

Diffusion of the Italian social media campaign against smoking on a social network and YouTube

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Keywords

Health prevention campaign • Tobacco smoke • Ministry of Health • Social media

Summary

Introduction. Recently, the Italian Ministry of Health developed a health prevention campaign against tobacco smoking entitled “Ma che sei scemo? Il fumo fammale” (Are you stupid? Smoking is bad). The aim of this study was to evaluate the diffusion of the ministerial campaign by analyzing data from two web platforms, Facebook and YouTube.

Method. The study evaluated the dissemination of the campaign using the number of users reached, interactions and the interaction index (interactions/users reached) on the web platform Facebook and YouTube. A qualitative analysis of the text comments left by the users was also carried out.

Result. The average number of interactions on Facebook was 6,087 and 400 for YouTube while the total views were 356,967 for Facebook and 174,763 for YouTube. The interaction index was very low for both platforms, between 0 and 1%. A total number of 156 comments were obtained on Facebook and 37 on YouTube, most of which were negative, or comments not related to the campaign.

Conclusions. The Italian campaign had low diffusion on the web platforms investigated. Evidence-based public health interventions can play a central role in the prevention field but must be based on elements of scientific effectiveness. Further research should analyze the effects of social media campaigns on direct health related outcomes.

Introduction

Tobacco is responsible for the death of about six million people every year and is the leading cause of preventable diseases [1]. Nevertheless, tobacco use remains a widespread and accepted behaviour and Italy records among the highest smoking prevalence in Europe [2]. The Italian behavioural risk factor surveillance system (PASSI) reported that 26% of the population aged between 18 and 69 years were smokers between 2014 and 2017 [3]. Conversely the survey among young people, Health Behaviour in School-aged Children (HBSC), showed that 13.8% of 15-year-old boys and 13.3% of girls smoked every day in 2014 [4].

Smoking is a well-known preventable risk factor for the development of many chronic diseases: cardio and cerebrovascular diseases, chronic obstructive pulmonary disease, osteoporosis, and many cancer types as lung, trachea, bronchi, larynx, oral cavity and esophagus [5]. Smoking during pregnancy increases the risk of having underweight babies, premature births, and sudden infant deaths. Second-hand smoke is also very dangerous especially for children, pregnant women and elderly people.

Many prevention media campaigns for tobacco cessation have been implemented [6] and are recognized as effective strategies to change smoking attitudes and behaviours [7]. The health preventive messages can be spread through different communication channels as television, radio, newspapers, billboards and posters [8].

Moreover, the social media as social networks, YouTube and blogs are used to reach a larger number of people and in particular young ones. Social media are increasingly integrated into programs and campaigns aimed at raising public awareness on specific health issues or to promote healthy behaviour. Numerous public health campaigns used them such as the seasonal flu vaccination campaign of the Center for Disease Control (CDC) [9], the national “Truth campaign” against tobacco use and the programs against HIV infection [10, 11]. These means of communication can spread health messages in an economic and efficient manner; the national anti-smoking campaign “The Tips from Former Smokers” by CDC, for example, was both cost-effective and improved smoking related health outcomes [12].

In Italy several campaigns have been carried out by the Italian Ministry of Health, as “sFreccia contro il fumo” (2013) (Whizz against the smoke) [13], and “Il fumo uccide: difenditi” (2009) (Smoking kills: defend yourself) [14]. The last one was “Ma che sei scemo? Il fumo fammale” (2015) (Are you stupid? Smoking is bad) [15], which aimed to increase awareness about the health consequences of smoking, in particular to protect children, pregnant women and elderly from second-hand smoke exposure. The objective of this study was to evaluate the diffusion of the Italian social media campaign “Ma che sei scemo? Il fumo fammale”, through the number of views and interactions on the web platforms Facebook and Youtube.

Material and methods

STUDY DESIGN AND THE MEDIA CAMPAIGN

The campaign “Ma che sei scemo? Il fumo fammale” (Are you stupid? Smoking is bad) was launched by the Italian Ministry of Health in 2015. It was weekly published on the landing page “www.macheseiscemo.it” (today no longer accessible*) and on the Facebook page thus creating a mini web series [16]. For the dissemination of the spots, Facebook Advertising channel used YouTube to which is directly linked. It was also broadcast on the national television channels such as Canale5, Italia1, Rete4, La7, DeeJay TV, Real Time, DMAX and on the main national and local radio stations.

The campaign included four video spots lasting 30” and aimed at different targets. It was conceived to be an innovative, social media campaign combining the anti-smoking message with other preventive messages.

- Video 1 - pregnant women. The video showed the risks and consequences of smoking among pregnant women (premature birth, retardation in mental and physical development, spontaneous abortion) [17].
- Video 2 - women who smoke. The spot focused on some consequences of tobacco use as skin ageing, teeth spot and hair weakening. Furthermore, the video promoted safe driving and suggested not to take photos while driving [18].
- Video 3 - effects of second-hand smoke on children. The video showed the negative effects of second-hand smoke on children, as respiratory and pulmonary infections or asthma attack. The spot combined the communication against smoking with a message of protection and respect of animals [19].
- Video 4 - prevention of smoking for young people. The video showed the effects of smoking on young’ health as reduction of life expectancy, increase of mortality, damage for fertility and higher risk of impotence. Moreover, it combined the tobacco message with the prevention of road accidents, encouraging safe driving and the use of the helmet [20].

The testimonial, the popular ironic actor Nino Frassica, was chosen after a focus group. He repeated the expression “Ma che sei scemo? Il fumo fammale” (Are you stupid? Smoking is bad) using surreal gestures and mimics. The actor was considered credible and trustworthy for social communication.

STUDY DESIGN AND OUTCOME MEASURES: DISSEMINATION AND IMPACT

The research is a study of evaluation of the impact of a preventive mass media campaign on a social network and internet. The outcome measures were decided based on the narrative revision of Bardus et al. [10] where results were reported as statistics of access to the web pages as number of visitors, registered users, followers. This research evaluated the diffusion of the media campaign using the number views and interactions (“likes”, “comments”, “shares”) on the dedicated web platforms. Data were described using frequencies and percentages to describe outcomes of

dissemination on Facebook and YouTube. The virality of the campaign’s contents was evaluated with the interaction index. It was inspired to the engagement rate of Socialbakers, the social media analytics campaign, which weighs the interactions generated by posts (“likes”, “comments”, “shares”) on the number of fans of a page or post. In this study, the webpage of the campaign was temporary, so we considered more important to compare the number of interactions (“likes”, “comments”, “shares”) to the reached users (views) instead of the number of fans. Consequently, the page interaction rate, or interaction index, was calculated as the interactions generated by the posts (likes + comments + shares) / users reached. As far as concern the qualitative evaluation, the comments were described by frequencies and percentages. We considered the following answers:

- negative comments: expression of disapproval of the campaign as ineffective, offensive or lack of sharing of contents;
- positive comments: approval of the video;
- share to other users: signaling the video to other users;
- support for the anti-smoking message: lack of explicit approval of the campaign, but positive opinion about the anti-smoking message;
- support for the testimonial;
- comments not related to the campaign.

Results

The results of the quantitative analysis are reported in Tables I and II. A total number of 356,967 views and 6,087 interactions were recorded on Facebook. The interactions were respectively like (2,232), comments (108) and share (3,747). Most like and views were registered for the first video “Non me lo far ripetere più: il fumo fammale” (prevention message for pregnant women) followed by the fourth “Chi fuma è scemo, ma anche chi va in giro senza casco” (prevention of smoking for young people). As far as concern the comments, the second and fourth video gained 26% and 30%, more than half per cent of comments by users. The interaction index was higher for the second video (1.7%), although overall it was critically low with a mean of 1.2%. As far as concern YouTube a total number of 174,763 views and 400 interactions were obtained. The interactions were respectively likes (324), comments (31) and shares (45). The most visited video was the fourth “chi fuma è scemo, chi non indossa il casco anche” with 35% likes, 35% comments and 51% share. Consequently, it registered the highest interaction index of 0.3%. The second video gained the most views (34%). The interaction index was very low also for YouTube with a mean of 0.22%.

From a qualitative point of view, 13% of comments left by users on Facebook were of approval of the campaign, 31% negative comments, 18% share of the video and 25% gave comments not related to the campaign. The qualitative results of Facebook are shown in Table III. The qualitative results for Youtube, were 14% positive comments, 32% of negative comments, 13% of support for the message transmitted and 22% of inconsistent comments. The results for YouTube are shown in Table IV.

Tab. I. Quantitative results on Facebook.

| Title of video | Like | Comments | Share | Views | N. interactions* | Interaction rate** |
|--|--------------|------------|--------------|----------------|------------------|--------------------|
| Video 1 "non me lo far ripetere più: il fumo fammale" | 719 (32%) | 26 (24%) | 1,600 (43%) | 173,000 (48%) | 2,345 (38%) | 0.013 (1,3%) |
| Video 2 "chi fuma è scemo, ma anche chi si fa i selfie alla guida" | 468 (21%) | 28 (26%) | 734 (19%) | 73,217 (20%) | 1,230 (20%) | 0.017 (1,7%) |
| Video 3 "chi fuma è scemo, ma anche chi non rispetta gli animali" | 362 (16%) | 22 (20%) | 730 (19%) | 111,577 (31%) | 1,114 (18%) | 0.009 (0,9%) |
| Video 4 "chi fuma è scemo, ma anche chi va in giro senza casco" | 683 (31%) | 32 (30%) | 683 (18%) | 154,873 (43%) | 1,398 (23%) | 0.009 (0,9%) |
| Total | 2,232 (100%) | 108 (100%) | 3,747 (100%) | 356,967 (100%) | 6,087 (100%) | 0.012 (1.2%) |

*: number of interactions (likes + comments + shares); **: interaction index: number of interactios/reached users.

Tab. II. Quantitative results on Youtube.

| Title of video | Like | Comments | Share | Views | N. interactions* | Interaction rate** |
|--|------------|-----------|-----------|----------------|------------------|--------------------|
| Video 1 "Il fumo fammale (con due emme perché fa molto male)." | 59 (18%) | 4 (13%) | 12 (27%) | 50,678 (29%) | 75 (19%) | 0.001 (0,14%) |
| Video 2 "chi fuma è scemo, ma anche chi si fa i selfie alla guida" | 79 (24%) | 8 (26%) | 7 (16%) | 59,177 (34%) | 94 (23%) | 0.0015 (0.15%) |
| Video 3 "chi fuma è scemo, ma anche chi non rispetta gli animali" | 73 (22%) | 8 (26%) | 3 (7%) | 26,100 (15%) | 84 (21%) | 0.003 (0.3%) |
| Video 4 "chi fuma è scemo, chi non indossa il casco...anche" | 113 (35%) | 11 (35%) | 23 (51%) | 38,808 (22%) | 147 (37%) | 0.003 (0.3%) |
| Total | 324 (100%) | 31 (100%) | 45 (100%) | 174,763 (100%) | 400 (100%) | 0.006 (0.22%) |

*: number of interactions (likes + comments + shares); **: interaction index: number of interactios/reached users.

Tab. III. Qualitative results obtained on Facebook.

| N. comments | Video 1 | Video 2 | Video 3 | Video 4 | Total |
|---|-----------|-----------|-----------|-----------|------------|
| Negative comments: expression of disapproval of the campaign as ineffective, offensive or lack of sharing of contents | 17 (30%) | 8 (31%) | 3 (14%) | 12 (54%) | 40 (31%) |
| Positive comments: approval of the video or of the anti-smoking message | 2 (3%) | 5 (19%) | 3 (14%) | 6 (27%) | 16 (13%) |
| Share to other users | 20 (35%) | 3 (11%) | 0 | 0 | 23 (18%) |
| Support for the anti-smoking message | 8 (14%) | 0 | 4 (19%) | 2 (9%) | 14 (11%) |
| Support of the testimonial | 2 (3%) | 0 | 0 | 0 | 2 (2%) |
| Comments not related to the campaign | 8 (14%) | 10 (38%) | 11 (52%) | 2 (9%) | 31 (25%) |
| Total | 57 (100%) | 26 (100%) | 21 (100%) | 22 (100%) | 126 (100%) |

Tab. IV. Qualitative results obtained on Youtube.

| N. comments | Video 1 | Video 2 | Video 3 | Video 4 | Total |
|---|-----------|----------|----------|-----------|-----------|
| Negative comments: expression of disapproval of the campaign as ineffective, offensive or lack of sharing of contents | 4 (33%) | 1 (14%) | 2 (66%) | 5 (33%) | 12 (32%) |
| Positive comments: approval of the video or of the anti-smoking message | 1 (8%) | 2 (28%) | 0 | 2 (13%) | 5 (14%) |
| Share to other users | 0 | 0 | 0 | 0 | 0 |
| Support for the anti-smoking message | 2 (16%) | 1 (14%) | 1 (33%) | 1 (6%) | 5 (13%) |
| Support of the testimonial | 1 (8%) | 0 | 0 | 0 | 1 (3%) |
| Comments not related to the campaign | 4 (33%) | 3 (43%) | 0 | 7 (47%) | 14 (38%) |
| Total | 12 (100%) | 7 (100%) | 3 (100%) | 15 (100%) | 37 (100%) |

Discussion

The national campaign "Ma che sei scemo? Il fumo fammale" had the aim to be a viral mean of information against smoking. Conversely, the dissemination was low, the number of users reached was small if compared to

the numerosity of Italian young people and to the general population [21]. The interaction index was also very low considering the potentiality of the social networks and internet to reach many users. The qualitative results were few and not encouraging. Although it is not possible to compare the diffusion of this campaign to similar health

education programs as other outcomes of evaluation were used [10].

The findings of this study indicate that some characteristics of the media campaign were not effective for the viral spread and different reasons may be involved. The Italian media campaign used an ironic and popular approach; however, the contents may have been simplistic and the linguistic register was not serious. Considering the single elements of the media campaign, we can begin talking about the slogan which might have resulted ineffective or rather offensive, in fact, the smokers were called “silly”. Smoking uptake is a voluntary behaviour, usually occurs during adolescence under the influence of peer pressure and can be considered a wrong choice for health. However, over time, smoking becomes a physical and psychological dependence and to stop can be very difficult for heavy smokers. Consequently, the catchphrase may be not an effective and strategic slogan to encourage smoking cessation, while its use may be more appropriate to prevent the onset of smoking habits among young people. As far as concern the tone, which is the general positive or negative attitude of a message, the study of Allen et al. [22] suggests that advertisements with a negative emotional connotation have a greater impact on young people than positive or neutral messages. This is in line with the studies of Biener et al. [23, 24]: the campaigns that generate negative feelings as sadness and fear are more effective than those that arouse positive emotions. Also, the study of Lee et al. [25] indicates that elements for effective media campaigns are the negative emotional reinforcement, the communication of harmfulness of smoking and the change of social norm.

As regards the testimonial Nino Frassica, the actor, wore a red and shiny dress and used an ironic style. The study of Allen et al. [22] underlines that young people are more likely to be impressed and think about advertising with intense and surprising style and images. Although we believe that the Italian campaign may have resulted as not enough impressive both for the aspects of production and style

Concerning the content of mass media campaigns, several reviews highlighted that negative messages about smoking, like health consequences of tobacco use, can be effective; although the effectiveness of negative messages was not compared with that of the positive ones [26-28]. Conversely Stead et al. [29] in their review concluded that there is insufficient evidence that a message about smoking is more effective than other messages. The review concluded that the reasons for smoking are complex and that negative messages against tobacco may not be the sole and final solution. Jepson et al. [26] highlighted that the addictive impact of nicotine is rarely mentioned in the context of antismoking messages while the fight against dependence is a crucial aspect to stop smoking.

Another aspect that influences the effectiveness is the intensity and duration of the mass campaigns [23, 29]. Carson et al. [30] underlined that anti-smoking campaigns need to use repetitive messages and to be broadcast over time. The review of Richardson et al. [31] showed that the exposure to anti-tobacco messages over time discourages smoking initiation and increases negative attitudes towards tobacco. Several studies showed that long term interventions

broadcast on multiple channels are associated with better health outcomes [30, 32, 33]

Conversely, the campaign “Ma che sei scemo? Il fumo fannale was not transmitted for long time or repetitively, this is other aspect that could explain why the diffusion was very low.

Finally, this research is innovative because it tried to measure the diffusion of an education campaign on the social media and make a qualitative evaluation of the Italian campaign.

More studies and reviews on the effectiveness of new-media campaigns, including digital and social media, are needed. In addition, it could be useful to study the specific contribution of mass media campaigns as part of multicomponent community interventions considering the synergic role of public health interventions [29].

Conclusions

Evidence-based public education campaigns can play a central role to counteract tobacco use particularly among youth and young adults. Although evidence-based features and elements of the viral marketing science should be considered in order to make health messages viral and effective [34]. Further research should analyze the effects of Italian media campaigns on direct outcomes as on smoking attitude and behaviour.

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Conflict of interest statement

The authors declare no conflict of interest.

Authors' contributions

Conceptualization: GLT and AM; methodology: GLT, VDE and AM; software: GLT and AM; formal analysis: GLT; investigation: GLT, VDE, SG, AB and AM; data curation: GLT; writing - original draft preparation: GLT, VDE; writing - review and editing: GLT, VDE, SG and AB. All authors have read and agreed to the published version of the manuscript.

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