

Adolescent and Young Adult Response to Anti-Smoking Fear Appeals

Purpose – The paper investigates the level of fear experienced by students aged 13 to 30 years, in response to different types of anti-smoking fear appeals. It extends and validates Quinn, Meenaghan et al's (1992) study by specifically comparing adolescent and young adult responses to fear appeals.

Design/methodology/approach – 548 useable questionnaires were collected via a self-administered questionnaire based on established scales. Factor analysis, T tests and ANOVA were used to replicate Quinn, Meenaghan et al's (1992) analysis the data.

Findings – The main results are consistent with previous findings that adolescents and non-smokers experience more fear. Further, general health and factual appeals cause the most fear across all ages but adolescents were more fearful of factual appeals and social ostracism appeals than young adults possibly indicating that factual and social appeals are better targeted at adolescents than young adults. The results were broadly similar to Quinn, Meenaghan et al's (1992) results.

Practical implications – Advertisers often use realistic fear appeals to attract the attention of the intended recipient, to scare the recipient into processing the information, and to get them to act in response to the anti-smoking message. However, because adolescents and non-smokers experience more fear, social marketers, governments, schools and parents need to customise fear appeals to suit these recipients.

Originality/value – The current study re-tests and revalidates the effect of these different appeal types amongst adolescents and young adults. The results will help clarify which type

of fear appeal causes more fear amongst adolescents and young adults in Australia, 20 years on from Quinn, Meenaghan et al's (1992) study.

Paper Type: Research Paper

Keywords: fear appeals, young consumers, adolescent, health, factual appeals

INTRODUCTION

Tobacco smoking is the single most preventable cause of ill health and death in Australia. It contributes to more hospitalisations and deaths each year than alcohol and illicit drug use combined (Australian Institute of Health and Welfare 2012 pp221).

Smoking rates have declined in developed countries since the 1950s. According to the 2007/8 National Health Survey (Australian Bureau of Statistics 2010), only 18.9% of Australians (18 years and older) smoked daily compared to 21.3% in 2004/5 and 22.1% on 2000/1. This is one of the lowest rates of smoking in the OECD (Australian Institute of Health and Welfare 2012) and is likely to decline further in coming years as 64.4% of people under 24 years in 2007/8 had never smoked compared to 56.7% in 2004/5 (as shown in table 1). Most smokers commence smoking prior to the age of 24 years; therefore, lower levels of adoption in these age groups are likely to translate to less people smoking in the future.

Insert table 1 about here

Despite these positive trends, and as noted by the opening quotation, smoking remains a serious issue in Australia. While the total health burden of smoking has diminished from 10% in 1996 to 7.8% in 2003 (the most recent assessment in Australia), it is still the largest single contributor to disease and death in Australia (Australian Institute of Health and Welfare 2010). This was because smoking substantially increases the likelihood of serious disease: for example smokers are 10 times more likely to get lung cancer than non-smokers (Australian

Institute of Health and Welfare 2012). As well, despite lower proportions of the population smoking, population growth has meant that the number of people smoking in Australia has remained relatively stable at 3.3m since 2007 (Australian Institute of Health and Welfare 2012). These smokers represent a future burden on health costs. In response to this situation, The Council of Australian Governments' set a target in 2008 to reduce the rate of smoking to 10% of all Australian adults by 2018 (Australian Institute of Health and Welfare 2012).

Anti-smoking advertising dissuades non-smokers from smoking and encourages smokers to quit (or at least to reduce the number of cigarettes smoked) (Beltramini and Bridge 2001; Sly, Hopkins et al. 2001). The Australian Institute of Health and Welfare stated in Australia's Health (2012 pp153) that "conservatively, between 1970 and 2010, 10% of the decline in tobacco consumption rates can be attributed to health promotion campaigns, with net benefits equalling \$2 billion".

Adolescents and young adults are crucial targets for anti-smoking messages. They are the most likely to experiment with and become smokers; the most likely to influence their peers to smoke (Australian Institute of Health and Welfare 2012); the most able to quit because they are the least addicted (Jenks 1994; Breslau and Peterson 1996; Messer, Trinidad et al. 2008); and quitting at a younger age reduces the risk of illness and death (Husten 2007; Australian Institute of Health and Welfare 2010). Australian Secondary Students' Alcohol and Drug surveys have shown that smoking rates diminished amongst 12–15 year olds from 11% in 2002 to 5% in 2008 and amongst 16–17 year olds from 23% in 2002 to 13% in 2008 (White and Smith 2009). Yet smoking amongst these groups remains an issue with the average

adolescent smoker consuming their first full cigarette at 14.9yrs and 29% of adolescents being offered the opportunity to smoke prior to 17 years of age (Australian Institute of Health and Welfare 2011).

Fear-appeal advertisements convey messages that smoking is harmful to smokers and to the people around them. According to Schneider, Coutts, and Gruman (2012), "Fear appeals are based on the idea that people will be more likely to pay attention to a message and to subsequently act to change their health behaviour, if their related fears are activated" (p. 171). Ideally the fear attracts the recipient's attention, encourages them to process the message and leads to changed attitudes or behaviour. The feeling of fear can also have an emotional impact that recipients are more likely to recall (and hopefully act upon) when they are exposed to smoking opportunities. Realistic/shocking appeals may also prompt further response from community and other stakeholders that may reinforce the message. Some recent anti-smoking fear campaigns in Australia have included "Who will you leave behind?", "Every cigarette brings cancer closer", "4,000 chemicals", "Break the chain", and "Every cigarette you don't smoke is doing you good".

However, Albaum et al (2002) argued that anti-smoking advertisements fail to reach adolescents and young adults. de Meyrick (2010) specifically argued that anti-smoking initiatives have not discouraged female adolescents from taking up smoking. Quinn et al (1992) had suggested that this could be improved if antismoking appeals are customised to suit the target audience. They found that adolescents were more affected by general health, procreation and factual health appeals than young adults. They also found that factual fear

appeals caused the most fear followed by procreation health appeals, general health appeals and finally social ostracism appeals. The current study re-tests the effect of these different appeal types amongst adolescents and young adults. The results will help clarify which type of fear appeal causes more fear amongst adolescents and young adults in Australia, 20 years on from Quinn et al's study. The following sections of the paper introduce the relevant literature, methodology, findings and discussion, and finally conclusions and directions for future research.

RELEVANT LITERATURE

Fear Appeals

Fear is an affective state that protects us against danger and a motivational state leading us away from danger. Fear appeals in advertising gain attention and 'scare' recipients into changing their attitudes or behaviour (Witte 1992) and as such are used commonly as a persuasion technique (Morales, Wu and Fitzsimons 2012). The idea is that people decode fear appeals, fear that it may happen to them, and act to reduce that likelihood. Marketers manipulate the level of fear to create threat, anxiety and tension while recipients seek to mitigate these feelings (Latour and Zahra 1988; Latour, Snipes et al. 1996; Lee and Ferguson 2002) and is also used to address a wide range of public health issues including AIDS, alcohol and drug addiction and smoking cessation (Morales et al. 2012).

Fear appeals and threat appeals are used interchangeably in the literature (Thompson, Barnett et al. 2009). However, Witte and Allen (2000) differentiate the two concepts arguing that fear is an emotional response while perceived threat is a cognitive response. The direction of the

relationship between the two concepts is unclear because we do not know whether recipients perceive a threat which generates fear of negative consequences (Schmitt and Blass 2008; Cummings 2012) or become fearful and consequently perceive a threat. Some authors have argued that the effectiveness of fear appeals depends on their emotional impact (Latour, Snipes et al. 1996) while others have argued that it depends on cognitive assessments of threat (Rogers 1975; Smerecnik and Ruiters 2010). Irrespective of how recipients process the message, the strength of the fear appeal is crucial to attract the recipient's attention and to encourage further processing of the message. Researchers have also argued that attempting to induce a large amount of fear into a person can have a negative and less beneficial effect (Schneider et al., 2012). However, Lennon, Rentfro and O'Leary (2010) argue that this 'boomerang' effect occurring because only low to moderate levels of fear were generated in their study. The current study explored the level of fear generated by different types of appeals irrespective of whether they are cognitively or emotionally processed.

There are social forces working against the anti-smoking messages. It has been widely argued that the attitudes and behaviours of friends, family and people around children influence their choices (Blum, Beuhring et al. 2000; Albaum, Baker et al. 2002). Social norms can also determine smoking behaviour (Australian Institute of Health and Welfare 2010) so if smoking is 'normal' then adolescents and young adults are much more likely to adopt. For example, a 2001 study reported that two thirds of men in China became daily smokers before they reach the age of 25 (Hesketh, Qu Jian et al. 2001). As well, convincing smokers to change their attitudes is difficult because they tend to be risk-takers (Jenks 1992) and have a defensive attitude towards their 'right' to smoke (Shore, Tashchian et al. 2000). Smokers point out that

their friends and family smoke, that smoking relaxes them, that it provides reward and reassurance, and that it fulfils them (Jenks 1992; Jenks 1994; Pechmann and Ratneshwar 1994; Breslau and Peterson 1996) to justify their smoking. There are also substantive costs associated with quitting including lower job performance (in the short term), less satisfying social interactions, higher depression, anxiety and stress. Many of these costs occur immediately while the benefits (health, quality of life) take longer to materialise.

Antismoking messages do work on adolescents. Farrelly et al (2002) found that exposure to anti-smoking communications led to increased anti-tobacco attitudes amongst 12-17 year olds. Farrelly et al (2005) and Carpenter & Pechmann (2011) found that youths in 8th grade were more effected by anti-smoking/anti-drug messages than older students. Pechmann & Reibling (2006) found that showing young adults suffering from smoking related health issues disgusted adolescent viewers most and was the appeal most likely to reduce their intention to smoke. Lee & Ferguson (2002) found that realistic fear appeals were more effective than vulgar humour advertisements at changing opinions, and intentions to change behaviour, amongst rebellious students.

Customising the fear appeal to particular target segments is intuitively appealing. Quinn et al (1992) evaluated the fear generated by four different fear-appeal anti-smoking messages, namely general health statements, socially related statements, procreation related statements, and factual health statements. The study found that adolescents experienced more fear from procreation, factual and general health statements than young adults; while social ostracism

statements generated no difference in fear. They also found that females experienced a higher level of fear than males and that non-smokers experienced more fear than smokers.

Hypotheses Development

Prior studies have found that fear appeals affect the attitudes and behaviours of children and adolescents more than older recipients (Farrelly, Heaton et al. 2002; Farrelly, Davis et al. 2005; Pechmann and Reibling 2006; Carpenter and Pechmann 2011). Therefore consistent with the findings of Quinn, Meenaghan et al (1992) we expect that adolescent students will be more fearful of general health, procreation health and factual health anti-smoking appeals than older students. However contrary to Quinn, Meenaghan et al (1992) but consistent with Lee et al (2003) and Schoenbachler and Whittler (1996), we expect that adolescents will experience high levels of fear from social fear appeals. Hence we expect that:

H_{1(a-d)}: Adolescent students will have a stronger fear response to (a) general health, (b) procreation health, (c) factual health and (d) social ostracism anti-smoking appeals than older students.

Quinn et al (1992) found that females experienced more fear than males in response to anti-smoking messages. Hence we expect that:

H₂: The females will have a stronger fear response to all the anti-smoking message types than males.

Most non-smokers have unfavourable perceptions of smoking. 12 years old students who are aware of the negative effects of cigarettes have described a smoker as unhealthy, dumb and

one that has low personal appeal (Pechmann and Ratneshwar 1994). Furthermore, non-smokers are also more concerned about their own health as passive smokers, and may refuse to build personal relationships with smokers. Quinn et al (1992) found that non-smokers had a stronger fear response to general health and factual health messages. Hence we expect that:

H₃: Non-smokers will have a stronger fear response to all the anti-smoking message types than smokers.

METHODOLOGY

Sampling and Data Collection

The sample comprised students aged between 13 and 27 years from Secondary (High) Schools, a Technical College and a University. One hundred questionnaires were sent to each of two secondary schools that had agreed to participate in the study. Twenty students from each of the five years were asked to complete the questionnaire. The remainder of the responses were collected from a convenience sample of students attending one technical college campus and one university campus.

Survey Instrument

The two page self-administered survey comprised of a number of sections using established scales. The first section was used to assess the level of fear caused by 14 general health, social ostracism, procreation health or factual health fear appeals (as per Quinn, Meenaghan et al. 1992). Respondents rated each statement on a five point Likert scale, where 1 indicated a very high and 5 indicated a very low level of fear induced. Respondent age, gender, educational

level, income level and smoking experiences were also collected. The questionnaire was pilot tested on 31 adolescents and young adults prior to distribution.

FINDINGS AND DISCUSSION

Table 2 shows the profile of respondents. 548 useable questionnaires were completed by 258 males and 290 females. 169 responses were received from the 200 questionnaires distributed to secondary schools, 113 surveys were completed by technical college students, 214 by undergraduate university students and 52 by postgraduate university students. 98 respondents were aged between 13 and 15 years (17.9%), 130 were between 16 and 18 years (23.7%), 171 were between 19 and 21 years (31.2%), 104 were between 22 and 24 years (19%), and 45 were between 25 and 30 years (8.2%). For the purposes of this study adolescents were considered high school students aged between 12 and 17yrs. Students studying at technical college (17-19yrs), as a university undergraduate (18-24yrs) or as a university postgraduate (23-30yrs) were considered young adults. Of the respondents, 21.4% were smokers, 5.8% ex-smokers and 72.8 non-smokers. 30.6% of male respondents were smokers compared to only 13.1% of females. Only 7.1% of high school respondents were smokers compared to 34.5% of technical college students, 24.3% of undergraduate students, and 26.9% of postgraduate students. The proportion of respondents who smoked in the current study is consistent with the broader Australian data (see table 3).

Insert table 2 and table 3 about here

As shown in table 4, males tended to smoke more cigarettes per day than females. Smokers in high school smoked fewer cigarettes per day than smokers at other levels of education. For instance, only 23.1% of technical college students smoke less than five cigarettes per day compared to 66.7% of secondary school students, 34.6% of undergraduate students and 28.6% of postgraduate students.

Insert table 4 about here

The proportion of ex-smokers is higher at the postgraduate level. This is consistent with Australian Institute of Health and Welfare (2010) findings that more daily smokers quit between the age of 24 and 44 years and Australian Bureau of Statistics (2010) findings that 25 to 34 year olds have the largest percentage increase in ex-smokers. The results support Breslau & Peterson (1996) contention that older smokers are more likely to quit than younger ones.

Respondents assessed the level of fear associated with 14 anti-smoking statements developed by Quinn, et al (1992). A factor analysis was administered on the scale items. As shown in Table 5, the results matched the original scale with items 1 to 4 forming a general health factor, items 5 to 7 forming a social factor, items 8 to 10 forming a procreation health factor and the last four items forming a factual health factor. The factors were reliable with factor two exhibiting the lowest Cronbach alpha of 0.756.

Insert table 5 about here

As shown in Table 6, general health (mean = 2.22) and factual health (mean = 2.35) antismoking statements caused more fear amongst the respondents than statements about procreation (mean = 2.56) and social ostracism (mean = 2.63). These findings were partially consistent with Quinn, Meenaghan et al's (1992) finding that social ostracism caused less fear (mean = 2.9), but contrary to their finding that factual health (mean = 2.3) and procreation (mean = 2.4) statements created more fear than general health statements (mean = 2.6). Other researchers have highlighted that adolescents and young adults are highly concerned about the perceptions of their peers (Schoenbachler and Whittler 1996; Lee, Buchanan-Oliver et al. 2003) but the results of both Quinn, Meenaghan et al (1992) and the current study indicate the opposite.

Insert table 6 about here

The results showed that high school students were in general more fearful than other students. Responses to fear appeals were significantly different between education groups for social appeals and ($F=3.414, 0.017$) and factual health appeals ($F=6.483, sig=0.000$). Post hoc analysis (LSD) indicated that high school students were significantly more fearful of social and factual health statements than both undergraduate students ($sig=0.005, 0.003$) and postgraduate students ($sig=0.022, 0.000$)The findings are somewhat different to Quinn, Meenaghan et al (1992) who found that adolescents experienced significantly more fear from general health, procreation and factual health appeals than young adults. The data did indicate that adolescents were more fearful across all of the appeal types (for example general health

appeals generated a mean score of 2.12 in adolescents and 2.56 in postgrads) but a small sample of postgrad students (n=52) combined with variability prevented significant findings in the post hoc analysis. As such, H_{1a} and H_{1b} which posit that adolescent students will have a stronger fear response to (a) general health and (b) procreation health anti-smoking appeals than older students were not supported. However, H_{1c} and H_{1d} which posit that adolescent students will have a stronger fear response to (c) factual health and (d) social ostracism anti-smoking appeals than older students were supported.

However, the results indicate online sparing support for the hypothesis that females experience more fear in response to antismoking statements than males. Females were significantly more fearful on five items across general health, factual health and social ostracism statement types (see table 6) but this did not translate into significantly more fear being experienced for any of the types of appeal. Males also recorded a higher level of fear on one statement: “smoking is socially unacceptable”. Smith and Stutts (2003) found a similar result: males were more fearful of cosmetic appeals while females were more fearful of health appeals. The relationships are much weaker than Quinn, Meenaghan et al’s (1992) findings that females experienced significantly more fear from factual health, social and procreation statements. As such, H₂ which posits that females will have a stronger fear response to all the anti-smoking message types than males is rejected.

The level of fear experienced by non-smokers, ex-smokers and smokers were significantly different for all types of fear appeal (general health F=21.360, sig=0.000; social F=25.152, sig=0.000; procreation F=16.448, sig=0.000; factual health F=16.913, sig=0.000). Posthoc

tests showed that non-smokers were more fearful of general health statements than both ex-smokers (sig=0.006) and current smokers (sig=0.000). Non-smokers were more fearful of social statements than both ex-smokers (sig=0.000) and current smokers (sig=0.000). Non-smokers were more fearful of procreation statements than both ex-smokers (sig=0.001) and current smokers (sig=0.000). Non-smokers were more fearful of factual health statements than current smokers (sig=0.000). Therefore non-smokers experienced more fear across all appeal types and H₃ was accepted. These findings indicate that non-smokers are significantly more fearful of all types of appeal while Quinn, Meenaghan et al (1992) found that non-smokers only experienced significantly more fear from general health and factual health statements.

CONCLUDING COMMENTS

The level of daily smoking among high school student respondents (7.1%) is a continuing concern for the reduction of the overall level of smoking in Australia. As de Meyrick (2010) has recently argued, continued reduction in smoking is dependent upon youth not taking up smoking. Quinn, Meenaghan et al (1992) argued that adolescents respond differently to different types of fear appeals and therefore should be targeted with appropriate type of fear appeal. Their primary argument was that adolescents are more prone to experience fear in response to general health, factual health or procreation appeals than young adults and therefore should be targeted with those types of appeals. The current study supported the finding that adolescents experienced more fear from factual health appeals than young adults, did not general health or procreation fear appeals, and did find that adolescents were more fearful of social ostracism appeals. A synthesis of the findings indicates that whilst not all of

the differences were significant, adolescents reported experiencing somewhat higher levels of fear than young adults (postgrads) on all 14 of the statements; therefore it is likely that adolescents experience more fear irrespective of the type of appeal. This would lead to the conclusion that social marketers should be more concerned with customising the level of fear to the adolescent group rather than the type of appeal.

Quinn, Meenaghan et al (1992) argued that females are more prone to experience fear in response anti-smoking appeals (particularly procreation, social and factual health appeals) than males because of male perceptions of 'invulnerability'. While the current study did find that females were significantly more fearful on five statements of the 14, significant differences by message type were not supported. This may mean that females are becoming less affected by anti-smoking fear appeals. Therefore the current study does not support Quinn, Meenaghan et al's (1992) call for the type of appeal to be customised based on gender.

Quinn, Meenaghan et al (1992) argued that exposing non-smokers to the general health and factual health consequences of smoking may deter non-smokers from taking up smoking. This was because they found that non-smokers were more fearful of these types of appeals. The current study found that non-smokers were more fearful irrespective of the type of appeal. Higher levels of fear may partially explain why non-smokers have not already become smokers yet continued exposure to the messages may reinforce current attitudes and continue to deter take up. Therefore we conclude that social marketers should be more concerned with customising the level of fear to non-smoker needs rather than the type of appeal.

The way that the messages are executed is important for the end outcome as well. For example, shocking (realistic) content attracts the notice of reticent message recipients and creates affective responses that are remembered long after cognitive assessments have faded. As well, shocking messages are more likely it is to generate discussion amongst stakeholders other than the primary recipient and therefore possibly enhance the effectiveness of the campaign. But Government bodies together with parents and schools may choose less shocking executions in order to better target adolescents with information and education about negative effects of smoking. Social marketers should also consider other aspects of execution including credibility of the message source amongst adolescents (Quinn, Meenaghan et al. 1992).

Social marketers must also consider the role of affective responses other than fear to anti-smoking messages. Pechmann & Reibling (2006), for example, argue that because people avoid fear, some respondents may deny that the problem exists rather than seek to eradicate it. Therefore they advocate that social marketers should seek to generate 'disgust' as a better response because people will move to eradicate those things that disgust them. This is could be particularly relevant to adolescents as some consumers (particularly youth) may be attracted to the novelty or risk (fear) (Pechmann and Reibling 2006; Pechmann and Shih 1999).

Lastly, social marketers should also consider giving recipients the tools to avoid taking up smoking or to quit. The protection motivation theory argues that consumers must perceive that they have the ability to deal with the perceived threat (self-efficacy) in order to respond

appropriately (Rogers 1975). Convincing recipients that they can remove the fear by changing their behaviour determines response to the message and intention to change (Manyiwa and Brennan 2012). Therefore social marketers must include examples of how to resist or quit that adolescents can implement.

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Table 1: Proportion of Australian's who Report Never Having Smoked by Age Group and Data Collection Year (collated from ABS 2010)

	15-17yrs	18-24	25-34	35-44	45-54	55-64	65-74	75 +	Total
1989		53.7	45.6	47.7	46.3	45.4	47.5	60.7	48.4
1995		56.2	45.4	45.8	47.2	46.3	46.3	56.8	48.2
2001		57.3	49.9	44.6	48.9	46.5	49.5	53.9	49.4
2005		56.7	46.3	44.8	42.9	44.1	45.7	51.2	57.4
2008	89.6	64.4	47.7	48.3	45.5	44.0	48.2	52.4	49.4

15-17 years olds were included for the first time in 2008.