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Media representations of complementary and alternative medicine in the Italian press: a criminological perspective

Anita Lavorgna (University of Southampton) and Anna Di Ronco (University of Essex)

Introduction

Tullio Simoncini is a former doctor known for promoting the idea that every cancer is an infection caused by a fungus which can be best treated by bringing it into contact with sodium bicarbonate. After causing the death of many of his patients, Simoncini was expelled from the Italian Medical Association in 2003 for unethical human experimentation (Di Grazia 2015) and found guilty of serious fraud and manslaughter by Italian courts (Appeal Court of Rome, decision no. 1255/2007; Italian Supreme Court, decision no. 1432/2012). The case of Simoncini is only one example of the many infamous health frauds perpetrated by health gurus, who have claimed to offer patients medical treatments that are *alternative* to (and, in their opinion, more effective than) traditional (and accurately tested) therapies.

Complementary and Alternative Medicines (CAMs), here broadly intended as all those health care approaches developed outside standard science-based medicine, are often the object of highly polarised public (media) debates, with “believers” and “sceptic” presenting arguments for or against the effectiveness of CAM remedies and the opportunity to make them available to patients through public healthcare systems (Lipman 2002; Segar 2012). On the one side, CAM supporters describe CAMs as – among other things – holistic, natural, curative, preventive, enhancing of self-healing capacities, promoting of self-responsibility for health, and able to be used either in combinations or

individually (consider, for instance, the descriptions provided by the European Federation for Complementary and Alternative Medicine (EFCAM))¹. On the other side, the medical research community has repeatedly clarified that “there cannot be two kinds of medicine – conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work” (Angell and Kassirer 1998: 841). CAMs can be beneficial to individuals’ physical, psychological and spiritual needs (Ernst et al. 2006); however, they can also be dangerous and greatly harmful to people’s health, especially when they take the form of frauds or quackeries perpetrated by health “gurus” (Cattaneo and Corbellini 2014). With a very few exceptions, relative little attention has so far been paid in criminology, as well as in other social sciences, to the topic of CAMs. However, the area of CAMs should be of great interest to criminology, as some of these practices (such as bogus anti-cancer or anti-malaria treatments), and the way they are portrayed in the media, are leading to great social harms, with serious repercussions both on the health of people and on their confidence in the medical profession and the scientific method.

The perceptions people have of medical treatments including of CAMs often depend on what they learn about them through the media (Weeks and Strudsholm 2008; Nissen et al. 2013: 36 ff). Media representations shape our perceptions of a “problem” and influence the solutions that are taken to counter it (Hall 1982). Media representations can, for example, amplify the magnitude and extent of a given issue and contribute to creating moral panics (Cohen 1972) around it.² This can often result in pressures being put on policy-makers to introduce legislative and policy changes (Burney 2009;

¹ See <http://www.efcam.eu/cam/cam-definition/>

² Some scholars argue that changes in the way news are produced and consumed in recent years may have modified the nature and impact of moral panics. In essence, the creation of moral panics by moral crusades seems to be a harder project to accomplish than before, due to the participation of different actors (e.g., bloggers, activists etc.) in the news production mainly through social media (see Moore, 2014). Pluralism in news production, however, does not necessarily correspond with pluralism in news content (Jewkes, 2015), meaning that different sources of news may not fundamentally challenge dominant media (and particularly press) representations.

Surette and Kampe 2016). Media representation of CAMs can also greatly impact on the audience. For example, overall positive media representations of CAM practices can influence the decisions about whether to trust them, and might put pressure on policy-makers to validate certain treatments while ignoring the advice of the scientific and medical community (Cattaneo and Corbellini 2014)³. A previous study (Lavorgna and Di Ronco, 2017) analysing the self-representation of online communities supporting non-conventional medicine suggested that the media may have conveyed ambiguous messages on alternative treatments proposed by health “gurus” then proved to be fraudulent by way of judicial decisions. These ambivalent messages may have caused confusion among the public, and resulted in individuals believing in the credibility of health fraudsters and their treatments, while distrusting the scientific and medical community.

The study reported here presents a longitudinal analysis of media representations of CAMs in Italy. It aims to inspect how the Italian press news have represented CAMs overtime, and, particularly, to investigate the way in which news has shaped public understandings of CAMs. After presenting a brief overview of CAMs research and its relevance for criminological studies, this article will discuss the media analysis methodology and detail its findings. Given its exploratory nature, the findings and discussion section will pay particular attention to identifying avenues for further research as suggested by the research results. In the conclusions, practical implications of the findings will be considered, and recommendations for the media, practitioners and relevant research communities will be made.

³ However, this is not to say that audiences are passive in consuming (crime) news (and that their behaviour is directly affected by the media); individuals are (at least, to a certain extent) active as they give meanings to what they read and get to know through the media. For more on the recent developments of the “effects research” and, particularly, on the pluralist paradigm, realism (reception analysis), postmodernism and cultural criminology, see Jewkes (2005).

It worth noting that this study does not want to argue for the criminalisation of CAMs⁴, nor to uncritically present a view of the medical and pharmaceutical establishment in general as untarnished (consider, for instance, the literature on the harm caused to patients by the deceitful conduct of pharmaceutical companies, e.g. Punch 1996; McFadden et al. 2007; Gøtzsche 2012; Braithwaite 2013). Nonetheless, we recognise that besides CAM treatments that might (more or less effectively) integrate standard science-based medicine in addressing specific patients' needs (Ernst et al. 2006; Deng and Cassileth 2013) (hereafter "*benign CAMs*"⁵), there are a number of CAMs and analogous pseudoscientific practices that are used in a way that has proved to be, or are likely to be, seriously harmful for the patient (hereafter "*CAM quackeries*"). The categorisation of CAMs as benign or quackeries depends on the shifting balance between benefits (health, quality of life, psychological, spiritual) and harms to people (health, emotional and psychological, financial). We believe that this area of investigation, which has been left relatively unexplored by the social sciences, offers to criminologists an interesting area of study, especially considering the *social harms* (which include, in line with the critical criminology perspective, *criminal harms*) that are caused by deceitful CAM techniques and practitioners.

Background

What counts as CAMs varies greatly across the world. The pan-European research network for complementary and alternative medicine (CAMbrella project), which has studied the situation of CAMs in European countries between 2010 and 2012, clarified that "CAMs, as utilised by

⁴ We recognize that CAM is a very broad umbrella term, and that it includes very diverse approaches and practices (ranging from those with a proven placebo effect to those dangerous tout court), each carrying its own definitional issues. Debates on the legality of diverse CAMs would exceed the scope of this study, especially given that different countries have different legal standards to consider something as 'CAM' (while CAM practitioners can operate cross-borders); that national standards differ also regarding 'compassionate cures' and the protection of patients' 'freedom of choice'; and that in some countries traditional approaches can formally and legally co-exist with 'western' medicine.

⁵ Or "beneficial CAMs", see Lavorgna and Di Ronco (2017).

European citizens, represents a variety of different medical systems and therapies [...] mainly used outside conventional health care, but in many countries some therapies are being adopted or adapted by conventional health care” (Falkenberg et al. 2012: 3). Among the most important and widespread CAM approaches and disciplines, the report indicates anthroposophic medicine, homeopathy, manual therapies such as osteopathy and reflexology, natural medicine such as herbal medicine and food supplements, and various methods linked to traditional Chinese medicine (Falkenberg et al. 2012: 3). In Italy, in 2002 the National Federation of the Orders of Medical Doctors and Dentists (FNOMCeO) issued a set of guidelines on non-conventional medicines and practices where it established that only the following are “socially relevant” are: acupuncture, phytotherapy, Ayurvedic medicine, anthroposophic medicine, traditional Chinese medicine, homeopathy and homotoxicology, chiropractic and osteopathic manipulation (FNOMCeO 2002). However, besides these more established CAM approaches, there are others that are regarded by users or practitioners as non-traditional, “alternative”, medicine, which in this study will be included among CAMs (in line with Lavorgna and Di Ronco, 2017).

CAM methods are used in combination with (“complementary medicine”) or in substitution of (“alternative medicine”) treatments that are more conventional (e.g., think of the use of acupuncture in post-operative pain control, or to facilitate patients’ recovery from the side effects of many conventional therapies). Statistics on the use of CAMs are not conclusive. At the EU level, the prevalence in the use of any type of CAMs has been reported as being between less than one to more than 80 percent (Eardley et al. 2012). In Italy, estimates on the use of CAMs range from 18.5 (EURISPES 2010) to 8.2 (ISTAT 2014) percent of the population. While some CAM practices have been proven to have beneficial physical and/or psychological effects and have, therefore, been positively recognised and even supported by the medical community, others are harshly opposed in light of the harmful effects that they can cause to the health of people. These harmful effects might derive not only from the fact that CAM treatments might directly produce harm (e.g., a herbal remedy might badly interfere with the medicines taken by the patient), but also by the fact that

certain CAM approaches might move the patient away from the conventional treatment he/she might need. For example, a homeopathic treatment might have a valid placebo effect but no proven therapeutic effect (Ernst 2002; Shang et al. 2005); or they might support – for instance – a diabetes treatment but not be a substitute for it.

Over the past 40 years, the academic (medical) community has addressed CAMs with ambivalent, but mostly critical, terms (Lerner 1984; Bivins 2010; Offitt 2013). While the use of non-conventional medicine has a very long history, it was only from the 1970s that western practitioners who were outside the medical establishment were dismissed as unscientific and fraudulent. This followed an increase in the use and social acceptance of CAMs, which were sparked by the counterculture movements of the 1960s, particularly from the call to return to a “more natural” way of life and healing, and to rebel against the authority (of the medical establishment, in this case) (Sampson 1995; Coulter and Willis 2004). Since then, alongside the (scarce) publications summarily marginalising CAMs approaches as frauds (Sampson 1995; Bausell 2007; Barrier and Yarett 2012), it is possible to observe the emergence of CAM research as an interdisciplinary endeavour (of, among others, scholars working in medicine as well as in health psychology and health research) to design and implement appropriate programs to adequately address a diverse range of research questions pertinent to CAMs (Bishop 2008; Myers et al. 2012). This growing body of research tries to understand, among other things, the safety and effectiveness of certain types of CAMs on specific physical and psychological aspects of the patient (e.g., Angell and Kassirer 1998; Ernst et al. 2006; Deng and Cassileth 2013), and the attitudes and practices of doctors and patients in using CAMs (e.g., Cocconi et al. 2006; Evans et al. 2007; Giannelli et al. 2007; Ebel et al. 2015).

Notwithstanding the attention that scholarly research has drawn on some aspects of CAMs, it has surprisingly under-addressed the more dangerous aspects of certain CAMs and pseudoCAMs practices and the anti-scientific views they have been accused to promote (Sampson 1995). If the

voice of academics is still relatively absent on these issues, the debunking work of activists from several countries (consider, for instance, The Nightingale Collaboration⁶, the SkepDoc⁷, or ScienceBased Medicine⁸), also specifically operating for an Italian or Italian-speaking audience (such as D'Amato 2010; Di Grazia n/a), has been substantial. These works are of the utmost importance as they contributed to shedding light on the most problematic aspects of CAMs. Debunking activities, however, also suffer limitations as they are mostly based on anecdotes rather than on systematic and scientific data collections and analyses.

With a few exceptions (Coulter and Willis 2004; Lavorgna and Di Ronco, 2017), relative little attention has so far been paid in criminology, as well as in other social sciences (including sociology of science and social psychology) and legal studies, to investigate CAMs (and, specifically, the most problematic and harmful forms of alternative medical treatments⁹) and how they are socially constructed. Previous research already dealt with media coverage of CAMs (for a review, see Weeks and Strudsholm 2008), suggesting an increase in CAM-related popular media in the early 2000s, and arguing that this coverage is for the most part (but not entirely) positive towards CAMs. These studies, however, are no longer up-to-date, have not studied media at the national level¹⁰, and have never analysed the empirical data through criminological perspectives.

⁶ <http://www.nightingale-collaboration.org/>

⁷ <http://www.skeptdoc.info/index.html>

⁸ <https://www.sciencebasedmedicine.org/>

⁹ With the exception, to the authors' knowledge, of "Hush the quacks. Exploring health fraud scams in the UK", led by X and funded by X (details to be added after peer review).

¹⁰ As CAM research indicated that CAM approaches and perceptions are different in different member states, although they appear to be similar in the EU countries that show cultural similarities (such as among the Mediterranean, the German-speaking and the Scandinavian countries) (Falkenberg et al. 2012), it is

Our contention is that CAMs should be of great interest to criminology and that this research domain should become a focus of criminological attention in its own right. As mentioned above, the concept of CAMs is a very broad, and culturally constructed, one. What is considered as a “valuable” CAM method or practice – able, as such, to improve the physical or mental health of people, or their spiritual needs – varies across the space and, within it, across cultures. This broad and culturally-based concept, however, may also entail practices that do not particularly contribute to enhancing people’s health and, worse, methods that are in fact harmful to the health and wellbeing of people (“CAM quackeries”, as defined above). While only a relatively small number of cases have come to be formally defined as crimes (for instance, as frauds) by courts¹¹, a number of court trials and journalistic reports have provided evidence of the harms and of the social dangerousness of these types of practices, both for the health of people and for the confidence in the

important to fine-grain media analysis to specific countries. We hope that our exploratory media analysis could serve as the basis for further media research looking at different countries.

¹¹ In Italy a notorious case is the one of Tullio Simoncini, which has been mentioned earlier in the text. He was brought to court and found guilty of serious fraud and manslaughter in Italy (Appeal Court of Rome, decision no. 1255/2007; Italian Supreme Court, decision no. 1432/2012). Also the regulator and competition authority for the communication industries in Italy condemned Simoncini for misleading advertising in 2011 and banned him from further advertising his “treatments” (see Lavorgna and Di Ronco (2017) for further details). Another example is the one of Davide Vannoni, the president of the Stamina Foundation, who claimed (until his last public post, which was in late 2015) that he could cure a wide number of neurological diseases with an unproven stem cell therapy. In April 2014, a public prosecutor accused Vannoni of fraud and of criminal conspiracy: the judge for the preliminary investigations defined the Stamina method “an enormous scientific fraud” (*Il Corriere della Sera* 2015). However, Vannoni received no penalty for the fraud case, as it was ruled that the statute of limitations had been exceeded. He was only found guilty in the conspiracy case, where he negotiated a suspended sentence on the condition that he would no longer treat patients (*La Stampa* 2015).

professional scientific and medical norms (Cattaneo and Corbellini 2014; Lavorgna and Di Ronco, 2017).

As well as CAM methods, also the concept of crime (or of criminal harm, defined as such by the criminal law) varies in time and space. In general, legal philosophers and criminal law scholars agree on that the harm principle (or “harm to others” (Feinberg 1984)) is a legitimate ground for criminalising behaviour in modern liberal societies (Peršak 2007; Simester and von Hirsch 2011), as opposed to, for instance, legal moralism and legal paternalism¹², which nonetheless can sometimes inspire criminalisation against criminal and sub-criminal behaviour (Peršak 2016). For criminologists, the interpretation of crime as a social construct is not new (among many others, Sutherland 1940; Becker 1963; Ferrell and Sanders 1995). An increasingly number of authors have questioned the idea that criminological studies should only focus on the study of harmful behaviour as defined by the criminal law; rather, critical criminology has advocated to engage with the broader notion of *social harm* (Hillyard et al. 2004; Tombs 2016), which also (but not only) includes criminal harm.

By acknowledging that social harm is itself a very broad concept, critical criminology scholars have made a few attempts to define it and, particularly, to define “harm”. For example, harm has been associated with its significance as an emotional or material negativity (Muncie 2000). In addition, harm has been categorised into physical harm, financial/economic harm, emotional/psychological harm and cultural safety harm (Hillyard and Tombs 2004), and conceptualised as the non-fulfilment of individual’s needs (Pemberton 2007, 2016). Pemberton (2004, 2007), moreover, insisted on criminologists looking not only at harms that are caused by people’s intention, but also by indifference, which is “morally comparable” to intent when the person had the chance to change the

¹² Legal paternalism provides ground for criminalising harm to the self, whereas legal moralism for violations of conventional mores or morality (as it has been for, e.g., homosexuality).

course of events that led to the production of harm by intervening (Pemberton 2007: 38). By emphasising the centrality of indifference, and by attributing it to “perpetrators” (who mostly consist of powerful people or groups), he has, therefore, opted for a broader and “more balanced” notion of responsibility (Pemberton 2007: 38).

Applying this concept of social harm to CAMs, we argue that the social harms (regardless of whether they are also criminal harms) that are demonstrably caused by some CAM methods and/or practitioners to individuals can be significant (Cattaneo and Corbellini 2014). The area of CAMs, therefore, is (or should be) much of interest to criminology as a discipline, especially if one looks at it not only in legalistic terms (Hillyard et al. 2004) and recognises the importance of a harm-based approach in crime analysis and crime control (Paoli and Greenfield 2013; Paoli and Greenfield 2015).

Methodology

In order to analyse how the Italian press news have represented CAMs overtime, this study collected articles from the online archives of the two mostly read Italian national generalist newspapers (both online and on paper), *Il Corriere della Sera* and *La Repubblica*¹³. The researchers extracted articles published between 1 January 2001 (which is the year from which articles have been indexed in the online archive of *Il Corriere*) and 30 September 2016, containing the keywords *medicina alternativa* [alternative medicine], *santone medicina* [healer medicine, m.], *santona medicina* [healer medicine, f.], *santoni medicina* [healer medicine, pl.], and *guru medicina* [guru medicine]. The keywords selection was informed by (names to be added after peer review)’s analysis of Italian online CAM forums (2017); after some tentative keyword searches, this specific

¹³ According to the data of Accreditamenti Diffusione Stampa [Press Diffusion Accreditation], retrievable from: <http://www.adsnotizie.it/certif/index.php>.

combination was selected to keep the search as comprehensive as possible. The resulting articles were manually screened for relevance, and the manifestly irrelevant articles that did not cover the topic of CAMs and duplicate articles were removed. This strategy resulted in a final sample of 259 newspaper articles¹⁴.

Coding

The researchers carried out a computer-assisted content analysis through the aid of the software NVivo. In light of the exploratory nature of the analysis, we used open coding (Glaser and Strauss 1967; Strauss and Corbin 1998) for the codes construction and refinement (Franks 1999; Bauer 2000). Relevant passages in the text were categories according to nine main codes (or “nodes”, in the language of NVivo) and a total of 206 sub-codes or sub-subcodes, as summarised in Appendix A. The use of NVivo allowed us to obtain descriptive statistics of the different codes and sub-codes, offering us comprehension of the recurrence of certain themes and topics in the press news analysed. Particularly, the number of references (that is, the number of text fragments within our sampled articles that have been coded with any node) provided us with insights into the recurrence of a certain theme in the press (the number of references is reported in parenthesis in the following text). Moreover, the codes and sub codes were used to assist the qualitative part of the analysis, whose results are presented in the following section.

Findings and discussion

Where

¹⁴ When entered in the online archive of *La Repubblica*, the five keyword searches resulted respectively into the following hits: 403(107), 37(8), 8(3), 45(6), 265(40) (Total no.: 164). In *Il Corriere della Sera*, the number of retrieved articles per every keyword search were 293(45), 9(8), 9(4), 5(2), 52(36) (Total no.: 95).

Quite obviously, most of the news focused on Italy (only 76 articles referred to other countries). Within Italy, the regions that were mostly represented in the news were Piemonte (28), Veneto (26) and Lombardia (26) – which are regions that are located in the northern part of the country –, followed by Toscana (18), in the centre of Italy.

During the process of coding, we observed that, quite interestingly, the news tended to concentrate around some specific cities (specifically Torino in Piemonte, Padova in Veneto, Milano in Lombardia and Firenze in Toscana). This has mainly to do with the fact that many cases of CAM quackeries covered by the national press news originated from these cities. Further research in this area could explore CAM practices at the local level, for example by analysing how the local print and social media represent CAMs (including comments to online articles and the ones posted on social media).

In addition, the concentration of news around specific places might suggest that social networks developed in a specific territory could have an important role in explaining the concentration of CAM practices. As it will be illustrated below, CAMs often appeal to a specific “lifestyle” (45 references¹⁵, for instance, referred specifically to “new lifestyles” and wellbeing practices directed to “those who want to find a better equilibrium” and “take back control on their health”¹⁶), which may be more common in certain subcultures or among people concentrated in specific geographic areas. In addition, as highlighted in previous research (Lavorgna and Di Ronco, 2017), CAM practitioners are often reached by people through word of mouth. Hence, further research could analyse the development and the structure of the CAM social networks existing at the local level, for example as reflected in the media or by using social media network analysis.

¹⁵ Please note that the sub-code “lifestyle” is listed under the code “other” in the Appendix.

¹⁶ *Il Corriere*, 30 September 2016.

When

The number of articles published around the topic of CAM has not significantly varied through the years, even if an unsteady increase in the number of relevant news can overall be observed, reaching its peak in 2016. Published news mostly clustered on the same month or in subsequent months, thus suggesting that media attention on the topic concentrates on the coverage of the same CAM-related case, event or issue.

Voice

Among the groups that have mostly been given a voice in the news, the most numerous one comprises those having vested interests, such as CAM practitioners, companies in the CAM-business, and attorneys defending a given CAM practitioner (74). In addition, qualified experts (such as doctors, researchers, and notorious debunkers) (59) and politicians and administrative authorities (25) are often present in the news. It is very interestingly to note that, while experts are often cautious in their statements and self-critical (e.g., “[official medicine should be self-critical] regarding the doctor-patient communication, waiting lists, the increasingly brief Doctor’s visits...”¹⁷), CAM practitioners tend to be bolder by making claims that are often misleading (e.g., “There are numerous scientific studies on the PubMed database that confirm how CAMs are superior to placebos”)¹⁸, but also cautious as they tend not to make statements that are self-incriminating (e.g., “You claim that cancers depends on psychological factors [...]” “This is what you say. At the most, I cannot disagree with this”¹⁹). Interestingly, in the narrative of those with a vested interest in CAMs, the lack of scientific evidence on the effectiveness of certain CAM remedies is obscured by the fact that these remedies are “popular” among patients²⁰.

¹⁷ *Il Corriere*, 13 September 2016.

¹⁸ *Il Corriere*, 13 August 2014.

¹⁹ *Il Corriere*, 1 September 2016.

²⁰ *La Repubblica*, 14 May 2008; *La Repubblica*, 27 May 2009.

The voices of patients who have been victim of a CAM-related fraud, their relatives, or friends and attorneys are heard only in 18 newspaper articles, almost as much as famous people (e.g., actors, singers), whose voices appear in 17 items. The relative absence of victims' voices can be due to different factors, including their unwillingness to recognise the fact that they have been defrauded by health gurus (which is quite typical in victims of fraud, see Box, 1983) or to deal with the emotional consequences of the fraud (which might even include the death of a beloved one) (Button et al. 2009). The lack of victims' participation in the press discourse on CAMs can, however, also be linked to their enduring support to the gurus and can, therefore, also reflect a deliberate choice of journalists and editorial boards who may want to favour voices that convey messages that oppose to gurus and their practices. As it appears evident, further research is needed to address the reason of this relative absence of victims' voices in the news.

Relative little attention is also given in the news to the opinions of the general public (13), religious authorities (10)²¹, criminal justice actors such as public prosecutors (6), patients (or animal²²) associations supporting homeopathic treatments (5) and the FNOMCeO (3).

Representation

Although CAMs have been framed in a neutral fashion in 56 articles (these are cases where pros and cons of CAMs have been equally addressed, and where the journalist has not taken a clear stand

²¹ The ambivalent position of the Catholic Church on the CAMs is of particular interest. If, from the one side, some Church representatives took for example a clear stance against a priest advertising CAMs as part of an alternative mysticism (*Il Corriere*, 12 October 2011), from the other side the press reports episodes (such as the use of homeopathic medicines to “cure” homosexuality sponsored by an association of Catholic doctors in Germany) where there an official stand against CAMs is missing (*Il Corriere*, 4 June 2011).

²² It worth noting that CAM remedies and particularly homeopathic treatments are used also for pets.

towards them), the results indicate that CAMs have mostly been represented in either positive (104) or negative (88) terms by the press, thus suggesting that the press may have conveyed ambivalent messages that may ultimately confuse the audience.

Positive messages are very high in number (104). Sadly, the press at times even defends CAM approaches by opposing them to science-based medicine (“There are only few and brave men who challenge the scepticism of traditional medicine in order to follow the fascinating idea to transform a sick person into an emotionally active person”²³). In 34 cases, the positive representation of CAMs went even further, with proactive advertisements of CAM business companies²⁴ or CAM-related courses, seminars, cultural events and other initiatives, both carried out by private institutions and in public hospitals²⁵. As mentioned above, the number of negative references (mainly concentrated around blatant cases of CAM quackeries) is however relatively high (88), thus reflecting the presence of confusing and ambivalent messages on CAMs in the national press.

While negative representations tended to be clustered around specific and “newsworthy” cases (see the paragraph below for specific cases of CAM quackeries that led to the death of a patient) and to report the opinion of experts on CAM quackeries, the presence of many enthusiastic and neutral articles suggests that journalists covering CAM-related topics do not have a specific expertise and lack professional competence on the subject matter. For example, there are many cases of articles where the doubts of the scientific community on the effectiveness or validity of certain remedies are

²³ *La Repubblica*, 31 October 2003.

²⁴ See, for instance, *La Repubblica*, 8 October 2009.

²⁵ Please note that the sub-code “advertisement” is listed under the code “other” in the Appendix.

completely ignored. References to reputable academic research and data are extremely rare²⁶. Conversely, there are articles that are focused on presenting the opinion of those supporting a specific CAM quackery (e.g., Hamer-inspired approaches) and that disregard any type of (science-based) contradictory opinion. This can have the insidious effect of implicitly endorsing a certain non-scientifically based and potentially dangerous CAM practice²⁷. The lack of preparation of some journalists in covering CAM-related news is also proven by the fact that often the news tend to put in the same hodgepodge very different and non-related CAM practices (e.g., Hamer-inspired approaches described as homeopathy²⁸, phytotherapy confused with homeopathy²⁹, a non-CAM doctor described as CAM only because he promotes home childbirth³⁰).

Case

We identified 13 different cases where the news focused on a specific and clearly identifiable patient who died because of CAM quackeries. These are the cases of E.B. (19 years old woman from Padova) (10); C.P. (16 years old girl from Firenze) (8); M.L. (53 years old woman from Torino) (6); A.T. (34 years old woman from Rimini) (4); former Vannoni's patients (5); a 6 years-old boy from Bologna (2); A. (28 years-old with lupus) (2); L.O. (young men 27 years-old from Catania) (2); Steve Jobs (2); a former patient of an ayurvedic doctor (1); A.F. (62 years old, French men living near Ivrea); (1) L.M. (4 years-old from Lecce); (1) T.B. (2 years-old boy from Firenze) (1).

²⁶ Hyperlinks to peer-reviewed scientific publications were found only in *Il Corriere*, 28 September 2016. In *Il Corriere*, 18 March 2014 we found the only explanation on why homeopathy is considered non-effective by the mainstream scientific community.

²⁷ Consider, for instance, *La Repubblica*, 21 December 2004; *La Repubblica*, 5 April 2016.

²⁸ *Il Corriere*, 29 March 2013; *Il Corriere*, 14 July 2016.

²⁹ *La Repubblica*, 19 March 2005.

³⁰ *Il Corriere*, 10 February 2016.

Besides these cases, reported statements from doctors³¹ and debunkers³² suggest that the real number of deadly or otherwise serious cases might be significantly higher. This might depend both from an underreporting from the media, and from the fact that a huge dark number can be expected for cases of CAM quackeries. In fact, as suggested by the Carabinieri Command for Health Protection (NAS), quoted in one press article, for victims it can be very difficult to admit that they let themselves be fooled by charlatans, so that many cases emerge only when there are administrative infractions or very serious consequences³³. It is also likely that many of the most serious cases do not emerge at all, as it might be that the victim or her/his family do not even realise to have been victimised, as it emerges clearly from this fragment where the father of a patient who died (after refusing chemo therapy and undergoing Hamer's treatments) speaks: "Hamer's theories are not the problem [...]. And who says the opposite is a jackal who only wants to denigrate his findings. These are instrumentalisations that help to maintain the 'system' how it is. [...] The fault [for the death of the daughter] is of the pressure exercised by the court and the doctors, of all the curses that they casted on her. They have pestered her, bothered her, she has been raped by those 'experts' who would not let her be. All of them wanted their hands on her because she wanted to escape their methods"³⁴. As already suggested in Lavorgna and Di Ronco (2017), victim studies would be extremely useful to provide an insight into the amount of unreported cases of CAM quackeries.

Furthermore, from the press coverage of the above-mentioned cases it clearly emerges that people operating in the traditional healthcare system often have a core role in CAM quackeries leading to

³¹ For instance, in *Il Corriere*, 3 September 2016.

³² For instance, in *Il Corriere*, 13 September 2016.

³³ *Il Corriere*, 26 September 2016.

³⁴ *Il Corriere*, 1 September 2016.

very serious consequences. This might be because the same doctor employed in the healthcare system “cures” the victim with quack remedies, or because doctor, pharmacists, or nurses facilitate the initial contact between the victim and the charlatan. Hence, further research should look more into detail into the role of these facilitators, and into the systems in place within the public healthcare system to tackle and expel them. Noteworthy is also the scarce presence of the National Federation of the Orders of Medical Doctors and Dentists (FNOMCeO) in the news, which speaks only in three references published in 2016. Optimistically speaking, this may suggest that the national federation for doctors is finally getting its way in the national press; however, the silence from the various medical orders at both the national and provincial levels is worrisome and revealing a general disengagement of the main medical associations with the press.

Health issues and personal wellbeing

The articles mostly cover cases of cancer (56); flue, respiratory diseases, muscular pain, impotence, and other non-life-threatening diseases (27); muscular dystrophy, spinal muscular atrophy, Parkinson's disease, etc. (14); mental health (12); diabetes (10); autism (always in the context of the so-called “vaccine conspiracy”) (7); and other diseases (AIDS, cystic fibrosis, heart problems, lupus) (7). Twenty-eight articles also address personal (physical, psychic, and social) wellbeing (e.g., diseases prevention through alimentation, relaxation and anti-stress exercises) and beauty (CAMs in gyms and wellness centres). This heterogeneity of issues related to CAMs in the media reinforces the idea that the ambiguity conveyed by the media in discussing CAMs (again, as a “lifestyle”, ranging from treating a tumour to enhancing wellbeing) might create confusion in the general public, and make more difficult for non-experts to distinguish between “benign” CAMs and CAM quackeries.

Guru

Many press articles revolved around the remedies proposed by a specific and clearly identifiable “guru”. An overwhelming majority of these gurus advocate very dangerous CAM quackeries (see

Lavorgna and Di Ronco (2017) for an overview of some of them). Most articles referred to Rykw Geerd Hamer (the originator of the Germanic New Medicine) (21) and other practitioners who have been inspired by him (9). Davide Vannoni (the inventor of the Stamina treatment) (20), Don Paolo Spoladore (a former priest advocating for various types of alternative treatments) (8), Marjorie Randolph (anthroposophical medicine) (8), Radovan Karadzic/Dragan Dabic (6)³⁵, Luigi Di Bella (the originator of an alternative anti-cancer treatment) (4), Max Gerson (the inventor of the Gerson Therapy, a dietary-based therapy)(3), Tullio Simoncini (the inventor of an anti-cancer treatment based on baking soda) (3), and others (20) follow (with one or two references each).

The press discourse on gurus tends not to frame CAM quackeries in terms of fraud. Only in three articles quackeries were described as frauds but this occurred only in quotes from public prosecutors and debunkers. Interestingly, only two articles referred to the mental manipulation of the patients by the gurus and only four articles gave some emphasis to the economic reasons that might led certain charlatans to act as health gurus. Given that it appears that many victims and/or supporters of dangerous CAM quackeries are seduced by them because of they are considered different from the “greedy” and “powerful big-Pharma³⁶” (Lavorgna and Di Ronco, 2017), more information in the press on the (often extremely onerous) economic costs of these quackeries might be beneficial in alerting and discouraging potential victims from undertaking harmful treatments. In

³⁵ This is not a real case of CAMs but rather the hoax of a guerrilla artist who prepared a website allegedly run by Radovan Karadzic (a Bosnian Serb leader and ruthless warlord) posing as Dragan Dabic (a made-up guru of alternative healing). We decided to leave this case in our analysis as it is still relevant to see how media represented CAMs (all the 6 press articles referring to Dabic are dated before the hoax was discovered).

³⁶ *La Repubblica*, 22 August 2007. The words are of the former president of the FAI – The Fund for the Italian Environment, the main Italian non-profit foundation for the safeguarding and management of the country’s artistic and natural heritage.

addition, further research could investigate the return on investments of CAMs companies and practitioners. However, it seems that money is not always the obvious motivator for CAM quackeries. For instance, in one reported case the young victim is the son of a CAM practitioner. Research into the motivation of those practising dangerous CAM quackeries (for instance via in-depth interviews or ethnographic research) would be of the utmost importance³⁷.

CAM techniques

A number of press news pivoted around various CAM treatments and approaches, without references to a specific guru. Among the CAM techniques that are addressed in the news, there are homeopathy (50), Chinese traditional medicine (e.g. acupressure, acupuncture, viper serum, etc.) (42), phytotherapy (27), ayurveda (17), and shiatsu (12). Other therapies, such as sound, music or art therapy, psychoneuroimmunology, pranotherapy, power balance, cupping, Yoga, Tai-chi, reflexology, chelation therapy, Bach flowers, chiropractic, Reiki, anthroposophy, psychic surgery etc. are referred to in 48 items (less than 5 references each).

Conclusions

From the analysis of the findings, it clearly emerges how, throughout time, there has been a great deal of confusion in the press as to what CAMs are and as to how we should think of them, with the alternation of articles opposing CAMs altogether with articles enthusiastic towards CAMs (often the ones where CAM practitioners and people with vested interests in CAMs had a voice). This alternation would be sustainable if a clear distinction between “benign” CAMs and CAM quackeries was consistently made in the press news, which would allow for a more nuanced and precise coverage, depending on the merits and the potential harms of one case or another. However, the findings suggest that a high degree of confusion is present among many journalists, which is

³⁷ *Il Corriere*, 22 October 2011.

also reflected in their muddling up very different CAM approaches and in their disregarding of the scientific evidence on the effectiveness of different treatments. These findings point at the need for journalists to get a greater preparation on CAMs and, more in general, for news agencies and organisations to have specialised or expert journalists to cover subjects that have an impact on people's health and on people's relationship with science and scientific evidence³⁸. In the attempt to report impartially and to provide "balance" in the CAMs-related debate, unprepared journalists in our "post-truth" era run the risk of failing their public as they give equal weight to evidence-based and non-evidence-based arguments (Mutsvauro 2016).

The results also suggest the need for a greater involvement of experts with the press who possess and produce specialist knowledge on the subject. Not only this implies that journalists should seek to include more systematically experts presenting evidence-based accounts on sensitive topics but also, and most crucially, that medical associations and researchers should proactively seek access in the mainstream media to help the general public to develop informed opinions. Also CAM researchers – once they unequivocally take the distance from dangerous quackeries and anti-scientific views – could have a fundamental role in this process, as they might be in a good position to reach those parts of the general public that are more critical towards and drawn away from conventional healthcare. This potential role is demonstrated, for instance, in a couple of the press articles analysed, where a CAM practitioner, while advocating for a *specific* CAM approach (e.g., phytotherapy), warned potential patients to be sceptical and careful towards the many hoaxes ("*bufale*", in Italian) suggesting useless and/or dangerous treatments³⁹.

³⁸ A way to do that would be to rely on online information only if available in websites that have been certified as reliable by medical organisations (for an example see <http://www.hon.ch/HONcode/>).

³⁹ For instance, in *La Repubblica*, 27 January 2011; *Il Corriere*, 30 November 2015.

Finally, it is worth noting that although much of the press debate has ravelled around cases of CAM quackeries leading to the death of a patient or around cases of specific “gurus”, it has generally failed to frame these cases as frauds and, overall, to fully recognise the criminal and social harms brought about by them. Criminological research might assist in this by providing an analysis of dangerous CAMs methods (including of the modus operandi of their proponents and of the motifs of their followers), by clarifying the types of possible harms involved and their bearers, and, ultimately, by actively participating in the media debate on CAMs, therefore helping to frame the distinction between useful and harmful CAMs in the (print) media.

In conclusion, it is argued that a more rigorous media coverage of the fraudulent aspects of quackeries, also pursued via the more active participation of criminologists in the press debate on CAMs, might help to better inform the public, and, ultimately and in the long run, to reduce suffering in society – an ultimate aim which criminologists should also strive to reach with their work. We also hope that our analysis can stimulate comparative quacks-related socio-legal and criminological research (e.g., not only on media representations, but also on law-enforcement responses), which would be particularly useful to better understand emerging trends, systemic weaknesses, and best practices.

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Appendix A

Codes	Sub-codes	Sub-subcodes
Where	World (76)	
	Italy (228)	General (74)
		Piemonte (28)
		Lombardia (26)
		Veneto (26)
		Toscana (18)
		Emilia Romagna (13)
		Puglia (13)
		Campania (9)
		Sicilia (7)
		Lazio (5)
		Friuli-Venezia Giulia (3)
		Liguria (2)
		Marche (2)
		Trentino-Alto Adige (2)
When	2001 (9)	Jan (1), Mar (1), Apr (1), Jun (2), Jul (2), Nov (2)
	2002 (14)	Jan (3), Feb (2), Mar (1), Jun (2), Sept (1), Oct (3), Nov (1), Dec (1)
	2003 (7)	Feb (1), May (1), Jun (1), Jul (1), Oct (1), Nov (1), Dec (1)
	2004 (11)	Jan (1), Feb (1), Mar (1), May (1), Jul (1), Ago (2), Sept (2), Dec (1)
	2005 (15)	Feb (2), Apr (2), Mar (5), May (2), Jul (2), Ago (1), Sept (1), Dec (1)
	2006 (11)	Feb (1), May (1), Jun (2), Oct (4), Nov (1), Dec (2)
	2007 (6)	Ago (1), Sept (2), Oct (1), Nov (2)
	2008 (20)	Jan (2), Feb (1), Apr (1), May (7), Jul (5), Ago (1), Sept (1), Nov (1), Dec (1)
	2009 (16)	Jan (3), Feb (2), May (2), Jul (3), Ago (1), Sept (2), Oct (2), Nov (2)
	2010 (26)	Jan (1), Feb (3), Mar (8), May (4), Jun (1), Jul (1), Ago (2), Sept (2), Oct (3), Nov (1)

	2011 (17)	Jan (1), Feb (1), Mar (1), Apr (1), May (2), Jun (2), Jul (3), Sept (1), Oct (4), Dec (1)
	2012 (9)	Jan (2), Feb (1), Apr (1), Sept (1), Oct (3), Nov (1)
	2013 (10)	Jan (2), Feb (2), Mar (1), Ago (1), Nov (1), Dec (3)
	2014 (33)	Jan (2), Feb (4), Mar (6), Apr (7), May (1), Jun (1), Ago (2), Oct (2), Nov (6), Dec (1)
	2015 (18)	Jan (4), Feb (1), Apr (3), May (1), Jul (2), Ago (2), Oct (3), Nov (2)
	2016 (37)	Jan (4), Mar (3), Apr (5), Jun (1), Jul (3), Ago (1), Sept (20)
Voice	CAM practitioner, attorney or business company (74)	
	Expert (doctor, researcher, qualified debunker) (59)	
	Politicians or administrative authorities (25)	
	Patient/victim, or family friends or attorney (18)	
	Famous people (non-experts) (17)	
	General public (13)	
	Religious authority (10)	
	Criminal Justice system (e.g. prosecutor) (6)	
	Patients (or animal) associations (5)	
	FNOMCeO (3)	
Representation	CAM as positive (104)	
	CAM as negative (88)	
	Neutral (56)	
Case	E.B. (19 years old woman from Padova) (10)	
	C.P. (16 years old girl from Firenze) (8)	
	M.L. (53 years old woman from Torino) (6)	
	A.T. (34 years old woman from Rimini) (4)	
	Former Vannoni's patients (5)	
	6 years-old boy from Bologna (2)	
	A. (28 years-old with lupus) (2)	

	L.O. (young men 27 years-old from Catania) (2)	
	Steve Jobs (2)	
	Former patient of ayurvedic doctor (1)	
	A.F. (62 years old, French men living near Ivrea, fasting) (1)	
	L.M. (4 years-old from Lecce) (1)	
	T.B. (2 years-old boy from Firenze) (1)	
Health issues and personal wellbeing	Cancer (56)	
	Wellbeing, beauty (28)	
	Flue, respiratory diseases, muscular pain, impotence, and other non-life-threatening diseases (27)	
	Muscular dystrophy, spinal muscular atrophy, Parkinson's disease, etc. (14)	
	Mental health (12)	
	Diabetes (10)	
	Autism (vaccine conspiracy) (7)	
	Other (AIDS, cystic fibrosis, hearth problems, lupus) (7)	
Guru	Rykw Geerd Hamer (21)	
	Davide Vannoni (Stamina) (20)	
	Hamer-inspired gurus/practitioners (9)	Dr Germana Durando (5), Adriano Buranello (1), Dr Paolo Rossaro (1), Lucia Dettori (Onde Delta) (1), Simona Cella and Marco Pfister (5LC Italia) (1)
	Don Paolo Spoladore (CAM in general) (8)	
	Marjorie Randolph (Anthroposophy) (8)	
	Radovan Karadzic, Dragan Dabic (fake) (6)	
	Luigi Di Bella (cancer treatment) (4)	

	Max Gerson (Gerson Therapy, a dietary-based therapy) (3)	
	Tullio Simoncini (baking soda cancer cure) (3)	
	Others (20)	Osho, Sai Baba and Maharishi (Indian gurus) (3), Dr Massimo Montinari (anti-vax) (2), Dr Roberto Gava (anti-vax) (2), Gabriella Mereu (Verbal Therapy) (2), Alex L. Orbito (Pyramid for Light, spiritual healer) (1), Andrew Wakefield (anti-vax) (1), Arkeon (personal growth movement) (1), Dr David Servam-Schreiber (neuroscientists and psychiatrist, pro alternative treatments for cancer) (1), Dr Huang Hongyun (embryonic stem cell) (1), Dr Mariano Loiacono (Metodo della Salute, Nuova Specie) (1), Eric Pearl (Reconnective Healing) (1), Giuseppe Zani (healer) (1), Mamma Ebe (Ordine di Gesu Misericordioso) (1), Oscar Citro (olistic operator) (1), Simon Cornelis Sagda (healer) (1)
CAM techniques	Homeopathy (50)	
	Other (sound or music or art therapy, psychoneuroimmunology, pranotherapy, power balance, cupping, Yoga, Tai-chi, reflexology, chelation therapy, Bach flowers, chiropractic, Reiki, antroposophy, psychic surgery) (48)	
	Chinese traditional medicine (acupressure, acupuncture, viper serum, etc) (42)	
	Phytotherapy (27)	
	Ayurveda (17)	
	Shiatsu (12)	
Other	Lifestyle (45)	
	Advertisement (34)	

