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Tobacco still a major killer—will we achieve the end game?

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The game of tobacco use began in Europe in 1560 when the first tobacco seeds were sent from Lisbon to the king of France, by Jean Nicot. From kings' and nobles' exclusive use, it gradually and progressively became popular among the public, as a new player. Eighty-eight years ago (1929), Fritz Linkint, an extraordinary researcher in Germany, while reviewing existing evidence regarding a wide range of cancers potentially caused by smoking, indicated that smoking was a cause of respiratory disease. Despite the overwhelming accumulated evidence of the negative effects of nicotine intake, the prevalence of tobacco use is not expected to decline in the near future. What have we missed thus far in the game that claims more than seven million deaths annually worldwide? Although tobacco use is recognized as a major health problem, the persistent habit creates a dissonance between public health initiatives to reduce tobacco consumption and the choices citizens are making. To understand this dissonance, consideration first must be given to the social meaning attributed to smoking. Second, the political dissonance between health imperatives and social agendas is discussed with regard to relevant theory. Third, health promotion strategies can make a strong contribution to win the game from a negentropic perspective, that is to say, a public health vision that is structured towards an overarching goal.

Introduction

In 2013, lung cancer was the second most important cause of death in terms of years of life lost in countries with high per capita income.[1] Although lung cancer, mainly caused by smoking, reached a peak in some countries in the last century, data over time shows that in other countries, the incidence of this disease, is growing.[2] Yet, the World Health Organization (WHO)[3] asserts that tobacco use leads the list of five behaviours initiated in adolescence and maintained throughout life, that are the major contributors to premature death, disease and disability.

A problem of social representation and meaning

There is no universal social representation of tobacco use. Some consider tobacco use as a 'disease', while for others it contributes to 'health', helping users to focus, concentrate, manage stress or even control weight. Furthermore, as a 'health' component in the social dimension of being, it may be perceived as a contributing factor to the development of the 'Ideal self', shaping social integration (e.g. for an adolescent to be accepted in a peer group).[4]

For generations, scientists and health professionals have referred to the regular use of cigarettes as an addiction.[5] The Royal College of Physicians claimed nicotine as an addictive drug, with the drug delivered to the brain through smoking tobacco.[6] The International Classification of Diseases and Related Health Problems (ICD-9 and ICD-10) listed tobacco use as a disease in the category (T 65.2) 'Toxic effect of other and unspecified substances'.[7] The Diagnostic and Statistical Manual of Mental Disorders[8] of the American Psychiatric Association, refers to nicotine dependence as a 'psycho-active substance use disorder' in the sub-categories of dependence [305.10] and withdrawal [292.0], attributed to the use of tobacco in any form.

The consideration of tobacco use as a 'disease' is a recent development: in 1984, a British physician was prosecuted because he prescribed a medication for smoking cessation. As the physician's case went to the Tribunal of Independent of Referees, the position of the government was clear as far as the Secretary of State for Health was concerned: 'Smoking is a habit. It is not a disease …'.[9] Nevertheless, today, smoking is considered a '*disease*' and the treatment process is standardized and monitored in Britain[10] in the conventional doctor's five-stage work model: (i) Measure; (ii) Detect (abnormality); (iii) Prescribe (treat); (iv) Measure (normality); (v) End intervention. According to this model, the treatment process for the smoker also has five stages, as the parameter to be measured is blood carbon monoxide (CO) levels: (i) Measure: expired CO; (ii) Detect (e.g. abnormal levels of CO, HyperCarboxy-Haemoglobinaemia); (iii) Prescribe/treat (behavioural counselling and medications); (iv) Measure (e.g. normal levels of CO); (v) End intervention and follow-up.

Ultimately, when a condition such as HyperCarboxy-Haemoglobinaemia is detected, one must ask if the model described earlier is appropriate for terminating or 'curing' the 'disease' of smoking. What will happen if the person diagnosed with HyperCarboxy-Haemoglobinaemia needs to wait several weeks before being admitted for treatment (e.g. some countries have waiting lists for such treatments, like in Portugal, with a mean of 103 days)?[11,12] What if a pregnant smoker refuses to be 'treated' as the smoking cessation workshop, that she is entitled to under universal care, is conducted during her work hours?[13]

What if a man, who is aspiring to stop his habit, faces a financial condition that does not allow him to pay for a prescription medication treatment, equivalent to a month of minimum wages? Is a patient to be condemned or chastized for not adhering to the

medication prescribed by the General Practitioner (GP), when the patient does not perceive smoking to be a 'disease', or feels adversely affected by the medications?

Moreover, regarding the limits of the five stage model, support for smoking cessation is socioeconomically sensitive, is rarely user-centred, and is based on the biomedical magic bullet strategy. It is not focused on 'health' promotion,[14] but rather on 'disease' extinction. The problem is that not all stakeholders are convinced of the benefits of its extinction, and therefore, this cognitive dissonance is expected to interfere with the process of achieving the end game.

The political dissonance between health imperatives and social agendas

In aspiring to end the game, a social dissonance dominates across societies today and 'building public healthy policy'[14] will be strategic to end the game. First, the WHO Framework Convention on Tobacco Control (FCTC), the most significant WHO initiative in public health,[15] opened the door to allow and encourage countries to shift to an endgame strategy. However, most of the 'tools' needed to end the game, continue to be merely well-intended words in the form of this Convention, and are not extensively imbedded in the 'modus faciendi' of the signatory countries. Some of the major world players (e.g. USA or Switzerland), to date, still oppose the FCTC and have not yet ratified it, and thus compromise the vision of the endgame. Other countries (e.g. Uruguay[16]) fight bitter end games with the tobacco industry, exhibiting how far the conflict can be taken (just imagine for a moment that the industry would have won the case, instead of having to pay seven million dollars to Uruguay?). This decision from the International Centre for Settlement of Investment Disputes, from the World Bank, on the 8 July 2016, following 6 years of quarrel, show how persistent the industry can be in the pursuit of its agenda to bar the success of public health efforts.

Although Fritz Linkint[17] gathered evidence of the negative health consequences of tobacco use, in his country a dictator was rising to power carrying to the extreme the ideology of a pure German 'Ideal self'. For Hitler, a German woman who smoked was not worthy of becoming a mother of a German citizen. In this instance, prohibition of smoking is associated with dictatorship and fascism. This dictatorship was terminated by the Allies in less than 5 years. In the meantime the spirit of individual freedom, rights and liberty, valued to this day, has been associated with the reason tobacco use has remained high in Germany.[18]

In Europe, this political dissonance is persistent: in Germany advertisements promoting tobacco and cigarette brands are ubiquitous in public places, openly expressing the failure and lack of coherence between the signature/ratification of the FCTC. In Portugal, a country that ratified the FCTC in 2005, recent legislation initiatives on tobacco control (2007 and 2017, when the government had the support of a disciplined majority of the Legislature), overlooked scientific evidence and public health interests, and surrendered to the financial and industry/commercial interests, thus failing to translate into policy FCTC goals.[19]

The missing node and pitch

Although the 'bio-medical model' might be proposed to resolve smoking as a disease, we need to examine the fundamental reasons why the individual initiates and maintains tobacco use. The purpose is to clarify theory that can subsequently be applied to help build interventions contributing to the end game.

Indeed, many interventions are designed without theoretical foundation, jeopardizing practice and knowledge translation efforts. Health professionals, who have been trained in the bio-medical model, understand that by applying the curative discourse, they are not in tune; their discourse does not match the audience pitch (e.g. most adolescents in a school are not sensitive to the menace of having cancer in 30 years!). When using the disease prevention style discourse, miscommunication often prevails in many situations, since those trained according to the bio-medical model are trained for cure, but not necessarily for applying preventive approaches. Unfortunately, many well trained professionals, such as teachers, health educators, sociologists, psychologists or health promotors, have not sufficiently joined in this game, where they could certainly make a positive contribution.

Thus, this game cannot be played only by a select few (e.g. physicians or nurses) and as it has been played up until now. The 'node', i.e. the information redistribution point of the social network to help end the game, needs to be applied in a different way and with different strategies to 'strengthen community action for health'.[14] This is a whole-of-society game in an all-settings approach that necessitates inputs from a vast array of diverse competencies. It necessitates forging ahead with innovation that offers immediate response [e.g. the use of ICTs (Information and Communication Technologies)]. The inclusion of a multidisciplinary approach of interventions definitively would support efforts to end the game, such as effective group and *m*health approaches, to compensate human and financial shortage of resources (with the financial crises that are affecting welfare systems around the world).

But, this goes far behind discussing the 'node' of who is playing this game with what resources or strategies. It needs a clarification about how to play the game.

In the year 2000, the WHO *Health for all in the XXI Century* road map—guidelines proposed for the European Region of the WHO, for the year 2020, regarding tobacco control strategies—introduced salutogenesis as a paradigm shift with a new theoretical approach (from the Latin *salus*, meaning '*ease*', and *genesis*, meaning '*creation*'):

> *Proposed strategies: A **sense of coherence**, where life is experienced as **comprehensible**, **manageable** and **meaningful**, is a great health resource for all people. Health is created if people are confident that life makes sense emotionally, and that they have adequate resources (mental, physical, emotional, social and material) to meet whatever demands are placed on them. As outlined above, this **sense of coherence** must be built up from infancy and childhood through a range of family, kindergarten and health care experiences. Policies that have an immediate effect on young people, as well as on the settings in which they learn, work, live or spend leisure time, should be oriented towards strengthening this sense of coherence.*[20]

As only three years remain for implementing these strategies (2000–2020), the WHO 'Health for All' guidelines lack appropriate investment. Knowledge translation has not occurred; these guidelines will be stored on the book shelves of our homes, faculties or libraries, or archived in our computers. Following the rule, that what is more than 5 years old is too old to merit citation, neglect of these strategies is to be expected, even if in most countries of Europe they were never implemented. Energized by the innovative spirit that emulates the progression of knowledge, the *new* strategies to be proposed after 2020, may not adopt former strategies that failed to be implemented,

> '*from infancy and childhood through a range of family, kindergarten and health care experiences … oriented towards strengthening this sense of coherence*'.[20]

Nevertheless we will move on, having missed this node of change! We may need to re-invent another wheel to continue the journey, maybe not based in knowledge acumen, rather in knowledge neglect, while we try to find the right pitch to communicate (e.g. e-cigarettes).[21]

Building supportive environments

WHO emphasizes the 'environments [that are] created that help people to gain a sense of coherence and cope with stressful situations and events'.[20] The recognition by the WHO of

Antonovsky's theoretical proposal for 'an orientation towards strengthening the sense of coherence (SOC), so that life might be experienced as comprehensible, manageable and meaningful',[22] brings to light his metaphor when life is compared to a river (the river of life). From a pathogenic perspective it is mandatory to rescue people from the river. In terms of health education, it is necessary to learn how to swim, since people jump into the river of their own free will, and nothing can deter them from doing so. He then referred to the salutogenic paradigm, writing that

> '*my fundamental philosophical assumption is that the river is the stream of life. None walks the shore safely … My work has been devoted to confronting the question: 'Wherever one is in the stream – whose nature is determined by historical, social-cultural, and physical environmental conditions – what shapes one's ability to swim well?*'.[22]

There are different approaches to the problem of people being swept along in the river when we consider tobacco use. The possibilities vary according to the many health models and theories (for better health or less disease) that can be implemented to promote the end game. From the salutogenic perspective, what is emphasized is that people can be in the water and yet survive with their personal skills. It is therefore important to understand how the personality disposition, that Antonovsky called the *SOC*, allows people to survive and function in the water, some managing better than others, since life is an imbalanced state. The normal condition is not balance and health (according to the WHO definition of health), but rather imbalance, which leads to suffering and sometimes to dis-ease.

This is the context in which Antonovsky applies the concept of entropy, rooted in a trans-disciplinary move. The question is then how to contribute to counteracting this natural law of degradation. This is called negentropy, or negative entropy, when a system can reorganize itself again, a characteristic that Antonovsky attributes to humans, as complex systems in the midst of other systems:

> *'The human organism is a system and, like all systems, it is at the mercy of the power of entropy'*.[22]

Consequently ease (or health) is a permanent building process, as it can be jeopardized by a process of loss and degradation (dis-ease).

> '*The salutogenic approach regards the battle towards health as permanent and never quite successful*'.[23]

So it is with tobacco control. Once a person is an ex-smoker, he/she will have to re-build his/her life every day, be empowered to develop personal skills,[14] in an effort to move towards more order (negentropy), i.e. the ease end of the continuum dis-ease/ease, while facing the call to return to nicotine intake, which would lead to entropy (the disease end of the continuum). This is just one of many examples that could be referred to in the permanent negentropic approach of tobacco control.

Society as a standing reserve to win the game from a negentropic perspective

What is 'health'? How is 'disease' defined? What is 'sickness'? Why do we avoid an 'illness'? Is smoking a 'disease', a 'sickness', an 'infirmity', an 'illness', or, is it, a component of the 'health' of individuals? Is smoking cessation important for 'health' or in preventing or halting the progression of a 'disease' (such as Chronic Obstructive Pulmonary Disease (COPD))? If pathogenesis (from the Greek *pathos*, meaning 'disease', and *genesis*, meaning 'creation') is the mechanism that provokes a 'disease', is smoking a pathological condition or is it the mechanism that initiates a pathology? Is the ideal man or women a tobacco free human being? In this context, Heidegger's focus on the 'Ideal self' (the Being) that is the model upon which a person will build his/her life in order to obtain ultimate satisfaction, is relevant.[24]

One of the particularities of ICT, previously mentioned, is their 'enframing' capability. Enframing occurs when machinery is capable of processing logic. Enframing means 'the gathering together of that setting-upon which sets upon man'.[24] Although the neutrality of ICTs is questionable, that does not mean it have to be considered negatively in their essence; in societies where shortage of resources is widespread, ICTs enframing capability can make a significant contribution, as already specified when facing shortage of resources. The question is not about 'if' or 'when' people establish a relationship with tobacco or smoking cessation endeavours. It is about 'how' people and stakeholders will respond to it. How we deal with motivation for smoking cessation and waiting lists is certainly an indication of how committed we are to end the game. The concept of societal 'standing reserve' becomes a powerful metaphor for this relationship. A smoker who refers to a standing reserve to support him or her (perhaps ICT based—e.g. in Portugal: www.parar.net), can secure permanent access to information and improve health literacy about his or her endeavour to fight the tobacco call in the permanent negentropic approach to life. Health will be perceived as negentropy activation. This 'standing reserve' can assure a smoker that his teleonomic movement towards a life without tobacco is sustainable and will help 're-orient' 'health services',[14] to respond to the call to end the game.

Conclusion

We began by asking if we will achieve the end game while tobacco continues to play a major role, as a major killer, with more than seven million 'victories' annually. Change in terms of shifting the source of profit for the industry has been tried in the past with little success. Perhaps the solution lies in strategic shift, focusing on the players, instead of on the game itself. As long as the industry is the player seeking profit, the game will continue to hunt the public down. What is needed is to find another game to replace the existing one. In order for this to happen, a 'standing reserve' of options and resources needs to be activated while, 'building public healthy policy, creating supportive environments and strengthening community action for health, developing personal skills and re-orient health services'.[14] Based in knowledge acumen, rather in knowledge neglect, to end the game, we should re-visit the past foundation of good practice and discuss the implementation gap.

First we need to deal with the social representation and meaning of tobacco use, if as activists in public health, we intend to contribute to ending the game. Second, the political dissonance between health imperatives and social agendas needs to be tackled and finally solved. Communicating the message on tobacco control, cannot be achieved correctly while missing the node and pitch of the discourse. Salutogenesis, as a consistent theory, is urgently needed for the practice of tobacco control. Building supportive environments, one of the five Health Promotion strategies introduced in the Ottawa Charter,[14] will be feasible if society responds unanimously, as a 'standing reserve', to win the game from a negentropic and sustainable perspective.

Since humanity only recently found the way to play this game, our hope is that soon, the 'standing reserve of humanity', will find the right replacement for this game, supporting and empowering the players' transition into a new, fulfilling and no less engaging arena of activity. In that day, hope will prevail if we have finally diverted and recovered the 'Ideal self' away from (tobacco) addiction.

Conflicts of interest: None declared.

Key points

- Tobacco use claims more than 7 million deaths annually worldwide
- Despite the overwhelming accumulated evidence of the negative effects of nicotine intake, the prevalence of tobacco use is not expected to decline in the near future.

- Social representation of tobacco use needs to be tackled as some consider it as a disease, while for others it is a contributing factor to the development of the Ideal self, contributes to health, helping to focus, concentrate, manage stress or even control weight.
- Social dissonance, that dominates across societies, while building public healthy policy, needs to be resolved.
- Social networks to overcome tobacco use necessitate inputs from a vast array of diverse competencies and different strategies to strengthen community action for health.
- The Salutogenic paradigm can be an ally in the development of personal skills to promote empowerment and health literacy improvement.

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