

*Evaluation of Alcohol Screening
and Brief Intervention in Routine
Practice of Primary Care Nurses
in Vhembe District, South Africa*

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- The World Health Organization SBI program was developed to train medical providers to implement SBI in primary care settings
- To assess the implementation of the Alcohol Screening and Brief Intervention (SBI) strategy as part of a routine practice of nurses in 18 primary health care services in Vhembe district, South Africa.
- Our study is a part of the World Health Organization Collaborative Study on Brief Interventions for Hazardous and Harmful Alcohol Use in developing countries



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Alcohol use Vhembe district: community sample (n=800)

AUDIT score levels	Total	Men	Women
	Col%	Col%	Col%
Abstainers (0)	68.4	55.4	80.7
Low-risk drinkers (1-7)	15.3	18.5	12.1
High-risk drinkers (8-19)	11.0	22.2	5.0
Probable alcohol dependence (20+)	3.3	4.8	1.4



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ALCOHOL USE IN PRIMARY CARE (in %)

	AUDIT Score	Total	Men (n=188)	Women (n=412)
Abstainers	0	69.0	46.6	79.4
Low-risk drinkers	1-7	11.9	16.1	9.9
High-risk drinkers	8-19	16.1	28.2	10.4
Prob. alcohol dep.	20+	3.1	9.2	0.3



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The assessment of the implementation of the alcohol
Screening and Brief Intervention (SBI)

→ conducted in 18 clinics (16 primary care clinics and 2
community health centers) Vhembe District

The 18 clinics selected for the implementation serve
125,000-130,000 patients per month; the primary health
care utilization rate in 2006 was high (mean, 4.6; range,
3.8-6.2; primary care clinic visits in a year)

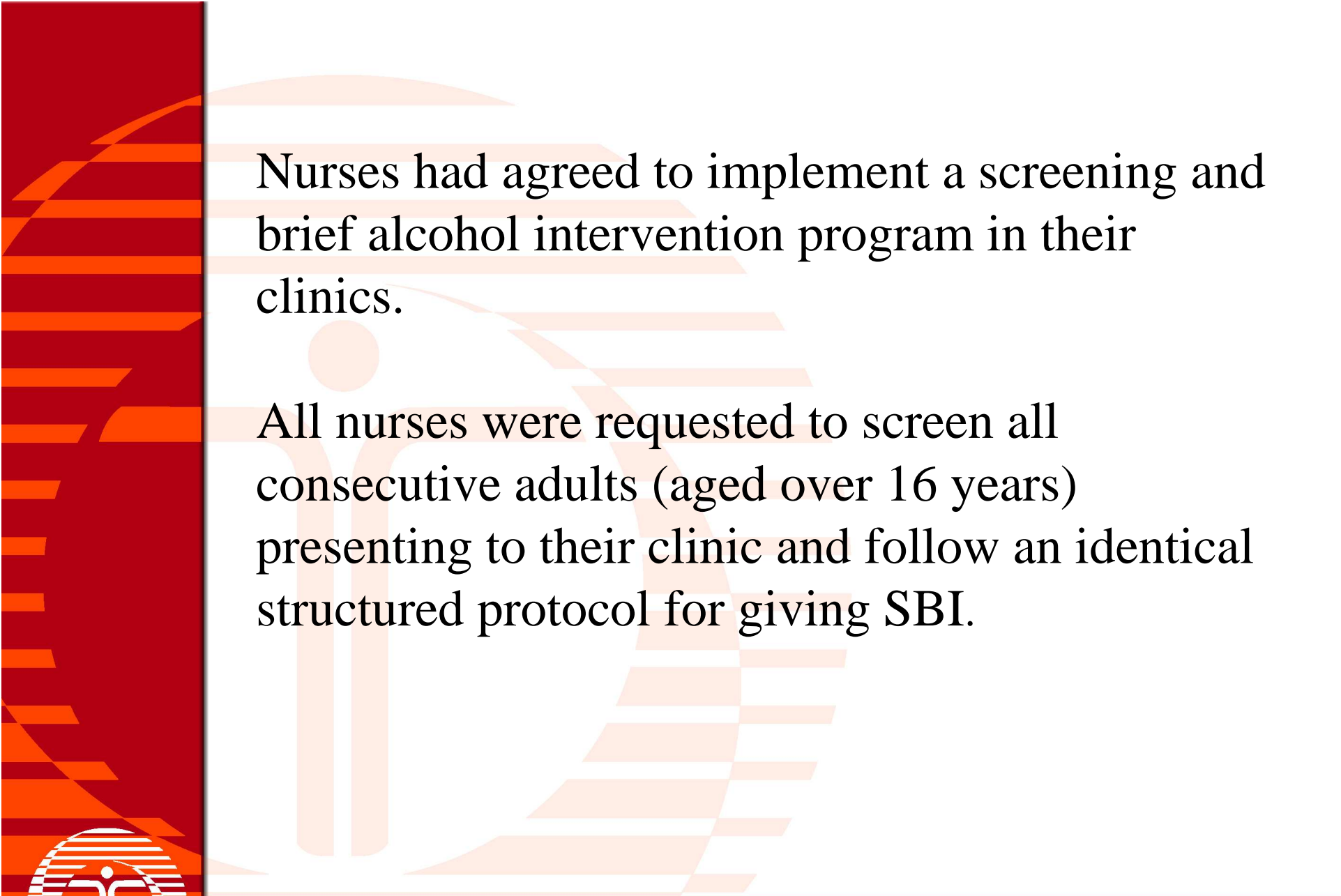
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Setting

- **Primary health care providers including professional nurses, enrolled nurses, and assistant nurses from 18 primary health care clinics from Thulamela sub-district (Vhembe district) had been trained for two days on SBI.**
- **The trainings included nurses with different nursing ranks (professional, enrolled or assistant nurses), practice goals, levels of education, and length of experience.**
- **However, due to their similar experiences in the nursing field they had a similar goal in preventing alcohol abuse.**
- **Training of nurses in SBI for alcohol problems in primary health care is described in more detail elsewhere.**
- **The SBI implementation program was officially endorsed by the national department of health and the province and district health authorities.**
- **Nurses were provided with a certificate of attendance when all the trainings had been completed.**
- **When the trainings were completed, each clinic received at least two support visits by a trainer on SBI procedures during the first three months of implementation.**



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Nurses had agreed to implement a screening and brief alcohol intervention program in their clinics.

All nurses were requested to screen all consecutive adults (aged over 16 years) presenting to their clinic and follow an identical structured protocol for giving SBI.



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(A) Screening brief intervention implementation modalities in primary care clinics in Vhembe District, South Africa.

Option 1:

Assistant nurse (AN) or the Enrolled Nurse (EN) takes the vital signs of every patient while finding out about the patients drinking habits. Patients are referred to the Professional Nurse (PN) for alcohol screening.



The PN does all screening work plus the interventions



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Option 2:

The AN takes the vital signs of every patient and explains and administers the AUDIT screening questionnaire.

The questionnaire is scored using the following template.

If a patient is drinking sensibly then the AN or EN gives alcohol education to the patient.

AUDIT score = 0-7

If a patient is drinking hazardously then the AN or EN gives simple advice to the patient.

AUDIT score = 8-15

If a patient is drinking harmfully the he/she is given simple advice plus brief counseling by the EN or PN and continued monitoring.

AUDIT score = 16-19

If the patient is drinking harmfully and has become alcohol dependent then the EN or PN provides brief counseling plus referral to a specialist for diagnostic evaluation and treatment.

Anonymous carbon copies of the screening questionnaire were collected from all practices after a 6-month implementation period.

All clinic managers were interviewed by a Human Sciences Research Council researcher and trainer 4 months after the implementation of SBI with a semi-structured questionnaire on SBI implementation attitudes.

Informed consent was obtained from the clinic managers and the study was approved by the University of Limpopo ethics committee



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Measure

The screening questionnaire used was the AUDIT
Because AUDIT is reported to be less sensitive at identifying risk drinking in women, the cut-off points of binge drinking for women were reduced by one unit as compared with men.

Ten SBI implementation attitude questions:
items on perceived benefits, beliefs, values, past history, current needs, competing priorities, complexity of innovation, trialability and observability, and feedback on

SBI performance (defined as 120 and more AUDIT questionnaires retrieved)



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Results

Patient screening data were provided from 18 clinics.

Clinics had 101 professional nurses (83% of which had been trained in SBI), 47 enrolled nurses (85% of which had been trained in SBI), and 48 assistant nurses (73% of which had been trained in SBI).

Nurses implemented SBI with 2670 patients during a 6-month implementation period in the 18 clinics.

Of the nurses who implemented SBI, 83.4% had received formal SBI training. Different SBI components, screening, alcohol education, simple advice, brief counseling, and brief counseling and referral were done by professional nurses (75%) and enrolled nurses (25%)



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Risk drinking level by sex and age of 2670 patients screened for alcohol in primary care

	No. (%) of:						
	zone I*	Zone II	zone III	zone IV	hazardous or harmful	χ^2	<i>P</i>
AUDIT score	0-7	8-15	16-19	20-40	8-40		
Total patients	2022 (75.7)	357 (13.4)	125 (4.7)	166 (6.2)	648 (24.3)		
Sex:						212.40	<0.001
male	611 (60.9)	210 (20.9)	84 (8.4)	99 (9.9)	393 (39.1)		
female	1282 (86.2)	115 (7.7)	31 (2.1)	59 (4.0)	205 (13.8)		
Age:						77.86	<0.001
16-24	613 (87.0)	56 (7.9)	19 (2.7)	17 (2.4)	92 (13.0)		
25-40	800 (73.5)	157 (14.4)	52 (4.8)	79 (7.3)	288 (26.5)		
41-60	374 (66.4)	99 (17.6)	37 (6.6)	53 (9.4)	189 (33.6)		
>60	89 (75.4)	14 (11.9)	7 (5.9)	8 (6.8)	29 (24.6)		



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Evaluation summary ratings of screening and brief intervention in primary care

	clinics with good implementation (n=9)	clinics with poor implementation (n=9)	Fisher's Exact test
Structure and organization of clinics:			
all nurses in the clinic trained in SBI	8	3	.050
feedback provided	4	2	.620
nurse clinical workload <35 patients a day	7	2	.057
competing priorities (eg, voluntary HIV counseling and testing, tuberculosis, antenatal care, Papanicolaou smear examinations)	1	5	.131
Teamwork	7	3	.153
tension in the clinic	2	4	.620
Perceptions of innovation:			
early adopters (first 2 mo)	6	0	.009
perceived benefit from SBI	9	8	1.000
compatibility with beliefs, values, past history and current needs	6	4	.637
low perceived complexity of innovation	8	4	.131
trialability and observability	4	3	1.000

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Discussion

Factors influencing the implementation of SBI as routine in primary care in this study included:

- the percentage of nurses trained in SBI,
- support visits,
- clinical workload,
- competing priorities,
- team work,
- early adoption,
- compatibility beliefs,
- perceived complexity of innovation,
- trialability, and observability of SBI



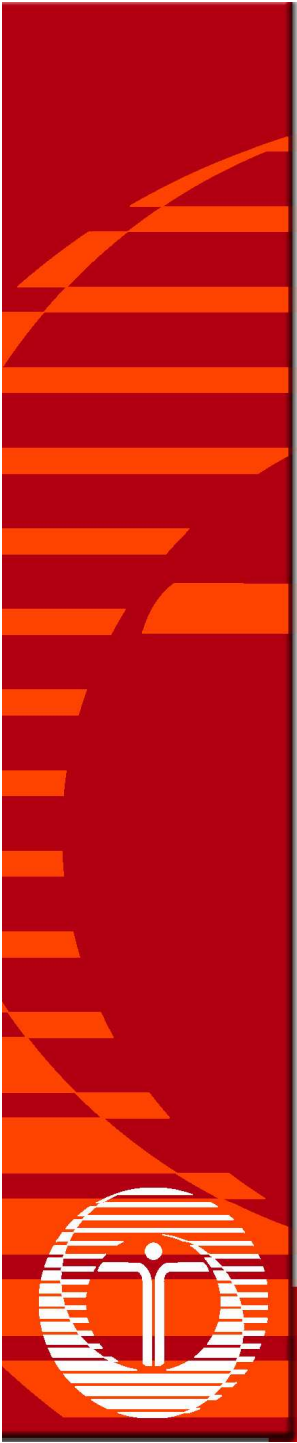
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Other factors influencing the adoption of innovations seem not to have played a role in this study:

- perceptions of innovation (perceived benefit and risks of change),
- contextual factors (communication, incentives, leadership, management, nurturing environment for innovators),
- group education sessions,
- education by respected colleagues (ie, opinion leaders),
- that the continuing education in SBI is based on demonstrated need, that the needs are translated into specific measurable objectives,
- that the length of the education offered is appropriate to the objectives to be achieved,
- that the participants are a homogeneous group with similar practice goals and learning readiness,
- that learning activities and teaching methods are varied,
- that objectives are developed jointly with sponsors and evaluated in practice afterwards

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In this study, the nurses screened 2670 patients during a 6-month implementation period and found high prevalence of hazardous or harmful drinkers (39.1% of men and 13.8% of women; AUDIT cut-off score 8 and more).

Peltzer (2007) found similar prevalence of hazardous or harmful drinking among men (48.1%) and among women (11.0%) in rural primary care clinics in South Africa.

Lock and Kaner (2003) also found similar prevalence of risky drinkers (27%) when brief alcohol interventions were implemented by nurses in primary care in the UK

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In order to improve on SBI implementation as routine practice, more attention should be paid to the following factors:

- 1) training modalities (greater number of nurses trained in SBI in each clinic, the provision of support visits, trialability and observability of SBI);
- 2) clinic organization (low clinical workload, fewer competing priorities, and better team work); and
- 3) attitudinal changes (early adoption, better compatibility of intervention with beliefs, and less perceived complexity of innovation).



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