



EFFECTIVENESS OF SCREENING, BRIEF INTERVENTION AND REFERRAL TO TREATMENT APPROACH IN ORGANIZATION-BASED MITIGATION OF ALCOHOL ABUSE

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INTRODUCTION

- Substance abuse is a major public health concern globally
- This is due to its impact on the individual, family, community and the nations in general
- Workplace substance use has significant impact on the user, other employees and consequently to the organization
- It leads to absenteeism, presenteeism, high treatment cost and burden of disease to the family and employer



INTRODUCTION CONT....

- The study aimed at establishing the effectiveness of the screening, brief intervention and referral to treatment (SBIRT) as an approach to mitigating alcohol abuse problems in the workplace
- SBIRT is an evidence-based practice that was developed for use in the primary health care
- It is used to identify, reduce and prevent problematic use, abuse and dependence of alcohol (Quanbeck et al., 2010).
- It has also been used in settings other than primary health care such as in schools, among prisoners and workplaces
- It is used as a package with its three components



PURPOSE OF THE STUDY

To determine the effectiveness of SBIRT as an approach to organizational-based mitigation of alcohol abuse

Objectives

1. To determine the prevalence of alcohol abuse problem among Kenya Wildlife Services (KWS) employees
2. To identify approaches used by the Wellness Centre in assisting persons with alcohol abuse problems
3. To determine the effectiveness of SBIRT approach in the workplace



THEORETICAL FRAMEWORK

- The study adapted Transtheoretical model of behaviour change also known as stages of change model by Prochaska & Diclemente
- The model highlights different approaches of understanding human behaviour



METHODOLOGY

Research Design

- The study used quasi-experimental design , a three-time series with pre- and post-test only design
 - Pre-treatment or baseline, was done at the beginning to identify alcohol prevalence and respondents with alcohol use problems
 - Midline evaluation after 3 months and endline after 6 months to assess effectiveness of the intervention



Study site, Population & Sample size

- The study was limited to all KWS employees both permanent and contractual, uniformed and non-uniformed
- The study adopted the two means comparison formula
- This is because it was a prospective study that involved unmatched cases for comparing the mean functional outcome score by means of a standard t-test



Cont...

- The sample size was calculated based on the study effect size of 30%, prevalence of 41% with 95% level of confidence, 80% power and SD of 2 units
- Based on sample size calculation, a total of 219 respondents were screened which gave a sample size of 97 respondents including 20% attrition rate
- The study used both clustered and simple random sampling to identify regions for the study as well as platoons or units in each identified region



Study Instruments

- Both qualitative and quantitative data was collected
- The study used three data collection instruments
 - i. SDQ developed by the researcher
 - ii. Standardized tools-AUDIT & ASSIST to assess prevalence of alcohol abuse and also during post treatment I & II
 - iii. FGD guides to collect qualitative data from management, Wellness centre staff and Wellness program beneficiaries



Data Analysis

- Data was analyzed using SPSS v21
- Different tests were carried out to respond to the study objectives
- They included descriptive -univariate, bivariate and multivariate
- Chi square and paired T-test were used to test efficacy of the intervention



STUDY FINDINGS

- a) Characteristics of respondents
 - Respondents SD data was collected based on gender, age, marital status, religious affiliation, education level, nature of employment, category of officer
 - Results showed that 69.4% of the respondents were male and 30.6% females
 - Type of employees-54.3% uniformed and 45.7% non-uniformed
 - Type of employment- 79% permanent and 21% contractual staff



Risk levels of alcohol use based on AUDIT

	<i>Frequency</i>	<i>Percent</i>
No risk (score 1-7)	31	32.0
Low risk (score 8-14)	33	34.0
Moderate risk (15-19)	14	14.4
High risk (20+)	19	19.6
Total	97	100.0



INTERVENTION

- This was administered after baseline based on AUDIT scores as follows:
 - No risk (1-7 scores): four 20 min sessions
 - Low risk (8-14 scores): four 30-min sessions
 - Moderate level (15-19): six 30-min sessions (with referral)
 - Severe level (20+): six 30-min sessions (with referral)
 - Those with severe levels were also referred for specialized services
 - Other drugs-intervention was based on most problematic drug based on ASSIST scores



ADA Mitigation At KWS

- ▶ There is a wellness centre at the organization that offer different services to staff and families with only 4 addiction counselors in the organization
- ▶ Employees with substance abuse problems are referred to HQ for intervention
- ▶ There is stigma associated with substance abuse in the organization leading to low uptake of the services
- ▶ The staff have no specific approach for mitigation of substance abuse but indicated the use of CBT, other behavioural approaches, Gestalt and Motivational interviewing
- ▶ They further indicated lack of proper training in the approaches they used
- ▶ Staff training is up to diploma in addiction counseling



OBJECTIVE 2: EFFECTIVENESS OF SBIRT

- Effectiveness of the intervention was calculated as mean before intervention minus mean after intervention divided by the SD of treatment difference scores with a corresponding 95% CI
- Means were compared from baseline to endline within the group and against different study variables



Comparison of mean from baseline to endline

Mean scores (SD)

Pre-treatment/baseline
(n=80)

Treatment One/3 months
(n=80)

Treatment Two/6 months
(n=72)

Alcohol
Abuse

12.95 (7.167)

9.66 (5.519)

7.00 (4.723)



Mean difference by gender-baseline to endline

		Mean scores (SD)			
	Pre-treatment/baseline	Treatment One/3 months		Pre-treatment/baseline	Treatment Two/6 months
Male (n=64)	13.59 (7.007)	10.13 (5.551)	Male (n=57)	14.30 (7.028)	7.51 (4.800)
Female (n=16)	10.38 (7.446)	7.81 (5.141)	Female (n=15)	9.00 (5.196)	5.07 (3.990)



Mean outcome difference from pre-treatment to post-treatment at 3- and 6-mth follow-up

Mean difference scores (SD)

Pre-treatment	Treatment One (n=80)	p-value	Treatment Two (n=72)	p-value
Alcohol Abuse	3.287 (3.163)	P<0.0001	6.194 (4.048)	P<0.0001



mean outcome difference from baseline to endline by gender

Pre-treatment	Mean difference scores (SD)			
	Treatment One (n=80)	p-value	Treatment Two (n=72)	p-value
Male (n=64)	3.469 (3.081)	p<0.0001	6.789 (4.169)	p<0.0001
Female (n=16)	2.563 (3.483)	0.010	3.933 (2.576)	p<0.0001



mean outcome difference from baseline to endline by age

Mean difference scores (SD)

	Pre-treatment	Post-treatment One	p-value	Post-treatment Two	p-value
Below 40 years		3.143 (3.344)	<0.0001	5.694 (4.234)	<0.0001
Above 40 years		3.625 (2.732)	<0.0001	7.261 (3.467)	<0.0001



mean outcome difference from baseline to endline by education level

Mean difference scores (SD)

	Pre-treatment	Post-treatment One	p-value	Post-treatment Two	p-value
Secondary level and below		3.917 (3.168)	<0.0001	7.333 (3.680)	<0.0001
Post-secondary level		2.344 (2.958)	<0.0001	4.600 (4.058)	<0.0001



Mean outcome difference from baseline to endline by duration of alcohol use

Mean difference scores (SD)

	Pre-treatment	Treatment One	p-value	Treatment Two	p-value
Less than 5 years		3.000 (3.536)	0.001	5.889 (5.312)	<0.0001
More than 5 years		3.390 (3.046)	p<0.0001	6.296 (3.585)	<0.0001



Effect size from baseline to endline

Pre/3-month post-treatment (n=80) Pre/6-month post-treatment (n=72)

	Effect sizes	95% CI	Effect sizes	95% CI
Alcohol abuse	0.518	-0.467 – 1.502	0.977	0.008 – 1.945



Effect size from baseline to endline by gender

	Pre/3-month post-treatment (n=80)		Pre/6-month post-treatment (n=72)	
	Effect sizes	95% CI	Effect sizes	95% CI
Male	0.552	-0.535-1.638	1.138	0.043-2.233
Female	0.415	-1.732-2.561	0.878	-0.723-2.480



Effect size from baseline to endline by age

Duration of Treatment	Pre/3-month post-treatment (n=80)		Pre/6-month post-treatment (n=72)	
	Effect sizes	95% CI	Effect sizes	95% CI
Below 40 years	0.488	-0.705 to 1.680	0.945	-0.246 to 2.137
Above 40 years	0.603	-1.099 to 2.305	1.297	-0.322 to 2.917



Effect size from baseline to endline by age at first use

	Pre/3-month post-treatment (n=80)		Pre/6-month post-treatment (n=72)	
	Effect sizes	95% CI	Effect sizes	95% CI
Less than 18 years	0.626	-1.271 to 2.522	1.253	-0.580 to 3.086
Greater than 18 years	0.493	-0.648 to 1.634	0.996	-0.133 to 2.125



Effect size from baseline to endline by age at first use

	Pre/3-month post-treatment (n=80)		Pre/6-month post-treatment (n=72)	
	Effect sizes	95% CI	Effect sizes	95% CI
Less than 5 years	0.434	-1.656 to 2.524	0.899	-1.240 to 3.039
Greater than 5 years	0.557	-0.542 to 1.655	1.109	0.037 to 2.180



KEY FINDINGS

- Study found that lifetime prevalence of alcohol abuse among KWS employees was 60.3% while the current alcohol abuse prevalence was 44.3%.
- Age of initiation for alcohol abuse: 41.1% had started drinking at 19 years and above
- Onset of alcohol abuse age was below 10 years.



Findings Cont.....

- The majority of respondents (30.2%) with alcohol abuse problems indicated having used alcohol for a period ranging from 6 years and above.
- Prevalence of use of other drugs such as tobacco, miraa/muguka (khat), bhang and mandrax based on ASSIST was 9.6%.



Findings Cont.....

- Computed data indicated an effect size of 0.518 at post-treatment one after 3 months and 0.977 after post-treatment two at 6 months.
- Mean difference was compared to respondents characteristics and indicated significant changes across age, gender and education levels
- The findings revealed that SBIRT was effective across different populations based on gender, age and education.
- There were significant changes in mean scores from baseline to endline with a steady decline in the mean scores for alcohol abuse.



Findings Cont.....

- Mean outcome difference scores were compared at baseline and endline on selected socio-demographic characteristics and were statistically significant ($p \leq 0.0001$).
- The effect size value for midline ($d=0.518$) and endline ($d=0.977$) suggested a large practical significance for alcohol abuse.
- This indicated that SBIRT was effective in management of alcohol abuse in the workplace.



CONCLUSIONS

- This study established prevalence of alcohol abuse and alcohol dependence among employees at KWS as well as the mean differences on alcohol abuse across different socio-demographic variables.
- There were significant changes in mean scores from baseline to endline with a steady decline in the mean scores for alcohol abuse.
- The findings revealed that SBIRT was effective across different populations based on gender, age and education.



RECOMMENDATIONS

- It was recommended that :
 - KWS management review their current ADA policy to include prevention strategies in the work place that would provide strategies for prevention, early identification, treatment and referral for specialized treatment.
 - the organization adopt evidence-based workplace ADA prevention strategies targeting new employees and those who are not yet initiated into alcohol use.
 - policy makers adopt the approach which is evidence-based for mitigating alcohol abuse in the workplace.
 - KWS employ wellness staff with higher levels of training in addiction counseling and management. The staff



AREAS FOR FURTHER RESEARCH

- There is need for replication of this study in other work settings to find out if the findings would confirm the effectiveness of SBIRT as an organizational-based approach to mitigating alcohol abuse.
- There is need for further studies focusing on enforcement of the National and Counties Alcoholic Drinks Control Acts that focus on management of alcohol in different counties.
- There is need for further studies focusing on the impact of work environment on alcohol abuse



THANK YOU

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