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Are We Transformed to Confused Decision-Makers? The Impact of Digital and Conventional Media on the Health-Relevant Choice and Information Overload

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Abstract

During H1N1 and Coronavirus pandemics, there has been a global info-demic. We have seen an immense rise in the production and dissemination of health-relevant information and choices. Biomedicalization and pharmaceuticalization paved the way for the proliferation of many products, services, and advice. This process has also enhanced the dissemination of misinformation and conflicting information. This study investigates how information overload influences health-relevant decision-making and behaviors, and how the overload of healthy life messages creates confusion and indecisiveness about ideal healthy life behaviors through mass communication, the internet, and social interaction. It provides examples from digital and conventional media and data from primary and secondary findings. This paper was prepared and organized as part of a doctoral dissertation for the period anteceding Coronavirus pandemic and did not focus on this pandemic, however, it may provide some foundational explanations about the Coronavirus info-demic.

Keywords: information overload, choice overload, indecisiveness, health information, info-demic, decision-making, misinformation.

1. Introduction

The volume of production exceeding the demand has occasionally raised such topics as information overload and choice overload. An overload and abundance in the supply, demand and consumption of many kinds of information and products has always followed the developments in the relevant industries throughout history. For instance, after the invention of the printing press, progress was made in scientific fields and technology, resulting in changes in the perception about access to information and consuming it as well as triggering many changes in individual and social life. Later on, the developments in the culture industry (cinema and television) coupled with the commodification of cultural values produced a consumer audience and the consumption of products of the culture industry. We can see from 1950s onwards that body and health-relevant issues and advice had an increased visibility in conventional media and social interactions. The visibility of healthy life advice was amplified as a result of the developments in medical technologies, health communication strategies, social and cultural changes, and these have regulated the proactive health behaviors since then. Health advice in modern terms is not a recent phenomenon and dates back to the 1800s. It was introduced by the authoritative professionals (primarily doctors) at the beginning of the 19th century along with the emergence of industrial modern society. Now at the beginning of the 2020s, popular culture and consumer culture prevail in disseminating these. Besides advice in media, digital media, and word of mouth health communication, nowadays, the healthy life images, messages, and information are attached to so

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many products, to nutrient product packages, into restaurants, cafes, and many other public places to transform the citizens into health-literate consumers and provoke them emotionally.

Starting in the 2000s, the overproduction and distribution of health-relevant messages emerged as a result of the involvement of lay people in organizing health communication and behavior management in addition to the top-down media and internet streams of information. When we consider the aspects relevant and specific to this study, that is health information (advice), we see that the production of health-relevant information had already increased in the context of modernist state goals even in the 1930s and 1940s during the periods of both Salazar and Atatürk. Healthy life choices and advertisements were disseminated in mass media faster than in previous decades. However, these were still limited to such commodities as toothbrushes, painkillers, nutritional supplements, or advice on sports and exercise. In due course, this gradually changed along with advancements in marketing, food, and information production technologies during the Post-War years. After the Post-War years, an overload in the supply of health-relevant products and information emerged in the process of globalization. In conjunction with this, an increasing number of people in Portugal and Turkey have constantly been exposed to such advice due to developing health communication technologies. In accordance with neoliberalist consumption norms, the health-relevant products, advice, and services spread throughout society as marketable commodities to be consumed without restriction by the policy-makers, interest groups, and organizations.

Health promotional activities have successfully convinced, been manipulative, and imposed the behavior changes through fear-producing discourses. These moral and emotion-targeting discourses are easily associated with the commodification process in such a simplified fashion: “If you do not want to experience this problem, you should do this and that”, with suggestions of products, services, and ideal behaviors for a healthy and beautiful body. Even public health customs and practices are reinterpreted and new neoliberalist consumer slogans are derived from these.

The consumer society members having a compulsive demand for narcissistic investment (Baudrillard, 2008) are also likely to have a compulsive demand for information. However, this demand for information and products alternately brings about the production of a variety of choices by the entrepreneurs, but not necessarily an overload of choices, including conflicting advice overload. This variety of choices can be seen in the constitution of many groups of experts supporting some theories (supporters of proteins carbohydrates in Facebook, enemies of fat or sugar, low-carb consumers in Instagram, macro-counters, and social media cultural intermediaries, etc.). In conventional or digital media, one dietitian or nutritionist asserts that any type of sugar use is fatal, so the fruits should be consumed very carefully (Karatay, 2018), another may assert the opposite (Sousa, 2014). Here, the neoliberal market and media have acquired a position in which they can ignorantly lead people to indecisiveness by not controlling information replication and pollution.

As labor-force of neoliberal health market and media, the cultural intermediaries have long been one of the most important actors organizing this global health decision-making process. In the literature, there is a variety of different names and terms to define them. Gomes calls them health brokers but we may call them cultural intermediaries (actors) as Bourdieu and others named them (Gomes, 2010; Bourdieu, 1984). Featherstone attaches particular importance to the role of cultural entrepreneurs and intermediaries in health commodification and advice. He defines them as those people creating postmodern pedagogies, educating the public, and being engaged in fashion occupations and symbolic production in consumer culture and popular culture (Featherstone, 2007: 10). “They produce popular pedagogies and lifestyle guides...They can be found in market-oriented consumer cultural occupations – the media, advertising, design, fashion, etc. – and in state-funded and private helping professions counseling, educational and therapy occupations” (Featherstone, 2007: 35). Featherstone’s definition has long been appropriate and sufficient for relevant issues. However, this definition should be developed to include the present issues of today regarding the exploitation in health. In this regard, we can add another function of this group; today, they may also fulfill a duty of “disease mongering” within the scope of medicalization, biomedicalization, para-medicalization, pharmaceuticalization, and pathologization activities. Disease mongering is a function of medicalization, a proactive practice, which labels many conditions as illness, increase the publicity of these newly defined “disorders” so that some cures for these can be produced and offered by the market, for further reading, please see (Fontecilla, 2014: 104-107). The number of disease-mongering activities and cultural

intermediaries that target health-related decision-making has drastically increased in line with the increasing usage of internet technologies, mainly social media applications such as Instagram and Facebook. The dissemination of information that guides the decision-making has drastically increased as well. Today, even the smart-bands (smart bracelets), smartwatches, or activity tracking applications in smart devices function as cultural intermediaries and they offer some behavioral norms as imperatives of commodified ideal health. Levitin indicates the information literacy deceptions full of biased or pseudo-scientific health information including the disease-mongering activities in the following example: “If you are looking up a particular prescription drug and trying to figure out whether you want to take it or not, the first thing that is part of information literacy that every eight-year-old should know is, whose website are you on? Is it the drug manufacturer’s? Might there be a biased information on there? Is it the site for the manufacturer of a competing drug? Maybe it is some sort of shadow site for the manufacturer of a competing drug under the name *americansforbetterhealthcare.com* or something like that” (Levitin, 2014).

Especially in Instagram and Facebook, cultural intermediaries are defined as “influencers” and “lifestyle coaches”, they are taking the commodification issue several steps further. Many famous “lifestyle experts/coaches” or popular social figures (actors) disseminate images, videos, and texts about their healthy lifestyle and body exercise activities and relevant advertisements on social media. These are organized to govern and manipulate people’s decision-making in a convincing manner, thereby they decide to consume that particular brand or act in the proposed or imposed manner. For instance, in Portugal, we can check this website that has a genre-based name, not a brand name: <https://www.saudebemestar.pt/pt/>. It has much advice on general healthy life issues which can be easily accessed through search engines. However, in some messages and pages, it can also be easily observed that these information sources belong to specific investor groups in the medical and pharmaceutical sectors. Anyone can find visible or hidden advertisements and commodified advice that go beyond “the needs and wants” discourse.

Johnson focused on the similarities between production and consumption of food and information, on the similarities between production models of these markets and sectors. In media, one can easily find examples for the health information production models, which provide sensational information to attract readers accustomed to consuming such information. Johnson claims that consumers prefer this sensational information rather than informative ones: “The food companies learned that if they want to sell a lot of cheap calories, they should pack them with salt, fat, and sugar—the stuff that people crave—and that affirmation sells a lot better than information... These media companies are driven by a desire for more profits and for wider audiences and produce information as cheaply as possible. As a result, they provide affirmation and sensationalism over balanced information” (Johnson, 2012: 6-10).

Johnson claims that the production and consumption models are similar in the food and media industries. That is to say, the targeted emotional consequences or outputs are similar and the information is now “consumed”, not acquired systematically and pedagogically due to the information overload. He establishes a relationship between over-supply and overconsumption in the food industry. He states that it is applicable for media industries, too: “In the food industry, the cost of a calorie has been reduced down so low that now obesity has become more of a threat than famine. The food supply became more abundant, and access to it improved. Obesity is no longer just for a fortunate few” (Johnson, 2012: 6-10). His notion assumes that overconsumption occurs as a result of these kinds of production models, which have mostly become cost-effective: “the media companies learned how to produce and distribute information in an almost free manner” (Johnson, 2012: 6). In a Bourdieuan way of thinking, this notion proposes that the food-nutrition industry has changed the products and the tastes of people, so have done the media-internet industries. Esitti refers to the capitalist justifications for this similarity in food-information production and consumption: “Media companies target more profits and a wider audience. To reach this goal, they produce as more cost-effective information as possible. After awakening to the fact that sensational and sexually explicit information is consumed more than informative content, they focused on producing more magazinish information and news instead of informative content and entered into a competition. Such elements as the sensational and sexually explicit information, advertisements, public relations activities, informational intervention, propaganda and spin doctors came to the fore in new media” (Esitti, 2015: 82).

The following headlines taken from newspapers can exemplify the sensational information produced through a communication technique that blends food and information production and

consumption models. These sensational news headlines are produced to manipulate the emotions of those demanding health information:

- “Mushrooms Beat Cancer” – (*Mushrooms...*, 2009).
- “Blood Pressure Risk from Salt” – (*Blood...*, 2013).
- “Eating Fat Is Good for You” – (*Eating...*, 2013).
- “Processed Foods are Driving Up Rates of Cancer” – (*Processed...*, 2018).
- “Eat Up, Fat is Good for You” – (*Eat...*, 2016).
- “Diet That Will Add Years to Your Life” – (*Diet...*, 2012).
- “Diet That Will Add Years to Life” – (*Diet...*, 2014).
- “Healthy Diet to Beat Dementia” – (*Healthy...*, 2014).

In Web 1.0, people received healthy life advice from cultural intermediaries and applied this information to their lives and behaviors. Now, we have transcended the limits of Web 1.0, we have social media and Web 2.0. In Web 2.0, the opportunity for people to share information has contributed to information and choice overload. The number of healthy life advice sources through which we are expected to make the decisions has exploded. Schwartz attributes this information bombardment to the emergence of healthy life information dissemination on the internet: “It is not just a matter of listening to your doctor lay out the options and making a choice. We now have encyclopedic lay-people’s guides to health, “better health” magazines and most dramatic of all, the Internet. So now the prospect of a medical decision has become everyone’s worst nightmare of a term paper assignment, with stakes infinitely higher than a grade in a course” (*Schwartz, 2006: 32*).

The overload of choices and information has also transformed lay-people into cultural intermediaries, consumers of this overload, and decision-makers. Within the context of this transformation into information consumerism, a majority of people’s habits were altered to cover the utilization of these information technologies. In the 2010s, almost half of the day of many people has been allocated for consuming a variety of information choices, Johnson underscores which kinds of information transform us into infosumers (information consumer) as follows: “People spend more than 11 hours per day consuming information—reading newspapers and books, checking out friends’ Instagram and Facebook pages, reading the newspaper, watching television, listening to the radio or portable music player. For those who work in front of a computer all day, the number of hours is even more, spending all day reading and writing in front of a screen” (*Johnson, 2012: 4*)

As held by Johnson, extensive consumption of information, “can have physiological effects on our bodies, as well as fairly severe and uncontrollable consequences on our decision-making capability” (*Johnson, 2012: 5*). Accordingly, the decision-makers and regulating structures, aware of the power of information on decision-making capability, develop management techniques through which they overproduce information and manage their marketing strategies. The market research companies use many eye-tracking glasses or devices to monitor and observe the decision-making patterns and habits of people from each class. Many digital mouse-tracking software are employed in online shopping sites. Many analyses are conducted to observe people’s decision-making and emotional reactions to images, messages, or sensational information. By using such techniques, they affirm the relationship between this information consumption habit and manipulation. The ruling classes reproduce their power through these and produce well-elaborated governmentality.

Overload of Healthy Life Advice and Indecisiveness

In indecisiveness literature, many scholars focus on the influence of the IO on the emergence of confusion and indecisiveness (*Ozkan, Tolon, 2015: 33; Walsh et al., 2007: 704*). However, none of these scholars have focused on the impact of the overload of health advice on relevant health behaviors. Many people seeking advice about losing weight are exposed to very different kinds of diet regimes, many of which set off with conflicting assumptions and data sets and offer very different philosophies and lifestyle recommendations. In the middle of all these conflicting regimes, clear and understandable ways of managing health are created and destroyed by the diet market and media. Ozkan and Tolon assert that decision-making will be impacted by the confusion emerging after being exposed to the overload in the market: “confusion causes the misunderstanding or misinterpretation of the market by the consumer who wants to find the optimal solution for himself/herself with the results not displaying the expected performance during the consumers’ decision-making process” (*Ozkan, Tolon, 2015: 33*). In the same line with Ozkan and Tolon, Mitchell and Papavassiliou state that decision-making may be more complicated

and stressful as we can see in Simmel's urban complexity, too: "The number of products, the increasing amount of information carried by each brand about their products, the product proliferation and production of a decision-making imperative could cause the consumers' exposure to information overload and the consumer confusion, resulting in stress and poor decisions" (Mitchell, Papavassiliou, 1999: 319).

A combination of delay in decision making and postponing the act of buying (see: purchase avoidance) is deemed to be another consequence of indecisiveness or confusion (Ozkan, Tolon, 2015). Ozkan and Tolon found statistically meaningful relationships between IO and indecisiveness. They also found that this confusion has a negative effect on consumers' buying decisions, leading to a decrease in purchasing behavior (Ozkan, Tolon, 2015: 27). According to Malhotra, the "information load" may lead to decision difficulty with undesired consequences (Malhotra, 1982: 419), an undesired consequence for both the market and the consumers. Fletcher and Wald also make references to this possibility in terms of health-related indecisiveness: "Confusion is central to consumer protection because confused consumers may suffer physical harm when they unknowingly buy a product other than the one they intend to buy" (Fletcher, Wald, 1987, as cited in Mitchell, Papavassiliou, 1999: 324). These opinions and data should be updated with reference to the possibility of increased risks associated with increased information pollution and imitated products in many areas of life, such as food, non-prescription drugs, supplementary nutrients, beverages, and cosmeceutical products, but not limited to these.

The macro implications of this limitless and uncontrolled dissemination of health advice may be striking. While the health market overloads the customer with information and choices, it may also hinder the expansion of the market, by producing permanent indecisive, indifferent and unconfident consumer groups tending toward the purchase and decision avoidance in such phenomena as anti-consumerism and resistance against vaccination. Johnson underscores other possible impacts of information and choice overload, the influence of sensational diet philosophies on the health-related decision-making: "No matter which way you turn, abundant information makes it easy to distort our relationship with food into something unhealthy. If you're looking to surf through a land of false promises, spend a few minutes in the diet aisle of your local bookstore. You can lose weight by thinking like either a caveman or a French woman, or by eating only food that's cooked slowly. You can lose it, says the updated 2012 edition of *Eat This Not That!* (Rodale Books), by simply swapping in a Big Mac® for a Whopper-with cheese®" (Johnson, 2012: 16)

Johnson attributes the existence of such complicated and conflicting philosophies to the free market: "The emergence of these kinds of false premises is unavoidable in a free society: the right answers— healthy information—compete side-by-side with the answers we may want to hear but which may not be true. Only the highly nutritionally literate can easily tell the difference" (Johnson, 2012: 17). Similarly, Kuo underscores a possible correlation between less indecisiveness and high literacy despite the choice overload: "Even though consumers might feel overwhelmed or dissatisfied under an extensive choice variety situation, those who are high in product expertise will suffer less than those who have less expertise about the product they are customizing" (Kuo, 2010: 38). Being uninitiated about health issues or highly health-literate can impact the levels of indecisiveness in a given health decision-making case, however, here again, it should be kept in mind that both of these two types of consumers are exposed to an overload and no serious structural mechanisms protect them from decision difficulties.

Johnson brings another perspective and argument to the information overload issue. According to him, IO is not a problem, for him, the main problem is 'information overconsumption' (Johnson, 2012: 4-26). In his definition, he uses information overconsumption instead of "maximum capacity" discourse or "information overload" as most scholars did in the literature. This perspective could offer new insight in the related literature, in the construction of policies to eliminate the low-quality information production. However, this could also be counted as one of the blaming-the-victim discourses of biomedical perspective, because the overconsumption cannot be controlled only by the individuals. Without people's consent, all kinds of mass communication products, an incredible plethora of healthy life advice, and related issues appear before their eyes in public spaces and daily conversations.

Another biomedical categorization and stigmatization in information overload literature is the concept of "information obesity", similar to Johnson's "information overconsumption" concept. The overconsumption notion makes references to the individual free will instead of structural mechanisms that also regulate decision-making. However, Esitti developed another perspective

that does not dare to blame the victim as the “victim” is not aware of the stigmatization. For him, “the information obesity has turned out to be an inevitable result of the disfunction emerging in media. Accordingly, it has become almost impossible for the people to refrain from the information obesity, even to notice it” (Esitti, 2015: 83). Those leading suppliers of healthy life advice and conflicting ones should also be kept responsible for managing health care, because these suppliers contribute to information pollution and information overload, too. For instance, as one of the world’s biggest news and information suppliers, Twitter had to deactivate more than 70 million user accounts so as to eliminate the information pollution, even though this meant a decrease in the number of users by almost 20 % (Reuters, 2018). However, this elimination by the immense information disseminator platform shows us that this regulation is two faceted, one for the individual (agency) and another for the information providers and policymakers or structural factors (structure).

Mitchell and Papavassiliou stress the importance of respecting the ethical norms in information production for advertisements: “Even though the law and regulations require that advertisements should be honest, and truthful, with a sense of responsibility to the consumer and society, in line with principles of fair competition, little protection from information overload or consumer confusion is provided” (Mitchell, Papavassiliou, 1999: 324). In Portugal and Turkey, there is no specific protective law and application that underscore the influence of the accumulation of advertisements. Regulatory organizations have not conducted any serious analysis about the impact of the accumulated messages and sanctions on health decision-making. In recent years, some improvements have been made in the dissemination of health information in the conventional media of these two countries; however, the inclusion of social media in health communication has paved the way for another discussion, the necessity of considering the cumulative effect of all these media, messages and images. Mitchell and Papavassiliou have focused on this cumulative impact of discourses and advertisements in media: “this may be because overload generally results from the accumulated effects of many advertisements rather than being caused by any single advertisement or promotion. It could be argued that the codes should address this cumulative effect as well as the confusion resulting from any single advertisement” (Mitchell, Papavassiliou, 1999: 324). This cumulative effect can mainly be analyzed with powerful software by information technology enterprises; however, overload can even be observed in many mass-communication devices. This notion can be developed to include the cumulative effect of the advertisements and information overload and information pollution, choice overload relevant to health, too.

Today, the plethora of healthy life products and services is almost limitless. The information about how to use this variety of products and services comes in the form of an overload when the accumulation of the information received is taken into consideration. Among these various choices in the market, some sources offer some possible conflicts or confusion in information and meaning. This “confusion usually arises from three main sources, (1) over-choice of products and stores, (2) similarity of products, (3) ambiguous, misleading or inadequate information conveyed through marketing communications” (Mitchell, Papavassiliou, 1999: 320).

From the sociological perspective, Giddens focused on “late modernity’s role in fostering a diversity of lifestyle choices, the necessity of having to choose and the tendency of choices to cluster in particular patterns...” (Cockerham, 2013:134). In this regard, the similar products, the ever-increasing diversity of lifestyles, communication styles, the pressure emerging out of the information, and choice overload may be leading people to an indecisiveness or decision difficulty in terms of how to regulate the health behaviors, how much sugar, meat or bread to consume, how long to “do work-outs” or “six-packs” etc. .

The inefficient replicates of original information and products are not monitored attentively by the states or suppliers. The consumers can come across such diet regimes or lifestyle practices as “Keto”, “Paleo”, “vegetarian”, “vegan”, “Mediterranean”, “raw”, “low-carb”, “intermittent” “fasting”, “no-sugar”, “Atkins”, “weight watching”, “zone”, “17 day diet”, “alternate day diet”, “calorie counting”, “South Beach”, “Dukan” etc. . The health-literate consumers can experience decision difficulties or distrust some of these as they can observe the conflicts or contradictions in the relevant messages.

Mainly in internet marketing of consumer-oriented advice, there is a lack of a filter of choices. The emerging inability to filter the choices offered in the market may be another consequence of IO and the reason for the confusion felt by the consumer. Mitchell and

Papavassiliou point to this strain and difficulty with the "shopping fatigue" concept and assert that this fatigue could lead to a considerable strengthening of the anti-consumerism movement in Europe, as already observed in the USA and Canada (Mitchell, Papavassiliou, 1997: 172). As healthy life consumerism is one area in which tens of foods in many diets are considered as healthy or unhealthy in a manner and intensity that may create indecisiveness, it may be another area prone to anti-consumerism. Today, anti-consumerism extends to such divergent health-relevant areas as anti-vaccination and minimalism in nutrition and stands as a socio-political problem constructed by the neoliberal market structure.

Indecisiveness can be experienced in macro levels of healthy life regulation as well as in micro and meso levels. According to Santos, even the healthcare providers may experience indecisiveness about the nature of the emerging information and its impacts on their decision-making (Santos, 2017: 2). Boateng also makes references to macro levels and to an increasing difficulty in managing the complex health systems of the present time: "Modern health care systems are confronted with the task of effectively managing the resources necessary for improving the health and wellbeing of those they are committed to serving. Fulfilling this task successfully implies sound and effective decision-making at critical points throughout the entire system" (Boateng, 2007: 14)

The regulations and applications employed by the non-governmental bodies and structures, the state organizations, enterprises, and international organizations may collide or be in direct conflict because all these organizations have distinctive targets, interests, strategies, and information sources besides common or similar ones. It is also caused by the variety of decision-making mechanisms, the number of sources, and the agendas structured in line with the targets of these bodies. Some references to the complexity of decision-making in different levels can also be seen in the following interpretation by Boateng: "The contemporary healthcare systems can be divided into macro-, meso-, and micro levels of decision-making. Each level has a distinct mandate, but all are linked to contributing to overall healthcare system performance" (National..., 2005; Wilson et al., 1995, as cited in Boateng, 2007: 14). Here, it is essential to note that almost all macro-level health structures, World Health Organization being in the first place, experienced an ultimate level of indecisiveness in managing the Coronavirus pandemic. Other organizations and individuals perceived these macro-level decision difficulties because of the cumulative impact of the contradictory information disseminated by WHO.

In the diet industry, hundreds of studies, popular articles, books, and reports focusing on weight, fat, sugar, and fast-food issues are published each year. Some of these are even funded by the enormous enterprises making production in these issues which are stigmatized in society. These are even employed in the health policies of the health organizations. It is held that a glass of wine per day may be healthy for the heart. However, this is disproved by some studies announced in Turkish, Portuguese, and global media (Sputnik..., 2019) and there are some doubts (New..., 2016) about such propositions as the researches claiming its healthiness may also be funded by the alcohol companies as in the unclear history of the promotion of smoking from the 1960s until the 1980s. In these sources, it can also be observed that maximum alcohol consumption is recommended in Portugal at a higher level than in the UK, if it is 50 ml per day in the UK, it is recommended to use 75 ml in Portugal.

Hundreds of examples can be found about tens of different health-relevant issues as information is produced and disseminated in digital and social media for almost everything, even at the molecular level. I have picked only one simple example to show that there are conflicts that the health-literate consumers can encounter in a cumulative manner over time. The example is about the messages about walking and the messages have been extracted from the websites of national newspapers in Turkey and Portugal.

In Turkey, one can come across a diverse range of advice in conventional media or social media concerning the daily walking imperative, some of which present conflicting numeric figures or claims. For example, there are references made to the benefits of walking 20 minutes a day in a CNN Turk article (Citci, 2016), to walking or being active for 25 minutes a day in a Yeni Akit article, (Sagligimiz..., 2018), to walking for minimum 30 minutes a day in Milliyet article (Ozlem, 2015), to 6 benefits of walking 30 minutes a day in a Sozcu article (Kaya, 2017), to the imperative of starting walking for 15-20 minutes and increasing it to 45-60 minutes in another Milliyet article (Haftada..., 2015), to the imperative of starting walking for 15-20 minutes and increasing it to 30-60 minutes to lose weight in a Haber 7 article (Kilo..., 2016), to the imperative of walking with

10.000 steps a day in NTV article (Gunde..., 2017), to taking 2000 steps to maintain the weight, but the literally suggested advice is taking 5000-10.000 steps in a Vatan article (Arslan, Arslan, 2018), to taking 5000-12.500 steps a day in a Sabah article (Gunde..., 2018) and a Hürriyet article (Muftuoglu, 2016). Here, we can see that there is a variety of advice and choices starting from 15 to 60 minutes, from 2000 to 12500 steps, and references made to the accuracy of each advice. As for Portuguese sources, references are made to walking for 10000 steps a day in a Sapo.pt article (Baptista, Miranda, 2018), to walking 8 km and 10 minutes and 3 times a day in a Diário de Notícias article (Três..., 2018) and to 30 minutes a day and variations in a Beleza e Saude article (Que..., 2018). In terms of walking, Turkish sources were found to have more variety in terms of conflicting claims.

Many different healthy life messages, namely, choice overload, may be observed to conflict with each other in terms of applicability, meaning, scientific correctness, and knowledge quality. The “conflict” concept is used in this study for the information received from different sources that collide in meaning and accuracy. For instance, one source states that fat-based nutrition is healthy and carbohydrate-based nutrition is unhealthy, whereas the other source states the contrary. Such information is conceptualized as conflicting in this study. We can argue that the increase in healthy life messages may also increase the number of “conflicting” or “contradictory” ones. These conflicts in meaning and the difficulties in healthy life decision-making should not be reduced only to the health-related perception, knowledge level, and responsibility of lay people (individuals). However, they should also be attributed to the structure of the healthy life market, the inefficient management or regulation of the health promotional activities in digital and conventional media. Hemp holds that the digital media facilitated the IO, and that the magnitude of the loss of resources by this information pollution was very high even ten years ago: “Digitizing content also removed barriers to another activity first made possible by the printing press: publishing new information. No longer restricted by centuries-old production and distribution costs, anyone can be a publisher today...Information overload costs the U.S. economy \$900 billion a year” (Hemp, 2009).

In a similar vein with Hemp, Schwartz asserts that the “internet can give us information that is absolutely up-to-the-minute, but as a resource, it is democratic to a fault — everyone with a computer and an internet hookup can express their opinion, whether they know anything or not” (Schwartz, 2006: 55). Here, it would be useful to explain the distinction between ‘information overload’ and ‘information pollution’. In information pollution, the poor quality of the information concerned. In principle, information overload is possible with both high and low-quality information and this is a fundamental problem. Too much information is disseminated, especially on the internet and this makes the human brain to process this information more difficult and to arrive at useful results with the quantity of available information. Even if there were little information of only very poor quality, it would possibly confuse and even mislead the decision-maker. When the information overload and information pollution coexist, they confound the problem by a multiple. Together, these generate complexity and obfuscation. Even though people are media literate, they do not always perceive whether the cultural intermediaries or content generators lead them with correct and quality health information.

As this study also inquires the influences of the information disseminated lay-people, the overall impact of information overload is not limited to those by cultural intermediaries. It should be noted here that our minds can be the final destination as trash bins of other people, of their inaccurate or misleading information. This process impacts the reliability of internet-based information received through any communication technology device. In a research study conducted by the RAND Corporation more than one decade ago, the quality of websites with medical information was evaluated. Nearly all of these sources were found insufficient in quality. It was figured out that the information presented was occasionally misleading or inaccurate. Besides this study, some surveys indicate that these websites influence the health-related decisions of 70 % of the people who are exposed to health-relevant messages. They are inclined to start applying this information to their lifestyles to protect their health in line with their expectations from information and products marketed (Schwartz, 2006: 55). Besides the findings of Schwartz, Pew Internet and American Life Project also found that health information changed thinking patterns (PIALP, 2009).

According to a study conducted in Turkey over 600 texts about health-related news and articles, 29.1 % of the texts have a sponsorship relationship and 65.9 % of these include advertisements. (Can et al., 2014: 486-489). The majority of the healthy life messages and advice

one comes across has financial concerns. It initiates the pressure to make consumption decisions before a plethora of choices offered by capitalist markets. The choices concerning therapies are usually made with misinformation (unintentionally formed missing or incorrect information), in an entirely emotional and anxious atmosphere/mood. As one can conclude from such instances, health information should be correct, clear, applicable, and informative to be impactful in the decision-making process (Cinarli, 2012). Unfortunately, it has become too easy to find example cases that demonstrate that the health information reality is far from the ethical and desired level for the benefit of the public.

2. Materials and methods

This paper mainly discussed the relevant academic literature, made use of primary and secondary findings to inquire into the relationship between media-induced information and choice overload and indecisiveness. The research question of this study was: "How does information overload (advice-messages) creates confusion and indecisiveness about ideal healthy life behaviors through mass communication, internet, and social interaction?". It promises to answer this question by referring to various scholars' former theoretical and empirical contributions from diverse disciplines and crosschecking primary and secondary findings. The general conceptualizations of these scholars about health-relevant perception, choice, and decision-making and their interpretation about media impact on the perception, decisions, and behaviors were discussed, adapted, criticized, and developed in terms of healthy life issues. To explain the theoretical relationships and to be more precise, this paper provided some example cases from mass media and newspaper websites. The findings of an online survey study were also provided to subject the arguments to a test and relevant findings were presented. This study was organized in a theoretical argumentation fashion proposed by Rettig's and Paolucci et al.'s models: perception (reception), decision, and action (behavior) (Paolucci et al., 1977; Rettig, 1993).

The internal consistency and reliability (Cronbach alpha) for the scale was calculated as ,828. The scale consisted of 26 items. The researcher developed the scale as no other scale focusing on the issues to be investigated was found in the literature. This study targeted to investigate the issues through a holistic and integrative perspective, so did not use the scales based on reductionist perspectives seeking the answers in individual capacities and qualities. On the contrary, some items making references to the social, market-related, and organizational impacts and considering the relational structures were developed to have a more holistic view of the relevant issues.

After data collection through the online survey, the coding and analysis were conducted through the IBM SPSS 23[©] software. In the analysis process, such simple descriptive analysis techniques as frequency analysis and cross-table analysis were used. The online survey was conducted through Esurveycreator.com (Now Surveyhero.com) software. The link of the survey was distributed on social media platforms such as *Facebook*, *Twitter*, and *Reddit* in October and November 2019. The size of the sample group was calculated as 400 respondents, 196 respondents from Lisbon, with a 0.07 margin of error in 95 percent reliability gap, and 204 respondents from Istanbul, with a 0.07 margin of error in 95 percent reliability gap. A sample calculation table belonging to a private research company's (Aksoy Research Company, Turkey) was used to define the sample size.

The sample group was defined as the health-literate consumers that use the internet, social media, forums, and other interactive platforms. The lifestyle practices, awareness, and experiences of this group are statistically and empirically more significant than the characteristics of the general population because the data from this group could provide better responses to the research question of the study. Health literacy was used as a quota to incorporate the relevant respondents into the investigation process. In doing this, a quota question was used at the beginning of the survey: "Do you think that you have enough knowledge of healthy life advice to be able to meet your daily bodily and health-related needs?". When the respondent did not see himself/herself as a health literate person, s/he chose the option "no". Then, the interview was stopped thanks to the algorithms of the online survey software. In the survey, the quota question included only the participants that define themselves as health-literate. There are some measures used to define health-literacy in the literature, however, these usually focus on measuring the level of health knowledge, and there is a risk of a condition in which the respondents may feel that they are being tested in terms of the level of knowledge. If the respondents hold that they can maintain

healthiness or wellness in everyday life thanks to the available knowledge they have, such a conceptualization of health literacy can be deemed sufficient.

Other than health literacy, gender, and country quotas were also used. In this context, it is safe to say that this study made use of quota sampling, however, the principal technique was purposive sampling.

3. Results

Above, some methodological details about the online survey study were presented. After these explanations, some findings from the survey will be presented below with references to the theoretical arguments discussed in the text. And finally, the relevant interpretation of the findings will be provided in the conclusion.

The rate of respondents by gender is as the following 51,3 percent (205 respondents) female, 48,0 percent (192 respondents) male, the rate of other gender category is 0,8 percent (3 respondents).

Below, four items from the online survey were presented as supportive data for the arguments of this paper. The graphics manifest data from Turkey and Portugal, and also an average of these two countries is presented as 'global'.

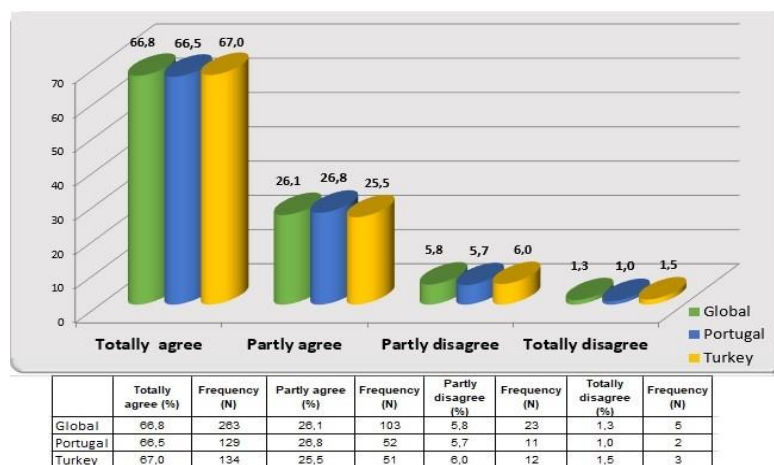


Fig. 1. In media and the internet sources, I come across health advice and information which are in conflict with each other

This item inquired into whether the internet and media are the main sources of conflicting health information and advice. Findings revealed that these conflicting messages are encountered by a great majority of respondents (92.9 %) upon the reception of the overload of advice through media and the internet. They encounter conflicting health information and advice on the internet and media sources. This finding belongs to the period before Coronavirus info-demic but reflects the memory of the recent past. So, it may be safe to read the process of Coronavirus info-demic as a continuum of the past. There may be slight changes in these rates after or before info-demic, but the finding shows that the health-literate consumers were already aware of the conflicting information on the internet and in media. No significant statistical difference was found between the data collected from respondents in Turkey and Portugal.

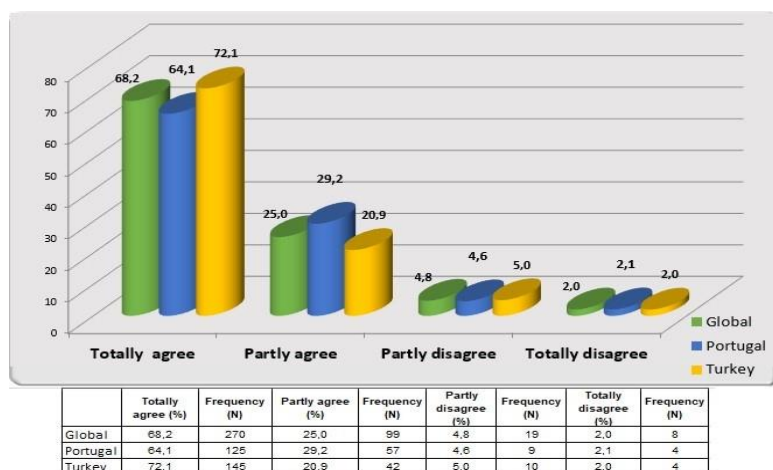


Fig. 2. Internet and media distribute confusing health advice whether I like it or not

It was an important issue to inquire about whether the internet and media disseminate the confusing health information and advice that may lead the respondents to indecisiveness. The findings revealed that the confusing messages were disseminated through the internet and media. 93,2 percent of the respondents totally or partly agree with the statement that the internet and media distribute confusing health information. They confirmed that they have no control over this dissemination of conflicting advice on media and the internet. There was no significant statistical difference between the data collected from respondents in Turkey and Portugal.

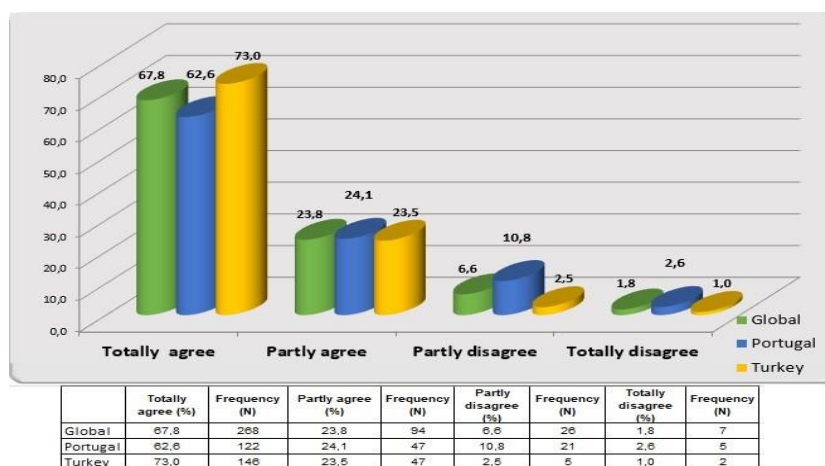


Fig. 3. There is too much information pollution about healthy life on the internet and in media

Another important issue to be inquired was the health-literate consumers' perception about the existence of conflicting, confusing, and low-quality information dissemination on media and the internet. Findings revealed that the media and internet can facilitate the dissemination of the conflicting health information. 91.6 % of the respondents totally or partly agree with the statement that they encounter too much health-relevant information pollution in media and on the internet. The data indicates that information pollution is produced and observed a bit more in Turkey. There, the information pollution is controlled less due to a lack of protective measures by relevant organizations. This was an expected result. This phenomenon was one of the most important issues that establish the theoretical and empirical framework of the inquiry of this study. The findings concerning the perception about the existence of information pollution converge with the findings concerning the perception about information overload, conflicting information, and indecisiveness (see Figure 4).

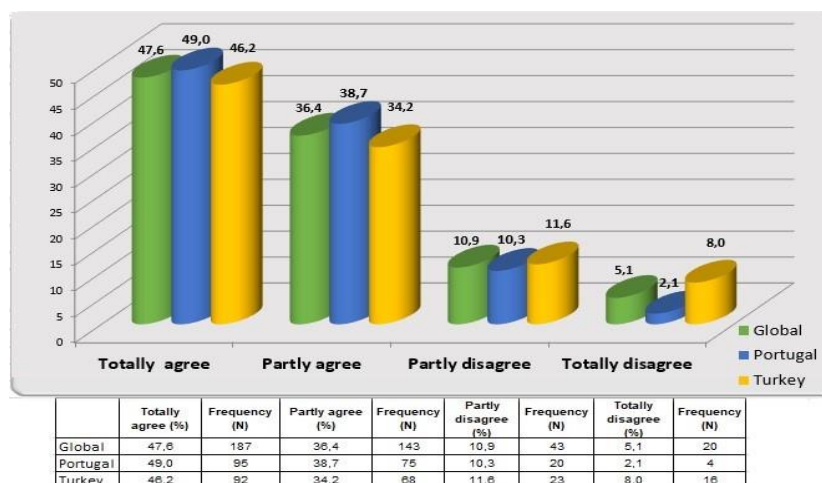


Fig. 4. On the internet and in media, there is a redundancy of healthy life advice

The data revealed that the health-literate consumers perceive the volume of health information disseminated on the internet and in media as an abundance or overload. It supports the argument that the health-relevant information volume disseminated in the media and internet can be considered as an overload, overproduction, or over-dissemination. 84.0 % of the respondents totally or partly agree with the statement that they consider the volume of health information disseminated in media and on the internet as an abundance and overload. No significant statistical difference was found between the data collected from respondents in Turkey and Portugal.

4. Conclusion

The consumer society has generated an imperative to make a narcissistic investment in physical and mental health. This has been reflected in the compulsive demand for health-relevant products, advice, and services. This demand brought about an immense variety of health-relevant choices and information when the profit maximization was coupled with these. The suppliers of information, product, and services responded to this demand with an overload of choices and information in many areas. This overload included health-relevant misinformation and conflicting information, which have been disseminated in media intensely by health professionals and cultural intermediaries. These actors could firstly discuss their counter-arguments in scientific conferences to produce scientific progress. This could lead to verification or refutation, but so many health professionals who have commodified and commercial agendas created postmodern pedagogies. They disseminated sensational information and convinced the majority of the public to believe in their philosophies, try and consume specific nutrients, pills, and act accordingly. Their agendas produce their supporters in social life and on the Internet. The commercialization and commodification in these areas have stimulated the practices and activities relevant to medicalization, biomedicalization, para-medicalization, pharmaceuticalization, pathologization, and disease mongering. These trends and movements spread thanks to the increasing usage of the Internet, wearable devices, social media, and shadow websites. The public has internalized the consumption of sensational and low-quality health information (Rand corporation, 2001) and products through these apparatus and these have become everyday life issues. The conventional and digital media took advantage of the fact that sensational health information attracted a wider audience, contributed to the information overload, and disseminated confusing or contradictory advice.

Cooperation of the biomedical sectors with conventional and digital media contributed to indecisiveness in health behavior and consumption. It resulted in many unsatisfied experiences and trial-error processes. This unregulated process may hinder the expansion of the health market due to the emergence of indecisive, indifferent, and unconfident consumer groups who tend to have purchase and decision avoidance within the context of the anti-consumerism movement. We can see the impact of this info-demic on the resistance against vaccination in the Coronavirus pandemic as observed in the H1N1 pandemic.

The example case by *Twitter* (elimination of 70 million irrelevant accounts) showed that the structural factors could eliminate misinformation. Policy-makers can also contribute to the regulation of health-relevant information dissemination. The cumulative effect of the information

and choice overload should be considered, because, as revealed in the study by RAND Corporation (2001), many digital sources contributing to the health-relevant information overload are low-quality. A majority of the people (70 %) takes this information seriously and apply it. A study by Pew Research Center also revealed that this information taken seriously changes the mindset of those consuming it (PIALP, 2009). The health-relevant information disseminated in media is not scientific. Moreover, one-third of this information is sponsored and 65.9 % include advertisements (Can et al., 2014: 486-489). Considering all these data, it may be safe to state that health-relevant information disseminated by conventional and digital media has a considerable impact on health-relevant perception, decision, behavior (PDB), and indecisiveness. Since the beginning of the Coronavirus pandemic, it has been very easy to detect the misinformation and information overload created or facilitated by conventional, digital, social media, and the Internet.

According to the data from the online survey, the conflicting health advice are disseminated in media and on the internet, and the majority of health literate consumers (92.9 %) perceive this confusing overload of information. They (93.2 %) hold that they cannot control the dissemination of the confusing and conflicting health advice, it is beyond their control and without their consent. Most of the respondents (91.6 %) are of the opinion that media and the internet disseminate low-quality health information and misinformation. Even though there are some hints about the consumer demand for health information, the health literate consumer respondents (84 %) consider the volume of health advice on the internet and in media as an overload and redundancy, which surpass their demand and exhausting their decision-making capacity. This process may cause the health-literate consumers to experience indecisiveness on many occasions, and that may be a negative situation in the eye of the consumers. Further macro studies can study the impact of info-demics on the health-relevant indecisiveness on a global scale with references to many example cases from a great variety of sources and structural factors that this study pointed.

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