SBI training - A strategy for addressing Alcohol-related problems at the workplace in Portugal

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Warsaw, 18/19 September 2014

Introduction and Objectives

- **Alcohol** is a psychoactive substance with dependence-producing properties whose harmful use can cause a heavy health, social and economic burden in societies.
- This is an exploratory study for other bigger research, in Portugal, that aims to adequate Screening and Brief Interventions (SBI) training of Occupational Health (OH) professionals.
- Previous studies in Primary Health Care (PHC) point to an increase in SBI in patients with Alcohol Related Problems (ARP) after appropriate training of health professionals.
- Towards a Portuguese strategy to ARP in the Workplace, the study object shifted from workers to OH professionals, considering that their attitudes changing have effects in their SBI effectiveness on workers.
- Health professionals commonly report that they are **reluctant to screen and advise patients** in relation to alcohol use. **Training can improve professionals skills and attitude.**

STUDY AIMS:

1. To assess **OH professionals' attitudes towards screening and brief interventions (SBI)** in alcohol-related problems (ARP) at the workplace setting;
2. To determine whether any changes in these attitudes occurred after a specialized SBI training ("Alcohol and Work") and which factors were associated with that change.

Methods

- **Design:** Quasi-experimental, prospective, longitudinal study of an evaluation before-after a training session.
- **Intervention:** One-day (5,5h) training session with theoretical, case analysis, exercises and discussion.
- **Participants:** 56 OH Professionals who took part in a training about alcohol and work.
- **Dependent variables:**
  - Sociodemographic, personal and professional experience, self-reported difficulties in dealing with patients with ARP;
  - Professionals' attitudes, obtained through **SAAPPQ** – Short Alcohol and Alcohol-Related Problems Perception Questionnaire before and after training. SAAPPQ is a 10-item questionnaire, in which respondents indicate the extent of their agreement on a five-point scale ranging from 'strongly disagree' to 'strongly agree'. The 10 items (sum of the scores) can be grouped into 5 subscales:
    - *Role ADEQUACY;*
    - *Role LEGITIMACY;*
    - *Willingness/MOTIVATION to work with drinkers;*
    - *Professional SELF-ESTEEM in working with drinkers;*
    - *Expectations of SATISFACTION in working with drinkers.*
  - **AUDIT-C** Alcohol Use Disorders Identification Test. The first 3 questions in the AUDIT questionnaire were validated and established the cut-off points of 0 for absence of consumption; 1 to 4 for men and 1 to 3 for women for low risk consumption; 5 to 12 for men and 4 to 12 for women for hazardous alcohol consumption .
- **Statistical analysis:** Is indicated as a table and graphic footnotes.

Results

WHO PARTICIPATED IN THE TRAINING 'ALCOHOL AND WORK'? [TABLE 1]

- **About 2 out of 3 were women, and the participants' average age was 49±11 year-old**.
- Almost half (47%) worked in Lisbon and 15% were from Oporto. The participants were part of Occupational Health and Safety teams (92,4% were Health Professionals).
- **The participants average working experience was of 14±11 years, most of them in both large and medium companies**, and both in the industry and services sector. About half of the participants indicated to be currently exclusively dedicated to clinical practice.

TABLE 1. SOCIO-DEMOGRAPHIC, PROFESSIONAL AND PERSONAL EXPERIENCE CHARACTERISTICS (N=56) AND OPINION CONCERNING THE TRAINING PROGRAM (N=46)

Characteristics			Total, n (%)
Socio-demographic characteristics			
Age (years)	*Mean ± SD*		48.8 ± 11.1
Sex	*Female*		39 (69.6)
District	*Lisboa*		26 (47.3)
	Porto		8 (14.5)
	Others		22 (39.5)
Professional characteristics and opinion concerning ARP			
Professional category	*OH Physician*		22 (39.3)
	OH Physician Trainee		5 (8.9)
	Physician (other specialities)		12 (21.4)
	OH Nurse		2 (3.6)
	Nurse (other specialities)		5 (8.9)
	Psychologist		3 (5.4)
	Ergonomist		1 (1.8)
	Services		1 (1.8)
	Social services		2 (3.6)
	Work Safety Technician		3 (5.4)
Company Dimension (one or more options)	*Micro companies*	*yes*	8 (14.3)
	Small companies	*yes*	13 (23.2)
	Medium companies	*yes*	18 (32.1)
	Large companies	*yes*	43 (76.8)
Activity sectors (one or more options)	*Services Sector*	*yes*	36 (65.5)
	Industry sector	*yes*	28 (50.9)
	Primary sector	*yes*	4 (7.3)
	Several	*yes*	12 (21.8)

Characteristics			Total, n (%)
Professional characteristics and opinion concerning ARP (cont)			
Years of professional activity	*Mean ± SD*		13.8 ± 10.5
Occupational Health clinical activity only	*yes*		28 (50.9)
ARP importance in medical appointment.	*Very important*		39 (69.6)
	Important		14 (25.0)
	Somewhat		3 (5.4)
	Not important		0 (0)
Workers/patients with ARP per week	*<5*		36 (73.5)
	5 to 10		10 (20.4)
	10 to 20		3 (6.1)
The services give appropriated answers to patients with ARP	*yes*		15 (28.8)
Feels the need of implementing new approaches to ARP	*yes*		54 (96.4)
Aware of new approaches to ARP, namely "Brief interventions"	*yes*		19 (33.9)

OH, Occupational Health.
SD, Standard deviation.
Descriptive statistics with counts, percentages and means with standard deviation
Missing values were exluded.

Characteristics			Total, n (%)
Personal experience with alcohol and with patients with ARP			
Difficulties in dealing with patients with ARP	*Lack of training*	*yes*	37 (77.1)
	Difficulties of making diagnosis	*yes*	18 (40.9)
	Lack of time	*yes*	22 (52.4)
	Lack of incentives	*yes*	27 (61.4)
	Frustrating medical consultations	*yes*	24 (58.5)
ARP problems in respondent own family		*yes*	24 (43.6)
Risk score (AUDIT-C)		*Doesn´t drink*	11 (19.6)
		Low risk	40 (71.4)
		Risky consumption	5 (8.9)
Training in dealing with patients with ARP		*yes*	24 (44.4)
Training was useful for clinical practice (n= 24)		*yes*	24 (100)
Need for further training in ARP		*yes*	53 (98.1)
Opinion about the training screening and brief intervention "Alcohol and Work" in ARP (n=43).			
The participant felt that the Screening and Brief Intervention "Alcohol and Work" training was useful for clinical practice		*yes*	39 (95.1)
The participant declares that he/she has further need for advanced training		*yes*	35 (83.3)

WHAT WERE THE DIFFICULTIES PARTICIPANTS REPORTED WHEN DEALING WITH ARP? [TABLE 1]

- Most important difficulties reported by professionals when dealing with patients with ARP were **lack of training (3 out of 4)**, **lack of incentives (2 out of 3)**, **feeling frustrated (3 out of 5)** and **lacking time (1 out of 2)**. About 2 out of 5 stated to **have difficulty in identifying workers** with ARP.

RELEVANCE OF ARP AND OPINION OF PROFESSIONALS CONCERNING HEALTH SERVICES RESPONSE TO ARP. [TABLE 1]

- The vast majority of the professionals (95%) considered that **alcohol-related problems (ARP) are very important or important in their medical practice**. Most professionals saw less than 5 workers per week with ARP, although **25% saw 5 or more workers with ARP each week** .
- Two out of 3 professionals felt that **health services did not provide an appropriate answer to patients with ARP** and **almost all felt that new approaches were needed**.
- **Only 1 out of 3 were aware of new approaches**, namely 'brief interventions'.

OPINION OF PARTICIPANTS REGARDING THE *SCREENING AND BRIEF INTERVENTION* "ALCOHOL AND WORK" TRAINING IN ARP

- After having the training session on "Alcohol and work", **almost all considered that it was useful for their clinical practice** and the **vast majority felt further need to improve their training** on ARP .

WHAT WAS THE GLOBAL CHANGE IN ATTITUDE SCORING WITH THE ARP TRAINING, PER DIMENSION? [TABLE 2]

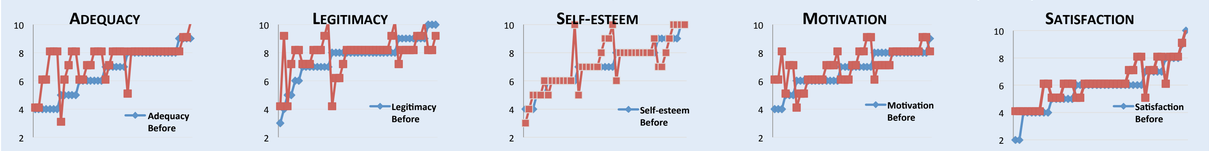
- ADEQUACY was the only dimension which revealed a statistically significant difference between pre-training and post-training.
- An increase in SATISFACTION was observed which was marginally statistically significant.
- It is noteworthy the **global high values of pre-training scores in most attitudes**, with the exception of SATISFACTION.

TABLE 2. COMPARISON OF ATTITUDES TOWARDS WORKING WITH ARP BEFORE VERSUS AFTER THE TRAINING (N=43).

Dimension	Pre-training Median (IQR)	Post-training Median (IQR)	p-value
Adequacy	7 (5; 8)	8 (7; 8)	**0.004** [1]
Legitimacy	8 (7; 8)	8 (7; 8)	0.815 [1]
Motivation	7 (6; 8)	7 (6; 8)	0.171 [1]
Self-esteem	7 (6; 8)	7 (6; 8)	0.578 [1]
Satisfaction	6 (5; 7)	6 (5; 7)	0.054 [1]

[1] *Wilcoxon Matched-Pairs Signed-Ranks Test;* [2] *Marginal homogeneity test.*
IQR, Interquartile range.
All statistically significant differences (p< 0.05) are in bold. Statistical differences probabilities below 0.1 are in blue.

FIGURE. CHANGE IN ATTITUDE SCORE BEFORE AND AFTER THE TRAINING, ACCORDING TO THE ATTITUDE DIMENSION (N=43)



GRAPH NOTES: Plots of score values (from 2 [complete disagreeament] to 10 [complete agreement], yy axis) before and after the training by participant (x x axis), ordered by before values.

HOW DID IMPROVEMENTS IN ATTITUDE SCORES OCCURRED ACCORDING TO PRE-TRAINING VALUES? [TABLE 1, FIGURE]

- Table 3 shows that **the majority of the professionals think that they have the skills and a 'comfortable' attitude to deal with patients with ARP** (Score >6 in the dimensions ADEQUACY, LEGITIMACY, MOTIVATION and SELF-ESTEEM) **but have LOW SATISFACTION** (3 out of 4 professionals have a score ≤6).
- The **training program is able to improve the attitude scores among those (and only those) who have low baseline scores** in the dimensions of ADEQUACY, MOTIVATION and SATISFACTION, borderline LEGITIMACY but not SELF-ESTEEM.

Table 3. Baseline attitudes towards dealing with workers with ARP and improvement in attitude scoring according to baseline values (n=56).

Scoring	Adequacy		Legitimacy		Motivation		Self-esteem		Satisfaction	
	≤6	>6	≤6	>6	≤6	>6	≤6	>6	≤6	>6
N (%)	25 (44.6)	31 (51.4)	11 (19.6)	45 (80.4)	25 (44.6)	31 (51.4)	20 (35.7)	36 (64.3)	41 (73.2)	15 (26.8)
Pre-training, median (IQR)	5 (4; 6)	8 (7; 8)	6 (4; 6)	8 (8; 9)	6 (5; 6)	8 (7; 8)	6 (4.3; 6)	8 (7; 9)	6 (4.5; 6)	7 (7; 8)
Post-training, median (IQR)	7 (6; 8)	8 (8; 8)	7.5 (4; 8.25)	8 (8; 8)	6 (5.75; 7)	8 (7; 8)	6 (5; 6)	8 (7; 9)	6 (5; 6)	8 (7; 8)
p-value	**0.002**	0.763	0.056	0.320	**0.05**	0.717	0.480	0.873	**0.007**	0.458

TABLE 4. ANALYSIS OF THE ASSOCIATION BETWEEN SOCIOECONOMIC, EXPERIENCE, CLINICAL DIFFICULTIES AND PRE-TRAINING ATTITUDE SCORE CHARACTERISTICS AND HAVING IMPROVED POST-TRAINING ATTITUDE SCORE.

		Unadjusted OR (95% CI)				
		Adequacy	*Legitimacy*	*Motivation*	*Self-esteem*	*Satisfaction*
Age, per year		0.96 (0.91-1.02)	1.02 (0.96-1.09)	1.04 (0.98-1.1)	0.97 (0.91-1.03)	**1.10 (1.01-1.2)** [3]
Sex	*Female*	**21.27 (2.43-185)** [1]	1.93 (0.44-8.55)	0.38 (0.1-1.44)	0.65 (0.15-2.83)	0.69 (0.18-2.68)
Professional and personal experience						
Risk score (AUDIT-C)	Yes	1.36 (0.33-5.61)	0.99 (0.21-4.61)	1.33 (0.31-5.73)	0.28 (0.03-2.68)	0.5 (0.09-2.77)
ARP problems in family	Yes	1.02 (0.30-3.44)	1.09 (0.29-4.04)	0.46 (0.13-1.66)	0.37 (0.08-1.73)	0.27 (0.07-1.1) [1]
Years of professional experience, per year		0.95 (0.89-1.01)	1.05 (0.98-1.12)	1.05 (0.99-1.12)	0.98 (0.92-1.06)	1.01 (0.95-1.08)
Previous training	*Yes*	1.33 (0.38-4.60)	0.41 (0.11-1.62)	**0.13 (0.03-0.53)** [1]	0.4 (0.09-1.71)	1.07 (0.28-4.15)
Difficulties in dealing with patients with ARP						
Lack of training	Yes	0.13 (0.01-1.15) [2]	1.65 (0.32-8.54)	3.89 (0.76-19.86)	0.47 (0.05-4.50)	0.29 (0.03-2.65)
Difficulties of making diagnosis	Yes	1.60 (0.37-7.02)	2.4 (0.42-13.9)	1.13 (0.25-4.98)	**0.05 (0.008-0.36)** [7]	6.43 (0.7-59.17) [1]
Lack of time	Yes	1.27 (0.33-4.93)	1.0 (0.23-4.37)	2.13 (0.52-8.76)	4.09 (0.69-24.24)	**0.15 (0.03-0.87)** [9]
Lack of Incentives	Yes	1.2 (0.31; 4.71)	0.79 (0.18-3.53)	0.23 (0.05-1.06) [5]	**7.44 (1.25-44.19)** [8]	0.26 (0.05-1.53)
Frustrated consults	Yes	0.67 (0.17-2.67)	0.39 (0.08-1.91)	1.75 (0.43-7.17)	**14.88 (1.56-142.2)** [8]	0.73 (0.16-3.28)
Pre-training attitude score						
Pre-training attitude score, per point		**0.441 (0.27-0.73)** [3]	**0.31 (0.13-0.71)** [4]	**0.43 (0.23-0.8)** [6]	0.87 (0.55-1.39)	**0.59 (0.36-0.98)** [10]

Comments on dependency of other influential variables

1 Independent of age.
2 Associated with sex.
3 Independent of sex.
4 Independent of sex and years of professional experience.
5 Independent of demographic.
6 Independent of demographic and previous training.
7 Independent of demographics and other reported difficulties.
8 Independent of demographics but dependent of other reported difficulties.
9 Independent of demographic and difficulties in diagnosis
10 Independent of demographics but dependent of difficulties in diagnosis and lack of time.

Univariate and multivariate logistic regression models, with sequential adjustment for the indicated dimensions, having improvement as the outcome.
All statistically significant differences (p> 0.05) are in bold. Statistical differences probabilities ≥0.1 are in blue.
OR, Odds ration; CI, 95% confidence interval.

WHICH FACTORS AND CHARACTERISTICS WERE ASSOCIATED WITH IMPROVEMENTS IN ARP ATTITUDE SCORES DUE TO THE TRAINING? [TABLE 4]

- Improvements in the ADEQUACY SCORES due to the the training were observed in those who had low pre-training adequacy scores and were females, but not in those who reported lack of training (mostly men). These improvements seemed to be independent of age, previous professional or personal experience and other difficulties reported.
- Improvements in LEGITIMACY and MOTIVATION attitude were observed mostly in those with low pre-training scores, regardless of their demographic, previous professional or personal experience and difficulties reported. Those with previous training were highly unlikely to improve their MOTIVATION.
- SELF-ESTEEM was much improved in those reporting difficulties with dealing with ARP, regardless of their pre-training score, as long as they did not report difficulty of making the diagnosis.
- SATISFACTION improved in older people and those with lower pre-training score, as long as they did not have ARP in the family or reported lack of time.

Discussion and Conclusions

In the context of a SBI training program for Occupational Health Professionals, it was clear that, for these professionals, **ARP was a relevant problem frequently faced in their clinical practice**, and that **health services did not provide an appropriate answer to patients with ARP**, so that almost all felt that **new approaches were needed**. However, only 1 out of 3 were aware of new approaches, namely 'brief interventions'.

Most important difficulties reported by professionals when dealing with patients with ARP were **lack of training**, **lack of incentives**, **feeling frustrated** and **lacking time**.

These professionals had **high pre-training attitudes scores**, particularly higher legitimacy, and lower satisfaction. Overall, **training was only able to improve adequacy and satisfaction.**

However, when examining those with lower pre-training scores, **training was able to improve most attitudes for dealing with ARP**, with the exception of self-esteem. These results **may guide future training programs and evaluating instruments towards addressing concrete difficulties, obstacles and needs in training on dealing with ARP**.

IN CONCLUSION:

Training seems to be able to improve most key attitudes for professionals to deal with ARP. Future instruments for evaluating the relevance and impact of training on ARP should be more discriminative and able to incorporate concrete difficulties and obstacles in clinical practice.

REFERENCES:

- Ribeiro C. [Family medicine approach to alcohol consumption: detection and brief interventions in primary health care]. Acta Med Port 2011;24 Suppl 2:355-68.
- World Health Organization. Global status report on alcohol and health-2014. World Health Organization, 2014.
- Anderson P, Gual A, Colom J. Alcohol and Primary Health Care: Clinical Guidelines on Identification and Brief Interventions.: Department of Health of the Government of Catalonia: Barcelona.; 2005.
- A. O`Donnell et al. 2014. The Impact of Brief Alcohol Interventions in Primary Healthcare: A Systematic Review of Reviews. Alcohol & Alcoholism
- B. Schulte et al. 2014. Alcohol screening and brief intervention in workplace settings and social services: A comparison of literature. Frontiers in Psychiatry
- Kääriäinen J, Sillanaukee P, Poutanen P, Seppä, K. Opinions on alcohol-related issues among professionals in primary, occupational, and specialized health care. Alcohol and alcoholism. 2001; 36(2):141-146.