Exploring attitudes towards smoking behaviour and cessation among hospitalised smokers via a socio-ecological framework: A scoping review

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Abstract

Objectives: Cigarette smoking is a leading cause of preventable mortality and disability. Smoke-free policies in healthcare settings have been implemented as a public health measure. This scoping review aims to explore attitudes on smokers' cessation in smoke-free healthcare settings using a socio-ecological framework

Methods: Four databases were searched for terms: smoking cessation, patient attitudes, and smoke-free policy. Of 420 studies, 17 met full inclusion criteria.

Results: The review identified four socio-ecological aspects of smoking cessation in smoke-free healthcare settings: Intrapersonal factors (health literacy, health conditions, and self-efficacy), interpersonal factors (social support, peer pressure, and social responsibility), healthcare factors (perceived mixed messages, clinical, psychosocial and health promotion supports), and societal factors (restrictions on smoking in a public place and social acceptability of smoking). Willpower, cold turkey, and nicotine replacement therapy were stated as the most common smoking cessation strategies. Smoke-free policies effectively encouraged cessation in some patients but were ineffective in those that felt a loss of autonomy. Provision of smoke breaks within smoke-free policies was considered a mixed message.

Conclusions: Holistic strategies are required to interconnect the four socio-ecological dimensions for successful smoking cessation.

Keywords – Smoking behaviour, cessation, hospitalised smokers

Exploring patient attitudes towards smoking cessation in smoke-free healthcare settings using a socio-ecological framework: A scoping review

According to the World Health Organisation (WHO; World Health Organization, 2017), tobacco use is one of the leading global health risk factors and a leading cause of preventable death and disability. The WHO reports that tobacco use accounts for seven million deaths each year. Smoking addiction causes significant health problems, including cardiovascular disease, pulmonary disease, cancer, reproductive health issues, and increased susceptibility to infectious diseases (United States Department of Health and Human Services, 2014). Cigarette smoking is the most common form of tobacco use worldwide (World Health Organization, 2017), with nearly one in seven adults indulging in daily cigarette smoking (Peacock et al., 2018). In 2017 the WHO reported smoking prevalence rates in adults across the globe: Australia 16.2%; Brazil 16.5%; Canada 17.5%; the United Kingdom 19.2%; China 24.7%; the United States 25.1%; Poland 26%; and Spain 27.9% (World Health Organization, 2017).

The many triggers relating to smoking continuation and cessation fit into a socio-ecological framework of prevention based on Brofenbrenner's (1977) ecology of human development theory (Ennett et al., 2010). The socio-ecological framework suggests that human development sits within nested environmental levels, and the interactions between these levels shape human behaviour. The first level (interpersonal level) includes an individual's biological and psychological developmental history. Concerning smoking cessation, can involve stress reduction (Chezhian et al., 2015) and positive attitudes toward smoking (Martinasek et al., 2017). The genetic makeup of an individual is also influenced by their physical environment (intrapersonal level), such as having parents or peers who smoke (Scherrer et al., 2012). Other social, economic and political factors influence the individuals interpersonal and intrapersonal levels. In this context healthcare-related

and societal factors such as targeted tobacco advertising (Mays et al., 2014) and healthcare facility policies influence the socio-ecological system. Finally, the individuals' beliefs about the social, economic and political factors further influence the socio-ecological system, such as low health literacy placing low socioeconomic groups at greater risk of smoking continuation (Schiøtz et al., 2017).

Since the late 1980s, smoke-free policies in healthcare settings have been implemented as a public health measure (Riseley, 1988). It is suggested that the period of hospitalisation in a smoke-free healthcare setting may serve as an excellent opportunity to educate hospitalised smokers about the health consequences of smoking and provide individualistic support for smoking cessation (Wilson et al., 2016). However, barriers at the different socio-ecological levels (individual, healthcare and societal levels) can prevent smoke-free healthcare settings from achieving these goals. Although evidence suggests a positive association between smoking, poor health outcomes, and mortality rates in chronic diseases (pulmonary diseases, cardiovascular diseases, diabetes, and HIV/AIDS) (Siddiqi et al., 2013), there is a lack of research in smoking cessation in hospitalised smokers, including negative views regarding smoking cessation services, and continued smoking among patients in smoke-free healthcare settings (Wells et al., 2017). In their study on smoking cessation in cancer patients, Wells et al. (2017) found that just under half of the 15 cancer patients who identified as current smokers showed no interest in smoking cessation treatment, believing willpower as the only way to stop smoking. Some of these patients believed it was inappropriate to offer generic cessation advice to someone who already has a cancer

diagnosis and cited time constraints, particularly during cancer treatment periods, as a barrier for cessation. Willpower refers to a psychological method of quitting smoking that involves self-talk/self-reflection strategies (e.g., motivation for smoking) to generate or enhance mental strength and determination to quit smoking (Hughes & Naud, 2016). It differs from quitting smoking "cold turkey", which refers to abrupt cessation without an aid. In their study of 60 Brazilian adults with mental illness, Cruvinel et al. (2020) reported that 52% of smokers made a quit attempt in the past year. Only 11% sought cessation support, and 4% reported receiving cessation treatment from healthcare professionals.

Also impacting the extent of utilising smoking cessation treatments are healthcare professionals' poor attitudes and distrust regarding the effectiveness of cessation treatments. A meta-analysis of 38 mixed methods studies reported that 40% of 16,369 mental health professionals held negative attitudes and misconceptions regarding smoking that undermined smoking cessation programs in care settings (Sheals et al., 2016). Similarly, a multinational qualitative study by van Eerd et al. (2017) explored why physicians do not routinely offer evidence-based cessation treatments to their patients. They found three underlying themes, (i) physicians' frustrations and negative feelings in supporting reluctant patients to quit, (ii) organisational factors such as financial compensation, and (iii) a lack of trust in nicotine replacement therapy, which some physicians believed would not provide a lasting treatment to smokers.

This scoping review aims to understand patient attitudes on hospitalised smoking cessation in smoke-free healthcare settings. Although this review mainly focuses on exploring the attitudes on cessation (regardless of the types of interventions), a diverse range of interventions and cessation programmes are used in different settings. To our knowledge, no other review paper has explored the attitudes at different levels for smoking cessation in smoke-free healthcare settings. The findings help provide a comprehensive framework for developing strategies to enhance smoking cessation in smoke-free healthcare settings.

Methods

Design

A systematic scoping review using the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) framework (Moher et al., 2009) was conducted to answer the research question: What are patient attitudes on hospitalised smoking cessation in smoke-free healthcare settings? Scoping reviews are useful in revealing gaps in current research, setting research agendas and providing evidence-based recommendations for policy and practice in a particular field of inquiry (Peters et al., 2015).

Search strategy

A systematic literature search was developed with librarians' help and conducted in duplicate by two researchers (OO, ML) in May 2021 across four databases, Scopus, MEDLINE, CINAHL and PsycINFO. The following key search terms were selected “nicotine replacement

therapy" OR "behavi*ral counselling" OR bupropion OR cystine OR varenicline "smoking cessation" AND attitude OR perception OR belief AND smok* OR patient* AND "smok* polic*" OR "smok* ban" OR "smoke-free" OR "tobacco-free" OR "ban on smok*". Delimiters were applied to filter results by title, abstract and keywords, scholarly journals and English language. Secondary and grey sources of literature were excluded. Reference lists of included articles were screened. The literature search was limited to articles published from 2009 onwards to include studies conducted following the World Health Organisation report on the global tobacco epidemic and a call for implementing policies of smoke-free environments (World Health Organization, 2009).

Study selection

All papers were reviewed by title and abstract by two independent reviewers (OO, ML). Papers that met the following inclusion criteria were included in the final search: (i) qualitative, quantitative or mixed methods research design, (ii) primary research, (iii) smokers or former smokers currently in a smoke-free healthcare setting, (iv) 18 years or older, (v) described attitudes of smoking interventions.

The literature search method yielded 420 articles. Two further articles were identified using citation chaining. Once duplicates (n = 212) were removed, the titles and abstracts of 210 articles were screened for inclusion in this review. After reviewing the title and abstract, the full text of 26 articles was read, and inclusion and exclusion criteria were applied. Most of the rejected articles were excluded for one or more of the following reasons: the study did not address key search terms, non-smoker populations, and addressed attitudes of care staff rather than patient attitudes, secondary evidence, outcomes not related to smokers' attitudes. The full process can be seen in Figure 1.

Insert Figure 1 here

Data extraction, charting and analysing the data

Data extraction was conducted by two authors (OO, ML) using a predefined format (Aromataris et al., 2015) and checked by a third author for accuracy (NS). The data extracted in Table 1 included author, year, country, study aims, study setting, study design, participant characteristics, data collection and analysis, findings, and strengths and limitations. Data were analysed by three authors (OO, ML, NS) independently using thematic analysis to identify key codes, resulting in categories and themes regarding smoking cessation. There were multiple sessions to discuss the key themes for making a consensus. As the key themes included a diverse range of variables at different levels, the authors made a consensus to code the data, integrate the codes into categories, create overarching themes and apply to a socio-ecological framework (Ivankova and Plano Clark, 2018). This thematic analysis resulted in a more holistic approach to covering all the possible attitudes in smoking cessation.

Insert Table 1 here

Results

Characteristics of the included studies

Seventeen papers met the inclusion criteria: eight qualitative studies, five quantitative studies and four mixed-methods studies. The key characteristics and findings of all included studies are shown in Table 1. The studies' geographical distribution included England, the United States, Australia, Poland, China, Spain, Brazil, and Canada. Ten of the included studies were conducted in more than one facility. Most of the studies involved both males and females. Five studies involved only current smokers, while others also included former smokers and non-

smokers. Although most of the settings were related to residential substance use disorder treatment or drug and alcohol treatment settings, there was a diverse range of other settings, including medical and surgical wards, psychiatric wards, mental health facilities, diabetes outpatient clinics, HIV clinics, and general practice clinics.

Among studies that reported patients' daily cigarette consumption, the mean number of cigarettes smoked per day varied from seven (Gubner et al., 2019) to 30 cigarettes per day (Hehir et al., 2012). The mean age smoking was initiated ranged between 15 (Hehir et al., 2012; Kelly et al., 2018; Wilson et al., 2016) and 18 (Li et al., 2019). Mean smoking duration ranged between 15 (Kelly et al., 2018) and 30 years (Ratschen et al., 2010). The most common smoking cessation strategies utilised were willpower (57 %), cold turkey (55%), and nicotine replacement therapy (45%). Nicotine replacement therapy was reported to be the most common therapy to treat tobacco dependence among inpatients (Shopik et al., 2012).

Four key interconnected themes related to attitudes on smoking cessation in smoke-free healthcare settings were synthesised and categorised via a socio-ecological framework, including (i) intrapersonal factors, (ii) interpersonal factors, (iii) healthcare factors and (iv) societal factors. These different levels of influence reflect varied motives to quit smoking across all studies.

Intrapersonal factors

Intrapersonal factors influencing smoking cessation included beliefs about smoking, perceived benefits of smoking, self-efficacy, attitudes towards smoking therapies, health awareness, current history of health conditions, fear of nicotine withdrawal symptoms, and prior knowledge of the facility's smoke-free policies.

The perception around smoking, smoking cessation methods, and the experiences surrounding available care services influenced individuals' decision making around cessation.

Some patients residing in mental health facilities had perceptions that cigarette smoking was a "lesser evil" compared to their primary psychiatric diagnosis, such as substance use (Bhuiyan et al., 2017), and felt smoking was dissimilar to their other addictions (Wilson et al., 2016). Participants' perceptions about benefits of smoking included socialisation (Fallin-Bennett et al., 2018; Shopik et al., 2012), enticing effects of tobacco taste and inhalation process (Ghazaleh et al., 2018), habit (Ratschen et al., 2010; Wilson et al., 2016), and emotional support during stress (Ghazaleh et al., 2018; Li et al., 2019; Shopik et al., 2012). The fear of nicotine withdrawal or cravings was associated with continued smoking (Ghazaleh et al., 2018; Li et al., 2019). Moreover, some participants expressed their concerns that healthcare professionals may misinterpret nicotine withdrawal symptoms as signs or symptoms of their mental illness (Hehir et al., 2012). Some patients believed that nicotine replacement therapy was just as harmful as smoking and unhelpful for smoking cessation (Kelly et al., 2018; McQueen et al., 2014). Others believed that therapy increased cigarette consumption and caused allergic skin reactions from nicotine patches (Ghazaleh et al., 2018; Ratschen et al., 2010). Although, McQueen et al. (2014) found that many patients perceived nicotine replacement therapy as less harmful than cigarettes, and they believed it could increase cessation.

Intrapersonal factors also suggested that individuals may be aware of smoking risks but lack the self-efficacy to stop smoking, and the comorbid health conditions either motivated or hindered smoking cessation. Most patients were aware of smoking's health risks, and some stopped or reduced cigarette consumption whilst in a smoke-free healthcare setting (Bhuiyan et al., 2017; Buczkowski et al., 2014; Ghazaleh et al., 2018; Li et al., 2019; Wilson et al., 2016). Others continued smoking behaviours and expressed doubts regarding improvements in their quality of life if they stopped smoking (Ratschen et al., 2010). McQueen et al. (2014) reported that most

patients did not plan to quit smoking in the next twelve months as many of them were in a pre-contemplation or contemplation stage of change.. Having prior knowledge of a facility's smoke-free policies helped patients prepare for their stay at the facility and enhanced patients' self-efficacy regarding smoking cessation (Hehir et al., 2012). Many individuals were aware of the risks of smoking for themselves and their family and believed in the advantages of cessation. However, they believed they did not have the control and self-efficacy to commit and make it happen (Bhuiyan et al., 2017; Buczkowski et al., 2014; Ghazaleh et al., 2018; Li et al., 2019; Wilson et al., 2016). Ghazaleh et al. (2018) found that diabetic patients stopped or reduced the number of cigarettes consumed daily after diagnosis

Interpersonal factors

Interpersonal factors related to smoking cessation include family-related motivation to quit, peer support and peer pressure, people's views about smoking, urge to smoke when others smoke, and consideration of the impact of smoking on others.

Social support was found to be a key driver of cessation. Wilson et al. (2016) and Ghazaleh et al. (2018) reported that most patients intended to quit due to the support and encouragement from their families and friends. Findings from the focus group discussions conducted by Wilson et al. (2016) indicated that anti-smoking television advertisements empowered family members to challenge a smoker to stop smoking. Watching advertisements that portrayed smoking-related health problems prompted individuals to encourage family members to quit smoking to improve their quality of life. Similarly, peer support, such as engaging in extra-curricular activities with friends, served as external cues to support smoking cessation (Ghazaleh et al., 2018). Some patients felt a social responsibility for the health of loved ones, including understanding the effects of second-hand smoke exposure on others, including children and women and being the only

family support for others (Fallin-Bennet et al., 2018). This social responsibility had a positive influence on their motivation to quit smoking. Wilson et al. (2016) reported that guilt regarding continued smoking was common among patients who expressed a desire to quit smoking. Also, having a family member suffering from a smoking-related health condition such as cancer served as a motivating factor to stop smoking (Hehir et al., 2012). Buczkowski et al. (2014) found that some patients received signals about the unpleasant smell of cigarette smoke from their family members, which motivated them to quit smoking. Among both current and former smokers, pregnancy and breastfeeding were strong motivators for abstinence to protect the baby, but many women returned to smoking when the gestation periods was over (Buczkowski et al., 2014). Some patients reported that they initiated cigarette smoking following peer pressure from fellow smokers (Ghazaleh et al., 2018). Being in an environment that induced the urge for smoking, witnessing others smoke, and specific social settings were implicated in smoking relapse (Buczkowski et al., 2014; de Oliveira et al., 2014; Ghazaleh et al., 2018).

Healthcare factors

Factors at the healthcare service level that influence smoking behaviours include perceived mixed messages related to policies and practices around smoking and sensation, the impact of hospitalisation on smoking behaviours, clinical and psychosocial supports, role modelling, health promotion to improve health and wellbeing, and an individualistic approach to the provision of cessation treatments.

. Regarding the impact of hospitalisation on smoking behaviours, many patients, including those who had never attempted to stop smoking, felt there was an opportunity to consider smoking cessation during their current stay in the smoke-free facility (Li et al., 2019; Martinez et al., 2020). Despite recognising the hospitalisation period or staying in a smoke-free facility as a good time to

reduce or stop smoking, some patients mentioned they would consider quitting after their current admission (de Oliveira et al., 2014; Fallin-Bennett et al., 2018; Ratschen et al., 2010; Wilson et al., 2016). These patients suggested this was due to challenges that discouraged changes in their smoking behaviours, including boredom, lack of activities to indulge in during hospitalisation, stress, unsuitability of the environment to address smoking and a need for a substitution for illicit substances during their treatment.

Challenges facing adherence to smoke-free policies in healthcare facilities were identified. These included the concealment of smoking materials on the ward (Huddlestone et al., 2018), secret smoking during the healthcare stay (Li et al., 2019), smoking on and off the facility property (Shopik et al., 2012) and covert facilitation of smoking by staff (Huddlestone et al., 2018). To increase adherence to smoke-free policies in healthcare settings, some patients suggested a fine for violating the policy (Shopik et al., 2012). Bhuiyan et al. (2017) reported that some participants expressed strong opinions about staff allowing smokers to utilise “smoke breaks”, which they thought promoted continued smoking habits

Regarding clinical and psychosocial supports for smoking cessation, many patients claimed that they received limited support from healthcare providers and demonstrated a willingness to accept smoke-free policies if they were provided with information about the health risks of smoking (Bhuiyan et al., 2017; Li et al., 2019; McQueen et al., 2014) or link between smoking and their diagnosis (Ghazaleh et al., 2018). Patients expressed a need for healthcare providers to be role models for smoking cessation (Bhuiyan et al., 2017; Martinez et al., 2020), and provide adequate smoking cessation support (Hehir et al., 2012; Li et al., 2019; Martinez et al., 2020; Wilson et al., 2016). There were reports that staff smoked in the facility (Shopik et al., 2012) or had smoked together with patients, making it difficult to view them as role models for

smoking cessation (Wilson et al., 2016). The most common therapy offered for tobacco dependence treatment was nicotine replacement therapy (Shopik et al., 2012). Telephone support services were not favoured as some found them unhelpful, while others found it difficult to receive counselling via the telephone (Wilson et al., 2016). Patients receiving alcohol and drug rehabilitation suggested modifying the sessions into a group-like format similar to recovery-based groups already being offered at the facility (Bhuiyan et al., 2017).

Societal factors

Factors related to the societal level included restrictions on smoking in public places and home, social acceptability, and health literacy around smoking. The implementation of a ban on smoking in public facilities was associated with mixed reactions. While some patients supported the smoke-free policy because of health and environment-related factors such as a reduction in second-hand smoke exposure (Pagano et al., 2016), others expressed strong disapproval, anger and feelings of powerlessness due to the perceived loss of their rights to smoke (Fallin-Bennett et al., 2018; Hehir et al., 2012; Ratschen et al., 2010). There was evidence of improved smoking behaviours among some patients (Gubner et al., 2019; Ratschen et al., 2010) and increased smoking cessation advice (Huddlestone et al., 2018) after the policy's implementation. In a five-year longitudinal study conducted by Pagano et al. (2016), the mean number of cigarettes per day of smokers with substance use addiction decreased from 13.7 (SD = 8.38) before the implementation of a smoke-free policy to 10.2 (SD = 4.44) post-implementation. Patients' smoking prevalence over the same period was unchanged.

Formal bans on smoking at the workplace and informal smoking restrictions at home were cited as key motivating factors that helped some patients stop or reduce smoking (Buczkowski et al., 2014; Ghazaleh et al., 2018; Wilson et al., 2016). Social acceptability and enculturation of

cigarette smoking are reflected in the terms used by some patients to describe smoking in public places following the implementation of a smoke-free policy. Bhuiyan et al. (2017) reported that patients identified smoking as their "last freedom" and an "accepted norm". Ghazaleh et al. (2018) found that patients referred to cigarettes as their "best friend" and adopted new social behaviours such as smoking outside public places.

Discussion

This scoping review highlights that smoking cessation in smoke-free healthcare settings does not happen in isolation and requires an integrated approach across different levels. Hence, this review utilised a socio-ecological approach to address smoking cessation at four interconnected levels (interpersonal factors, intrapersonal factors, healthcare factors, and societal factors). This review provided insight into possible interactions among the key factors to improve the understanding of smoking behaviours and cessation roles.

The intrapersonal and interpersonal level's main indicators are beliefs/attitudes, health literacy, self-efficacy, social support perceived and received, and peer pressure. The patients' false beliefs about smoking (Bhuiyan et al., 2017; Wilson et al., 2016), perceived benefits of smoking (Fallin-Bennett et al., 2018; Ghazaleh et al., 2018; Shopik et al., 2012), and fear of nicotine withdrawal symptoms (Ghazaleh et al., 2018; Li et al., 2019) could perpetuate negative attitudes towards smoking cessation. Those who reported positive smoking cessation attitudes reported awareness of smoking's health consequences and negative social implications (Buczkowski et al., 2014; Ratschen et al., 2010). Overall, there are paradoxical arguments around smoking cessation across the studies. Some patients harbour fears of cravings or withdrawal from nicotine and would

not consider quitting (Ghazaleh et al., 2018; Li et al., 2019), while others believe that nicotine replacement therapy increases the number of cigarettes smoked daily and releases more nicotine resulting in further addiction (Ghazaleh et al., 2018; Ratschen et al., 2010). These findings may explain the reason behind cessation preferences such as willpower and cold turkey over nicotine replacement therapy (Kelly et al., 2018). These factors may explain why most of the patients had no plan to stop smoking or were in a pre-contemplation or contemplation stage of behavioural change (McQueen et al., 2014). These findings highlight the importance of health literacy and social support as key factors that impact interpersonal and intrapersonal levels (belief and self-efficacy). If individuals receive the right information at the right time, such as the burden or impact of smoking on themselves, their families, and society, they may be better positioned to make the right decision around smoking cessation. In some cases, individuals may have the knowledge or awareness of the consequences of smoking, but they may not have the self-efficacy and the right support to motivate them to quit.

The healthcare levels main indicators include healthcare, social, and community care systems. They are paramount in directing and encouraging individuals to successful smoking cessation. Some patients reported minimal support from staff and could not view staff as role models in smoking cessation because they were aware of staff smoking in the facility (Shopik et al., 2012) and facilitated covert patient smoking (Huddlestone et al., 2018). These behaviours may serve as negative factors for health promotion concerning smoking cessation. Hospitalisation in smoke-free hospitals can have negative and positive impacts on smoking behaviours. Many patients recognised that a period of stay in a smoke-free environment offered a good opportunity to seek help with smoking cessation. Yet, some decided they would rather consider quitting after discharge because they believed that smoking helped them cope with boredom and emotional

stress during the admission (Ratschen et al., 2010; Wilson et al., 2016). These attitudes are concerning because they indicate re-consideration in the current methods of smoking cessation at the service level, which influence an individual's commitment to quitting and the outcome of future attempts following discharge from hospital. According to Mussulman et al. (2019), smoking during hospitalisation, low confidence in quitting and not setting a quit date are strong predictors for continued smoking, occurring as early as within a day of hospital discharge. Additionally, the commonly held views about smoking among some patients, including being a good coping mechanism for increased stress during hospitalisation (Fallin-Bennett et al., 2018), patient's right to smoke (Hehir et al., 2012), and risks of aggressiveness due to nicotine withdrawal (de Oliveira et al., 2014) may account for sustained smoking habits (Sheals, Tombor, McNeill, & Shahab, 2016).

Societal levels main indicators include implementing smoke-free policies in public areas, the impact of hospitalisation, clinical and psychosocial supports, smoking bans in public places and social acceptability of smoking. Implementation of smoke-free policies encouraged cessation in some patients (Gubner et al., 2019; Ratschen et al., 2010), while others disapproved of the policy, and it did not affect their smoking behaviours (Stockings et al., 2015). This indicates that different policies and practices may be required based on different populations or an individualistic approach to personalise the care provision for smoking cessation. Stockings et al. (2015) found that more than 50% of patients with mood disorders or serious mental illness have high levels of nicotine dependence. This confirms the findings of this review that people with psychological illnesses and higher nicotine dependence may have a lower likelihood to receive help to quit and may require specific approaches and strategies to their cessation (Szatkowski & McNeill, 2013).

Furthermore, the concern by some patients that nicotine withdrawal symptoms may be misinterpreted as symptoms of their mental health conditions (Hehir et al., 2012) indicates the importance of providing this group of patients with adequate treatment for nicotine withdrawal, so clinical symptoms of mental health conditions can be assessed accurately. The findings of multiple motivating factors for smoking cessation among patients suggests that smoking cessation strategies and the actual smoking cessation treatments should be individualised to achieve better treatment outcomes.

The high cost of cigarettes was highlighted as a motive for quitting (Bhuiyan et al., 2017; Buczkowski et al., 2014; Ratschen et al., 2010). While other patients, who were not motivated by cost, considered reducing smoking because they had a limited amount of accessible funds during their hospital stay (Ratschen et al., 2010). Bader, Boisclair, & Ferrence (2011) support these findings, highlighting that increasing the price of cigarettes effectively reduces smoking in high-risk populations, including youth, young adults, persons of low socioeconomic status. Other studies found that the high cost of cigarettes was viewed as a disincentive for smoking (Bhuiyan et al., 2017; Buczkowski et al., 2014; Ratschen et al., 2010).

There is a diverse range of interconnected socio-ecological factors for smoking initiation and cessation. At the individual level, these include stress (Chezhian et al., 2015), having parents or peers who smoke (Scherrer et al., 2012), attitudes toward smoking (Martinasek et al., 2017), health literacy, socioeconomic status (Schiøtz et al., 2017), health concerns, pregnancy and breastfeeding. At the societal level, these include smoking advertising (Mays et al., 2014), smoking bans in the home and at work, cigarette expenses, clinical and psychosocial support from social networks, smoke-free policies, social acceptability of smoking, inadequate support or lack of adherence to smoke-free policies from healthcare professionals. Addressing these modifiable risk

factors could delay the uptake of smoking and improve smoking cessation (Chezhian et al., 2015). Understanding the interconnectivity between the levels of smoking-related influences is crucial for providing appropriate individualised and integrated support. Factors such as using smoking to socialise and regulate emotions may increase the likelihood of succumbing to influences such as peer pressure (Ukwayi, Eja, & Unwanede, 2012).

Although this review does not specifically explore the various smoking cessation techniques and approaches utilised by the study participants, some patients utilised willpower as their sole cessation method. This finding correlates with previous results showing that most smokers believe willpower is critical and adequate for stopping smoking (Hughes & Naud, 2016). In a systematic review conducted by Smith et al. (2015), willpower was perceived as both a method of quitting and a strategy to curb nicotine cravings. The limited belief in the effectiveness of nicotine replacement therapy reported in this t review, and the belief that using cessation aids is a sign of weakness and lack of confidence in one's capabilities (Hughes & Naud, 2016), may contribute to over-reliance on willpower. The belief in willpower may negate health professionals' efforts towards delivering smoking cessation education and treatments. There is a need to target beliefs surrounding willpower to enhance motivation to use evidence-based cessation aids, increasing attempts to quit (Hughes & Naud, 2016).

Healthcare professionals can promote non-smoking behaviours by providing clinical, educational and psychological support to increase awareness of health risks associated with cigarette smoking, combat ambivalence regarding quitting and deal with false beliefs about smoking and cessation treatments. According to Dawson et al. (2012), the most effective way to quit smoking is with professional advice and support combined with smoking cessation treatment.

But the current smoking status of healthcare workers may impact smokers' perception of them as role models, which could undermine the provided cessation support.

With social acceptability and enculturation of smoking, smokers may feel emboldened in their unhealthy habits of cigarette smoking, resulting in more people smoking in public and an increased potential to intensify the urge to smoke, particularly among smokers who lack self-regulation (Wang, Eddy & Fitzhugh, 2000). Strict implementation of smoking bans in public places would impact environmental and social cues to smoking and reduce the chances of smoking because others are smoking (Wilson et al. 2016).

This review's strengths include the inclusion of diverse study designs (quantitative, qualitative and mixed-methods), including various care settings which look at the topic from different perspectives. However, some studies included small sample sizes and were often in a single study site, which may impact the generalisation of the results.. Further primary research is needed to understand the predictors of hospitalisation's positive impact on smokers' behaviour and attitudes toward smoking cessation.

It is recommended to personalise smoking cessation treatments based on an individual's background and context. It is vital to include social networks such as family and friends' support in cessation programs while creating awareness about relapse risks. Given negative attitudes and misconceptions about smoking cessation and nicotine replacement therapy, it is paramount to enhance health knowledge by highlighting the impact of smoking at the individual and societal levels. The concern regarding misinterpretation of nicotine withdrawal symptoms among clients with mental health conditions as signs of worsening conditions indicates a need for early assessment of smoking status and prompt provision of nicotine withdrawal treatment of smoker's

choice. The review findings recommend ongoing staff training on the health benefits of smoking cessation and how to adhere to a smoke-free policy in healthcare settings to enhance their willingness and confidence to enforce policies and advise patients. Furthermore, efforts to build smokers' self-confidence skills to commit to quitting smoking during hospitalisation through behavioural interventions and peer support are deemed crucial as such skills would enhance successful quit rates.

Conflict of interest statement - The authors declare that they have no conflict of interest.

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