
Impact evaluation of an HIV screen educational advertisement

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Keywords

AIDS, Media, Advertising

Abstract

An advertisement explicitly depicting behaviours associated with transmission of HIV was developed with the aim of reminding people of the continued threat posed by the virus to health. Evaluation of the advertisement was carried out to assess its impact on the target group of people, those aged 18-36 years. An international film festival provided the opportunity for the advertisement to be screened and an exit poll was carried out with a randomly selected 11 per cent sub-sample of the total audience of 2,045. The results indicate that the advertisement reached and was assimilated by the target audience. Some differences were found based on socio-demographic variables, with women finding the portrayals in the advertisement more realistic than men. All audience reactions were positive with support expressed for wider dissemination of the advertisement. The advertisement has subsequently been released nationally through cinemas.

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Introduction

Health education approaches have and will continue to be at the forefront of efforts to reduce the transmission of HIV. A large proportion of these strategies have been information campaigns aimed at the general public and individuals at increased risk of contracting the virus. These campaigns have often focused on raising awareness of HIV/AIDS in order to put the issues on the public's agenda. In Ireland, these strategies have largely taken the form of information provision through the mass media using, either singly or in combination, leaflets, posters including convenience advertising (Convenience Advertising (Ire) Ltd, 1996), television and radio channels as means of message dissemination. Various initiatives have been aimed at the population in general, as well as some specifically targeted at those in so-called high risk groups, such as homosexual men. Few of these awareness-raising attempts have been formally evaluated. However, inevitably these initiatives have contributed to the increase in awareness of HIV/AIDS in the population which is demonstrated by the amendment of misconceptions about the transmission of the virus in the general population between 1989 and 1994 (Harkin, 1989; Health Promotion Unit, 1994).

A major challenge in HIV information campaigns is maintaining levels of public awareness amid increasing levels of complacency and apathy towards the threat of HIV/AIDS (Lupton *et al.*, 1993). The lack of spread of the virus in the heterosexual non injecting population, contrary to initial predictions, contributes to the challenge. In Ireland, 17 per cent of those who have tested positive for HIV antibodies are heterosexual, while 44 per cent are intravenous drug users and 23 per cent homosexual (the balance is made up of haemophiliacs, children and others) (Department of Health, 1998). The incidence of HIV in the general population is therefore currently low, which undermines appeals aimed at raising individuals'

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perceptions of their susceptibility to contracting the virus (Wight, 1993). This may be considered with the results of a survey of young people's sexual behaviour, which reports that, of those sexually active, 33 per cent said that they did not always use condoms (MacHale and Newell, 1997). Therefore, younger people are practising unsafe sex and are at risk of contracting HIV. The nature of HIV/AIDS as an incurable and probably fatal disease coupled with the continued practice of unsafe sex in the general population, indicates the continued need to maintain awareness and keep HIV/AIDS on the public agenda. The awareness raising and agenda setting function of the mass media has been identified previously and would appear to be an appropriate tool for health education in this instance (Wallack, 1990). This is supported in an Irish context, where the population repeatedly cite the media as their main source of information about HIV and AIDS (Health Promotion Unit, 1994).

A major difficulty in HIV/AIDS public education stems from the sensitivities around the discussion of sexuality. This has resulted in cryptic public health messages, with the result that many campaigns in this area have been criticised for their lack of explicitness (Watney 1988; Williams and Miller, 1995). It has been suggested that the higher the prevalence of HIV in a population, the more accepting the population is of forthright campaigns (Wellings and Field, 1996). The level of acceptance by populations of less cryptic, and more direct and explicit portrayals in the provision of HIV/AIDS information also has a cultural component (Harris, 1994). The threat posed by HIV/AIDS to the Irish population has contributed to issues of sexuality and drug taking behaviours being considered in the public arena in a way that was previously unacceptable. It has also contributed to policy changes, such as the decriminalisation of homosexuality in 1993 and the increased availability of condoms not only through shops but also vending machines (Glen/Nexus, 1996). These changes have in turn facilitated the development of increasingly direct health information campaigns in the media. However, some people are concerned about the promotion of the use of condoms and clean needles as they perceive that this message will result in greater sexual activity by

young adults (Stryker *et al.*, 1995) and promote intravenous drug use.

The need to counteract the complacency of the general population in relation to the continued threat posed by HIV/AIDS requires a planned initiative to maintain and sustain awareness in the general population. The appropriateness of mass media as a health education tool in this instance, coupled with the increasing acceptance of explicit messages in relation to the transmission of HIV, culminated in the production of an advertisement designed for dissemination through cinema and/or television entitled "The Brain".

Health education through the mass media is considered difficult to evaluate (Tones and Tilford, 1994; Redman *et al.*, 1990) but it is essential to formulate and develop effective campaigns, therefore an evaluation of the advertisement was undertaken. There are three basic questions to be asked in evaluating the use of an advertisement as a tool for health education:

- (1) Can the target group be reached?
- (2) Can such messages be assimilated by the target audience?
- (3) What effect does the message have?

Many definitions of evaluation are available but most, according to McKenzie and Jurs (1993) include the concept of determining the value or worth of the object of interest against a standard of acceptability.

Methodology

The aim of the advertisement was to remind people of the continued existence of HIV/AIDS within the community and so maintain awareness. The target group for this advertisement was specifically younger people aged 18-36 years. The advertisement depicts a heterosexual and homosexual couple engaging in sexual activity and a drug user injecting. It illustrates precisely the situations which are risk situations for the transmission of HIV. The advertisement appeals to individuals to consider consciously the implications of their actions in order to motivate them to consider adopting protective behaviours. The protective behaviours are explicitly portrayed in the advertisement with the message: "Use condoms and don't share needles". This idea is analogous to aspects of

the theory of reasoned action (Ajzen and Fishbein, 1980). The application of this theory to the development of public health messages appears appropriate as it is generally thought that recipients of such messages neither passively accept nor reject the influence, but rather analyse and actively interpret it in the context of interpersonal interactions with family and friends. The effectiveness of the advertisement will be facilitated if the target population perceive that the behaviours espoused in the message will actually reduce the threat of contracting HIV. This concept is known as response efficacy (Hale and Dillard, 1995).

Evaluation can be considered in three phases: process; impact; and outcome. The evaluation of this advertisement is concerned with people's immediate response to it and therefore constitutes an impact evaluation. Permission was obtained from the organisers of an international film festival in a regional city for the advertisement to be screened with a random selection of 13 films identified from the full festival programme, at two venues. People were approached on leaving the venue following screening of the selected film and asked to complete a purposefully designed administered questionnaire. The film festival audience – a captive sample of younger people who would be exposed to the advertisement, in the context for which the advertisement was designed – provided the sample frame. A minimum sample size of 200 was established with the aim of interviewing a quota sample of 50 per cent men and 50 per cent women.

The questionnaire explored a series of issues with regard to recall and recognition of the advertisement, perceptions of the advertisement and reactions to it. The impact and accuracy of recall specifically in terms of the topic were assessed. Salience to the individual and general reaction to the advertisement were also explored. Response efficacy was ascertained through questioning people in relation to the perceived effect of compliance with the message recommendation. Acceptance of the specific advertisement was assessed as was the appropriateness of mass media for information dissemination. Socio-demographic information was also collected.

A team of six people were recruited to administer the questionnaire, two Irish men, two English women, one woman from Lesotho and another from America. All took

part in the planning discussions and piloting in order to facilitate the standardisation of questioning techniques. The questionnaire was piloted four times and changes were made following each pilot except the final one. The data on occupation was coded using the Irish Social Class Scale (Central Statistics Office, 1986). Analysis was undertaken using the World Health Organisation (WHO) software program "Epi-Info" by means of the chi-square method where appropriate.

Results

A total of 225 people completed administered questionnaires. This was 11 per cent of the total (2,045) who had seen the advertisement. Only six individuals approached who had seen the advertisement refused to take part. The socio-demographic characteristics of the sample are shown in Table I. Males are slightly under represented in the sample. While the audience is highly significantly younger than the general population, blue collar people are under represented.

As Table II shows, the vast majority of people in all groups recalled the advertisement without prompting. A higher proportion of the target age range could accurately recall the central message than others but this was not statistically significant.

Participants considered that it would be appropriate to disseminate the advertisement through cinema (95 per cent) and television after 9pm (88 per cent). In the sample as a whole, 83 per cent considered the portrayal of the behaviours by the actors as realistic. Women found the people in the advertisement more realistic than men ($p < 0.004$). There was little observable difference in perception of realism by the other socio-demographic variables.

Overall, 60 per cent of the participants found the advertisement relevant to themselves. There is some difference according to gender, although this is not statistically significant. However, significantly more of the target age range of 18 - 36 years considered the advertisement to be personally relevant as opposed to older people ($p < 0.002$). It may be considered that as many of those in the older age group were married, they consider themselves in a monogamous relationship and therefore not at risk of contracting HIV. The perception of relevance was found to be

Table I Sample profile

Gender	Male (94)				Female (131)			
	Under 36 years		37 years and over		Under 36 years		37 years and over	
Socio-economic group	White collar	Blue collar	White collar	Blue collar	White collar	Blue collar	White collar	Blue collar
	41 (18%)	24 (11%)	16 (7%)	12 (5%)	57 (25%)	43 (19%)	18 (8%)	12 (5%)
Parents	5 (12%)	2 (8%)	11 (69%)	5 (42%)	7 (12%)	3 (7%)	9 (50%)	6 (50%)
Married	6 (15%)	4 (17%)	12 (75%)	7 (58%)	8 (14%)	6 (14%)	8 (44%)	8 (50%)

Table II

Those agreeing with the following statement:	All Respondents (n = 223)	Men		Women	
		Under 36 years (n = 65)	37 years and over (n = 28)	Under 36 years (n = 100)	37 years and over (n = 30)
Correct recall of central message	221 (99%)	65 (100%)	27 (96%)	99 (99%)	30 (100%)
Performers seemed realistic	186 (83%)	50 (77%)	20 (71%)	88 (88%)	28 (93%)
Condoms can reduce HIV/AIDS cases	214 (96%)	61 (94%)	27 (96%)	97 (97%)	28 (93%)
Clean needles reduce the risk of HIV/AIDS	216 (97%)	63 (97%)	28 (100%)	98 (98%)	27 (90%)
Use of clean needles by those who inject drugs:					
easy	17 (8%)	6 (9%)	4 (14%)	5 (5%)	2 (7%)
possible	112 (50%)	35 (54%)	9 (32%)	57 (57%)	10 (33%)
difficult	65 (29%)	16 (25%)	9 (32%)	25 (25%)	14 (47%)
impossible	8 (0.4%)	3 (5%)	3 (11%)	2 (2%)	0 (0%)
Use of condoms as in video:					
easy	101 (45%)	35 (54%)	9 (32%)	48 (48%)	8 (27%)
possible	106 (47%)	27 (42%)	15 (54%)	46 (46%)	18 (60%)
difficult	11 (5%)	2 (3%)	1 (4%)	5 (5%)	3 (10%)
impossible	1 (0.5%)	1 (2%)	1 (4%)	0	0
Relevant to me personally	134 (60%)	43 (66%)	9 (32%)	69 (69%)	13 (43%)
Could be shown:					
after 9pm on TV	196 (88%)	58 (89%)	24 (86%)	88 (88%)	25 (83%)
at adult films	212 (95%)	62 (95%)	26 (93%)	93 (93%)	30 (100%)
at night-clubs	196 (88%)	60 (92%)	24 (86%)	86 (86%)	27 (90%)
at schools	165 (74%)	51 (78%)	20 (71%)	74 (74%)	21 (70%)
Encourages experimentation with:					
drugs	5 (2%)	1 (2%)	0	2 (2%)	1 (3%)
sex	16 (7%)	7 (11%)	0	8 (8%)	1 (3%)
Encourages people to think about behaviour	198 (88%)	56 (86%)	26 (93%)	99 (93%)	23 (77%)
Encourages people to change behaviour	96 (43%)	26 (40%)	16 (57%)	44 (44%)	11 (37%)
Media campaigns reduce risk of HIV	157 (70%)	45 (69%)	20 (71%)	74 (74%)	16 (16%)

highly significant in relation to parental status, in that parents did not find the advertisement at all relevant compared to non parents. As parental status in this sample was highly correlated with marital status it is unsurprising that 38 per cent of those married as compared to 71 per cent of single people found the advertisement relevant to them.

Participants were asked to choose from a number of words to describe their reaction to the advertisement. An option for their own words was also included. During analysis the words identified were categorised into positive and negative responses. Negative responses included such descriptions as indifference and, in total, amounted to 10 per cent of replies. Nobody chose the option

“offended”. The majority of participants (96 per cent) stated that they believed that using condoms would reduce the transmission of HIV, with 97 per cent considering that the use of clean needles would also reduce the transmission of the virus. There was little difference by socio-demographic variables, as shown in Table II.

Generally, participants stated that they believed that it is easy or possible to use condoms in the situations depicted in the advertisement, as opposed to difficult or impossible. Some difference was discernible by age in that 50 per cent of the target group considered it easy to use condoms and 47 per cent considered it possible. This trend is reversed in the older age group where 31 per cent considered it to be easy to use condoms and 60 per cent possible. In relation to intravenous drug use, the majority of participants believed it to be possible or difficult to use clean needles as opposed to easy or possible as in the case of condom use.

Participants did not consider that the advertisement would encourage experimentation with sex and drugs. A total of 92 per cent stated that it would not encourage experimentation with drugs and 85 per cent that it would not encourage experimentation with sex. There was little difference across socio-demographic variables. Interestingly, the largest difference was found in relation to parental status and promotion of sex, with 93 per cent of parents stating that the advertisement did not encourage experimentation with sex, compared with 83 per cent of non-parents.

Many people (89 per cent) considered that the advertisement would make people think about their behaviour. However, people were much more reticent in the belief that the advertisement would change behaviour, with only 43 per cent considering that this would be the effect of the advertisement. A large proportion of participants (95 per cent) stated that the advertisement would be suitable to be screened with adult films in the cinema. Support was also given by 88 per cent of participants to dissemination of the advertisement through television after 9pm and at night clubs. However, fewer participants (74 per cent) supported distribution through schools. Participants generally (70 per cent) advocated the use of media in attempts to reduce the spread of HIV.

Discussion

The high proportion of participants who were able to recall the advertisement without prompting, notably in the target group, demonstrates that the advertisement screened in the cinema is an effective vehicle for supporting the maintenance of awareness of the continued existence and subsequent threat of HIV in the population. The advertisement was made to be disseminated either through television or cinema.

Television has been described as the most common learning environment (Signorelli, 1990) and provides people with much of their information on HIV and AIDS (Health Promotion Unit, 1994). However, advertising on television differs from programming, in that people do not actively choose to watch it and often use the advertising breaks to switch channels. Therefore, while television is an obvious vehicle for mass health communication, the nature of viewing may limit its potential effectiveness. While cinema would at first seem to be similar to television, the context of cinema viewing is quite different. This is reflected in audience composition and involvement. Douglas (1984) in a comparison of people’s recall of advertising on television versus cinema found 36 per cent on prompting remembered the television advertisement as compared to 56 per cent for cinema audiences. The use of cinema for message dissemination in this case is supported by Tones and Tilford (1994) who consider that the cinema can provide a medium for subjects considered unsuitable for television. The evaluation results indicate that while both television and cinema were endorsed as acceptable media for dissemination of the advertisement, television was considered less suitable. This may be because cinema is seen as a more controlled environment. The relative lack of support for the advertisement to be screened in schools (although this is a very controlled environment) suggests that there is recognition that this relatively explicit advertisement is aimed at an older non-school-going population. However, while there was some reticence expressed in disseminating the advertisement through schools as compared to other channels, 74 per cent of those surveyed found this acceptable. Harris (1994) considers that even highly explicit and potentially controversial topics

may not be particularly controversial when presented seriously. It is possible that the advertisement "The Brain" typified this position as HIV/AIDS is considered incurable and fatal by the general public (Health Promotion Unit, 1994) and thus very serious. Further support for the general release of the advertisement is provided by the perception by all groups but notably by parents that it does not encourage sexual experimentation.

The data from the exit poll indicate a very positive reaction. The high rate of positive as opposed to negative responses towards the advertisement indicate that the message was well received by the target group. The target group in this instance identified only those in the age range 18-36 years, unlike many mass media initiatives which are aimed particularly at more specific subsets of the population. The expectations, needs and frames of reference of audiences of public health communications differ. It is argued that to ensure effective and efficient public health communication, messages and channels which appeal to different subsets of the population must be devised and used (Slater, 1995). HIV prevention strategies have traditionally identified groups which appear to be at high risk of contracting HIV, such as intravenous drug users and homosexual men, as population subsets to target public health messages. This approach has been criticised as attention is drawn away from the fact that it is the behaviour, not the group membership that carries the risk (Thorogood, 1992). This has the potential of engendering complacency among those whose behaviour exposes them to risk as opposed to the identity of their group membership (Stokedale *et al.*, 1989; Wight, 1993). The specific identification of subsets of the population considered at high risk of HIV may reinforce prejudice against these groups, resulting in discrimination (Thorogood, 1992). A further argument against the use of specific group membership as a criterion for audience segmentation in the instance of HIV prevention is provided by evidence from the UK which suggests that groups are not discrete in their sexual behaviour (Wellings *et al.*, 1994). Thus, efforts have been made to use alternative identifying criteria and refocus the target of public information from at-risk-groups to at risk behaviours. Coleman and Ford (1996) consider that this approach has resource implications and, due to the pattern of HIV

prevalence in groups at greater risk, HIV intervention programmes should be tailored to specific at-risk groups. This is supported in Ireland in a baseline study of HIV prevention strategies and the gay community (Glen/Nexus, 1996) which recommends that a safer sex publicity campaign in the national media should be devised and targeted specifically at gay men. However, due to the cultural stigmatisation of homosexual men in Ireland where homosexual sex has been decriminalised only since 1993, it is likely that many men who have sex with men do not identify with homosexual groups. Also, the pattern of spread predominantly in the intravenous drug users group is unlike that in other European countries. This group is not cohesive and is considered difficult to reach but may be accessed through mass media initiatives (Wolitski *et al.*, 1996). While the advertisement "The Brain" shows explicitly the main routes of transmission (heterosexual and homosexual sex as well as intravenous drug use) and so portrays all groups, the focus is not on group membership. The high rates of recall, recognition and acceptance of the advertisement suggest that this strategy in this case has been effective.

The perception of a large proportion of the target audience that the advertisement was realistic suggests that the actors were considered credible with the subsequent increased likelihood of audience members' assimilating the message (Bandura, 1994). Significantly fewer men than women found the advertisement realistic, which may indicate that some men found it difficult to identify with the men portrayed as either homosexual or intravenous drug users. However, both young men and women found the advertisement relevant to themselves, which further facilitates message assimilation (Stokedale *et al.*, 1989). This gender difference in perception of realism is reflected in the observation that fewer men than women in the target age range consider that the advertisement would make people think about their behaviour. It may be suggested that men in the target age range did not assimilate the advertisement in the same way as women. However, in total a large proportion overall felt that the advertisement would prompt people to think about their behaviour, supporting the view that levels of awareness will be raised by screening of the advertisement. Participants did not consider

that the advertisement would encourage people to change their behaviour which is probably an unrealistic expectation of health education through the mass media and contrary to the stated aim of the advertisement.

The audience perceived the behaviours recommended either as easy or possible, as in the case of condom use, or as possible or difficult as in relation to the use of clean needles. This statement of people's perception of the ease of following the recommended actions implies that the behaviours suggested, particularly the use of condoms, are perceived as achievable. This, coupled with the high level of response efficacy reflected in the knowledge and belief that the use of condoms and clean needles reduces the likelihood of the transmission of HIV, further affirms that message assimilation was achieved, especially by the target group.

The method used, screening the advertisement with films at a film festival, provided the ideal opportunity to evaluate the impact the advertisement had on the target audience in the context for which it was designed. The limitations of the exit poll were in relation to the length of time people were prepared to give to completing the questionnaire, a phenomenon identified in the pilot phase, which restricted the number of questions that could be asked.

Conclusion

The film festival provided an ideal opportunity for the impact of the advertisement to be evaluated with the target group. The advertisement was seen by nearly 2,500 people at the festival, a representative random sample of whom were positively disposed to the content and message. Since these are a key target group, that is young, single adult people in the main, the findings were highly positive. The results suggest that the advertisement could reasonably be released on a wider scale.

Subsequent to this impact evaluation the advertisement has been released nationally through cinemas.

References

- Azjen, I. and Fishbein, M. (1980), *Understanding Attitudes and Predicting Social Behaviour*, Prentice Hall, Englewood Cliffs, NJ.
- Bandura, A. (1994), "Social cognitive theory of mass communication", in Bryant, J. and Zillman, D. (Eds), *Media Effects: Advances in Theory and Research*, Lawrence Erlbaum Associates, Hillsdale, NJ, Ch. 4, pp. 61-90.
- Central Statistics Office (1986), *Irish Social Class Scale: Classification of Occupations*, Central Statistics Office, Dublin.
- Coleman, L.M. and Ford, N.J. (1996), "An extensive review of the evaluation of HIV prevention programmes", *Health Education Research Theory and Practice*, Vol. 11 No. 3, pp. 327-38.
- Convenience Advertising (Ire) Ltd (1996), "An evaluation of target audience's views about the sexual health education posters on display in entertainment venues in Dublin, Cork and Galway", The Health Promotion Unit, Dublin, unpublished.
- Department of Health (1998), "HIV/AIDS statistics to 31st March 1998", Department of Health, Dublin.
- Douglas, T. (1984), *The Complete Guide to Advertising*, MacMillan, London.
- Glen/Nexus (1996), *HIV Prevention Strategies and the Gay Community: Phase One A Baseline Study*, Glen and Nexus Research Co-operative commissioned by The Department of Health, Dublin.
- Hale, J.L. and Dillard, J.P. (1995), "Fear appeals in health promotion campaigns: too much, too little, or just right?", in Maibach, E. and Parrott, R.L. (Eds), *Designing Health Messages: Approaches from Communication Theory and Public Health Practice*, Sage Publications, Thousand Oaks, CA, Ch. 4, pp. 65-80.
- Harkin, A.M. (1989), *Public Knowledge of, Attitudes to, AIDS in Ireland*, Social and Policy Issues in Health Care in Ireland, Sociological Association of Ireland, Dublin.
- Harris, R.J. (1994), "The impact of sexually explicit media", in Bryant, J. and Zillman, D. (Eds), *Media Effects: Advances in Theory and Research*, Lawrence Erlbaum Associates, Hillsdale, NJ, Ch. 9, pp. 247-72.
- Health Promotion Unit (1994), *AIDS Awareness Survey*, Irish Marketing Surveys commissioned by The Department of Health, Dublin.
- Lupton, D., Chapman, S. and Wong, W.L. (1993), "Back to complacency: AIDS in the Australian Press, March-September 1990", *Health Education Research Theory and Practice*, Vol. 8 No. 1, pp. 5-17.
- MacHale, E. and Newell, J. (1997), "Sexual behaviour and sex education in Irish school-going teenagers", *International Journal of STD and AIDS*, Vol. 8, pp. 196-200.
- McKenzie, J.F. and Jurs, J.L. (1993), *Planning, Implementing and Evaluating Health Promotion Programs*, Macmillan Publishing Company, New York, NY.
- Redman, S., Spencer, E.A. and Sanson-Fisher, R.W. (1990), "The role of mass media in changing health related behaviour: a critical appraisal of two models", *Health Education Research Theory and Practice*, Vol. 5 No. 1, pp. 85-94.
- Signorelli, N. (1990), "Television and health: images and impact", in Atkin, C. and Wallack, L. (Eds), *Mass Communication and Public Health: Complexities and Conflicts*, Sage Publications, Newbury Park, CA, Ch. 8, pp. 96-128.

- Slater, M.D. (1995), "Choosing audience segmentation strategies and methods for health communication", in Maibach, E. and Parrott, R.L. (Eds), *Designing Health Messages: Approaches from Communication Theory and Public Health Practice*, Sage Publications, Thousand Oaks, CA, Ch. 10, pp. 186-98.
- Stokedale, J.E., Dockrell, J.E. and Wells, A.J. (1989) "The self in relation to mass media representations of HIV and AIDS - match or mismatch?", *Health Education Journal*, Vol. 48 No. 3, pp. 121-30.
- Stryker, J., Coates, T.J., DeCarlo, P., Haynes-Sanstad, K., Shriver, M. and Makadon, H.J. (1995), "Prevention of HIV infection looking back looking ahead", *Journal of American Medical Association*, Vol. 273 No. 14, pp. 1143-8.
- Thorogood, N. (1992), "What is the relevance of sociology for health promotion?", in Bunton, R. and MacDonald, G. (Eds), *Health Promotion Disciplines and Diversity*, Routledge, London, Ch. 3, pp. 42-65.
- Tones, K. and Tilford, S. (1994), *Health Education: Effectiveness, Efficiency and Equity*, 2nd edition, Chapman Hall, London.
- Wallack, L. (1990), "Mass media and health promotion: promise, problems and challenge", in Atkin, C. and Wallack, L. (Eds), *Mass Communication and Public Health: Complexities and Conflicts*, Sage Publications, Newbury Park, CA, Ch. 2, pp. 41-51.
- Watney, S. (1988), "The subject of AIDS", in Aggleton, P., Hart, G. and Davies, P. (Eds), *AIDS: Social Representations, Social Practices*, Falmer Press/Taylor Francis, London.
- Wellings, K. and Field, B. (1996), *Stopping AIDS: AIDS/HIV Public Education and the Mass Media in Europe*, Longman, London.
- Wellings, K., Field, J., Johnson, A.M. and Wadsworth, J. (1994), *Sexual Behaviour in Britain: National Survey of Sexual Attitudes and Lifestyles*, Penguin, London.
- Wight, D. (1993), "A re-assessment of health education on HIV/AIDS for young heterosexuals", *Health Education Research Theory and Practice*, Vol. 8 No. 4, pp. 473-83.
- Williams, K. and Miller, D. (1995), "AIDS news and news cultures", in Downing, J. Mohammadi, V. and Srebeni-Mohammadi, A. (Eds), *Questioning the Media: A Critical Introduction*, Sage Publications, Newbury Park, CA.
- Wolitski, R.J., Fishbein, M., Johnson, W.D., Schnell, D.J., Esacove, A. and The Aids Community Demonstration Projects (1996), "Sources of HIV information among injecting drug users: association with gender, ethnicity, and risk behaviour", *AIDS Care*, Vol. 8 No. 5, pp. 541-55.