

Chapter XIII

Smoking Assessment through Information Technology

Paola Gremigni
University of Bologna, Italy

ABSTRACT

This chapter introduces a proposal for the role of information technology as a means of completing a comprehensive assessment of smoking behaviour. Smoking cessation is an important goal both in primary care and in healthcare settings. Results of the literature encourage the utilisation of self-report questionnaires to assess individual differences that could assist to develop stage-matched-intervention for smoking cessation. Reliable and valid measurement tools are available in this area, but comprehensive assessment procedures are not yet standardized. Computerized/web-based psychological testing procedures may provide relevant advantages, in comparison to traditional paper-pencil approach, in that they may guarantee reliable results through the standardization of both testing and scoring procedures. They may also allow creating a common database accessible to researchers from various healthcare organizations.

INTRODUCTION

The World Health Organization has defined the control of smoking as the single most important preventive health measure that developed nations can take (World Health Organization, 2001). The control of smoking risk is clear an important goal, albeit uneasy to achieve. Actually, literature reviews have consistently concluded that smoking treatment is characterized by good initial success

but very high rates of relapse (Piasecki, Fiore, McCarthy & Baker, 2002).

Literature findings support evidence-based efficacy of both behavioural and pharmacological interventions for smoking cessation (Lancaster et al., 2004; Lancaster, 2005; Stead, Perera, Bullen, Mant & Lancaster, 2008). Accordingly, various countries organizations and authorities have established and disseminated treatment guidelines to provide guidance to clinicians and smoking

treatment specialists (Australian Government, Department of Health and Aging, 2004; Fiore et al., 2000; Hughes et al., 1996; West, McNeill & Raw, 2000; World Health Organization, 2001).

Guidelines on smoking cessation have largely focused on primary care practices, paying less attention to healthcare settings. As Rigotti (2000) has underlined, healthcare settings have instead a great opportunity to deliver to patients interventions for changing behaviours. A hospital stay provides a special incentive for setting up cessation, because of the widespread policies that prohibit tobacco use. Furthermore, an illness condition may increase smoker's perceived vulnerability to the health hazards of smoking, thus enhancing his/her motivation to quit. Finally, healthcare settings offer to smoking patients access to multiple caretakers who could provide smoking cessation interventions (Rigotti, 2000). Various studies emphasise the role of different healthcare providers in reducing the burden of tobacco-related diseases (e.g. Fagan, Eisenberg, Frazier, Stoddard, Avrunin & Sorensen, 2003; Quraishi, Orkin & Roizen, 2006). Thus, healthcare providers need standardised protocols to deliver effective cessation interventions.

Combined use of psychological procedures directed toward cognitive, behavioural and social modification, along with pharmacological treatment, seems to produce the best clinical results in the treatment of nicotine dependence (Miller & Wood, 2002). Pharmacotherapy, in particular nicotine replacement, reduces withdrawal symptoms subsequent to quitting and, so, increases the likelihood that successful cessation will be reached and maintained (Cofta-Woerpel, Wright & Wetter, 2006; Lancaster et al., 2004). Behavioural therapy contributes to improve quit rates (Lancaster et al., 2004; Park et al., 2004). Skills training and problem solving, in particular, emerge as effective techniques in predicting abstinence maintenance (Matheny & Weatherman, 1998; Tsoh et al., 1997). In the summary, a behavioural approach to the analysis and modification of smoking behaviour

seems to be the most productive, in combination with nicotine replacement (see Vidrine, Cofta-Woerpel, Daza, Wright & Wetter, 2006 for a review). Thus, the conceptual framework of this chapter has been taken out of behaviour modification and cognitive therapy. It may also provide a systematic framework for the analysis of variables predicting smoking behaviour. Actually, this approach assists to analyze the activating situations that lead to dysfunctional behavioural consequences such as smoking, as well as people's belief system in relation to these events.

It is well documented that smokers are a heterogeneous group in many important respects, including smoking motives, levels of nicotine dependence, self-efficacy, and withdrawal symptoms, to name but a few (see Gremigni, 2005 for a review). Some of the interventions that were effective do apply treatment tailoring based on systematic assessment of individual patient characteristics (Fiore et al., 2000). Thus, assessment of such differences is an important issue. With the development and sophistication of computer and communication technology, computerised and Internet psychological testing have become widespread. The use of technology information may offer a new means of delivering psychological tests to assess smoking behaviours in healthcare settings. Thus, the way to implement such tools and the related advantages are worth being analysed and discussed.

A COMPREHENSIVE ASSESSMENT OF SMOKING

The development and use of comprehensive assessment strategies are considered central to the success of any approach (Baer, 1997; Donovan & Marlatt, 1988; Epstein & McCoy, 1975). Nevertheless, the extent to which specialized assessment plays a role in guiding treatment decisions for smokers is underestimated (Kassel & Yates, 2002). Shiffman (1988) remarked that information

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