

## Smoking in contemporary German television programming

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### Summary

**Objective:** To study the prevalence of smoking in German television in 2005.

**Methods:** Content analysis of all programmes of the four main national channels *Das Erste*, *ZDF*, *RTL* and *Pro7* over one week between 3 pm and 12 pm. A total of 395 programmes were analysed (252 h of programming). Each programme was coded regarding whether there was one or more smoking occurrence, defined as active smoking or handling with tobacco products by a character.

**Results:** Smoking was portrayed in 176 (45%) of the programmes. Smoking occurrences were frequent in movies (77%), and in TV magazines (69%). Movies, films, and serials produced in Germany showed more often smoking (65%) compared with productions from abroad (48%;  $p = 0.051$ ).

**Conclusions:** Smoking is frequently portrayed in German TV.

**Key words:** Smoking – Prevalence – Germany – Television.

The role that tobacco imagery in the media might play in prompting smoking behaviour among youth has drawn increasing attention by health professionals in recent years (Wakefield et al. 2003; Wellman et al. 2006). For young people, this might include the “normalisation” of smoking; for tobacco dependent persons such imagery might serve as a barrier to quit. Most of this research has focused on research linking exposure to smoking to Hollywood movies with adolescent smoking. Cross-sectional (Hanewinkel & Sargent 2007; Sargent et al. 2001; Sargent et al. 2005) and longitudinal studies (Dalton et al. 2003; Jackson, Brown & L’Engle

2007) have assessed such exposure and have found a strong, independent association with smoking onset. Other studies in U.S. adolescents have linked smoking onset with smoking status of the adolescent’s favourite Hollywood star (Distefan et al. 1999; Distefan, Pierce & Gilpin 2004; Tickle et al. 2001). The amount of TV viewing in youth is also linked with smoking (Gidwani et al. 2002; Gutschoven & van den Bulck 2004; Gutschoven & van den Bulck 2005; Hancox, Milne & Poulton 2004).

One detailed content analysis of MTV’s reality show *The Osbournes* indicated that TV could deliver numerous messages related to the use of alcohol, tobacco, and other drugs, with more depictions implying endorsement than rejection of use (Blair et al. 2005). There has been some systematic analysis of tobacco imagery on television including the US suggesting about one “smoking act” per hour of programming (Christenson, Henriksen & Roberts 2000) and about 2.5% of TV prime time characters smoking (Long et al. 2002), while Japanese research indicates four smoking acts per hour and virtually no negative portrayals of smoking (Kanda et al. 2006; Sone 1999), and about two scenes in New Zealand’s TV containing such imagery for every hour of programming (McGee & Ketchel 2006). To our knowledge there has been no published study of tobacco imagery on German TV. The present study was designed to examine the prevalence of the depiction of smoking in German television in 2005.

### Methods

In Germany there are several free-to-air television channels, including national and regional channels. The five main national channels are *Das Erste*, *ZDF* (state channels), *RTL*, *SAT1* and *Pro7* (private channels). For one week from November 14<sup>th</sup> to 20<sup>th</sup> 2005, we video recorded all television programming (including movies) shown on four of these five

Genre	Description	N	Programmes with smoking occurrences (%)	
Info	News, weather, stock exchange	117	43	(37 %)
TV magazine	Lifestyle, knowledge, politics etc.	71	49	(69 %)
Daily Soap	Serials with 4 or more programmes a week	51	19	(37 %)
Show	Quiz, music, entertainment, talks	51	8	(16 %)
Serial	Crime serials, soaps, science fiction, animated films, telenovelas etc, less than four times a week	47	27	(57 %)
Movies and TV films	Movies (made for cinema release), TV films of all kind (movies made for TV release)	13	10	(77 %)
Court TV	Court show	12	3	(25 %)
Docu-Soap	Documentation-Soap	11	2	(18 %)
Documentation	Documentation	10	7	(70 %)
Sports	Sports programme	7	5	(71 %)
Children's TV	Kids programme	5	3	(60 %)
Σ		395	176	(45 %)

**Table 1** Programmes with smoking occurrences structured by genre

$\chi^2(10) = 57,2; p < 0.001$

major channels (*Das Erste*, *ZDF*, *RTL*, and *Pro7*), from 3 pm to 12 pm. This amounted to 252 h of television.

#### Description of the sample

Some 395 programmes were coded. Table 1 describes the programmes according to their genre. In addition, 570 trailers, 61 special programmes not listed in programme guides like the social spot *Wir sind Deutschland*, and advertisements were coded.

The different genres were pooled into two groups: a) „information programmes“ (sum of the genres “info“, “TV magazine“, “docu“ and “sports“ and b) “entertainment“ (sum of the genres “movies and films“, “serials“, “daily soap“, “docu-soaps“, “court TV“ and “children’s TV”).

#### Categories of the content analysis

**Each programme.** The appearance of one or more scenes containing smoking was coded for each programme-termed smoking episode. A smoking episode is defined as handling or using tobacco. Not included were someone talking about tobacco, imagery of vending machines, signs billboards and posters, packets of cigarettes, ashtrays, cigarette lighters, and any other related tobacco product including nicotine replacement products. In addition to smoking occurrences, brand appearance was noted.

**Movies, TV films, and serials.** For every movie, TV film and every serial the number of smoking occurrences was counted. A smoking occurrence was counted whenever a major or minor character handled or used tobacco in a scene or when

smoking was depicted in the background (e. g. “extras” smoking in a bar scene). Occurrences were counted irrespective of the scene’s duration or how many times the tobacco product appeared during the scene. This coding system was also used in other studies in the field prior to the present study (Dalton et al. 2002). We calculated the average number of smoking occurrences for one hour programming.

#### Reliability

Four coders, two students from the University of Kiel and two media scientists were selected to conduct the content analyses. We randomly assigned one coder to one TV channel. Interrater reliability was evaluated with the *RTL* programme at 15.11.05 from 6:30 pm to 7:40 pm and at the same day the *Pro7* programme from 8:00 pm to 8:45 pm. There was 100 percent agreement with regard to the appearance of smoking episodes.

#### Statistical analysis

Descriptive statistics (frequencies, percentages, and means) and inferential statistics ( $\chi^2$ -tests and t-tests) were performed with Stata SE9.

## Results

#### Appearance of smoking episodes in regular programmes

At least one scene containing smoking occurrences were found in 176 of the 395 programmes (45 %). Table 1 shows

the percentage of programmes containing tobacco imagery structured by genre. Smoking occurs frequently in movies and films (77%), but also in TV magazines (69%), documentations (70%), and serials (57%). In three out of five children programmes smoking could be detected; sports programmes also showed a high frequency of smoking (in five out of seven programmes). Smoking is less frequent in news, weather, and stock exchange programmes (37%), daily soaps (37%), court TV (25%), docu-soaps (18%), and shows (16%).

In 104 out of the 205 information programmes (51%) smoking was present, compared to 72 programmes out of a total of 190 entertainment programmes (38%;  $\chi^2(1) = 6.6$ ;  $p < 0.05$ ). Programmes with smoking were shown more often in evening hours (64 out of 122 programmes = 53%), compared to late afternoon to early evening (62 out of 131 programmes = 47%) or afternoon programmes (50 out of 142 programmes = 35%;  $\chi^2(2) = 8.5$ ;  $p < 0.05$ ). Finally, movies, films and serial productions from Germany more often showed smoking (24 out of 33 movies/films/serials = 65%) compared to productions from abroad (13 out of 27 programmes = 48%;  $\chi^2(1) = 3.8$ ;  $p = 0.051$ ).

#### *Number of smoking occurrences in movies, films and serial productions*

On average 3.4 (SD = 4.5) smoking occurrences were counted per hour for the entire 60 movies, films and serials. In movies and films an average of 4.7 (SD = 1.5) were counted, in comparison to 3.0 (SD = 0.6) smoking occurrences per hour in serials ( $t(58) = 1.3$ ; n.s.).

#### *Smoking occurrences in special programmes, trailers, and brand appearances*

In 20 out of 61 special programmes (33%) smoking was noted. In addition, smoking was present in advertisements for other products besides cigarettes. For example, the actor smoked in an ad for a special champagne (*Söhnelein Brilliant*) and in an ad for the movie "Hustle & Flow". Smoking was present in 67 (12%) out of 570 movie trailers. The following brand appearances were noted in the programming: Marlboro (14 times), Lucky Strike (5 times), Gauloise (3 times), L&M (1 time), West (1 time) und Brazil Cigar (1 time).

## **Discussion**

Nearly half of programmes (45%) shown on German television contained at least one scene with smoking, defined conservative as active smoking or handling with tobacco products. The probability of smoking in TV varies with the genre of the programme. Smoking was frequent in movies and films (77%) and in information programmes (51%), especially in TV magazines (69%). In addition, 38% of all entertainment

programmes portrayed smoking. Movies, films and serials produced in Germany showed more often smoking (65%) compared to productions from abroad (48%).

The strength of the study is the internal validity of the research approach. For one week *all* television programming was video recorded and content analyzed. The limitation is that the results could only be generalized to the four channels, which were investigated and to the time frame of the programming (3 pm to 12 pm during one week of the year). Nevertheless, these four channels have a high common market share of about 50% of all TV consumers in Germany (Zubayr & Gerhard 2005).

Christenson et al. (2000) content coded 168 US serials, which were shown between 1998 and 1999 (from 8 pm to 10 pm) in US TV and found smoking in 19%. The present study indicates that in 57% of all serials shown in German TV depict smoking. Recently, the prevalence of smoking in New Zealand's TV was studied, with a similar approach that has been used in this study (McGee & Ketchel 2006). A total of 120 programmes shown 2004 in New Zealand's TV were content coded. Thirty out of 120 programmes (25%) portrayed smoking. It has to be noted here, that a much broader definition of smoking was applied in the US study (including both visual portrayals and conversational references of smoking), and the New Zealand study (including the depiction of ashtrays and cigarette lighters). Both studies showed a much lower figure compared to the results of the present German study. Therefore, the conclusion that smoking is more frequently portrayed in German TV in comparison to the results of studies conducted in the US and New Zealand, seems justified.

Since many decades the harming effects of smoking on health have been studied (Doll et al. 2004). Despite the growing knowledge about the hazards of smoking, the smoking-attributable costs increased in recent years in Germany (Neubauer et al. 2006). Prevalence of smoking is high in Germany (Lampert & Burger 2005), and especially young people show one of the highest smoking prevalence in Europe and western countries (Langness, Richter & Hurrelmann 2005; Maziak et al. 2003). One way of controlling the smoking epidemic is to prevent youth from taking up the behaviour.

Adolescents initiate smoking for social reasons (Conrad, Flay & Hill 1992), and the social risk factors include influences such as parent (Avenevoli & Merikangas 2003) and friend smoking (Kobus 2003). Tobacco marketing is also linked with youth smoking (DiFranza et al. 2006), and this serves as the basis for controls on smoking marketing contained in the WHO Framework Convention on Tobacco Control, in which Article 13 recognizes that a comprehensive ban on tobacco marketing would reduce consumption. However, a comprehensive ban on tobacco marketing would not limit other mass media venues

from projecting favourable images of smoking, such as smoking contained in motion pictures, increasingly recognized as an important contributor to the smoking epidemic (Charlesworth & Glantz 2005; Sargent 2005). A recent German study concluded, after controlling for other factors, that teens in North Germany most exposed to the smoking in U.S. films were more than twice as likely to have tried smoking than those least exposed (Hanewinkel & Sargent 2007). Given the evidence that smoking in movies strongly impacts childhood and early smoking initiation in the US and abroad (Germany), leading US advocates promote an R-rating (no cinema admission to persons under the age of 17 without a parent or guardian) of all movies

portraying smoking (Glantz 2001; Glantz 2002; Glantz 2003; Woloshin & Schwartz 2002). A similar discussion on the best ways to prevent youth from exposure to smoking occurrences in German and European TV programmes is warranted.

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