NOVA
University of Newcastle Research Online

nova.newcastle.edu.au

Guillaumier, Ashleigh; Bonevski, Billie; Paul, Chris, "Tobacco health warning messages on plain cigarette packs and in television campaigns: a qualitative study with Australian socioeconomically disadvantaged smokers". Published in *Health Education Research*, Vol. 30, Issue 1, p. 57-66 (2015)

Available from: https://doi.org/10.1093/her/cyu037

This is a pre-copyedited, author-produced version of an article accepted for publication in Health Education Research following peer review. The version of record Ashleigh Guillaumier, Billie Bonevski, Christine Paul; Tobacco health warning messages on plain cigarette packs and in television campaigns: a qualitative study with Australian socioeconomically disadvantaged smokers. *Health Educ Res* 2015; 30 (1): 57-66 is available online at: https://doi.org/10.1093/her/cyu037

Accessed from: http://hdl.handle.net/1959.13/1327652

Tobacco health warning messages on plain cigarette packs and in television campaigns: A qualitative study with Australian socioeconomically disadvantaged smokers

Ashleigh Guillaumier[1], Billie Bonevski[1], Christine Paul[2]

[1]School of Medicine & Public Health, University of Newcastle, Newcastle 2308, Australia

[2]School of Medicine & Public Health, University of Newcastle & Hunter Medical Research Institute, Newcastle 2308, Australia

Corresponding author: Ashleigh Guillaumier, Phone: (02) 4033 5718, Fax: (02) 40335692 Postal address: CTNMH, Level 5, McAuley Centre, Calvary-Mater Hospital, University of Newcastle, corners of Edith Street & Platt Street, Waratah NSW 2298 Australia.

Running head: Health warning messages and disadvantaged smokers

Key words: smoking; health warning messages; social disadvantage; tobacco packaging; mass media campaigns

Word count: 4595

ABSTRACT

Television advertisements, packaging regulations and health warning labels are designed to communicate anti-smoking messages to large numbers of smokers. However, little research has examined how high smoking prevalence groups respond to these warnings. This study explored how socioeconomically disadvantaged smokers engage with health risk and cessation benefit messages. Six focus groups were conducted over September 2012–April 2013 with adult clients of welfare organisations in regional NSW, Australia who were current smokers (*N*=51). Participants discussed health warning labels, plain packaging, and anti-smoking television advertisements. Discussions were audio-taped, transcribed verbatim and analysed using thematic analysis. Highly emotive warnings delivering messages of negative health effects were most likely to capture the attention of the study participants, however these warning messages did not prompt quit attempts and participants were sceptical about the effectiveness of cessation programs such as telephone quitlines. Active avoidance of health warning messages was common, and many expressed false and self-exempting beliefs towards the harms of tobacco. Careful consideration of message content and medium is required to communicate the anti-smoking message to disadvantaged smokers who consider themselves desensitised to warnings. Health communication strategies should continue to address false beliefs about smoking and educate on cessation services that are currently underutilised.

INTRODUCTION

One aim of the World Health Organisation's Framework Convention on Tobacco Control (FCTC) is to educate the public about the risks of tobacco smoking.[1] Article 11 of the FCTC recommends removal of misleading information from tobacco packaging, as well as the inclusion of text and pictorial health warning labels (HWLs) to communicate the harmful risks of tobacco use. FCTC Article 12 recommends widespread public awareness and education programmes about the health risks of tobacco use and exposure to tobacco smoke, as well as promotion of cessation and the benefits of quitting.

The health risks of smoking and benefits of cessation can be communicated to large numbers of smokers through anti-smoking mass media campaigns (MMCs) and cigarette pack regulations. Used together, MMCs designed to support the introduction of new HWLs can enhance awareness of smoking health effects promoted on the HWLs printed on cigarette packs.[2] MMCs, particularly those involving paid television advertisements, have the capacity to reach millions of smokers at relatively low cost per head[3] and are one of the most widely used tobacco control measures in Australia shown to reduce population smoking rates.[4, 5] Campaigns delivering negative health effects messages appear to be more effective than other message types for increasing smoking-related knowledge and beliefs.[6]

Similarly, regulations on what can be included on cigarette packaging have potential for wide influences as cigarette packs are viewed repeatedly and remain with the consumer until the pack is finished.[7] The introduction of large pictorial graphic HWLs on Australian cigarette packs in 2006 was met with an increase in awareness of the health risks of tobacco use.[8] Larger, graphic and more comprehensive HWLs are more effective in communicating smoking health risks and increasing health knowledge.[7, 9] Plain or standardised packaging

aims to reduce misperceptions of harms and enhance the impact of health warning messages on tobacco products by removing branded packaging-related responses.[10] Early findings from the implementation phase of plain packaging in Australia suggest the new packaging reduces product appeal and is associated with more urgency to quit among adult smokers.[11] However this study had a low number of low socioeconomic status (SES) smokers and did not consider effects by level of advantage.

Despite the advances that have been made, high smoking rates persist in highly disadvantaged groups.[12] Low SES smokers have lower health literacy levels,[13] poorer knowledge of the health effects of smoking,[14] and hold self-exempting beliefs toward the harms of tobacco use[15] compared to their more advantaged counterparts. As a result they may have different information and communication needs than the general population. Communicating the risks of smoking and benefits of quitting to socially disadvantaged groups may require specialised techniques, language and communication channels. Highly emotive messaging strategies communicating the negative health effects of smoking appear to be more effective than less emotive approaches among low SES smokers.[6] Understanding how disadvantaged smokers perceive and engage with health warning messages and use them in aiding cessation attempts will be important to improve strategies to reduce smoking rates and smoking-related inequalities, however available research is limited.

In consideration of the research needs for FCTC Articles 11 and 12, Hammond et al.[16] identified consumer information needs and gaps, message content, and message processing, particularly among high smoking subgroups, as research priorities. The aim of this study was to explore how socioeconomically disadvantaged smokers conceptualise and respond to the communication of smoking health risk and cessation benefit messages via cigarette packaging

(plain packaging and HWLs) and mass media TV advertisements. Of particular interest were smokers' self-perceived responses to the information and whether they use it for cessation purposes.

METHODS

Design

Qualitative focus groups were conducted with adult clients attending four social and community service organisations (SCSOs) who were current smokers. Data was collected between September 2012 and April 2013. Three focus groups were conducted prior to, and three groups following, the mandatory full implementation of Australian plain packaging policy (December 2012). University of Newcastle Human Research Ethics Committee approved this study. This study was conducted with reference to the consolidated criteria for reporting qualitative research.[17]

Sample

Purposive sampling techniques were used. The participant target for the study was smokers from hard-to-reach groups including people who were homeless, with addiction or mental illness, unemployed or on a low income. In order to do this efficiently, Social and Community Service Organisations (SCSO's) that provide financial aid to people in need were approached. Seven managers from five SCSO's in the Newcastle region of NSW Australia were approached for consent for clients attending their organisation to be invited to participate in a study investigating disadvantaged smokers' opinions of tobacco control advertising and changes to cigarette packaging. Five managers consented and were provided with participant information sheets for their staff to distribute to eligible clients. Eligible clients were those

aged over 18 years, able to speak and comprehend English and who identified themselves as current smokers. Sampling continued until saturation of themes was reached.

Procedure

Focus groups were facilitated by author AG with a second facilitator (BB, CP or a research assistant) in a private room at each of the participating SCSO's. Participants were provided with information sheets and the research was verbally explained at the start of each group. Written informed consent was obtained prior to the commencement of research, and participants completed a brief pen-and-paper survey assessing: smoking characteristics, quit intentions, gender, age, indigenous status, income, income source, marital status, education and housing. Participants were informed that discussions would be audio-taped and de-identified quotes would be used in reports of the research. All participants were offered the opportunity to review or remove comments from the audiotape. Participants received a AUD$50 grocery voucher (which excluded purchase of tobacco) as reimbursement of their time and travel costs.

A discussion guide was followed. The questions were developed to address the research aims and with consideration of available literature. Group discussions began by exploring participants' perceptions of tobacco packaging and brand preferences. In groups conducted prior to the introduction of plain packaging (Groups 1 – 3), awareness and expectations of plain packaging was discussed before participants were shown models of plain packs (see pack descriptions below). Groups conducted after the full implementation of plain packaging (Groups 4 – 6) discussed their reactions to and the impacts of plain packaging and new health warning labels. All groups then discussed health warning labels that appear on tobacco packaging. Group discussions also covered participants' perceptions of anti-smoking

television advertising campaigns. Participants were then shown three examples of anti-smoking television advertisements that had previously aired in NSW, but were not in current use (see advertisement descriptions below) and asked to discuss their thoughts about the ads and typical reactions. Groups closed with discussions covering utilisation of health warning information and any attempts to contact the telephone cessation support service - Quitline.

Plain Pack Models

Models of plain packs were supplied by the NSW Department of Health. Three life-size packs were used to demonstrate the appearance of cigarette packaging under plain packaging legislation. Pack models were constructed as exact replicas of 25-cigarette plain packs, but did not carry any brand-specific information. The words 'Brand' and 'Variant' appeared in policy specified font and size as place-markers for branding information. The packs featured new health warning labels that accompanied the introduction of plain packs [18]. The three HWLs were: 1) Smoking causes emphysema – displays a picture of a cross-section of a lung with emphysema; 2) Smoking damages your gums and teeth – displays a picture of decaying gums and teeth of a male smoker aged 50, and; 3) Smoking harms unborn babies – features a picture of an underweight baby in critical care in hospital.

Anti-smoking television advertisements

Three television advertisements from the NSW based campaigns (available online: http://www.cancerinstitute.org.au/prevention-and-early-detection/public-education-campaigns/tobacco-control) were used in the focus groups. The three 30-second advertisements used were: 1) why message - graphic imagery of serious health effects: The 'Bronchoscopy' Campaign displays the primary health consequence of smoking – lung cancer. It shows the operation of a smoker with a lung tumour almost completely blocking an

airway. 2) why message - personal emotional testimonial: The 'Anthony' Campaign is based on the personal testimonial of Anthony Hicks who was diagnosed with throat and lung cancer caused by smoking. 3) how to quit message: The 'Get Off Cigarettes' Campaign reminds smokers that a range of professional help is available by talking to their general practitioner (GP), pharmacist or Quitline. These three types of messages were selected since they represent the more common type of campaigns used in the NSW and national tobacco control strategies [19-21].

Analysis

Focus groups were recorded, then transcribed verbatim by an independent transcribing service. All transcripts were checked for correctness by one author (AG). Data were analysed using thematic analysis by one author (AG) using NVivo version 10. One co-author (CP) separately coded two (33%) transcripts, and identified themes were compared and reconciled where necessary. Braun and Clarke's approach to thematic analysis was used.[22] The thematic analysis approach considered meanings across the entire data set, semantic themes, and followed a realist paradigm. Quotes are presented to illustrate key findings, identified by focus group number.

RESULTS

Sample

A total of 51 clients participated in one of six groups with group size varying from five participants to 13 participants. Focus groups lasted an average of 43 minutes (range: 30.11 – 52.13 minutes). Participating services included one drug and alcohol rehabilitation centre, one community-based group for people leaving prison/drug and alcohol rehabilitation centres, and two emergency relief (crisis welfare aid) services. Table 1 presents the demographic details

and Table 2 the smoking characteristics of the 51 current daily or occasional smokers who participated.

Message Preferences

Participants indicated the ads they considered to be most effective were tobacco control health warning messages that were highly emotive delivered either via graphic imagery or in a form of personal testimonial. Feelings of guilt and fear were repeatedly mentioned. When participants were initially asked about anti-smoking television advertising, the most frequently recalled ads were highly emotive examples involving children *"you see the kids suffering it makes you think about it because you've got kids, but that's the only ads that I'll actually take into consideration and felt for"* (Group 3). This was also true for pack HWLs using children, in particular mothers were more likely to *"hate the baby one…that one disturbs me, but I don't care about the rest of them"* (Group 1). Following presentation of the three 30-second anti-smoking ad clips, there was a general agreement that the personal testimonial 'Anthony' and graphic imagery 'Bronchoscopy' ads were more effective than the 'Get Off Cigarettes' how-to-quit ad.

Ads that provided role modelling of cessation behaviour were also recalled and discussed. Some smokers expressed a preference for positive messages such as descriptions of the health benefits of quitting or ads describing the way in which willpower can grow. Ads which provided a *'real'* illustration of the experience of quitting smoking were also commended for presenting scenarios that smokers could relate to.

Personal stories

The reasons cited for the effectiveness of the 'Anthony' personal testimonial ad were *"knowing the guy died"* (Group 5), the ad being *"heart-wrenching"* (Group 3) and *"because he wanted to stay alive to see his daughter and he died before"* (Group 4). Many participants reported that television ads featuring the personal testimonial of smokers grabbed their attention *"They don't have to put the gruesome **** on there…as soon as they have someone telling what they're going through…because of smoking, that sends the message home"* (Group 4). Similarly, the most frequently cited new cigarette pack HWL was 'Brian', an image displaying the rapid deterioration of a 34-year-old male dying from lung cancer *"I mean it does affect me, like seeing Brian, yes, is really sad"* (Group 5). Similarity of the participant's circumstances to that of the character in the ad (age, gender, being a parent) was perceived to increase the impact of the ad for the smoker. Similarly, participants who did not identify with the character in the ad stated the ad did not evoke a response.

Graphic imagery and health concerns

Aspects of the graphic health warning 'Bronchoscopy' ad which were considered effective according to participants were *"the sound of that breathing"* (Group 1) and *"the lung one, that's sickening looking, seeing the insides of a smoker"* (Group 2). Many discussed ads referencing a smokers breathing as being easy to relate to *"she's got the oxygen mask on and she's got emphysema, and they can hardly walk ten feet without getting short of breath, and that's frightening for someone whose been smoking for years"* (Group 1), and *"It actually makes me think about my husband and the way he breathes. Makes me panic. Do I need to go get him to a doctor"* (Group 5). Graphic warnings that communicated messages concerning the health effects of tobacco use prompted personally relevant health concerns in some participants.

There was a lot of discussion around the new health warning labels, which increased in size and contained new graphic and supportive text warning messages. Novel HWLs appearing on new plain packs sparked interest *"if it's a good interesting picture, like the…tongue cancer…I'd never seen that one…I sat down and while I was smoking I was actually reading it and…thinking wow, that'd be painful having tongue cancer"* (Group 5). Although graphic warning labels featured on cigarette packs were perceived as *"disgusting"* (Group 1), most participants said they generally *"do not even look at the warning"* (Group 2), others indicated *"they don't affect me at all. I get desensitised really quickly"* (Group 5). While most participants admitted they noticed the new HWLs that accompanied plain packaging at first, the idea of being desensitised to the graphic images in HWLs was repeatedly mentioned.

Cessation information

The 'Get Off Cigarettes' how-to-quit ad viewed during the focus group was praised for delivering a positive message, but was not considered as hard-hitting as the other ads, and probably *"more effective to those who are maybe ready to quit"* (Group 5). All participants agreed that the information provided on the pack HWLs is insufficient to support someone wanting to make a quit attempt. Not all participants reported reading the health warning information on the back of the pack, with some suggesting that it is *"too little, I can't see it"* and that *"people don't take notice of it anyway"* (Group 3). There appeared to be little uptake of message or use of how-to-quit information communicated to smokers via the pack or television ads.

Prompt to action

There was a general agreement among participants that HWLs did increase their thoughts about quitting. However, some participants felt it was too late for the impact of HWLs to help

them with quitting *"you just move on from the pictures and think oh ****, it's too late now anyway"* (Group 5). A number of participants mentioned that they *"probably learn more from the ads you see on TV"* (Group 5). For many, seeing an anti-smoking ad triggered cigarette cravings *"It reminds me to have a smoke"* (Group 2), with both the imagery of smoking and the words 'cigarette' and 'smoke' cited as prompts for this craving. A few participants admitted that seeing an ad might delay their plans to have a cigarette, or result in them engaging in substitution behaviours such as eating a mint. Although some participants expressed an interest in quitting *"I wish I could let those ads scare me…scare myself into quitting"* (Group 5), most reported that seeing anti-smoking TV ads did not make them think about quitting.

Telephone Quitline

Calling the Quitline that is advertised on all cigarette packs in Australia and in each anti-smoking ad was not a popular option for seeking help as people *"just never thought of it"* (Group 2), *"assumed it wouldn't do anything"* (Group 1), or thought *"it just would be like speaking to a telemarketer"* (Group 1). Participants were also sceptical about the person they would talk to *"it just seems like calling this weird robot person"* (Group 3). Barriers to Quitline use such as expectations of *"it's going to cost you"* or being put *"on hold"* (Group 2) were also mentioned. Accessing professional medical help was seen as a more appropriate option *"I think you've got to go to the doctors"* (Group 4), however there was still a persistent belief among many that quitting came down to willpower alone.

Warning messages more appropriate for youth

Generally, participants seemed to think that plain packaging and pack HWLs were *"aimed at young people"* (Group 4) and *"probably better for the new generation"* (Group 2) in terms of

encouraging cessation. Similarly, while many participants felt that anti-smoking television ads were wasted on them, *"I think it'll probably have more effect on them [younger ones] than us"* (Group 6), agreeing that they were good for educating children and were most likely to impact on the younger generation.

Avoidance of health warning and quit messages

While the impact of health warning information was perceived to be transitory or short-lived, a consistent theme throughout group discussions was an avoidance of health warning information. Most participants reported they did not read the HWL information set out on cigarette packs, and simply avoided looking at the graphic images. Others went further and reported that they purchased *"stickers to actually cover up the words"* (Group 3), bought *"hard cases…so you don't have to look at any of the pictures"* (Group 3), or *"just pull all the cigarettes out, put them in a bum bag so you don't have to look at the bloody package"* (Group 4). For some these behaviours were regular *"Just like every time you get a pack…take tobacco straight out of the pack, put them into me two tins and chuck the packet away"* (Group 5), while temporary for others *"only lasted a couple of weeks maybe, tops and then we just went back to smoking as we usually do"* (Group 6). It appeared for smokers who had taken to these avoidance behaviours after the implementation of plain packaging, changes were reactionary and not permanent.

The most common way to avoid the health warning and quit messages communicated via TV ads was to *"change the channel"* (Group 3) as *"you surf past it on the remote"* (Group 2). Some smokers simply said *"I don't watch them"* (Group 4), others specified *"I just put my head down"* (Group 4) or *"I have just walked away before"* (Group 1), and many reported here to *"turn the volume down"* (Group 6). A number of participants said they used the time

to go and have a cigarette *"I usually have a cigarette in the ad"* (Group 5). Participants reported actively avoided engaging with television health warning messages.

Self-exempting beliefs

Participants suggested that the health effects messages were exaggerated and were not part of the lived experience of smokers: *"The majority of people that smoke all their life don't end up with like their foot rotting off or no teeth in their head…It's sort of like an amplified message basically, it's not realistic"* (Group 2). Many were under the impression that the graphic images that accompanied HWLs on cigarette packs were not direct results of smoking *"There's a picture on one of them…the foot. And its gangrene, it's not because of smoking. It's just gangrene"* (Group 5). Most discussed a new Australian HWL that displayed before-and-after pictures of a 34-year-old male dying from lung cancer *"there's a packet with a man on it, like he's dying and…he wasn't even dying from smoking. No, he died of AIDS"* (Group 4). Others were sceptical about the imagery depicted in some TV ads, in particular the famous Australian 'Sponge' ad *"I'm thinking if that much **** comes out of your lungs with smoking in 12 months, I should be dead…And it is actually real tar that he's actually squeezing out?"* (Group 4). One participant said that they *"just sort of like ignore it a bit and think oh no, that doesn't happen"* (Group 5), while another said *"It isn't worth watching it because you're in denial about it anyway"* (Group 2). Some participants had a lack of knowledge of the range of negative health effects associated with smoking *"The only way you get cancer from smoking is either lung cancer or bowel cancer or something like that"* (Group 5). Participants expressed numerous beliefs that distanced them from the health warning message.

Misperceptions: plain packaging

Prior to the implementation of plain packaging, there was limited knowledge about what packs would look like *"When they said plain I just thought plain colour like they're all going to be black, or all white"* (Group 3). Participants suggested that *"for people starting something up it would definitely have an impact"* (Group 1), however *"what's on the pack is not going to fix an addiction"* (Group 2) and therefore it was unlikely to impact their own established smoking behaviour.

In groups conducted after the implementation of plain packaging, participants judged that the change had little impact on their smoking behaviour, other than at time of purchase having to *"double check whether they're giving you the right cigarettes"* (Group 4). However, as discussions progressed, some discussed reductions in product quality *"I've noticed the difference in the grading of the tobacco"* (Group 4); while others thought *"they're all the same now, smokes. Everyone's all the same"* (Group 5). Following the implementation of plain packaging, perceptions of the quality and taste of cigarettes had changed.

DISCUSSION

The findings of this research suggest that tobacco control messages communicating the risks of tobacco use and benefits of cessation may not be resonating with socioeconomically disadvantaged smokers. The results suggest that this may be due to these smokers not identifying with characters depicted in ads, perceiving themselves as being desensitised to warnings, and misperceptions and a lack of knowledge about the harms of tobacco use. Messages that are most likely to affect socially disadvantaged smokers are those that use highly emotive content, messages around children and family, more immediately relatable health concerns and characters that the smokers can identify with. It is likely that further research is needed to determine the best ways of engaging with vulnerable smokers, who

reported employing numerous warning message avoidance behaviours and holding self-exempting beliefs towards the harms of tobacco use.

The findings of the current research support the use of highly emotive messaging techniques to communicate the anti-smoking message to socially disadvantaged smokers. This is consistent with previous research suggesting highly emotive MMCs delivering negative health effects message content via graphic imagery or use of personal stories are the most effective, particularly among low SES groups.[6] This messaging strategy is the most likely to motivate smokers toward quit behaviour and cognitions.[6, 23, 24] Similarly, large pictorial HWLs, designed to evoke highly emotive and visceral responses, are most likely to be noticed and recalled by smokers,[8] and are more effective in increasing knowledge and promoting cessation.[7, 9] Although participants reported high levels of desensitisation to health warning messages, it is possible that disadvantaged smokers are more affected than they have self-reporting here. Maximising HWL cut-through is important given the high participation in warning avoidance behaviours among this group. Future research should focus on determining the most effective message content.

Improvement in how-to-quit message warning content is also needed, as smokers suggested there was insufficient information available in warning messages to help them progress towards quitting. Early research on a new approach to the how-to-quit message using a television campaign guiding smokers through the steps to becoming an ex-smoker has shown positive results.[25, 26] Further education campaigns about what services and support the Quitline can offer smokers may be required, given low levels of reported use and interest in the service among this group. The call to investigate the best ways to encourage disadvantaged smokers to contact Quitline has been expressed previously, in light of the

overall low engagement of these groups with the service.[27] Further promotion and education on existing cessation services may be needed as they appear to be underutilised by this group of smokers.

Socioeconomically disadvantaged smokers in this sample expressed false beliefs and suspicions that the harms of tobacco use claimed by health warning messages are overstated. Less well-educated smokers are more likely to hold self-exempting beliefs[15] and low SES smokers are known to have poorer awareness of the risks of smoking.[14] Previous research has demonstrated the value of using television campaigns to support HWLs.[2, 28] It was clear among this sample that new HWLs introduced on plain packs were met with false beliefs about the origin of the health effects depicted in the warnings. A complementary packaging and television advertisement campaign strategy could positively influence risk awareness and reduce false beliefs. Given that low SES smokers are more present-oriented,[29] future development of tobacco control messaging could explore the impact of more short-term and immediately relevant health concerns of socially disadvantaged smokers.

Reactions to new Australian pack regulations support plain packaging policy and are consistent with telephone survey research conducted during the policy roll-out phase, in which smokers smoking from plain packs perceived their cigarettes to be lower in quality and less satisfying than those smoking from branded packs.[11] Over a short time period the removal of brand imagery and enlargement of HWLs led smokers in this sample to question product content, quality and brand differentiation. Tobacco-industry research demonstrates that smoker’s taste ratings of the same cigarettes differ according to the packaging colour.[30] This is known as the concept of ‘sensation transfer’, where the design of the pack influences the consumer’s experience of the product. Tobacco companies use this concept to maximise

the role of packaging in tobacco marketing.[30] Information contained in tobacco-industry documents demonstrates pack elements such as colour, imagery, descriptor terms and structure are used to differentiate or reposition brands as luxury or economy, target groups of smokers such as young adults or women, and to impact on the perceptions of product taste.[30] These findings demonstrate the importance of branding in the tobacco market, as well as for the smoking experience and suggest the initial success of plain packaging policy in breaking down some of these well-established brand associations. Additionally, it is likely that plain packaging policy has increased the opportunity for engagement with HWLs as participants reported they now needed to read the pack to ensure they had purchased the correct brand.

The primary strength of this study is the sample of highly disadvantaged smokers with low levels of education, unemployed with very low income and in receipt of crisis welfare aid. Disadvantaged groups are often hard-to-reach populations for research, and subsequently little literature exists regarding their responses to a number of tobacco control strategies. While the results suggest limited effects of health warnings among this group who perceive themselves as desensitised to warnings, it may be the case highly disadvantaged smokers are more affected by warnings than we have captured here. We note that participants in groups conducted prior to the full implementation of plain packaging policy may have already seen or purchased packs, however this did not arise in group discussions. We also note that while the television advertisements shown to participants during group discussions were not new campaign ads, they were not in current rotation at the time of the study and so campaign effects were likely to have decayed by this time.

The results of this research indicate that tobacco control messages continue to be met with strong resistance by disadvantaged smokers. To reduce the smoking rate among socially disadvantaged groups it remains important to address false or self-exempting beliefs about the harms of tobacco use. It is also necessary to educate this group on existing cessation services that are currently underutilised.

FUNDING

This work was supported by Australian Postgraduate Award PhD Scholarship funding administered through the University of Newcastle [to A.G.]; the Cancer Institute NSW [Career Development Fellowship to B.B.]; and Newcastle Cancer Control Collaboration funding [to C.P.].

ACKNOWLEDGEMENTS

The authors thank the Social and Community Service Organisation and its clients involved in this research.

References

1. World Health Organisation: **WHO Framework Convention on Tobacco Control**. In. Geneva; 2003.
2. Brennan E, Durkin SJ, Cotter T, Harper T, Wakefield MA: **Mass media campaigns desiged to support new pictorial health warnings on cigarette packets: Evidence of a complementary relationship**. *Tob Control* 2011.
3. Wakefield MA, Loken B, Hornik RC: **Use of mass media campaigns to change health behaviour**. *The Lancet* 2010, **376**(9748):1261-1271.
4. Bala M, Strzeszynski L, Cahill K: **Mass media interventions for smoking cessation in adults**. In: *Cochrane Database Syst Rev.* Chichester, UK: John Wiley & Sons, Ltd; 2008.
5. Wakefield MA, Durkin S, Spittal MJ, Siahpush M, Scollo M, Simpson JA, Chapman S, White V, Hill D: **Impact of tobacco control policies and mass media campaigns on monthly adult smoking prevalence**. *Am J Public Health* 2008, **98**(8):1443-1450.
6. Durkin S, Brennan E, Wakefield M: **Mass media campaigns to promote smoking cessation among adults: an integrative review**. *Tob Control* 2012, **21**(2):127-138.
7. Hammond D: **Health warning messages on tobacco products: a review**. *Tob Control* 2011, **20**(5):327-337.
8. Miller C, Quester P, Hill D, Hiller J: **Smokers' recall of Australian graphic cigarette packet warnings & awareness of associated health effects, 2005-2008**. *BMC Public Health* 2011, **11**(1):238.
9. Hammond D, Fong GT, McNeill A, Borland R, Cummings KM: **Effectiveness of cigarette warning labels in informing smokers about the risks of smoking: findings from the International Tobacco Control (ITC) Four Country Survey**. *Tob Control* 2006, **15**(suppl 3):iii19-iii25.

10. **Tobacco Plain Packaging Act 2011**. In: *C2011A00148.* Australia: Commonwealth of Australia; 2011.

11. Wakefield MA, Hayes L, Durkin S, Borland R: **Introduction effects of the Australian plain packaging policy on adult smokers: a cross-sectional study**. *BMJ Open* 2013, **3**(7).

12. World Health Organisation: **Systematic review of the link between tobacco and poverty**. In. Geneva: WHO; 2011.

13. Stewart DW, Adams CE, Cano MA, Correa-Fernandez V, Li Y, Waters AJ, Wetter DW, Vidrine JI: **Associations between health literacy and established predictors of smoking cessation**. *Am J Public Health* 2013, **103**(7):e43-49.

14. Siahpush M, McNeill A, Hammond D, Fong GT: **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* 2006, **15**(suppl 3):iii65-iii70.

15. Oakes W, Chapman S, Borland R, Balmford J, Trotter L: **"Bulletproof skeptics in life's jungle": which self-exempting beliefs about smoking most predict lack of progression towards quitting?** *Prev Med* 2004, **39**(4):776-782.

16. Hammond D, Wakefield M, Durkin S, Brennan E: **Tobacco Packaging and Mass Media Campaigns: Research Needs for Articles 11 and 12 of the WHO Framework Convention on Tobacco Control**. *Nicotine Tob Res* 2013, **15**(4):817-831.

17. Tong A, Sainsbury P, Craig J: **Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups**. *Int J Qual Health Care* 2007, **19**(6):349-357.

18. **New tobacco graphic health warnings** [http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/tobacco-label-images#.U2M0oPk0VcY]

19. Hill D, Carroll T: **Australia's National Tobacco Campaign**. *Tob Control* 2003, **12**(suppl 2):ii9-ii14.

20. **Tobacco in Australia: Facts and Issues** [www.tobaccoinaustralia.org.au]

21. Social Research Centre: **Re-invigoration of the National Tobacco Strategy. Social marketing activity - Tracking research**. In: *2010 NTC Evaluation: Final Report.* North Melbourne: Australian Department of Health and Ageing; 2010.

22. Braun V, Clarke V: **Using thematic analysis in psychology**. *Qualitative Research in Psychology* 2006, **3**(2):77-101.

23. Durkin SJ, Biener L, Wakefield MA: **Effects of Different Types of Antismoking Ads on Reducing Disparities in Smoking Cessation Among Socioeconomic Subgroups**. *Am J Public Health* 2009, **99**(12):2217-2223.

24. Farrelly MC, Duke JC, Davis KC, Nonnemaker JM, Kamyab K, Willett JG, Juster HR: **Promotion of smoking cessation with emotional and/or graphic antismoking advertising**. *Am J Prev Med* 2012, **43**(5):475-482.

25. Vallone DM, Duke JC, Mowery PD, McCausland KL, Xiao H, Costantino JC, Asche ET, Cullen J, Allen JA: **The Impact of EX®: Results from a Pilot Smoking-Cessation Media Campaign**. *Am J Prev Med* 2010, **38**(3):S312-S318.

26. Vallone DM, Niederdeppe J, Richardson AK, Patwardhan P, Niaura R, Cullen J: **A national mass media smoking cessation campaign: effects by race/ethnicity and education**. *Am J Health Promot* 2011, **25**(5 Suppl):S38-50.

27. Siahpush M, Wakefield M, Spittal M, Durkin S: **Antismoking television advertising and socioeconomic variations in calls to Quitline**. *J Epidemiol Community Health* 2007, **61**(4):298-301.

28. Thrasher JF, Murukutla N, Pérez-Hernández R, Alday J, Arillo-Santillán E, Cedillo C, Gutierrez JP: **Linking mass media campaigns to pictorial warning labels on cigarette packages: a cross-sectional study to evaluate effects among Mexican smokers**. *Tob Control* 2013, **22**(e1):e57-e65.

29. Peretti-Watel P, L'Haridon O, Seror V: **Time preferences, socioeconomic status and smokers' behaviour, attitudes and risk awareness**. *Eur J Public Health* 2013, **23**(5):783-788.

30. Wakefield M, Morley C, Horan JK, Cummings KM: **The cigarette pack as image: New evidence from tobacco industry documents**. *Tob Control* 2002, **11**(Supplement I):i73-i80.