

Intentions and barriers to providing tobacco treatment among providers in a psychiatric hospital: An application of the Theory of Planned Behavior

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BACKGROUND

- Individuals with mental illnesses (MI) have disproportionate tobacco-related disease burden as compared to those without MI (Newcomer & Hennekens, 2007; Osborn et al., 2007; Tran et al., 2009). Despite declining smoking prevalence in the general U.S. population in the past decade, smoking rates among those with MI have only slightly dropped and remain two to three times national rates (Centers for Disease Control and Prevention 2013; Cook et al., 2014). Hence, engaging individuals with MI in tobacco treatment remains a ongoing opportunity for psychiatric nursing practice.
- Clinical practice guidelines for the treatment of tobacco use and dependence advocate that brief interventions (BI) (i.e., 5As-Ask, Advise, Assess, Assist, Arrange) should be used to engage tobacco users in treatment at every hospital visit (Fiore et al., 2008). However, health care providers often face several barriers in their engagement of tobacco users in treatment (Okoli et al., 2010). These barriers may be particularly important in psychiatric settings which have had a long normative tobacco use culture.
- The Theory of Planned Behavior (TPB) purports that an individual's attitudes, subjective norms, and perceived behavioral control can predict their intention towards a behavior (Ajzen, 1985). Few studies have used the TPB in assessing provider engagement in tobacco treatment within psychiatric facilities.
- The purpose of this study was to examine provider engagement in tobacco treatment among individuals with MI by:
 - using the TPB as a model to examine intentions to provide tobacco treatment
 - assessing current practices of BI, and
 - eliciting perceived barriers to providing tobacco treatment

METHODS

Design

- For this **correlational study**, we employed a survey design to elicit the attitudes, subjective norms, perceived behavioral control, and intentions to provide tobacco treatment among clinicians and staff at Eastern State Hospital; the second oldest psychiatric hospital in the U.S. located in central Kentucky

Sample

- We targeted 270 available staff and received completed surveys from 206 (76.3%). Participants consisted of both licensed health care providers and staff who facilitated care delivery (see Table 1)
- Eligible participants were required to be 18 years of age or older and full or part-time employed at Eastern State Hospital

Procedure

- Surveys were administered from March 1st to June 30th, 2016
- All those who completed the survey were entered into a drawing for the opportunity to win one of five \$20 cash incentives
- Approval was sought and received by the University of Kentucky Medical Institutional Review Board prior to administering the surveys

Measures

- Demographics variables included gender, ethnicity, age, marital status, education level, work discipline, and work tenure
- Attitudes (3-items), subjective norms (4-items), perceived behavioral control (4-items) and intentions to provide tobacco treatment (3-items) were developed from questions based on the TPB (see Figure 1)
- Current practices of BI was obtained by a 5-item scale
- Perceived barriers to providing tobacco treatment were developed into a questionnaire based on findings from a prior review study (Okoli et al., 2010)

Analysis

- Step-wise multivariate linear regression was used to regress mean scores of intention to provide tobacco treatment on demographic variables and means scores of, attitudes, subjective norms, and perceived behavioral control variables
- Means with standard deviations were used to examine the current practice of the BI. Differences between disciplines were examined using the ANOVA's
- Means with standard deviations were used to examine the perceived barriers to providing tobacco treatment

RESULTS

Sample Characteristics

- Participants were on average 35 years of age, mostly female, white, and a majority were college graduates. The discipline that participated the most in the survey were mental health associates and state registered nursing assistants. There were no significant tobacco use status differences in demographic variables or intention, attitudes, subjective norms, and perceived behavioral control (See Table 1)

Table 1. Demographic variables by tobacco use status of participants

	Total (N=206)		Non-tobacco user (n=168)		Tobacco user (n=38)		
	N	%	n	%	n	%	
Gender	Male	41	20.0	30	73.2	11	26.8
	Female	164	80.0	137	83.5	27	16.5
Ethnicity	White	157	76.6	123	78.3	34	21.7
	Non-white	48	23.4	44	91.7	4	8.3
Education	High School	13	6.4	11	6.6	2	5.4
	Some College/ Trade School	47	23.2	34	20.5	13	35.1
	College Graduate	143	70.4	121	72.9	22	59.5
Marital Status	Married/ Widowed	74	36.8	65	39.9	9	23.7
	Unmarried Couple	15	7.5	9	5.5	6	15.8
	Separated/ Divorced	20	10.0	17	10.4	3	7.9
	Single Never Married	92	45.8	72	44.2	20	52.6
Discipline	Medical Staff (Physicians, Advance Practice Nurses, Pharmacy)	17	8.3	17	10.1	0	0.0
	Nursing Staff (RNs, LPNs)	53	25.7	43	25.6	10	26.3
	Social Work and Psychology	23	11.2	19	11.3	4	10.5
	Mental Health Associates and State Registered Nursing Assistants	91	44.2	73	43.5	18	47.4
	Therapists (Recreational, Occupational, Music)	11	5.3	8	4.8	3	7.9
	Other (Unit Clerks, Risk/Quality Management, Security)	11	5.3	8	4.8	3	7.9
Age (in years)	M	SD	M	SD	M	SD	
Work Tenure (in months)	35.4	12.6	35.9	12.9	33.3	11.4	
	35.1	63.1	35.9	66.0	31.1	48.6	

*No significant differences between non-tobacco users and tobacco users. Differences are calculated using chi-square analyses for categorical and ordered categorical values, and using independent sample tests (with Levene's test for equality of variances) for continuous variables

Multivariate analysis regressing intentions on attitudes, social norms and perceived behavioral control

- Demographic variables** were initially included in the analysis, producing a significant model with an adjusted R² = .10.
- In the second step, by including **attitudes**, the adjusted R² increased to .21.
- In the third step, by including **subjective norms**, the adjusted R² increased to .40.
- In the final step, by including **perceived behavioral control**, the final adjusted R² = .44.
- Of all the variables, **subjective norms** was the most predictive for intentions ($\beta = .38, p < .0001$), followed by **perceived behavioral control** ($\beta = .25, p = .001$), and **attitudes** ($\beta = .15, p = .014$) (see Figure 1).

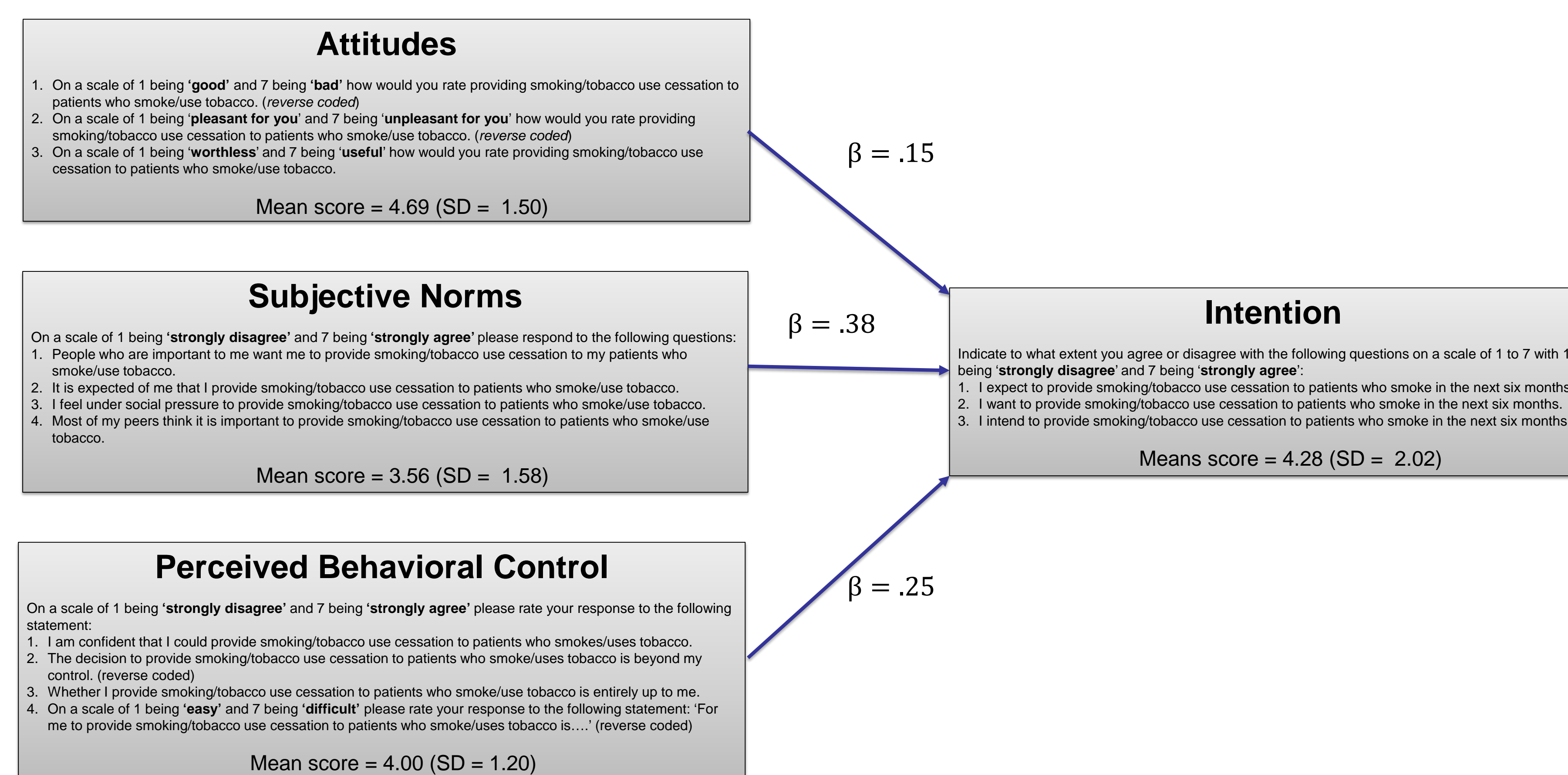


Figure 1. Applying the Theory of Planned Behavior to providing tobacco treatment

Current practices of BI

- Asking** if patients use tobacco was the most common practice endorsed by participants with **arranging** for follow-up, the least (see Figure 2).
- There were significant differences between disciplinary groups in reporting BI components with **medical staff, nursing staff and social workers/psychologists** having higher mean scores in each component as compared to other disciplines.
- In a similar fashion, **medical staff, nursing staff, and social workers/psychologists** were significantly more likely to score higher on using all components of the BI as compared to other disciplines (see Figure 3).

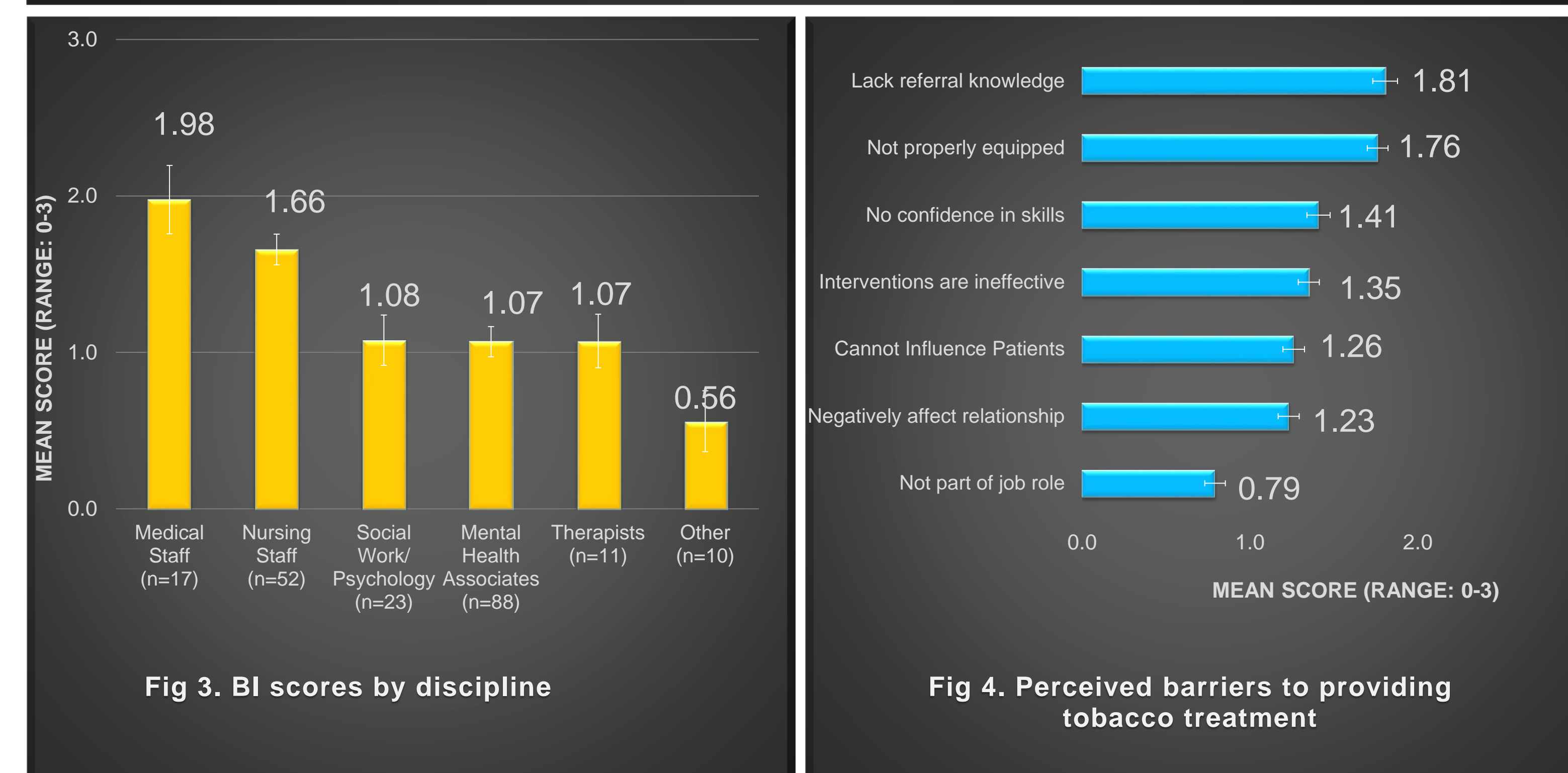
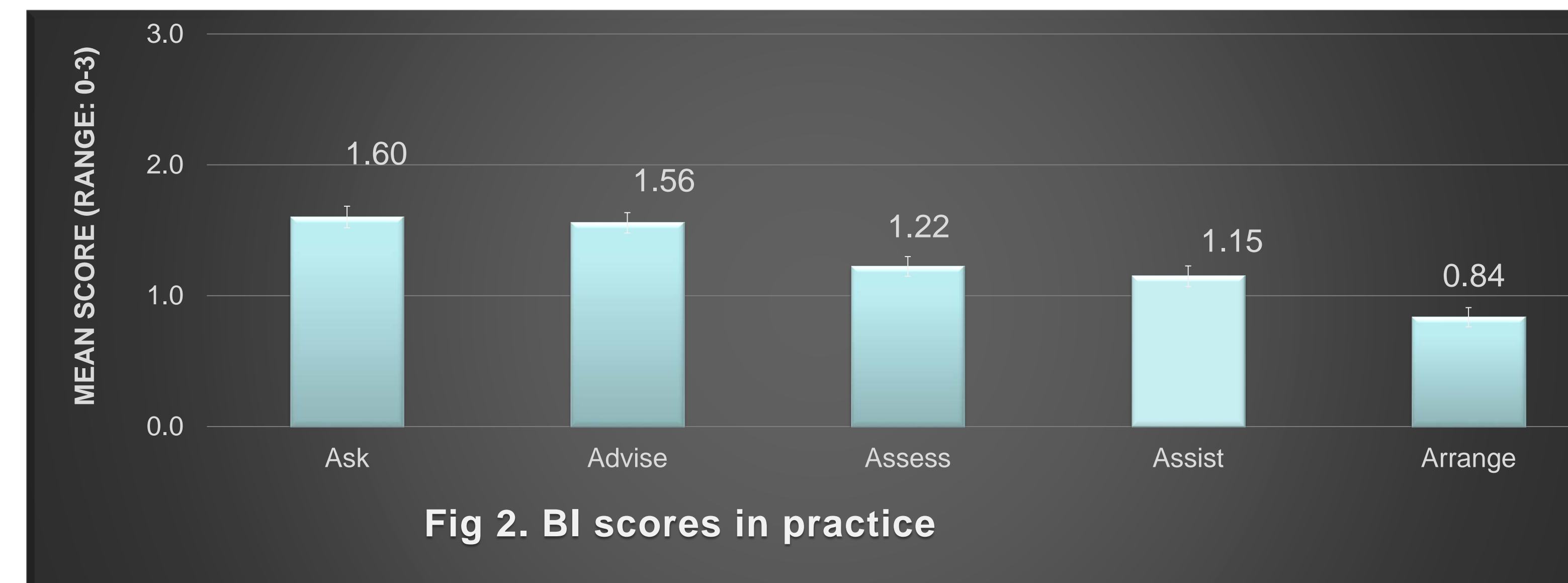


Fig 3. BI scores by discipline

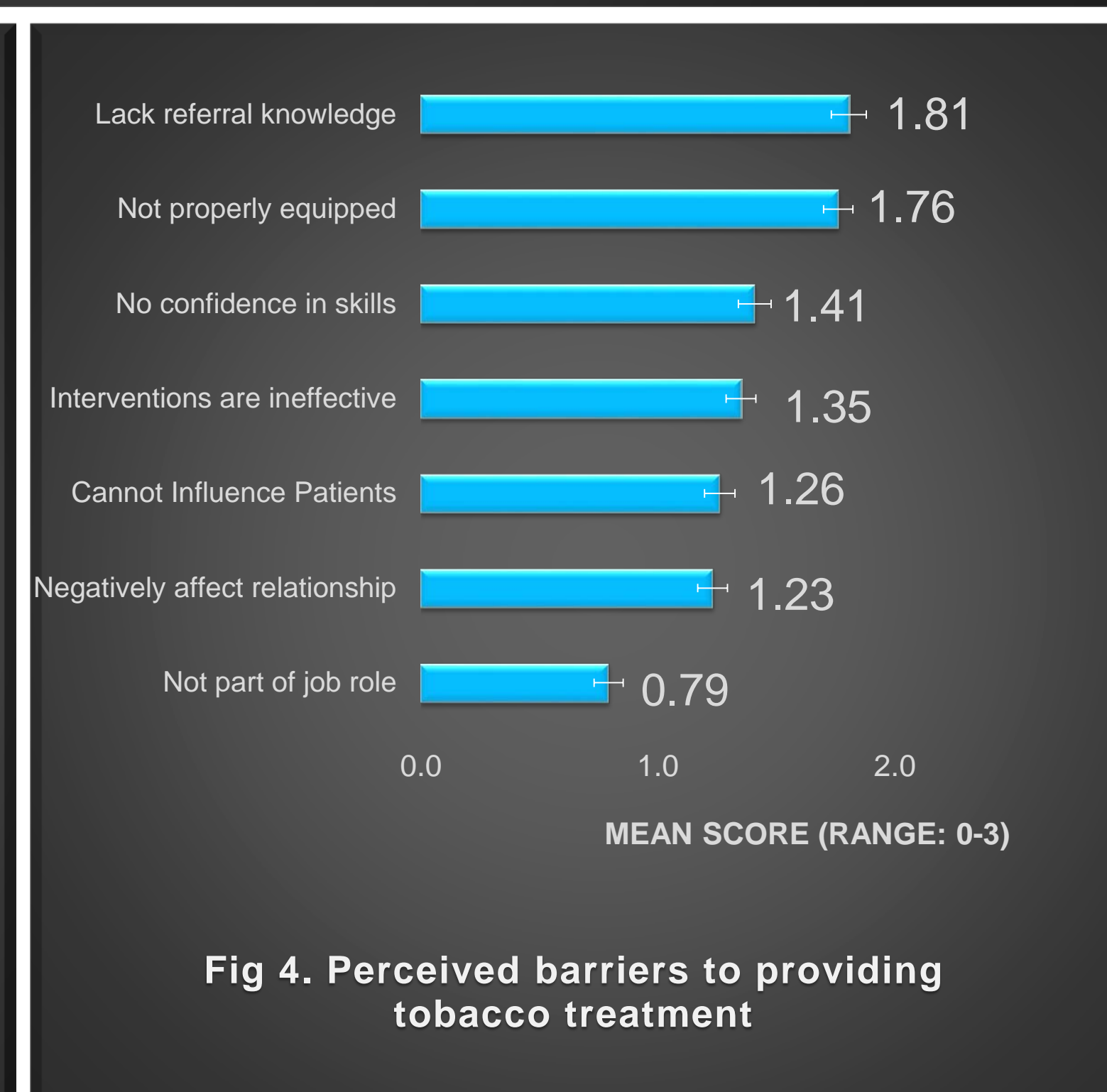


Fig 4. Perceived barriers to providing tobacco treatment

Barriers to providing tobacco treatment

- On average, providers reported that **lack of knowing where to refer patients** for tobacco treatment was the most noteworthy barrier and **being not part of their job role** as the least important (see Figure 4)
- However, there were significant group differences in perceived barriers to providing tobacco treatment. Specifically, medical staff and nursing staff were more likely to perceive that providing tobacco treatment **was their expected job role** and were **more confident** in providing tobacco treatment as compared to other disciplines

IMPLICATIONS

For Psychiatric-Mental Health Nursing:

- Advocate for a culture that makes tobacco treatment normative for clinicians and staff in psychiatric settings
- Support best practices for the delivery of tobacco treatment for smokers with MI
- Train clinicians/staff in evidence-based tobacco treatment with emphasis on referral to appropriate treatment programs (e.g., the State Tobacco Quit line) upon discharge

For Research:

- Develop interventions to facilitate the adoption of evidence-based treatment by psychiatric care providers
- Develop systems to facilitate referral of tobacco using patients to outpatient programs

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