THE IMPACT OF MASS MEDIA ON SOCIAL DETERMINANTS OF HEALTH AND LIFESTYLE IN CARDIOVASCULAR PATIENTS

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Abstract: *Socioeconomic dissimilarities have an overwhelming impact, with profound reverberations across societies, on health risk factors and consequences, especially regarding cardiovascular diseases. Cardiovascular diseases and their outcomes are preventable, if the risk factors are taken into account. The assembly of these factors can be grouped into unmodifiable risk factors, modifiable risk factors that are behavioural, metabolic factors and socioeconomical factors. The socioeconomical factors, known as socioeconomical determinants of health, are defined as the conditions where people are living, settings that are modelled by the dispersal of wealth, power and resources at all levels. The barriers to a better health can be alleviated by optimising publics' knowledge through media communication about the effect of the determinants on health.*

Keywords: mass-media, lifestyle, health risk factor, cardiovascular diseases

1. Introduction

Worldwide, cardiovascular diseases are the foremost cause of mortality and life - long disabilities. Annually, cardiovascular diseases are anticipated to rise, especially in the countries with low – and middle – income across the globe, suggesting that an array of socioeconomic factors is the decisive determinant of the disease, alongside the traditional factors such as smoking, obesity and others (Mathers and Loncar, 2006). Most of these factors that are related to lifestyle and behaviours can be preventable, reducing the incidence of cardiovascular diseases in populations. On the other hand, socioeconomic circumstances can be modified only when acknowledged by the public and policy makers as risk factors for these types of diseases and properly communicated to the public.

As early as 1850, Engels (1845) underlined that the living environment is more important for health than the lifestyle choices one makes. According to World Health Organization (2012), in the literature of speciality, living conditions have been defined until recently as "prerequisites of health", now being rebranded as "social determinants of health" (Marmot and Wilkinson, 2006). Social determinants of health are an array of social and environmental factors that are comprising the settings where the people are born, live, play, learn, work, age, together with ethnicity and race. Social and medical research established that these assemblies of factors have a powerful impact on the risk factors and the consequences of cardiovascular diseases. According to Robert Wood Johnson Foundation (2015), comprehending the nature and the relevance of social determinants of health will empower societies to promote a "Culture of Health", by "placing well-being at the centre of every aspect of our life" where "everyone has access to the care they need and a fair and just opportunity to make healthier choices". In order to do so, awareness need to be raised and focused on the significance and the implementation of these factors within our societies, leading towards better lifestyle choices and health outcomes. There are a multitude of channels that can be used to convey information to the public, correspondingly it has been shown that mass media is a

useful tool in transmitting messages that resulted in patterning people's attitudes, behaviours and approaches to health. On the other hand, when it comes to the promotion of social determinants of health to the public, there is dearth of coverage, that can be explain by certain dynamics involving mass media communication, political and economic aspects.

Thus, the present research proposes to examine the impact of mass media on the social determinants of health and lifestyle of patients suffering from cardiovascular diseases.

2. **What are cardiovascular diseases?**

Cardiovascular diseases are defined as an array of diseases, related to the heart and blood vessels comprising coronary heart diseases, cerebrovascular diseases, peripheral artery diseases and aortic atherosclerosis. These diseases are linked to arterial blockage, due to fatty deposits along the heart arteries (atherosclerosis) and a heighten incidence of blood clots. In atherosclerosis, the deposits of fat, cholesterol and calcium within the arteries will result in increased rigidity and narrowing of the walls. Coronary heart disease happens when the blood flow through arteries is reduced or blocked, and the heart is not receiving oxygenated blood. This strain on the heart can cause angina, cardiac arrest or heart attack when the blood supply is cut off completely and heart failure, when heart is unable to pump the blood. Blood clots augments the risk of strokes when the blood flow to the brain is stopped. When the blockage is temporary a transient ischemic attack takes place. This can be considered a mini stroke and the effect can last from few minutes up to 24 hours. Usually, mini strokes are viewed as warning signs for major strokes. Other diseases included in this spectrum are peripheral arterial diseases, when the arteries leading to limbs are blocked, inducing aortic disease. Aortic disease affects the main aorta that carries blood from the heart, sometimes generating an aortic aneurism which can be life threatening as it may cause dissection of the aorta.

Worldwide there are 550 million people suffering from cardiovascular diseases, with a ratio of 1 in 14 people being affected by these illnesses, a number that continues to rise yearly (British Heart Foundation, 2020). Research has shown that since 1990 there has been an increase of 93 percent in people suffering from cardiovascular diseases (British Heart Foundation, 2020). The WHO (2007) forecasted a 17 percent increase in the morbidity from heart diseases, reaching to a staggering amount of 20 million deaths per year, with a ratio of 1 in 3 deaths. Ischemic heart disease and strokes are engendering, every year a massive strain on the health and economy of countries worldwide, being accountable for 11 million deaths yearly and 156 million affected and left with life-long disabilities (Lopez, Mathers, Ezzati, Jamison and Murray, 2006).

Cardiovascular diseases and their outcomes are preventable, if the risk factors are taken into account. There are a multitude of causes associated with cardiovascular illnesses and these factors can be grouped into unmodifiable risk factors (genetic factors, age, sex, family history of cardiovascular diseases); modifiable risk factors that are behavioural (smoking, physical inactivity, unhealthy diet) and metabolic (hypertension, diabetes, overweight and obesity); and socioeconomic factors (Mejla-Lancheros, et al. 2014). Nevertheless, there are contrasting thoughts with regards to which risk factors have a higher impact on cardiovascular diseases. Most of the research tends to concentrate on the "modifiable factors" as they are largely individualistic, while socioeconomical factors known as social determinants of health are researched but not adequately promulgated to the public. Detrimental actions such as smoking, a poor diet of unhealthy foods, sedentary life are factors that are interconnected with the social determinants of health.

The particularities of how these categories of risk factors, lifestyle and social determinants, interact with each other has not been properly researched. Medical treatment together with surgical procedures makes up the 20 percent that ensures a positive result in individuals suffering from cardiovascular diseases; the rest of the 80 percent is about

acknowledging the potential impact of social factors on heart diseases, which will empower patients to alter their lifestyles accordingly, leaving aside other reasons such as genetics, gender and age (Kreatsoulas and Anand, 2010).

3. Social Determinants of Health in Cardiovascular Diseases

Social determinant of health is a quite novel term within medical sphere, and it defines the conditions where people live, settings that are modelled "by the distribution of money, power and resources at global, national and local levels" (WHO, 2012). This comprehensive definition shows that these determinants of health encompass not only the socioeconomic factors and the environmental factors, but also contain health - related behaviours as well (Hood, Gennuso, Swain and Catlin, 2016). A large body of evidence emphasize that worldwide the groups with an elevated risk of cardiovascular diseases, leading to poor outcome, are the socioeconomically underprivileged, with reduced access to healthcare, low income, and education (Havranek, et al. 2015).

According to the WHO (2012) all these factors and behaviours are complex, multifactorial, correlated with each other, and structured into five groups: economic stability (poverty, employment, food security, housing); education (childhood development, language, literacy, secondary education, higher education); social and community life (discrimination, condition within a working place); neighbourhood (housing, food, transport, water quality, crime and violence) and healthcare (access to healthcare, health insurance, health literacy).

Emerging evidence points out that socioeconomic features such as health disbursement, healthcare systems, and income are corelated with a higher occurrence of stroke morbidity and mortality (Sposato and Saposnik, 2012). Financial issues act as a catalyst on a bad prognosis, in people with cardiovascular diseases, together with poor access to healthcare and health insurance (Georgiades, et al. 2009). Low income is related to a higher risk of ischemic stroke and increase mortality of heart illnesses (Hedblad, et al. 2008). Education level is a strong indicator of disadvantaged lifestyle behaviours and "a poorer cardiovascular profile, heart failure and stroke" (Skodova, et al., 2008). Similarly, employment can affect the outcomes of heart diseases, lower work positions being associated with unhealthy lifestyles and higher morbidity levels (Kivimaki, et al.2012). Unhealthy lifestyle habits such as diet and sedentarism due to "globalization and westernization phenomena" are linked to a higher incidence of cardiovascular diseases (Franklin & Kushman, 2011). Within medical and social field, there is a multitude of research that points us in the right direction with regards to understanding the risk factors for cardiovascular diseases. Using the right channels of communication, this information can be expressed to the public, to augment their knowledge and responsiveness in relation to this topic.

4. Mass Media Communication of Health Information

Mass media is an important tool, within the health care sphere, in conveying information to the audience by propagation of messages, aiming to elevate awareness or to alter attitudes, beliefs, and behaviours among a pre-determined population. For the past three decades, there has been an immense change in the way mass media communicates with the public, leading to a revolution within its field "that has blurred the traditional distinction between mass and interpersonal communication", hence modifying the ways of reaching the public (Abroms and Maibach, 2008). Previously, mass media was perceived as a "broadcasting media", due to the existence of a small number of channels and a vast audience; nowadays media shifted towards the other extreme, being characterized as "narrowcast" (Lefebvre, 2006). The massive increase in the numbers of media channels resulted in a decrease in audience size. Consequently, media communication tailored their programmes and activities according to their audience requirements, in a continuous "battle" to increase the number of viewers. Not to leave aside the "boom" of the internet, social media, websites, and blogs that radically reformed

the transmission and the availability of any type of information, including health information. Nowadays, online media and social networks "have managed to eliminate communication barriers, such as geographic barriers", consequently innovation and emerging research, regarding a multitude of topics from medical sphere are available and can be conveyed instantly to public (Bularca, Nechita, Sargu, Motoi, Otovescu and Coman, 2022). Therefore, these alterations can positively impact the field of public health, enabling the diffusion of relevant knowledge to a variety of social groups. Regrettably, the true effectiveness of these methods of communication has not been thoroughly analysed by the literature of speciality.

Newspapers have been considered and still are, in some countries, a significant source of knowledge, with the public being better at "assimilating printed information… in comparison to information from television advertisements" (Corston and Colman,1997). Additionally, in the eyes of the readers newspapers are ranking highly with regards to trust, using as sources reputable academic and research journals. On the other hand, the press is a commercial institution and at certain times more attention has been accorded to sensational news or incipient health threats than diseases such as cardiovascular diseases. Research pointed out that in general, newspapers "failed to include threat or efficacy categories of disease prevention information required to help inform and potentially motivate change" (Peinado, 2008).

Health information has been made available to the public mostly through public campaigns, with the aim to influence behaviours, yet on most cases their overall impact has been minimal, or none at all. (Noar, 2006). However, "in the context of today's fast developing society in which peoples' preferences are constantly changing, mass media must…adopt effective strategies to promote" its messages (Coman, Bularca and Otovescu, 2021). The successful campaigns, that persuaded and amended behaviours, are the ones that promoted "well designed messages…delivered to their intended audience with sufficient reach and frequency to be seen or heard and remembered" (Abroms and Maibach, 2008). The efficacy of certain public health campaigns is owed to their directionality, being aimed to individual - levels factors, such as anti-tabaco and obesity awareness advertisings across United States (Farrelly, Healton, Davis, Messeri, Hersey and Haviland, 2002). Furthermore, health campaigns are supported by additional material, such as the creation of websites for providing supplementary information, with their effectiveness in engaging with the public emphasised by a growing body of research (Strecher, 2007). Abroms and Maibach, (2000) highlighted that campaigns can "achieve large scale changes" only if there are founded on "social support, community norms, the availability of products and services, and other factors from nonindividual fields of influence". The essential aspects of health advertising, at the present time, are based on the target policy, that are attempting to change the individuals rather than the social system as a whole.

More than two decades ago, Nettleton (1997) drew attention to the public unawareness of how social determinants are shaping the health, with everyone believing that "the holy trinity of risk" is the culprit: smoking, obesity and sedentary life, a concept that is still current. The framing of the messages hypothesised by the media regarding health topics perpetuates that everyone is responsible for their own health, and poor decisions lead to poor health, ignoring the important social determinants in preventing heart diseases alongside other illnesses. Peoples' perception can be changed by underscoring the effects of social determinants of health on the incidence, morbidity and mortality of cardiovascular diseases in media communications to the public. Empirical research stresses that people's underlying beliefs about poverty", and about the "role of personal responsibility" are strongly affected by a variety of factors such as the individualistic aspects of the society (Gollust, Lantz and Ubell, 2009). Wilkinson (1996) highlighted how the influence of neo-liberalism in the organization of the economy around the world is leading to an increase in income inequalities and poverty. Thus,

the very concept of social determinants of health is in disagreement with the individualistic aspects found in neo–liberal theory. Here, the economic structure influence how wealth, income, influence and power in society is distributed, while mass media pursuits are a "reflection of societal structures that shape dominant ideological discourses" (Grabb, 2007). Subsequently, the media is being controlled by the same "market forces that increasingly dictate public policies", the corporate owners (Raphael, 2011). Recognising the importance of the social determinants of health and 'allowing' media to communicate them to the public will call for new policies. Enacting new policies, to address the inequalities in socioeconomic factors, entails financial resources, and a redistribution of wealth.

5. **Methodology Study**
To understand the effectiveness of media communication of social determinants of health, and to successfully employ media as a means of educating patients on the benefits of having a healthy lifestyle we will investigate a sample of patients at a private hospital. The aim of this paper is to identify the impact of media communication of social determinants of health on lifestyle of patients with cardiovascular diseases, in Pristina, Kosovo.

5.1. Study design and settings
The current study will be conducted on patients diagnosed with cardiovascular diseases that are admitted to the cardiac ward of United Hospital, Pristina, Kosovo during 2023. This clinical trial survey is used to investigate the effect of media communication on the awareness of social determinants of health in cardiovascular diseases, and if this knowledge will lead to lifestyle changes.

5.2. Study participants
The sample size was calculated to 50 individuals per group. Taking in consideration the possibility of dropout 104 patients was evaluated. The patients will be divided into two groups according to the score obtained on the HRSN Screening Tool: the group that scored lower and the group that scored higher. Allocation will be double blinded, so the allocator and the patient will not have knowledge of the type of intervention. The inclusion criteria for the study are related to the diagnosis of cardiovascular diseases by the cardiologist, age < 35 years old, to own or have access to a mobile phone, and to be able to read, write and speak Albanian. The exclusion criteria are changing the mobile phone number without informing the researcher and having an accident during the intervention leading to a disability.

5.3. Data collections
The tools employed in this research included, firstly, questions about the demographic characteristics collected with the help of the 10-item HRSN Screening Tool. The Tool can helps find out patients' needs in 5 core domains: housing instability, food insecurity, transportation problems, utility help needs, including age, gender, education, the place birth, access to health care, income and questions about cardiovascular diseases, such as onset of the disease, hospitalisation length, and compliance to therapy. The answers to these questions will be collected pre – intervention. Secondly, the patients will receive a Walker's Lifestyle Questionnaire, where they have to answer questions related to nutrition, physical activity, stress management, interpersonal relationships, health responsibility and self-realization. The answer to the second questionnaire is ranked on a four – point Likert scale (1 = Never, 2 = Sometimes, 3 = Often, 4 = Always). The Walker's Questionnaire has a maximum score of 208 and a minimum of 52, while the score for each area can be calculate separately, while the high score is an indicator for good health. Patients that scored under 102 have a poor lifestyle,

between 103 - 156, an average lifestyle, 156 and above is an indicator of good lifestyle. The answers to this questionnaire will be collected before and after the intervention.

Data was collected from the patients before and after 4 months after the intervention. Firstly, the research objectives were explained, and the informed consents were collected. After the discharge of the patients a chat group was created, and the patient were added in the group. Through the chat group they received informative and educational material regarding, as text and videos, regarding the cardiovascular diseases, causes, risk factors and about the social determinants of health. The majority of information was constructed around the role of social determinants of health in cardiovascular diseases. The information was sent every three days to the patients. All the data will be analysed using SPSS Inc., Chicago, statistical software (IBM Corp., 2020).

6. Expected Results Study

Providing education through social networks and media will heighten peoples' awareness of social determinants and health – relating behaviours leading to a better lifestyle.

In the present study the groups are divided based on social determinants of health. The group that scored higher on the HRSN Screening Tool is anticipated to score higher on the Walker's Life Style Questionnaire as well, while the group that scored lower on HRSN Screening Tool is expected to have a lower health related behaviours with regards to life style.

7. Conclusions

Mass Media can be considered a powerful tool in providing information, education and modelling the attitudes and behaviour of the public. In the health and social research field, there are a plenitude of incessant emerging new evidence, that necessitates to be communicated, as this type of information is a latent prospect for societal gain. The results of the present research will show how knowledge of social health determinants will impact the patients' lifestyle choices, in Pristina, Kosovo. Furthermore, the effectiveness of media communication is examined, with the finding illustrating any impediments to message transmission to patients.

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