n=77)		p-value	95% CI
	Unadjusted	Adjusted			Unadjusted	Adjusted		
PANSS score								
Total score	-9.4	-14.7	0.052	-29.71 – 0.16	-13.4	-13.1	0.062	-27.00 – 0.73
Positive subscale	-3.8	-6.4	0.011	-11.20 - -1.60	-5.6	-5.4	0.060	-11.16 – 0.25
Negative subscale	-2.6	-4.4	0.059	-8.99 – 0.18	-3.5	-3.5	0.078	-7.52 – 0.43
General subscale	-2.8	-3.9	0.350	-12.6 1 – 4.68	-4.4	-4.2	0.248	-11.67 – 3.19
MARS	-0.21	-0.75	0.425	-2.68 – 1.17	0.36	0.49	0.603	-1.44 – 2.43
CGI	-0.8	-0.58	0.346	-1.84 – 0.67	-	-	-	-
GAF	7.5	4.1	0.440	-6.90 – 15.17	-	-	-	-
CAN					-	-	-	-
Total needs	-	-	-	-	-	-	-	-
Unmet needs	-3.2	-3.6	0.029	-6.74 - -0.49	-	-	-	-
Met needs	-	-	-	-	-	-	-	-
EUROQUEL-VAS	16.1	15.2	0.124	-4.59 – 34.99	-	-	-	-

RCT - Conclusion

- Acceptable
- Treatment partner and psychoeducation feasible
- M-health component not feasible
- TP/Caregivers obliged to care;
- TP/Caregivers understanding of mental illness is limited;
- TP struggled with environmental factors including substance abuse and violence, which increased risk for poor adherence and readmission to hospital, and that
- TP's circumstances may change, impacting on their direct availability to provide support.
- Tended towards efficacious

Sibeko *et al. BMC Psychiatry* (2018) 18:191
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BMC Psychiatry

RESEARCH ARTICLE **Open Access**

Piloting a mental health training programme for community health workers in South Africa: an exploration of changes in knowledge, confidence and attitudes

Goodman Sibeko[1*], Peter D. Milligan[1], Marinda Roelofse[2], Lezel Molefe[2], Deborah Jonker[1], Jonathan Ipser[1], Crick Lund[1,3] and Dan J. Stein[1,4]

CHW Training
(CHW T)

- Research question: Does a manualized mental health training improve knowledge, and improve confidence and attitudes
- Development
  - WC DoH
  - New Beginnings,
  - South African National framework for CHWs as developed by the Health and Welfare Sector Education and Training Authority;
  - "UNESCO Training Guide and Training Techniques" and the "Best Practice Guidelines for Implementing and Evaluating CHW Programs in Health Care Settings" documents
- Format
  - Manualized, Eight 3-hour session
- Study design
  - Quasi-experiment (before-after cohort

CHW T – Sites and participants

- Sites selected in consultation with WC DoH
- First draft
  - 20 CHW's supervised by The Caring Network Khayelitsha
  - 22 CHWs supervised by Arisen Women Foundation in the Klipfontein sub-district.
- Final draft
  - 27 CHW's supervised by Masincedane in Strand and
  - 36 CHWs supervised by Opportunity To Serve Ministries (OTSM) in the Mitchell's Plain sub-district.
- No exclusion criteria

CHW - T: Outline of training programme

Session	Topic	Elements
1	Introduction and Culture	Ice breaker session, pre-training evaluation forms, and discussion of culture.
2	Culture and Mental Illness	Introduction of mental illness and it's overlap with local cultural constructs.
3	Mood and Anxiety Disorder	Discussion of the features of these components.
4	Psychotic Disorders, Older People, Intellectual Disabilities, Suicide and Aggression	Discussion of the features of these components and an approach to suicide and aggression.
5	Substance Use Disorders and Management of Mental Illness	Discussion of substance use, abuse and dependence and the management of previously introduced mental illnesses.
6	The Role of the CHW	Discussion of the role of the CHW, a review of mental disordered previously discussed, and a discussion of adherence and general support skills
7	The Mental Health Care Act and Admission Pathway	Discussion of the mental health act, evaluation and admission pathways and processes.
8	CHW Experiences, Case Vignettes, Evaluation Forms and Closure	The CHWs reflect on their training and experience in the field, and complete the post training evaluation documents.

CHW T - Outcomes and measures

Outcome	Measure	Collection point
Knowledge and skill	Clinical case vignettes	Administered before the start of training, and at the completion of training
	Mental Health Knowledge Questionnaire	
Confidence	Mental Health Clinical Confidence Scale	
Acceptability	Daily Evaluation Questionnaire	Completed at the end of each session
Feasibility	Training Evaluation	Completed at the end of the training

Participant characteristics (Final draft)

Characteristic	Masincedane (N = 31) (Mean, SD)	OTSM (N = 27) (Mean, SD)
Age	32.3 (7.72)	41.48 (12.57)
Service	3.86 (3.94)	2.79 (2.44)
Highest Level of education in grades	11 (0.96)	10.81 (1.4)
Children	1.96 (1.16)	1.9 (1.16)
Dependents[a]	4.56 (3.71)	3.06 (2.34)
	%	%
Stable partnership[b]	40.74%	58.06%
Has own medical condition	22.22%	41.94%

CHW Training Quantitative Outcomes

Outcome	Pre-training (mean, SD, N)	Post-training (mean, SD, N	Statistic (df)	p-value
Knowledge (MAKS)	41.48 (5.85), N=58	45.57 (4.25) N=56	t = -4.523, (55)	< 0.001
Confidence (MHNCCS)	45.25 (9.97), N=58	61.75 (7.42) N=54	t = -8.749, (54)	< 0.001
	Pre-training (mean, SD) N=45	Post-training (mean, SD) N=45		
Attitudes (CAMI)				
Authoritarianism	27.87 (2.97)	26.38 (4.1)	t = 2.720 (44)	0.99
Benevolence	37.67 (4.46)	38.82 (3.79)	t = -1.818 (44)	0.04
Social Restrictiveness	24.73 (4.28)	22.4 (5.3)	t = 2.96 (44)	0.002
Tolerance to rehabilitation in the community	36.49 (5.11)	38.09 (4.22)	t = -2.18 (44)	0.02

CHW T - Training Evaluation

Component satisfaction	Max Score	Total (n=58) Mean score (SD)	% with Max Score	Masincedane (N = 31) Mean score (SD)	OTSM (N = 27) Mean score (SD)
Overall	15	13.98 (1.35)	61.1%	12.44 (4.34)	13.71 (2.4)
Training Benefit	15	13.85 (1.41)	53.7%	12.26 (4.3)	13.65 (2.4)
Training Processes	15	13.57 (1.4)	42.6%	12.15 (4.55)	13.16 (2.37)
Training Setting	10	9.06 (1.14)	51.9%	8.04 (2.88)	8.94 1.59
Training Content	25	22.17 (2.65)	31.5%	19.37 (7.39)	21.9 (4.12)
Trainer	30	28.07 (2.58)	55.6%	25.07 (9.02)	27.35 (4.73)

CHW T - Qualitative

- Content easy to follow and understand.
- aspects of culture and cultural idioms were not fully understood.
- More information was required about bipolar mood disorder and depression.
- Gratitude towards the facilitators
- Training experienced as valuable and worthwhile.
- Informative and interesting.
- Content was perceived as important and applicable to the field of practice
- CHW's felt empowered to make a meaningful contribution to their communities.

CHW T - Summary of findings

- Overall improvement in knowledge
- Improvement in confidence
- Overall positive change in attitudes, amongst the trained CHWs in all but the authoritarianism subscale,
- Satisfaction with the content and processes of the training and expression of sentiments of gratitude and feeling empowered.

TS Take-home for our setting

- Acceptable and feasible
- Must be contextually appropriate
- M-health has potential but needs tailoring
- MHSU participation adds value
- Further evaluation required for end-user outcomes
- Multi-stage stakeholder involvement is key for success
- Scale up must be deliberate and consider cadre burden

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