Validating a Single-question instrument for screening alcohol problems at Primary Care in Catalonia

Jorge Palacio-Vieira, Lidia Segura Garcia, Estela Diaz, Rosa Freixedas, Nuria Bastida, Antoni Gual, Joan Colom

Thursday, 27th September, 2012

Department of Health, Program on Substance Abuse Government of Catalonia

Generalitat de Catalunya
Agència de Salut Pública de Catalunya

Introduction

• Screening on alcohol at Primary Care (PC) is effective for the identification of patients whose alcohol consumption can be unrecognized under other circumstances [Fiellin DA, 2000].

• The "Drink Less" program in Catalonia seeks to equip PC professionals with the expertise and instruments to carry out early identification and brief interventions of alcohol problems.

• Previous validation studies of AUDIT [Contel M, 1999] and AUDIT-C [Gual A, 2002] were carried and versions are available for their use in Spanish and Catalan

• Research priorities include further development of brief methods to identify hazardous drinkers or individuals who have an alcohol use disorders [Maisto SA, 2003].

• In this context, shorter screening instruments are needed to improve early detection of patients with alcohol-related problems [Smith P, 2009].

Objective

To validate a Single-question instrument for the screening of alcohol problems at PC centres of Catalonia.

Methods

Patients who visit 17 primary care centres and 1 emergency room (ER) at one hospital in Catalonia.

Sample size 1707, 60% women and 40% men.

Instrument
-Socio-demographic data (11 items)

-The single-question module (1 item)
"How many times in the past year have you had X or more drinks in a day?"
        X = 5 for men
        X = 4 for women

- Alcohol Use Disorders Identification Test (AUDIT, [10 items])

Data is being collected at primary care centres and one ER through an **online instrument**

Methods

Risk of alcohol consumption

Single-question **Men**: **at least one occasion (5 drinks** in a day)
Single-question **Women: at least one occasion of (4 drinks** in a day)

AUDIT-10 Men: **No risk <9; Risk>=9**
AUDIT-10 Women: **No risk <6; Risk>=6**

Validity of the Single-question module was assessed by means of its **sensibility and specificity** as compared to the AUDIT-10

Results: Sample characteristics

Response rate reached 44% (n=746) of the sample (still pending to finish)

Gender	n (%)
Male	392 (53.2)
Female	345 (46.8)
Age group	
18 – 34 years	113 (15.2)
35 – 59 years	319 (42.9)
60 + years	312 (41.9)
Marital status	
Married	503 (68.2)
Single	123 (16.7)
Divorced	48 (6.5)
Widowed	64 (8.7)

Level of education	n (%)
No educated	66 (8.9)
Primary	346 (46.6)
Secondary	327 (44.0)
Other	3 (0.5)
Occupational status	
Currently working	300 (40.8)
Unemployed	78 (10.6)
Handicapped	60 (8.1)
Retired	247 (33.6)
Housewife/mistress	32 (4.3)
Student	14 (1.9)
Other	5 (0.5)

Results: Alcohol consumption

Table 2. Alcohol consumption, AUDIT-10 and Single-question

AUDIT-10	Women, n (%)	Men, n (%)
No risk	271 (88.6)	289 (83.1)
Risk	35 (11.4)	59 (16.9)
Single question	**Women, n (%)**	**Men, n (%)**
No risk	235 (68.1)	229 (58.4)
Risk	110 (31.9)	163 (41.6)

Table 3. Risk of alcohol consumption, AUDIT-10 and Single-question, by age group

AUDIT-10	Women, n (%)	Men, n (%)
18 – 34 years	16 (27.1)	9 (21.9)
35 – 59 years	13 (9.8)	40 (27.1)
60 + years	6 (5.3)	10 (6.3)
Single question	**Women, n (%)**	**Men, n (%)**
18 – 34 years	34 (53.1)	29 (60.4)
35 – 59 years	58 (39.2)	93 (56.4)
60 + years	18 (13.7)	41 (22.9)

Validity compared to AUDIT-10

Validity	Women (CI)*	Men (CI)*
Sensitivity	97% (85 – 99)	91% (81 – 96)
Specificity	76% (71 – 81)	71% (65 – 77)
Positive predictive value (1)	35% (25 – 47)	37% (28 – 47)
Negative predictive value (2)	99% (97 – 99)	97% (93 – 99)

* CI: Confidence interval
1. Proportion of test positives that are truly positive
2. Proportion of test negative that are truly negative

Validity across different age groups and sex, compared to the AUDIT-10

Validity (by age group)	Women (CI)*	Men (CI)*
Sensitivity		
18 – 34 years	100% (79 – 100)	100% (66 – 100)
35 – 59 years	100% (75 – 100)	95% (83 – 99)
60 + years	83% (36 – 99)	70% (35 – 93)
Specificity		
18 – 34 years	63% (47 – 77)	47% (29 – 65)
35 – 59 years	70% (61 – 78)	57% (47 – 67)
60 + years	89% (36 – 99)	82% (75 – 87)

* CI: Confidence interval

Validity compared to another study

Validity	Women (CI)*	Men (CI)*	Reference study**
Sensitivity	97% (85 – 99)	91% (81 – 96)	84% (74 – 91)
Specificity	76% (71 – 81)	71% (65 – 77)	75% (69 – 80)
Positive Likelihood ratio	4.4	3.1	3.4
Negative Likelihood ratio	0.04	0.13	0.2

* CI: Confidence interval

**Smith P et al. Primary Care Validation of a Single-Question Alcohol Screening Test. 2009. J Gen Intern Med 24(7):783–8

Conclusions

The Single-question module was **more sensitive** and **less specific** for the detection of risky drinkers at primary care centres of Catalonia

As a short screening instrument, the validity of the Single-question instrument is acceptable, specially **among younger women**

In general, validity of the Single-question at primary care centres in Catalonia is similar than in other studies

Using the Single-question at primary care centres in Catalonia can help professionals when taking decisions on alcohol problems.