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## Smoking and stress: the double-edged sword of living in a disadvantaged area

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### ABSTRACT

**Background:** Primary care-based smoking cessation interventions are often less effective among low-SES groups. Higher stress levels may explain the lower quit rate and higher prevalence of smoking in low-SES groups, and why the relative smoking prevalence rate is not declining at an equitable rate (same prevalence rate as higher SES groups). To understand these issues, this paper sought answers to two questions: is stress perceived by ex-smokers and current smokers as a barrier to quitting; and does stress act as a barrier to quitting in relation to other barriers in disadvantaged areas?

**Methods:** This paper seeks to understand the lived experiences from participants in 2 focus groups and 11 in-depth interviews, who reside in the most disadvantaged area in metropolitan Adelaide, regarding stress as a barrier to smoking cessation.

**Results:** The data pointed to stress as an ever-present aspect of life for people in low-SES areas for many reasons, most stemming from the social environment. Perceived stress was also found to be a major barrier to smoking cessation, more so for current smokers.

**Conclusions:** The data analysis revealed that people in low-SES areas maybe living in environments with increased levels of perceived stress, making them more likely to start, and less likely to quit, smoking. It is argued that the “middle-ground” be taken in a structure-agency approach regarding smoking cessation, recognising the potential of social systems to create stress whilst also recognising that individuals have the capacity to change aspects of their lives (e.g. to quit smoking). Without the awareness of such an approach, primary care efforts at smoking cessation may only serve to increase current inequities in smoking prevalence rates.

**Keywords:** *stress, smoking, social disadvantage*

## Background

Within the Australian population, tobacco smoking lies second behind obesity, in the league table of leading causes of disease,<sup>1</sup> with a smoking prevalence rate of 19.4%.<sup>2</sup> In addition, Australia, like many other developed countries, has an inequity in smoking rates, whereby high socio-economic status (SES) groups have lower smoking rates than low-SES groups.<sup>3</sup> Whilst reasons for higher rates of smoking in low-SES groups have been researched for some time and are fairly well understood,<sup>4-7</sup> smoking has often been found to decline more in high-SES groups leading to a greater inequity in smoking rates.<sup>6-9</sup> In other words, we understand some of the reasons why people in low-SES groups smoke, but efforts at reducing this may not have been as effective as efforts with high-SES groups. Indeed, living in lower SES areas may not only lead to greater harm in relation to smoking, but may also be associated with higher smoking prevalence rates.<sup>10</sup> Investigators, in a study in Glasgow, report that a poorly resourced and stressful environment (which is often associated with a “disadvantaged” area), can combine to encourage tobacco use and discourage cessation.<sup>11</sup>

Over the past 20 years or so, Hilary Graham’s research on women’s smoking has highlighted the enduring nature of structural factors (e.g. poverty, patriarchy, disadvantage, etc) as reasons for taking up and continuing to smoke, even in the face of changing social attitudes to smoking.<sup>4 5 9</sup> This research positions smoking, not as a “lifestyle choice” (in the neo-liberal sense) but as a reaction to the social, economic and political conditions of life. In this way, social systems (such as the economic, political, legal and medical systems) create particular conditions in low-SES groups whereby smoking becomes an attractive option.

To compound the problem in low-SES areas, these social systems also lead to higher levels of disadvantage, stress and anxiety. For example, low-SES areas are often characterised by lower incomes, lower education, more dangerous working conditions, greater social isolation, and higher levels of violence and criminal activity,<sup>12-19</sup> which may all produce an environment

where stress becomes a greater barrier to smoking cessation.<sup>8</sup> There have been some studies that relate smoking behaviour and stress,<sup>8 20 21</sup> with one study investigating smoking cessation in low-SES women, finding that longitudinal smoking outcomes were negatively related to perceived levels of stress.<sup>21</sup> Therefore, higher levels of stress may, at least in part, explain the lower quit rate and higher prevalence of smoking in low-SES groups, and why the smoking prevalence rate may not be declining in such areas.<sup>8</sup>

Smoking cessation is important to primary care practitioners, such as general practitioners, in Australia because a great many of them are likely to discuss smoking with their clients.<sup>22</sup> However, few general practitioners are likely to discuss stress management successfully with their patients in low-SES areas where perceived stress presents as a significant barrier to smoking cessation.<sup>8</sup> Whilst the previous literature has begun to explore the inter-relationships between smoking and stress, there needs to be more evidence about the role of stress (in addition to other factors) in the success of smoking cessation efforts. Specifically, this paper aims to answer the research questions: is stress perceived by ex-smokers and smokers as a major barrier to quitting; and does stress act as a barrier to quitting in relation to other barriers in a disadvantaged area?

## **Methods**

### *Choice of research methods*

A qualitative methodological approach was used to gain an understanding of the participants' experiences and subjective meanings that might explain the process of decision making and behaviour in relation to smoking.<sup>23</sup> Focus groups were initially used as the qualitative method of choice because they generate data about a focused topic,<sup>24</sup> are well suited to providing information about public understandings,<sup>25</sup> and they allow interaction between participants which differentiates them from interviews.<sup>26</sup> It is the group dynamics inherent in the focus group process that allow participants to clarify and explore their views, while also allowing the

interviewer to dig deeper for meaning.<sup>27</sup> The focus group data were then utilised to inform the development of the second stage of data collection, which involved in-depth interviews,<sup>28</sup> with key issues emerging from the analyses being used to facilitate theory development.<sup>29</sup> Overall, two focus groups were conducted, followed by 11 interviews (the data for both sources of information were collected in 2007).

*Recruiting participants, and developing topic guides for focus groups and interview schedules*

All focus group and interview participants reside in the most disadvantaged Local Government Area (LGA) in metropolitan Adelaide [based on Census data (Census data from the Australian Bureau of Statistics (CABS) 2001; including Socio-Economic Indexes for Areas (SEIFA) 2001].

Both “current smoker” and “ex-smoker” focus group participants were randomly recruited from the selected LGA from information located within a large database (of participants from previous research projects) located in an Adelaide research company. The focus group of “current smokers” (N=10) included 4 female and 6 male adults. The focus group of “ex-smokers” (N=8) included 3 female and 5 male adults. “Current smoker” interviewees were recruited through strategically distributing posters in the respective LGA and snowball sampling. Both focus groups were video-taped.

Interviews included 11 “current smokers”; 4 male (26-55 year old) and 7 female (18-53 year old) participants. “Current smokers” who were interviewed had a median number of 3 quit attempts. A \$40.00 shopping voucher was offered to recompense all participants for their travel expenses and time.

All “current smokers” recruited had to have had consumed at least 100 tobacco products in their lifetime and at least one tobacco product in the last 2 weeks prior to participation in this study.

All “ex- smokers” recruited had to have had consumed at least 100 tobacco products in their

lifetime and not to have consumed a tobacco product in at least the last 2 weeks before participation. This 2 week period was chosen as an operational definition because relapse is far less likely after 2 weeks of abstinence.<sup>30</sup>

Focus group questions (used to establish a topic guide for discussion) were developed by the first author (GT) of this study, which were based on previous recent work by this investigator<sup>8</sup>, the literature, discussions with the co-author (PW), and the research questions. The focus group topic guide for discussion included: barriers to quitting with an emphasis on stress as a barrier, and reasons for quitting. In-depth interview questions for “current smokers” were informed by the data collected and analysed from the focus group sessions and the literature. Questions were based on the following topics: stress, and quit attempts.

Focus groups were audio and video-taped to provide an accurate transcription, which were completed by professional transcribers. The in-depth interviews were conducted via telephone, and digitally recorded. Transcriptions were completed by the same member of the research team who conducted the telephone interviews. Data validation was assured by the first author matching the transcriptions against a replay of the video-tape of the focus groups, and the audio-recordings for the interviews.

## **Results**

From the data, perceived stress as a barrier to cessation can be found as: a factor that encourages smoking at the contemplative stage of quitting (a stage of the Transtheoretical stages of change model<sup>31</sup>); an encumbrance during the act of quitting (the action stage of the model); and a cause of relapse (the lack of maintenance stage of the model).

It is also apparent from the data that stress maybe an ever-present aspect of life for those people living in low-SES areas, and in most cases stemming from the social environment surrounding

the individual. For the groups interviewed for this study, these stressful environments and events included: financial problems; child-rearing; family issues; employment disadvantage; increased morbidity and mortality in the local community, including family members, friends and acquaintances becoming sick and dying from smoking; and difficulties in the workplace.

There is an abundance of literature, some of which have been cited in the Background section, that establishes that people living in low-SES areas are likely to face such stressors more often (that is lower SES is associated with higher prevalence of stress), and to a greater extent due to the disadvantages associated with their lower socio-economic status. One of the purposes of this study is to establish whether such stressors act as barriers to quitting smoking.

## **Barriers to quitting**

### *Socioeconomic stressors*

Within both the interview and focus group data, socioeconomic stressors presented quite often as significant barriers to quitting smoking. On the topic of financial stressors several respondents commented that nicotine replacement therapies were “too expensive” to maintain, which consequently lead to a relapse. A number of interviewees raised the issue of being stressed by financial issues and the cost of cigarettes themselves acting as a contributor to such money problems: “*Everyday stuff causes stress, money*”. As all participants in the study were from low socioeconomic status (low-SES) areas, it stands to reason that people in these areas have more money problems. The important point for this study is that interviewees clearly stated that they were stressed as a result of these factors, and either resort or resorted in the past to smoking as a way to cope with these stressors.

### *Family issues as stressors*

Child rearing presented as a significant barrier to smoking cessation for quite a few participants. Comments such as “kids misbehaving”, and “having a sick child”, leading to stress, are

indicative of child-rearing as being a stressful experience in and of itself. Quite a few women spoke of “bringing up the kids” and using smoking to alleviate the stress through smoking representing “having a break” or “having time-out” from the kids. In such a stressful situation, it seems that many turn to smoking as a coping mechanism. The data also indicates that many people find it difficult to quit because their partner continues to smoke.

#### *Increased morbidity and mortality levels in the local community*

Higher morbidity levels are prevalent in low-SES areas.<sup>32</sup> This was identified in the data as a significant stressor and in fact, was identified as a major barrier to smoking cessation:

*[M8] I think the biggest barrier was what this lady (F10) was saying – stress. I had a couple of bad accidents, lost my son, lost my father and trying to do that (reference to quitting) and look after them at the same time was just as you said (reference to F10 about wanting to light up a cigarette).*

A significant number of interviewees had lost a close relative or friend through lung cancer or some other smoking-related death. Eleven of the participants who were interviewed or who participated in a focus group had experienced a significant family member either dying or getting extremely sick from a smoking-related illness. A typical reaction to these kinds of stressors included increased levels of smoking. For example, one interviewee stated that their father had died from a smoking-related illness, their ex-husband got sick from smoking and their mother had to have a heart bypass operation. As a result, he started smoking again.

#### *Habit, Lack of control, Cravings, and Boredom as barriers*

With regards to barriers to quitting, another factor common to both “current smokers” and “ex-smokers” depicted in Table 1, is the “habit” of smoking. The following quote from the “current smokers” focus group highlights both the importance of how smoking can become a ritualised

behaviour and that addressing only one aspect of this problem, such as nicotine addiction, will often fail:<sup>33</sup> *I hadn't fully got rid of the habit of lighting up before I got off the patches.*

Barriers to quitting depicted in Table 1 that are commonly reported only from current smokers include: lack of control, addiction/cravings, and boredom (smoking when bored). These barriers may also be vital in discerning between why some individuals are able to successfully quit, while others are unable. Feeling bored as a facilitator of smoking behaviour has been reported in a few previous studies,<sup>34 35</sup> and addiction and cravings have been well established in the literature as barriers to cessation.<sup>36 37</sup> Boredom was indeed a factor in a number of responses in this study and a typical comment was: *[F3] . . . I think habits are the worst thing and boredom. I think boredom is a big thing. When you are bored, you light a cigarette up.*

Lack of self-control is listed as another barrier to quitting for current smokers (see Table 1).

Smoking may be seen as a mediating mechanism to counter perceived levels of stress and is also associated with a lack of self-control/"will power" when attempting to quit. There is considerable literature on self-control/self-efficacy in relation to smoking, smoking cessation, and stress.<sup>38 39</sup> One study suggests that significant increases in perceived stress can lead to decreases in levels of self-control, as well as an increase in smoking.<sup>38</sup> In support of the theory that stress reduces levels of self-control, one of the current smoker interviewees in our study stated the following when asked why she tries to reduce stress: *[F3] Because it feels absolutely horrible if you're not in control. It makes you feel weak. I hate being stressed.* The same interviewee also reported that smoking is: *"like food, it's something my body needs to function. Without it I would fall apart and crumble".*

One of the reasons why this participant smokes is that smoking alleviates stress. Therefore, smoking may be required at times of high perceived stress levels, which are more often

associated with lower socioeconomic areas, partly because smoking acts as a mechanism to regain a sense of self-control by ameliorating the level of perceived stress.

*Stress in general and in relation to socialising as a barrier*

For current smokers, perceived levels of stress appear to be a major barrier to smoking cessation (see Table 1). Almost all of the smokers from the focus group sessions reported that smoking acts as a mediating mechanism to cope with their perceived stress. Several participants in this focus group placed a significant emphasis on this theme. The following quote is directly linked to stress presenting as a barrier to quitting: *[F10] When I didn't conceive the stress factor just got to me and that was it, straight back into it. I think it is a big factor of wanting to light up a cigarette, it just calms you down or something*

One person from the “current smoker” focus group stated that it is a belief among smokers that the act of smoking ameliorates stress: *[[F7] ...But I think it is more in your mind. I don't think the cigarettes are calming us down but I think it is just what we want to believe.]*. However, another “current smoker” focus group member disagreed that smoking does not decrease levels of stress, to which there was a general consensus among participants. He did not argue the case that it is the physiological effects<sup>40</sup> of smoking that alleviates levels of stress. Much of the data points to smoking being used to go “off somewhere else”: *[M1] Normally you have a cigarette and you start thinking about something else and you leave it all behind for five minutes ... [M5] Getting away from them (work colleagues), it's more the time, it's not the smoking that relieves stress.]*. Four males and one female member from the “smokers” focus group also reported specifically on how they use their smoking behaviour to temporarily avoid or distract from a stressful situation. Other studies have discussed how avoidant coping strategies are used to manage occupational stress.<sup>41</sup> However, this is a particular example of how smoking can be used as part of a mediating mechanism to manage stressful life events.

The smoking interview data that described the participants' understanding of *stress* included the following properties: *negative feelings* (anger, despair, etc); *negative physical symptoms* (tense neck, etc); *not coping*; *strategies to reduce stress*, for example, use of a support circle and positive thinking (planned adaptive coping response); smoking and talking as a *reaction to a stressful event* (smoking is a maladaptive coping response); and *reasons for reducing stress* (because it is bad for you, to feel better, need to consider others, and “need to be in control”).

In contrast to the current smokers, only 3 of the “ex-smoker” focus group members clearly stated how stress had been a barrier to quitting. The following was reported by one of the ex-smokers:

*[F4] I found that every time that I did give up smoking, that I smoked twice as much as I did before I stopped smoking. [F2] Was it because of something that happened. [F4] Yes,*

*something happened. [M2] Stress or dramas in your family? [ F4] Yep. But I always smoked twice as much as I did before I stopped.* However, the majority of ex-smokers did report

socialising (social/drinking/buzz) as a major barrier to cessation *[M5] it gives you something to join in with crowd too, feel smoke is social.* Table 1 highlights that while socialising seems to be

a greater barrier for ex-smokers current smokers find both stress and socialising a major barrier to smoking cessation. This highlights the importance of perceived stress as a distinguishing

feature regarding smoking cessation, between individuals who can successfully quit and those who can not.

**INSERT TABLE 1 HERE**

## **Discussion**

This study has highlighted the particular value in exploring the “lay epidemiology”<sup>42</sup> of smoking and stress, whereby current and ex-smokers recounted their lived experiences of stress as a barrier to smoking cessation. Public health, including primary care, efforts at reducing the

smoking rate has not been as successful in low-SES groups, and this study provides some of the reasons for this, from the perspectives of smokers and ex-smokers themselves. The value of listening to (and responding to) lay voices in public health has been noted elsewhere.<sup>43 44</sup>

Participants discussed the various ways in which stress and stressful life events meant that smoking became an “attractive option”, thereby lessening the possibility of quitting smoking. Williams<sup>45</sup> talks about the notion of “normal crises”, which refer to particular situations in low-SES groups whereby individuals normalise stressful events which in a different social or cultural context may be seen as anything but normal. In this context, higher SES groups may indulge in the strategic mobilisation of resources,<sup>46</sup> although lower SES groups may accept their “fate” and “get on with life”, albeit while being limited by “normal crises”. The response to the “normal crises” within this study was for participants to continue to smoke, which in this context, may seem like an entirely rational action. Obviously, this is an epistemological issue: in a biomedical frame, smoking cannot be seen as rational (although maybe understandable), however from the perspective of respondents (that is, privileging lay knowledge), smoking can be seen as rational response to the cumulative effects of life stresses.

In terms of a public health and primary care response to these findings, the initial reaction would be to focus on reducing stress in low-SES groups, thereby reducing the perceived need to smoke, and potentially increasing smoking cessation rates. A purely structuralist response to understanding and thereby resolving this “problem”, would be to locate the “problem” within the variety of social systems causing the increased stress for our participants (and other people within low-SES groups). This is akin to the “upstream” thinking in public health, and would require wholesale political, cultural and economic changes. Whilst this would, and should, be the ultimate aim of political and social movements, it is a longer term strategy and we require some additional shorter and medium terms strategies.

A purely individualistic or agentic approach would locate the problem within the individuals themselves, citing concepts such as “the importance of the market”, “free will”, “rational actors”, and “individual choice”. This would fit with the post-modern shift towards the “individualisation of society”.<sup>47</sup> The extension of this approach would be that people in low-SES groups are making choices to smoke (and to not quit) and that we should try to help them by promoting quit smoking services. However, this merely serves to move the “problem”, which then shifts out of the domain of neo-liberal politics – the cause and the solution are at the level of the individual, rather than social systems.

The middle-ground (or Third Way) between these seemingly polar opposites, would include an approach which recognises both the potential of social systems to create stress and stressful life events (the structuralist approach) whilst also recognising that individuals have the capacity to act as social agents and change aspects of their lives (e.g. to quit smoking or to develop strategies to “cope” with stress). Whilst there are a number of theorists based in this “structure-agency” debate, the most useful for the purposes of this paper are Habermas<sup>48</sup> and Luhmann<sup>49</sup>, since they are primarily interested in the communication and communicative action between systems and agents. This is where the analogy of the double-edged sword becomes pertinent – people in low-SES groups are living in environments with increased levels of stress (as a result of social systems), and this increased level of stress makes them more likely to start smoking and less likely to quit smoking. Therefore, using the structure-agency approach, the issue for primary care and health promotion is located at the link between the system and the agent – there is a communicative role within both systems and agents, both to reduce the social determinants of stress (within the systems) and to empower and facilitate reflexive action to stop smoking. Without such a dualistic approach, public health and primary care efforts at smoking cessation may only serve to increase the current inequity in smoking prevalence rates and the related forms of morbidity and mortality.

## **Conclusion**

Previous studies have suggested that smoking cessation interventions based on primary care and public health principles have been less effective at the lower ends of the socioeconomic scale. This may be due to particular conditions in low-SES groups whereby smoking becomes an attractive option, due to higher levels of disadvantage, stress and anxiety. The double-edged sword refers to people in low-SES groups who maybe living in environments with increased levels of stress, and as a result maybe more likely to start, and less likely to quit, smoking. The response to the “normal crises”, or stressors, investigated in this study was for participants to continue to smoke, which in this context, may seem like an entirely rational action.

In terms of possible policy interventions, this paper has outlined the middle-ground approach, recognising both the potential of social systems to create stress whilst also recognising that individuals have the capacity to act as social agents and change aspects of their lives. Policy decisions could be aimed at reducing the social determinants of stress (within the social systems) and to empower the individual and facilitate reflexive action to stop smoking.

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**Table 1: Barriers to quitting, reasons for relapse, or factors that encourage smoking,**

Open code name	Source		Interviews
	Focus Group		
	Smokers	Ex-Smokers	
Stress	M1, F10, M8, F6, M5, M4, F7 General consensus	M6, F4, F8	M1, M2, M3, M4, F1, F2, F3, F4, F5, F6, F8
Lack self-“control”/ lack “will power”/lack self-determination	M1, M8		M4, F3
Socialising/Drinking/“Buzz”/ presence of other smokers	M2, M4, F6, M5, M9, F7, F6, F3, M1, F9, General consensus	F3, F4, F8, M2, M5, M6, M7	F1, F2, M2, M3, F5, F6, F8
*Habit /hand to mouth	M5, F6, F3, General consensus	M6, M5	M3, F3, M2, F8
Addiction/“Cravings”/ Withdrawal	M1		M3, F8, F4
Boredom (smoke when bored)	F3, M2		M3, F8, F5

\* F3: had to hold cigarette