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Review Article

Understanding the multitude of barriers that prevent smokers in lower socioeconomic groups from accessing smoking cessation support: A literature review

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ABSTRACT

One explanation for the increasing smoking-related health inequalities is the limited access of lower socioeconomic status (SES) smokers to smoking cessation support. In order to understand this limited access – and to eventually improve accessibility – we provide a structured overview of the barriers that lower SES smokers face in the successive phases of access to cessation support. Our literature review included 43 papers on barriers of access to cessation support for lower SES smokers, published before June 2016. We used the *access to health care* framework to categorize the extracted barriers into (a) either the abilities of smokers or dimensions of cessation support and (b) one of the successive phases of access to support. We found that lower SES smokers encounter many barriers. They are present in all phases of access to cessation support, and different barriers may be important in each of these phases. We also found that each phase transition is hampered by barriers related to both the abilities of smokers and the dimensions of cessation support, and that these barriers tend to interact, both with each other and with the disadvantaged living conditions of lower SES smokers. In conclusion, reducing smoking-related health inequalities by improving lower SES smokers' access to smoking cessation support requires a comprehensive approach. Our structured overview of barriers may serve as a starting point for tailoring such an approach to the multitude of barriers that prevent lower SES smokers from accessing cessation support, while simultaneously taking into account their disadvantaged living conditions.

1. Introduction

Smoking explains about one third of the differences in life expectancy between lower and higher socioeconomic status (SES) groups (Gregoraci et al., 2017). These smoking-related health inequalities are expected to increase even further in the coming years (Cavelaars et al., 2000), given the growing socioeconomic differences regarding both smoking prevalence and smoking cessation rates during the last decades (Federico et al., 2007; Giskes et al., 2005; Nagelhout et al., 2012; Bosdriesz et al., 2015). One explanation for the socioeconomic difference in quitting smoking is that individual-level smoking cessation interventions tend to have a negative equity impact, meaning that they are, on average, more effective for higher SES smokers than for lower SES smokers (Brown et al., 2014; Hill et al., 2014). A major reason for this negative equity impact is that lower SES smokers appear to have limited access to the smoking cessation interventions that are generally the most effective, i.e., those that combine behavioral support and pharmacotherapy (Twyman et al., 2014; Hiscock et al., 2012). Therefore, to have a positive equity impact, the access to such interventions should be improved by tailoring them to the specific needs of lower SES smokers (Brown et al., 2014; Hill et al., 2014). However, the evidence base for developing such tailored smoking cessation interventions is still limited (Brown et al., 2014; Hiscock et al., 2012).

The socioeconomic differences in access include the fact that smoking cessation interventions are usually less successful in reaching lower SES smokers, in keeping these smokers involved, and in effectively supporting them to quit (Twyman et al., 2014; Hiscock et al., 2012). These findings illustrate that differential access may occur all along the process of obtaining care and benefiting from care (Levesque et al., 2013). Therefore, we adopted a broad conceptualization of access, from which access to health care can be defined as “the opportunity to reach and obtain appropriate health care services in situations of perceived need for care” (Levesque et al., 2013). Building on this broad definition, the *access to health care* framework (Levesque et al., 2013) envisions access as a sequence of phases that ranges from having health care needs (e.g. running health risks because of smoking) up to

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Table 1
Access to health care framework: a specification of phases of access, the abilities of users and the dimensions of services.[a]

PHASES AND PHASE TRANSITIONS IN THE PROCESS OF ACCESS TO HEALTH CARE				
Health care needs -> Perception of needs	**Perception of needs -> Health care seeking**	**Health care seeking -> Health care reaching**	**Health care reaching -> Health care utilization**	**Health care utilization -> Health care consequences**
The opportunity to identify these services exists; they can be reached and may impact on the health of the individual	The possibility to accept the aspects of the service and the perceived appropriateness of seeking care	The availability of services (resources and capacity) that can be reached physically and in a timely manner	The economic capacity to spend resources and time to use appropriate services	The fit between the aspects of the service and the client's needs and capacities
ABILITIES OF HEALTH CARE USERS AND INFLUENTIAL FACTORS RELATED TO PERSONS, HOUSEHOLDS AND SOCIAL AND PHYSICAL ENVIRONMENT				
Ability to perceive	**Ability to seek**	**Ability to reach**	**Ability to pay**	**Ability to engage**
• Health literacy • Health beliefs • Trust and expectations • Knowledge about health	• Personal values • Social values • Culture • Gender • Autonomy • Capacity • Knowledge about options • Knowledge about rights	• Living environments • Transport • Mobility • Occupational flexibility • Social support • Knowledge about services	• Income • Assets • Social capital • Health insurance	• Empowerment • Information • Motivation • Participation • Adherence • Caregiver support
DIMENSIONS OF HEALTH CARE SERVICES AND INFLUENTIAL FACTORS RELATED TO HEALTH SYSTEMS, ORGANIZATIONS AND PROVIDERS				
Approachability	**Acceptability**	**Availability & Accommodation**	**Affordability**	**Appropriateness**
• Transparency • Outreach • Information • Screening	• Professional values • Professionals norms • Equitability of services • Culture • Gender	• Geographic location • Accommodation • Providers • Hours of opening • Appointments mechanisms	• Direct costs • Indirect costs • Opportunity costs	• Technical quality • Interpersonal quality • Adequacy • Coordination • Continuity • Integratedness

[a] Derived from Levesque et al. (2013).

and including these needs being met (e.g. becoming a non-smoker) (for an overview, see Table 1). This cumulative perspective originated from integrating multiple definitions of access to health care (Levesque et al., 2013).

According to the framework, successfully passing through the successive phases of access depends on the abilities of smokers to perceive the need for health care, and to seek, reach, pay for and engage in effective smoking cessation support. Parallel to and in interaction with these abilities, the framework specifies dimensions of cessation support that concurrently influence the passage of smokers through the successive phases of access. This means that the support itself should be approachable, acceptable, available, affordable and appropriate in order to help smokers to quit smoking. Having full access to cessation support implies that smokers should be able to successfully move from one phase of access to the next, and from that phase to the next, and so on. Hence, the successive phases in the *access to health care* framework represent crucial transitions where barriers to access can be revealed (Levesque et al., 2013). Therefore, the framework provides an excellent structure for identifying and categorizing the barriers that hamper access to effective smoking cessation support.

We expect that a structured overview of barriers for lower SES smokers in particular may improve our understanding of the socioeconomic inequalities in smoking cessation, and that this may serve as a solid basis for the further tailoring of cessation support, as different barriers usually require different strategies of change to overcome them (Michie et al., 2011; Bartholomew Eldredge et al., 2016). As such an overview is currently lacking, we aimed to deliver a structured overview of the barriers that lower SES smokers come across in the successive phases of access to smoking cessation support. In doing so, we addressed the following research questions: Which barriers to access have been identified so far? Are these barriers related to the abilities of smokers or to the dimensions of smoking cessation support? In which of the phases of access do these barriers play an important role?

2. Methods

2.1. Search strategy

For our literature review (Grant and Booth, 2009), we searched PubMed, the Cochrane Database of Systematic Reviews, Google Scholar and Web of Science until June 2016. To identify studies on barriers hampering access to smoking cessation support for lower SES smokers, we searched for determinants of smoking cessation, recruitment strategies, smoking cessation support and the access of this target group to such support. Key search terms included “smokers”, “socioeconomic status” or “disadvantaged” or “deprived”, “smoking cessation” or “quitting smoking”, “recruitment” or “chain-referral”, “programs” or “interventions”, “reach” or “use”, and “factors” or “barriers”. We screened the references of the papers retrieved for other relevant studies (“backward snowball method”) (Polit and Beck, 2004). Since we did not find any information on the approachability of cessation support specifically for lower SES smokers, we extended our search for this dimension to the general population of smokers. We continued the search until no new barriers to access were found. Studies published in English were selected if they reported barriers related to smoking cessation. No exclusion criteria were applied.

2.2. Data extraction and analysis

First, we retrieved all information about barriers from the included studies, irrespective of the level of evidence. Second, using the specifications provided by the *access to health care* framework (summarized in Table 1) (Levesque et al., 2013), the first author [EvW] systematically classified the barriers retrieved as either an ability of smokers or a dimension of smoking cessation support. Third, she assigned the barriers to the most appropriate phase of access. In order to maximize the distinction between phases, barriers were only assigned to more than one phase if deemed relevant according to the specifications provided by the framework. Finally, based on two complementary sources (Levesque et al., 2013; Bartholomew Eldredge et al., 2016), conceptually related barriers were merged and named after the psychosocial or environmental concept they shared. For example, the high smoking prevalence and the high acceptance of smoking in the smokers' social environment were first classified as abilities of smokers. Subsequently, in view of their probable relevance, they were both assigned to three phases of the framework: the ability to perceive needs, the ability to seek support and the ability to engage in support. Finally, based on their conceptual relatedness, we merged these two barriers into the concept of “pro-smoking social norm”, which they shared. Decisions about the final placement and nomenclature of barriers were discussed among all authors [EvW, LL & JH] until consensus was reached.

3. Results

3.1. Types of studies collected

We included 43 papers, published between 1997 and April 2016, reporting observational and experimental studies. Appendix A presents the characteristics of these studies and the position of the barriers they identified in the *access to health care* framework (Levesque et al., 2013). Most studies (N = 28) primarily included lower SES smokers (based on education, occupation, income or residential area) and/or smokers from ethnic minority populations (Twyman et al., 2014; Hiscock et al., 2012; Ford et al., 2013; Murray et al., 2009; King et al., 1997; Christiansen et al., 2015; Carlini et al., 2012; Woodruff et al., 2002; Benson et al., 2015; Nierkens et al., 2005; Thompson et al., 2015; Venn et al., 2016; Benson et al., 2016; Bauld et al., 2012; Owens and Springett, 2006; Christiansen et al., 2012; Henderson et al., 2011; Benson et al., 2014; Stead et al., 2001; Stewart et al., 2011; Pateman et al., 2015; Roddy et al., 2006; Benson, 2016; Courtney et al., 2014; Stewart et al., 2010; Matthews et al., 2009; Bains et al., 2011; Wiltshire et al., 2003), while nine studies also included smokers from higher socioeconomic strata (Marcano Belisario et al., 2012; Bauld et al., 2010; Browning et al., 2008; Hiscock et al., 2013; Kotz and West, 2009; Siahpush et al., 2006a; Siahpush et al., 2006b; Pisinger et al., 2011; Schnoz et al., 2010), and two studies also included professionals (Bryant et al., 2010; Bauld et al., 2009). Three studies only included smokers from the general population (McDonald, 1999; Bains et al., 1998; Vidrine et al., 2013) and one study only included professionals (Vogt et al., 2005). The studies were performed in the United Kingdom (n = 17) (Hiscock et al., 2012; Murray et al., 2009; Thompson et al., 2015; Venn et al., 2016; Bauld et al., 2012; Owens and Springett, 2006; Henderson et al., 2011; Stead et al., 2001; Roddy et al., 2006; Bains et al., 2011; Wiltshire et al., 2003; Marcano Belisario et al., 2012; Bauld et al., 2010; Hiscock et al., 2013; Kotz and West, 2009; Bauld et al., 2009; Vogt et al., 2005), United States (n = 8) (King et al., 1997; Christiansen et al., 2015; Carlini et al., 2012; Woodruff et al., 2002; Christiansen et al., 2012; Matthews et al., 2009; Browning et al., 2008; Vidrine et al., 2013), Australia (n = 7) (Twyman et al., 2014; Ford et al., 2013; Pateman et al., 2015; Courtney et al., 2014; Siahpush et al., 2006a; Siahpush et al., 2006b; Bryant et al., 2010), the Netherlands (n = 5) (Benson et al., 2015; Nierkens et al., 2005; Benson et al., 2016; Benson et al., 2014; Benson, 2016), Canada (n = 4) (Stewart et al., 2011; Stewart et al., 2010; McDonald, 1999; Bains et al., 1998), Denmark (n = 1) (Pisinger et al., 2011), and Switzerland (n = 1) (Schnoz et al., 2010). The study designs were reviews (n = 10) (Twyman et al., 2014; Hiscock et al., 2012; Ford et al., 2013; Murray et al., 2009; King et al., 1997; Marcano Belisario et al., 2012; Bauld et al., 2010; McDonald, 1999; Bains et al., 1998; Vogt et al., 2005), randomized controlled trials (n = 4) (Christiansen et al., 2015; Carlini et al., 2012; Woodruff et al., 2002; Vidrine et al., 2013), surveys (n = 14) (Benson et al., 2015; Nierkens et al., 2005; Thompson et al., 2015; Venn et al.,

2016; Benson et al., 2016; Bauld et al., 2012; Owens and Springett, 2006; Christiansen et al., 2012; Browning et al., 2008; Hiscock et al., 2013; Kotz and West, 2009; Siahpush et al., 2006a; Siahpush et al., 2006b; Pisinger et al., 2011), qualitative studies (n = 10) (Henderson et al., 2011; Benson et al., 2014; Stead et al., 2001; Stewart et al., 2011; Pateman et al., 2015; Roddy et al., 2006; Bains et al., 2011; Wiltshire et al., 2003; Bryant et al., 2010; Bauld et al., 2009), and other (n = 5) (Benson, 2016; Courtney et al., 2014; Stewart et al., 2010; Matthews et al., 2009; Schnoz et al., 2010). Twenty-one studies reported on the abilities of smokers (Twyman et al., 2014; Hiscock et al., 2012; King et al., 1997; Christiansen et al., 2015; Carlini et al., 2012; Nierkens et al., 2005; Thompson et al., 2015; Christiansen et al., 2012; Henderson et al., 2011; Benson et al., 2014; Stead et al., 2001; Stewart et al., 2011; Pateman et al., 2015; Roddy et al., 2006; Bains et al., 2011; Wiltshire et al., 2003; Bauld et al., 2010; Kotz and West, 2009; Siahpush et al., 2006a; Siahpush et al., 2006b; Pisinger et al., 2011), 37 studies reported on the dimensions of support (Twyman et al., 2014; Ford et al., 2013; Murray et al., 2009; King et al., 1997; Christiansen et al., 2015; Carlini et al., 2012; Woodruff et al., 2002; Benson et al., 2015; Thompson et al., 2015; Venn et al., 2016; Benson et al., 2016; Bauld et al., 2012; Owens and Springett, 2006; Henderson et al., 2011; Benson et al., 2014; Stead et al., 2001; Stewart et al., 2011; Roddy et al., 2006; Benson, 2016; Courtney et al., 2014; Stewart et al., 2010; Matthews et al., 2009; Bains et al., 2011; Wiltshire et al., 2003; Marcano Belisario et al., 2012; Bauld et al., 2010; Browning et al., 2008; Hiscock et al., 2013; Siahpush et al., 2006a; Pisinger et al., 2011; Schnoz et al., 2010; Bryant et al., 2010; Bauld et al., 2009; McDonald, 1999; Bains et al., 1998; Vidrine et al., 2013; Vogt et al., 2005), and 15 studies reported on both abilities and dimensions (Twyman et al., 2014; King et al., 1997; Christiansen et al., 2015; Carlini et al., 2012; Thompson et al., 2015; Henderson et al., 2011; Benson et al., 2014; Stead et al., 2001; Stewart et al., 2011; Roddy et al., 2006; Bains et al., 2011; Wiltshire et al., 2003; Bauld et al., 2010; Siahpush et al., 2006a; Pisinger et al., 2011).

3.2. Barriers identified

The barriers that lower SES smokers come across are reported first with respect to the abilities of smokers and next with respect to the dimensions of support (for a summary, see Fig. 1).

3.2.1. Abilities of lower SES smokers

3.2.1.1. Ability to perceive. A core barrier to the ability to perceive needs for smoking cessation support is a *low motivation to quit* (Hiscock et al., 2012; Siahpush et al., 2006a). Many lower SES smokers have a *low risk perception*. They are insufficiently aware of the health consequences of smoking and the toxic constituents of smoke (Siahpush et al., 2006b). Therefore, quitting smoking is often seen as a long-term goal instead of a short-term goal (Stewart et al., 2011). In addition, many *positive attitudes towards smoking* exist. Smoking is seen as a reward, which brings relaxation and a sense of control, and as a personal freedom contributing to autonomy (Twyman et al., 2014; Hiscock et al., 2012; Pateman et al., 2015; Wiltshire et al., 2003). Smoking often serves as an automatic *coping mechanism* to stressful living conditions, loneliness and boredom (Twyman et al., 2014; Pateman et al., 2015). The important role of smoking in dealing with lower SES related daily hassles results in *strong smoking habits* (Twyman et al., 2014). The *pro-smoking social norm* among lower SES smokers (Christiansen et al., 2012; Bauld et al., 2010), resulting from the high prevalence and acceptance of smoking (Twyman et al., 2014; Hiscock et al., 2012; Wiltshire et al., 2003), and from the embedment of smoking in social structures and places (Pateman et al., 2015), also limits the ability to perceive the need for support.

3.2.1.2. Ability to seek. On top of the *pro-smoking social norm* (Twyman et al., 2014; Hiscock et al., 2012; Christiansen et al., 2012; Pateman et al., 2015; Wiltshire et al., 2003; Bauld et al., 2010), *waiting for the right time* to quit smoking impedes the ability to seek support (Pateman et al., 2015). Lower SES smokers tend to have a *low self-efficacy*. They frequently regard quitting as difficult (Twyman et al., 2014) and quit attempts as hopeless (Wiltshire et al., 2003) because of the strong addiction that smoking represents (Hiscock et al., 2012; Pateman et al., 2015; Siahpush et al., 2006a). Nevertheless, they often regard cessation support as unnecessary. Quitting is seen as one's own responsibility (Pateman et al., 2015), for which willpower is believed to be sufficient (Christiansen et al., 2012; Roddy et al., 2006). This may make lower SES smokers *afraid of failure and of being judged* for using cessation support (Roddy et al., 2006). Moreover, many of them are not aware of the existence of such support (King et al., 1997; Roddy et al., 2006). Apart from such a *lack of knowledge*, lower SES smokers tend to have *negative attitudes* towards cessation support: counseling is seen as ineffective (Christiansen et al., 2012), and nicotine replacement therapy as ineffective, dangerous, addictive, too expensive, or more expensive than smoking (Christiansen et al., 2012; Pateman et al., 2015; Roddy et al., 2006; Wiltshire et al., 2003). A common *resistance to outsiders* among lower SES smokers may additionally complicate recruitment and outreach activities for cessation support (Thompson et al., 2015). Furthermore, most of these smokers have *competing priorities*. Due to their disadvantaged living conditions, they are facing other, often more immediate, threats to health than smoking, such as poor housing, environmental hazards and mental health issues (Twyman et al., 2014; Pateman et al., 2015). Finally, *cultural barriers* may impede the ability to seek support, such as the cultural pressure to accept cigarettes that are offered (Nierkens et al., 2005), and the importance of smoking in the conservation of cultural identity (Twyman et al., 2014).

3.2.1.3. Ability to reach. The ability to reach smoking cessation support is hampered by an *area effect* (Stead et al., 2001). Lower SES smokers tend to live in places with limited resources and in isolation from the wider community (Hiscock et al., 2012; Stead et al., 2001), and to have *low mobility*, as they may lack the transportation and childcare facilities necessary to reach support (King et al., 1997). Usually, they also experience a *lack of social support*, for both smoking cessation and participation in cessation support, from both their social environment (Hiscock et al., 2012; Henderson et al., 2011; Benson et al., 2014) and their health care providers (Twyman et al., 2014). Although lower SES smokers in general *do not know what to expect* from cessation support (Bains et al., 2011), they tend to perceive it as *inappropriate*, as it would disallow them to control their own destiny (Pateman et al., 2015), and *inaccessible*, for instance because of distance and long waiting lists. They would prefer flexible support, which is available at various times and locations (Roddy et al., 2006).

3.2.1.4. Ability to pay. Lower SES smokers barely use smoking cessation support in countries where free support is unavailable (Hiscock et al., 2012), as they are often unable to pay for it, due to their own *financial difficulties* and the *limited reimbursement* they receive from the health insurance (Christiansen et al., 2015; Pateman et al., 2015).

3.2.1.5. Ability to engage. The ability to engage in smoking cessation support is impeded again by *low self-efficacy* (Hiscock et al., 2012; Pateman et al., 2015; Siahpush et al., 2006a). This is also related to the high prevalence of *unsuccessful quit attempts* among lower SES smokers (Kotz and West, 2009; Siahpush et al., 2006a), resulting in high drop-out rates from support and high rates of relapse to smoking (Hiscock et al., 2012). The lack of success is caused by strong smoking habits (Pateman et al., 2015), strong nicotine addiction (Hiscock et al., 2012; Pateman et al., 2015; Wiltshire et al., 2003; Siahpush et al., 2006a), and stressful living conditions (Twyman et al., 2014; Hiscock et al., 2012; Pateman et al., 2015; Wiltshire et al., 2003; Pisinger et al., 2011). *Negative experiences with former quit attempts* result in low self-esteem

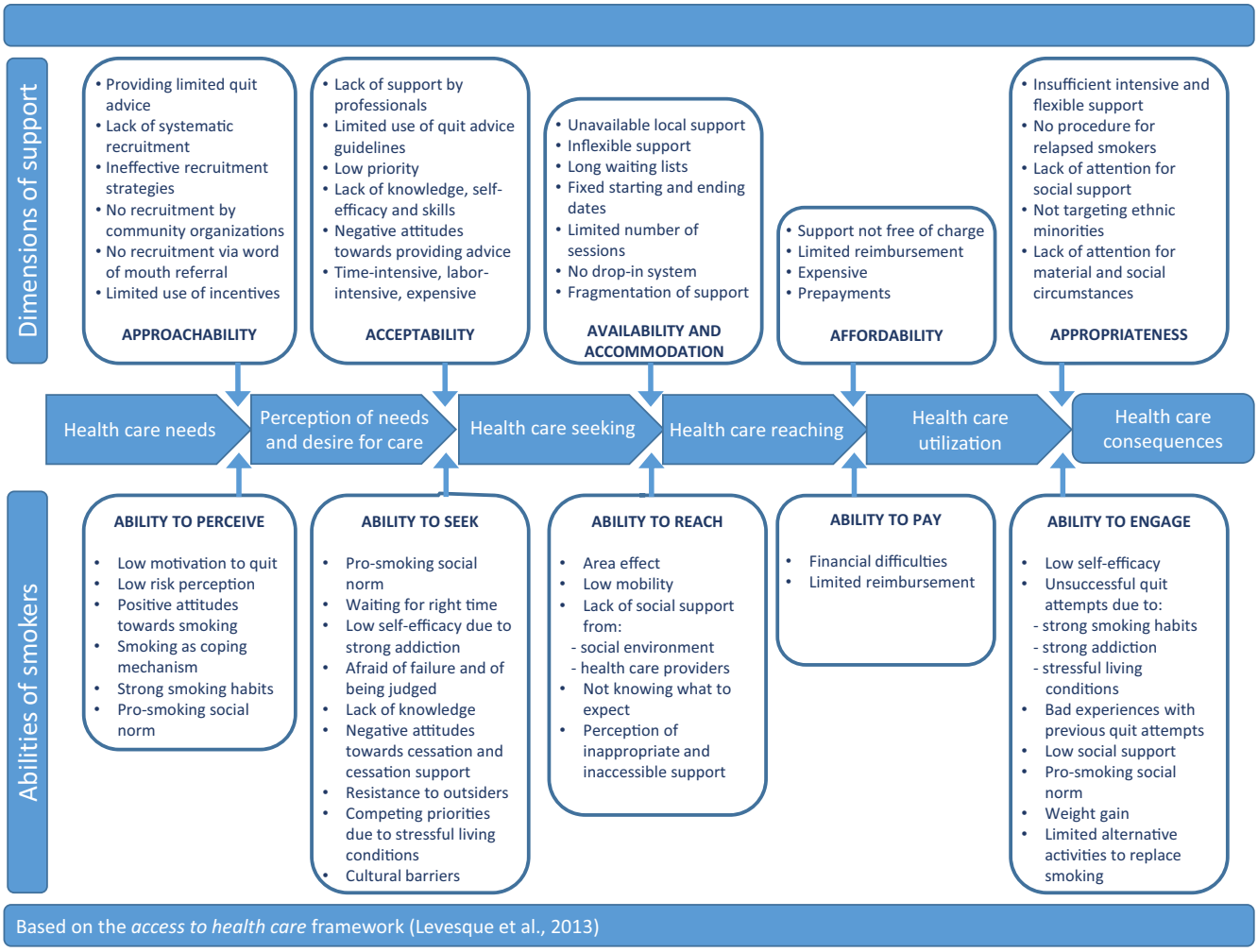

Fig. 1. Barriers for lower SES smokers to access smoking cessation support.

(Pisinger et al., 2011), and further reduce lower SES smokers' self-efficacy (Pisinger et al., 2011), their interest in quitting again, and thus their re-engagement in cessation support (Carlini et al., 2012). Other factors contributing to low participation in support and high relapse to smoking are the *low social support* (Henderson et al., 2011) and the strong *pro-smoking social norm* (Twyman et al., 2014; Hiscock et al., 2012; Christiansen et al., 2012; Pateman et al., 2015; Wiltshire et al., 2003; Bauld et al., 2010; Pisinger et al., 2011) that lower SES smokers usually encounter during quit attempts. These social factors also imply that limited alternative non-smoking contexts are available (Wiltshire et al., 2003). *Weight gain* after cessation (Pisinger et al., 2011) may additionally contribute to relapse to smoking, as may the limited options for *alternative activities* to replace smoking among lower SES smokers (Pateman et al., 2015).

3.2.2. Dimensions of smoking cessation support

3.2.2.1. Approachability. For lower SES smokers, the approachability of smoking cessation support is poor (Murray et al., 2009; Thompson et al., 2015; Venn et al., 2016; McDonald, 1999; Vidrine et al., 2013), because professionals usually *provide limited quit advice* (Browning et al., 2008). Despite the *lack of systematic recruitment* in general practices (Benson et al., 2015), lower SES smokers who do reach cessation support tend to be referred to it by their general practitioner (Benson et al., 2015; Henderson et al., 2011). In general, professionals who do recruit smokers for cessation support often use *ineffective recruitment strategies* (Marcano Belisario et al., 2012), such as impersonal and reactive approaches (Thompson et al., 2015; McDonald, 1999) that require smokers to sign up for support themselves. More effective recruitment strategies for lower SES smokers are personal and proactive approaches (Benson et al., 2015; McDonald, 1999), such as the Ask-Advice-Connect strategy (Vidrine et al., 2013), in which professionals invite smokers and connect them to support (Vidrine et al., 2013). Combining reactive and proactive strategies may even be the most effective way to recruit lower SES smokers (McDonald, 1999). Other potentially effective strategies, such as recruitment by professionals of *community organizations* (Christiansen et al., 2015; Bryant et al., 2010) and *word of mouth referral* by the target group itself (Benson et al., 2015), are barely employed. The same holds for the *use of incentives*, which can also increase recruitment rates (Murray et al., 2009; Marcano Belisario et al., 2012; Bains et al., 1998). Although their magnitude seems to matter, it is not yet clear which types of incentives are most effective (Murray et al., 2009; Bains et al., 1998).

3.2.2.2. Acceptability. The acceptability of smoking cessation support is low. One reason is that many health care *professionals hardly support* lower SES smokers in this respect (Twyman et al., 2014). For instance, they often do *not follow guidelines* with respect to recruitment and giving quit advice (Benson et al., 2015). Since lower SES smokers regularly have competing problems, professionals also tend to give smoking cessation *low priority* (Bryant et al., 2010). Some professionals regard themselves as having insufficient *knowledge*, *self-efficacy*, and *skills* to motivate smokers to quit, to provide them with adequate quit advice (Twyman et al., 2014; Bryant et al., 2010; Vogt et al., 2005), and to refer them to local cessation support (Benson et al., 2015). Professionals

also hold *negative attitudes* towards quit advice (Vogt et al., 2005). They believe that providing this advice is not their task, ineffective and inappropriate (Vogt et al., 2005), and that it violates the privacy of clients and their relationship with clients (Bryant et al., 2010; Vogt et al., 2005). Finally, recruiting smokers for cessation support is mostly regarded as *time-intensive*, *labor-intensive* and *expensive* (Twyman et al., 2014; Carlini et al., 2012; Thompson et al., 2015; Vogt et al., 2005).

3.2.2.3. Availability and accommodation. The availability and accommodation of smoking cessation support for lower SES smokers is generally poor. The area effect (Stead et al., 2001) introduced above implies that support is often *not locally available* (Murray et al., 2009). Most of the support is *inflexible* regarding time and place (Roddy et al., 2006; Bains et al., 2011), for instance because it requires an appointment, involves *long waiting lists* (Owens and Springett, 2006; Bains et al., 2011), has *fixed starting and ending dates*, and provides a *limited number of sessions* (Benson et al., 2016). The rare examples of flexible cessation support adopted a *drop-in system*, which seems more effective in attracting and reaching lower SES smokers (Benson et al., 2016; Bauld et al., 2012; Bains et al., 2011; Hiscock et al., 2013). Smokers who enter fixed group support may become demotivated by the decreasing group size due to other participants dropping out (Benson et al., 2014). Finally, *fragmentation*, meaning that different components, such as pharmacotherapy and behavioral support, are offered in different places, is likely to prevent lower SES smokers from reaching cessation support (Benson et al., 2015; Owens and Springett, 2006; Bauld et al., 2009).

3.2.2.4. Affordability. The affordability of smoking cessation support is problematic. Such support is generally neither *free of charge* nor entirely *reimbursed*, making its use *expensive* for lower SES smokers (Roddy et al., 2006; Benson, 2016; Bryant et al., 2010). Even if reimbursement is available, some of these smokers are not able to pay the *prepayments* that are often required (Benson, 2016). Until the recent policy changes, the United Kingdom was one of the few exceptions where behavioral support and nicotine replacement therapy were free (Bauld et al., 2010; Bauld et al., 2009). Even so, other costs may hamper the use of support, for instance if a different type of pharmacotherapy than is offered for free would be more suitable to quit smoking (Roddy et al., 2006; Bauld et al., 2009).

3.2.2.5. Appropriateness. The appropriateness of smoking cessation support for lower SES smokers is poor, due to its incongruence with their specific needs. Regular support is often *insufficiently intensive* and *too inflexible* for them to actually quit smoking (Siahpush et al., 2006a). There is no extra support in between sessions (Henderson et al., 2011), no sufficiently long follow-up support for smokers who quit smoking and *no procedure for smokers who relapse* (Carlini et al., 2012), while both drop-out (Benson et al., 2014) and relapse rates (Pisinger et al., 2011) are high. Cessation support also insufficiently addresses *social support* (Ford et al., 2013), despite the known lack of social support that lower SES smokers receive from their direct environment and its importance for a successful quit attempt (Ford et al., 2013). For instance, they may be in need of a buddy (Stewart et al., 2011) or of peers as role models to increase their self-efficacy (Ford et al., 2013). Also, cessation support is mostly *not* very well *targeted at ethnic minorities* (King et al., 1997; Woodruff et al., 2002; Matthews et al., 2009; Schnoz et al., 2010), meaning that it is neither tailored to their cultural beliefs nor available in other languages (King et al., 1997; Matthews et al., 2009; Schnoz et al., 2010). Finally, cessation support mainly focuses on nicotine addiction, while *material and social circumstances* play a key role in smoking behavior and relapse (Stewart et al., 2011; Stewart et al., 2010; Wiltshire et al., 2003). This means that a holistic approach, including for example financial education, would be more appropriate for lower SES smokers (Courtney et al., 2014).

4. Discussion

This literature review categorized the barriers that lower SES smokers come across when accessing smoking cessation support in accordance with the *access to health care* framework (Levesque et al., 2013). First, our study revealed that lower SES smokers encounter many barriers, that barriers are present in all phases of access to cessation support, and that different barriers may be important in each of these phases. Second, we found that each phase transition is hampered by barriers related to both the abilities of smokers and the dimensions of cessation support, and that these barriers tend to interact both with each other and with the disadvantaged living conditions of lower SES smokers. Finally, we established that studies in this field have usually examined barriers concerning either the abilities of lower SES smokers or the dimensions of cessation support, but not both, and typically addressed only one or a few phases of access.

4.1. Interpretation and implications

Previous studies that applied the *access to health care* framework (Levesque et al., 2013) to analyze the barriers to access for disadvantaged populations also identified a variety of barriers in multiple phases of access to care (Corscadden et al., 2018; Suurmond et al., 2016). However, these studies typically considered either only the abilities of populations (Suurmond et al., 2016) or mainly the dimensions of care (Corscadden et al., 2018). By preparing one overview of both the abilities of smokers and the dimensions of smoking cessation support, we are the first to substantiate, for lower SES smokers, the interactions between these two types of barriers that are predicted by the *access to health care* framework (Levesque et al., 2013). Since we deliberately assigned each of the identified barriers to the most appropriate phases of access, our study also makes clear how the disadvantaged living conditions of lower SES smokers play an impeding role throughout the entire process of access to cessation support. Therefore, our structured overview of barriers may offer a preliminary answer to the recently posed question “why particular approaches are more or less likely to have an equity-positive effect on smoking outcomes” (Smith et al., 2018). Our findings indicate that improving access to effective smoking cessation support for lower SES smokers requires an approach that simultaneously: (1) addresses both the abilities of smokers and the dimensions of cessation support; (2) is tailored to the specific barriers that hamper each of the successive phase transitions; (3) takes into account the disadvantaged living conditions of lower SES smokers.

In our review we did not come across any single smoking cessation intervention that met all three of these requirements. However, we did find some interventions that addressed combinations of barriers, albeit mostly in a limited number of the phases of access to support. Our findings correspond with a recent review of smoking cessation support in the United Kingdom, which found that primary care services typically intervene in the early phases of – what the review calls – “the cessation pathway”, while innovative cessation services focused more on the later phases (Smith et al., 2018). We infer that one possible strategy to improve the access of lower SES smokers to cessation support could be to combine one or more of the available interventions that target different phases of access to support. Interventions that address barriers in the earlier phases of access may, for instance, make use of personal and proactive recruitment strategies (Benson et al., 2015; Vidrine et al., 2013), word-of-mouth referral by the target group itself (Patten et al., 2011; Sadasivam et al., 2013), or a mobile drop-in service for which no referral is required (Venn et al., 2016). Such interventions may, for instance, be able to overcome barriers related to the *approachability* of support (e.g., by replacing ineffective provider recruitment strategies) and the *ability to seek support* (e.g., by increasing smokers' awareness of cessation support).

Although interventions like these may indeed have an equity-

positive effect in the first phases of access, they are less likely to promote the progression of lower SES smokers through the later phases (Smith et al., 2018). Our findings imply that this would require additional interventions that are specifically tailored to the barriers that are important in these later phases. One such intervention is a tobacco quitline (Fildes et al., 2012), offering free telephone counseling in several languages, thereby addressing barriers related to the *affordability* and *appropriateness* of support. Another example is a neighborhood drop-in rolling group (Bauld et al., 2012), offering cessation support free of charge and in a flexible manner. Such support may effectively tackle barriers related to, for instance, the *availability and accommodation* of support (e.g., by offering weekly, locally available support without referral being required), and the *appropriateness* of support (e.g., by offering support that remains accessible in case of relapse). Such a rolling group intervention may also improve the abilities of lower SES smokers, such as their *ability to reach* (e.g., by providing a supportive environment) and their *ability to engage* (e.g., by increasing perceptions of social support). However, evaluations of such a rolling group intervention have indicated that other barriers may still hamper lower SES smokers to remain engaged in the support long enough to successfully quit smoking (Bauld et al., 2012; Bauld et al., 2009). To enable lower SES smokers to also achieve this ultimate *health care consequence*, it may be necessary to offer more intensive support, and to pay more attention to their disadvantaged living conditions (Bauld et al., 2009), as these, rather than the barriers as such, may be decisive in distinguishing lower SES from higher SES smokers.

Therefore, a second possible strategy to improve the access of lower SES smokers to cessation support is to add intervention components that address their disadvantaged living conditions (Brown et al., 2014; Hill et al., 2014). Our finding that both the abilities of smokers and the dimensions of support are highly likely to interact with the disadvantaged living conditions of lower SES smokers endorses the importance of such a strategy. For example, our study revealed how an area effect (Stead et al., 2001), i.e., living in rather isolated area, may interact with the low mobility of lower SES smokers and the absence of locally available support (Murray et al., 2009; King et al., 1997). Although addressing disadvantaged living conditions has received little attention so far, such an approach would for instance respond to the needs that low-income female smokers identify themselves (Stewart et al., 2011). One option would be to improve the abilities of smokers to cope with the stresses they experience because of their lower socioeconomic status, such as the stress due to unemployment and income insecurity (Twyman et al., 2014; Pateman et al., 2015). Additional attention for coping with stress has been found to be a promising approach in a cessation program for Canadian low-income women (Stewart et al., 2011). A second option is to support lower SES smokers to better deal with the disadvantaged conditions that are causing the stress. One example is to offer cessation support that includes a module on dealing with a small income (Stewart et al., 2011), including suggestions for cheap alternative activities to replace smoking. Although promising, these first two options should be regarded as short-term solutions that still do not address the disadvantaged conditions themselves. The latter would require "upstream" policy measures (Twyman et al., 2014; Pateman et al., 2015; Adler and Newman, 2002), which, for instance, help lower SES smokers restructure their debts, find paid or voluntary work, or acquire a minimum income, or that promote good and smoke-free working conditions, that may also help to improve social norms towards smoking cessation. However, permanent measures like these may only have an impact on smoking cessation in the longer term, while such an effect may also be difficult to assess (Adler and Newman, 2002).

Finally, most studies included in our review examined either the abilities of smokers or the dimensions of cessation support, and addressed only one or a limited number of phases of access. In our opinion, our use of the *access to health* framework (Levesque et al., 2013) makes clear that such a limited scope may be insufficient to fully understand the socioeconomic differences in smoking cessation and to properly evaluate the tailored interventions to reduce these differences. Therefore, we think that future research could benefit from adopting a broader definition of access to health care (Levesque et al., 2013). This broader scope would also allow future needs assessments and program evaluations to take into account the disadvantaged living conditions of lower SES smokers throughout all phases of access to smoking cessation support. Future research could also explore the added value of simultaneously addressing other health-related behaviors that tend to cluster in lower SES populations (Evans and Buck, 2018; Meader et al., 2017).

4.2. Limitations

Three limitations should be discussed. First, we did not perform a systematic review or include grey literature, and new relevant studies have been published after our review in June 2016 (Smith et al., 2018; Evans and Buck, 2018). This means that our overview of barriers may not be complete. However, we believe that the resulting overview is representative for the evidence available, as we searched until no new barriers were found. Regarding the qualitative part of our review, i.e., the merger of conceptually related barriers and their arrangement in accordance with the *access to health care* framework (Levesque et al., 2013), the resulting structured overview may also be regarded as approaching theoretical saturation (Polit and Beck, 2004).

Second, we may not have reached such theoretical saturation for the *approachability* dimension of smoking cessation support. For this dimension, we could not find any information on barriers important to lower SES smokers in particular, only barriers that played a role for the "average" smoker in the general population (McDonald, 1999; Bains et al., 1998; Vidrine et al., 2013). Although we assume that these barriers, e.g., the use of ineffective recruitment strategies by professionals (Thompson et al., 2015; Marcano Belisario et al., 2012; McDonald, 1999), may as a rule be of similar or even greater importance to lower SES smokers, the opposite may be the case in the United Kingdom (Smith et al., 2018). Therefore, before further tailoring the available cessation support to lower SES smokers, an additional local needs assessment would be appropriate, preferably applying qualitative research methods (Smith et al., 2018).

Third, a local needs assessment may also be needed to determine the relative importance of each of the barriers identified. As we did not take into account the strength of the available evidence, our structured overview cannot be used to decide on the relative importance of each of the barriers identified. Moreover, our results indicate that the relative importance of barriers may be influenced by the local or the national policy context, which also implies that their exact placement in the framework may be debatable. Hence, whereas the barriers concerning the abilities of lower SES smokers in our overview may be generalizable to smokers in other lower SES populations than those covered by the studies in our review, the dimensions of support may be less or not generalizable to other health care contexts, such as to low-income and middle-income countries for which we were not able to include any studies in our review.

5. Conclusions

An important explanation for the socioeconomic differences in smoking and health is the limited access of lower SES smokers to effective smoking cessation support. Lower SES smokers face multiple barriers in all phases of access to the support. Reducing socioeconomic differences in smoking requires a comprehensive approach that is tailored to the specific barriers in each of the successive phases of access to cessation support. Such an approach should simultaneously address both the abilities of smokers and the dimensions of support, as well as take into account the disadvantaged living conditions of lower SES smokers. Future research could benefit from adopting a broad

definition of access to health care, as it may help to further improve our understanding of socioeconomic differences in smoking and health, and to identify and evaluate strategies with the potential to decrease these differences.

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Declaration of interests

The authors have no conflict of interest to declare.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ypmed.2019.03.029.

References

Adler, N.E., Newman, K., 2002. Socioeconomic disparities in health: pathways and policies. Health Aff. 21 (2), 60–76.
Bains, N., Pickett, W., Hoey, J., 1998. The use and impact of incentives in population-based smoking cessation programs: a review. Am. J. Health Promot. 12 (5), 307–320.
Bains, M., Venn, A., Murray, R.L., McNeill, A., Jones, L.L., 2011. A qualitative exploration of smokers' views regarding aspects of a community-based mobile stop smoking service in the United Kingdom. BMC Public Health 11 (1), 873.
Bartholomew Eldredge, L.K., Markham, C.M., RAC, Ruiter, Fernández, M.E., Kok, G., Parcel, G.S. (Eds.), 2016. Planning Health Promotion Programs. An Intervention Mapping Approach, 4th ed. Jossey-Bass, San Francisco.
Bauld, L., Ferguson, J., Jones, C., McEwen, A., Sumnall, H., Woolfall, K., 2009. Evaluation of a drop-in rolling-group model for smoking cessation: Interim report. United Kingdom: UK Centre for Tobacco Control. Studies 2009 (1360-0443).
Bauld, L., Bell, K., McCullough, L., Richardson, L., Greaves, L., 2010. The effectiveness of NHS smoking cessation services: a systematic review. J. Public Health (Oxf.) 32 (1), 71–82.
Bauld, L., Ferguson, J., McEwen, A., Hiscock, R., 2012. Evaluation of a drop-in rolling-group model of support to stop smoking. Addiction. 107 (9), 1687–1695.
Benson, F.E., 2016. Evaluation of Smoking Cessation Services in Disadvantaged Areas of the Netherlands.
Benson, F.E., Stronks, K., Willemsen, M.C., Bogaerts, N.M., Nierkens, V., 2014. Wanting to attend isn't just wanting to quit: why some disadvantaged smokers regularly attend smoking cessation behavioural therapy while others do not: a qualitative study. BMC Public Health 14, 695.
Benson, F.E., Nierkens, V., Willemsen, M.C., Stronks, K., 2015. Smoking cessation behavioural therapy in disadvantaged neighbourhoods: an explorative analysis of recruitment channels. Subst. Abuse Treat. Prev. Policy 10 (1), 28.
Benson, F.E., Nierkens, V., Willemsen, M.C., Stronks, K., 2016. Effects of different types of smoking cessation behavioral therapy in disadvantaged areas in the Netherlands: an observational study. Tob. Prev. Cessat. 2 (February), 14.
Bosdriesz, J.R., Willemsen, M.C., Stronks, K., Kunst, A.E., 2015. Socioeconomic inequalities in smoking cessation in 11 European countries from 1987 to 2012. J. Epidemiol. Community Health 69 (9), 886–892.
Brown, T., Platt, S., Amos, A., 2014. Equity impact of European individual-level smoking cessation interventions to reduce smoking in adults: a systematic review. Eur. J. Pub. Health 24 (4), 551–556.
Browning, K.K., Ferketich, A.K., Salsberry, P.J., Wewers, M.E., 2008. Socioeconomic disparity in provider-delivered assistance to quit smoking. Nicotine Tob. Res. 10 (1), 55–61.
Bryant, J., Bonevski, B., Paul, C., O'Brien, J., Oakes, W., 2010. Delivering smoking cessation support to disadvantaged groups: a qualitative study of the potential of community welfare organizations. Health Educ. Res. 25 (6), 979–990.
Carlini, B.H., McDaniel, A.M., Weaver, M.T., et al., 2012. Reaching out, inviting back: using Interactive voice response (IVR) technology to recycle relapsed smokers back to Quitline treatment–a randomized controlled trial. BMC Public Health 12 (1), 507.
Cavelaars, A.E., Kunst, A.E., Geurts, J.J., et al., 2000. Educational differences in smoking: international comparison. BMJ. 320 (7242), 1102–1107.
Christiansen, B., Reeder, K., Hill, M., Baker, T.B., Fiore, M.C., 2012. Barriers to effective tobacco-dependence treatment for the very poor. J. Stud. Alcohol Drugs 73 (6), 874–884.
Christiansen, B.A., Reeder, K.M., TerBeek, E.G., Fiore, M.C., Baker, T.B., 2015. Motivating low socioeconomic status smokers to accept evidence-based smoking cessation treatment: a brief intervention for the community agency setting. Nicotine Tob. Res. 17 (8), 1002–1011.
Corscadden, L., Levesque, J.F., Lewis, V., Strumpf, E., Breton, M., Russell, G., 2018. Factors associated with multiple barriers to access to primary care: an international analysis. Int. J. Equity Health 17 (1), 28.
Courtney, R.J., Bradford, D., Martire, K.A., et al., 2014. A randomized clinical trial of a financial education intervention with nicotine replacement therapy (NRT) for low socio-economic status Australian smokers: a study protocol. Addiction. 109 (10), 1602–1611.
Evans, H., Buck, D., 2018. Tackling Multiple Unhealthy Risk Factors: Emerging Lessons From Practice. London, United Kingdom, The King's Fund.
Federico, B., Costa, G., Kunst, A.E., 2007. Educational inequalities in initiation, cessation, and prevalence of smoking among 3 Italian birth cohorts. Am. J. Public Health 97 (5), 838–845.
Fildes, E.E., Wilson, M.A., Crawford, B.J., Kapella-Mshigeni, S., Wilson, L.A., Henkelman, W., 2012. Tobacco quitlines in the United States. Nurs. Clin. North Am. 47 (1), 97–107.
Ford, P., Clifford, A., Gussy, K., Gartner, C., 2013. A systematic review of peer-support programs for smoking cessation in disadvantaged groups. Int. J. Environ. Res. Public Health 10 (11), 5507–5522.
Giskes, K., Kunst, A.E., Benach, J., et al., 2005. Trends in smoking behaviour between 1985 and 2000 in nine European countries by education. J. Epidemiol. Community Health 59 (5), 395–401.
Grant, M.J., Booth, A., 2009. A typology of reviews: an analysis of 14 review types and associated methodologies. Health Inf. Libr. J. 26 (2), 91–108.
Gregoraci, G., van Lenthe, F.J., Artnik, B., et al., 2017. Contribution of smoking to socioeconomic inequalities in mortality: a study of 14 European countries, 1990–2004. Tob. Control. 26 (3), 260–268.
Henderson, H.J., Memon, A., Lawson, K., Jacobs, B., Koutsogeorgou, E., 2011. What factors are important in smoking cessation amongst deprived communities? A qualitative study. Health Educ. J. 70 (1), 84–91.
Hill, S., Amos, A., Clifford, D., Platt, S., 2014. Impact of tobacco control interventions on socioeconomic inequalities in smoking: review of the evidence. Tob. Control. 23 (e2), e89–e97.
Hiscock, R., Bauld, L., Amos, A., Fidler, J.A., Munafo, M., 2012. Socioeconomic status and smoking: a review. Ann. N. Y. Acad. Sci. 1248 (1), 107–123.
Hiscock, R., Murray, S., Brose, L.S., et al., 2013. Behavioural therapy for smoking cessation: the effectiveness of different intervention types for disadvantaged and affluent smokers. Addict. Behav. 38 (11), 2787–2796.
King, T.K., Borrelli, B., Black, C., Pinto, B.M., Marcus, B.H., 1997. Minority women and tobacco: implications for smoking cessation interventions. Ann. Behav. Med. 19 (3), 301–313.
Kotz, D., West, R., 2009. Explaining the social gradient in smoking cessation: it's not in the trying, but in the succeeding. Tob. Control. 18 (1), 43–46.
Levesque, J.-F., Harris, M.F., Russell, G., 2013. Patient-centred access to health care: conceptualising access at the interface of health systems and populations. Int. J. Equity Health 12 (1), 18.
Marcano Belisario, J.S., Bruggeling, M.N., Gunn, L.H., Brusamento, S., Car, J., 2012. Interventions for recruiting smokers into cessation programmes. Cochrane Database Syst. Rev. 12, CD009187.
Matthews, A.K., Sánchez-Johnsen, L., King, A., 2009. Development of a culturally targeted smoking cessation intervention for African American smokers. J. Community Health 34 (6), 480–492.
McDonald, P.W., 1999. Population-based recruitment for quit-smoking programs: an analytic review of communication variables. Prev. Med. 28 (6), 545–557.
Meader, N., King, K., Wright, K., et al., 2017. Multiple risk behavior interventions: meta-analyses of RCTs. Am. J. Prev. Med. 53 (1), e19–e30.
Michie, S., Hyder, N., Walia, A., West, R., 2011. Development of a taxonomy of behaviour change techniques used in individual behavioural support for smoking cessation. Addict. Behav. 36 (4), 315–319.
Murray, R.L., Bauld, L., Hackshaw, L.E., McNeill, A., 2009. Improving access to smoking cessation services for disadvantaged groups: a systematic review. J. Public Health (Oxf.) 31 (2), 258–277.
Nagelhout, G.E., de Korte-de Boer, D., Kunst, A.E., et al., 2012. Trends in socioeconomic inequalities in smoking prevalence, consumption, initiation, and cessation between 2001 and 2008 in the Netherlands. Findings from a national population survey. BMC Public Health 12 (1), 303.
Nierkens, V., Stronks, K., van Oel, C.J., de Vries, H., 2005. Beliefs of Turkish and Moroccan immigrants in The Netherlands about smoking cessation: implications for prevention. Health Educ. Res. 20 (6), 622–634.
Owens, C., Springett, J., 2006. The Roy Castle fag ends stop smoking service: a successful client-led approach to smoking cessation. J. Smok. Cessat. 1 (01), 13–18.
Pateman, K., Ford, P., Fitzgerald, L., et al., 2015. Stuck in the catch 22: attitudes towards smoking cessation among populations vulnerable to social disadvantage. Addiction. 111 (6), 1048–1056.
Patten, C.A., Smith, C.M., Brockman, T.A., et al., 2011. Support-person promotion of a smoking quitline: a randomized controlled trial. Am. J. Prev. Med. 41 (1), 17–23.
Pisinger, C., Aadahl, M., Toft, U., Jorgensen, T., 2011. Motives to quit smoking and reasons to relapse differ by socioeconomic status. Prev. Med. 52 (1), 48–52.
Polit, D.F., Beck, C.T., 2004. Nursing Research: Principles and Methods, 7th ed. Lippincott Williams & Wilkins, Philadelphia.
Roddy, E., Antoniak, M., Britton, J., Molyneux, A., Lewis, S., 2006. Barriers and

motivators to gaining access to smoking cessation services amongst deprived smokers - a qualitative study. BMC Health Serv. Res. 6 (1), 1–7.
Sadasivam, R.S., Cutrona, S.L., Volz, E., Rao, S.R., Houston, T.K., 2013. Web-based peer-driven chain referrals for smoking cessation. Stud. Health Technol. Inform. 192, 357.
Schnoz, D., Schaub, M., Schwappach, D.L., Salis Gross, C., 2010. Developing a smoking cessation program for Turkish-speaking migrants in Switzerland: novel findings and promising effects. Nicotine Tob. Res. 13 (2), 127–134.
Siahpush, M., McNeill, A., Borland, R., Fong, G.T., 2006a. Socioeconomic variations in nicotine dependence, self-efficacy, and intention to quit across four countries: findings from the International Tobacco Control (ITC) Four Country Survey. Tob. Control. 15 (Suppl. 3), iii71–75.
Siahpush, M., McNeill, A., Hammond, D., Fong, G., 2006b. Socioeconomic and country variations in knowledge of health risks of tobacco smoking and toxic constituents of smoke: results from the 2002 International Tobacco Control (ITC) Four Country Survey. Tob. Control. 15 (Suppl. 3), iii65–iii70.
Smith, C., Hill, S., Amos, A., 2018. Stop Smoking Inequalities: A Systematic Review of Socioeconomic Inequalities in Experiences of Smoking Cessation Interventions in the UK. United Kingdom Cancer Resarch UK. University of Edinburgh.
Stead, M., MacAskill, S., MacKintosh, A.-M., Reece, J., Eadie, D., 2001. "It's as if you're locked in": qualitative explanations for area effects on smoking in disadvantaged communities. Health Place 7 (4), 333–343.
Stewart, M.J., Kushner, K.E., Greaves, L., Letourneau, N., Spitzer, D., Boscoe, M., 2010. Impacts of a support intervention for low-income women who smoke. Soc. Sci. Med. 71 (11), 1901–1909.
Stewart, M.J., Greaves, L., Kushner, K.E., Letourneau, N.L., Spitzer, D.L., Boscoe, M., 2011. Where there is smoke, there is stress: low-income women identify support needs and preferences for smoking reduction. Health Care Women Int. 32 (5), 359–383.
Suurmond, J., Rosenmoller, D.L., El Mesbahi, H., Lamkaddem, M., Essink-Bot, M.L., 2016. Barriers in access to home care services among ethnic minority and Dutch elderly–a qualitative study. Int. J. Nurs. Stud. 54, 23–35.
Thompson, T.P., Greaves, C.J., Ayres, R., et al., 2015. Lessons learned from recruiting socioeconomically disadvantaged smokers into a pilot randomized controlled trial to explore the role of Exercise Assisted Reduction then Stop (EARS) smoking. Trials. 16 (1), 1.
Twyman, L., Bonevski, B., Paul, C., Bryant, J., 2014. Perceived barriers to smoking cessation in selected vulnerable groups: a systematic review of the qualitative and quantitative literature. BMJ Open 4 (12), e006414.
Venn, A., Dickinson, A., Murray, R., et al., 2016. Effectiveness of a mobile, drop-in stop smoking service in reaching and supporting disadvantaged UK smokers to quit. Tob. Control. 25 (1), 33–38.
Vidrine, J.I., Shete, S., Cao, Y., et al., 2013. Ask-Advise-Connect: a new approach to smoking treatment delivery in health care settings. JAMA Intern. Med. 173 (6), 458–464.
Vogt, F., Hall, S., Marteau, T.M., 2005. General practitioners' and family physicians' negative beliefs and attitudes towards discussing smoking cessation with patients: a systematic review. Addiction. 100 (10), 1423–1431.
Wiltshire, S., Bancroft, A., Parry, O., Amos, A., 2003. 'I came back here and started smoking again': perceptions and experiences of quitting among disadvantaged smokers. Health Educ. Res. 18 (3), 292–303.
Woodruff, S.I., Talavera, G.A., Elder, J.P., 2002. Evaluation of a culturally appropriate smoking cessation intervention for Latinos. Tob. Control. 11 (4), 361–367.