Health Remedy Fallacies Strike Social Media: What is the Role of Development Education?

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Abstract

The advent of social media has resulted in unequalled excitement but also risks, especially when postings are health-related and not supported by scientific evidence. Unfortunately, the majority of social media users tend to embrace and utilise every health remedy (alternative medicines) posted on social media without questioning their authenticity or even the authors' credibility, since these 'information creators' never display their addresses of even their identities, but the users proceed to 'ingest' these remedies. The paper further discusses why social media users become receptive and passive to unsubstantiated information, thereby threatening their health. The authors adopted 'The Uses and Gratifications Theory' and 'The Theory of Social Media Interaction' to explain the increased fallacies appearing on social media, while the masses continue to be duped. Through an interactive approach, most users, although educated, were found to get excited the first time they landed on 'useful information' that hinders most of them from applying logic and critical thinking skills, which presumably, 'development education' should ably address at every level of education. Secondly, the power and popular appeal of social media, which quickly convinces and sways users, has affected their questioning stance. The paper thus concludes that people respond differently when it comes to health matters and this impacts their ability to critically analyse health related information. Further, medical professionals do not participate in fallacious arguments on social media is that (1) they make assumptions that the users are logical enough, and will only use such remedies after consulting with physicians and perhaps doing some research, and (2), their medical professional ethics do not allow them to publicly discuss unfounded claims related to medicine.

Keywords: development education, health fallacies, medical practitioners, social media

Introduction

The recent few decades have seen social media (SM) dominating other forms of media in the world and gaining unmatched prominence with its endless provision of opportunities for users to both consume and create media (Thompson, Dawson and Ferdig, 2008). This interactivity on SM, therefore, has come with both opportunities and challenges, thereby plunging users into serious medical quandaries (Fox, 2011). Commonly used SM avenues include Facebook, Twitter, and YouTube, which are actually a powerful new generation of online tools and applications that foster user-generated content, social interaction, and real-time collaboration (Merchant, Elmer and Lurie, 2011). These technologies encompass blogs, social networks, video and photo-sharing sites, Wikis, and a myriad other media, and are pervasive around the world (Elmer et al, 2011). As espoused by Yamout (2011), Facebook has become so popular and has in fact surpassed a billion users worldwide. Invariably, however, although SM is positively shaping peoples' personal lives, it is steadily distorting health-related information as well. This is because a growing majority of modern patients – particularly those with chronic conditions – are fast responding to social media and other online sources – not only to acquire health information but alternative medicine (health remedies) and this avenue is considered extremely useful because it enables the users to connect with others affected by similar conditions and play a more active role in their healthcare decisions (George, 2011).

Nonetheless, even with the level of education as well as development achieved so far, social media users continue to adopt and utilise health-related remedies posted on SM, with no evidence of authenticity at all – thereby plunging thousands of lives in jeopardy. Yet, the advancement and promotion of 'development education' currently 'preached' is intended to promote human emancipation by curbing dominance and passivity. In fact, as efforts in the field of 'development education' are being proliferated, especially in developing countries like Uganda for the last two decades, there has been little or no awareness created among the beneficiaries, which has perhaps resulted in populaces become passive recipients of information – with little attempt to critically evaluate their authenticity. In particular, the system seems to have lost the quality and nature of learning that takes place in schools, which has resulted in 'a need to recapture the broad understanding of education and its purpose in future goals and frameworks' (UN, 2013). It would make sense if the consumers of façade information were exclusive to the 'baby boomers', but in fact, all categories of SM users have fallen prey to fallacious 'health-related arguments" and discussions. Surprisingly, this fallacy has affected even the professors – the promoters of 'critical thinking and research' and even medical practitioners – who preach 'the importance of conventional treatment' and only 'alternative treatment such as exercise and diet'. Considering such challenges, therefore, Dudková (2008) emphasises a 'learning process' and the quality pedagogy' in the provision of at all education levels, rather than concentrating on 'equity, access and outcomes', which Jefferess (2008) attributes to passive reading that has affected the critical thinking capacity of the populace. Consequently, Greysen and Chretien (2010) argue that whereas the emergence of technology has eased information creation and transfer, there was a need to

develop skills for the users for appropriate utilisation.

Nonetheless, while there are signs that these technologies are being used to enhance self-directed, lifelong learning, professional networking, communication and improved efficiency and effectiveness of health systems, they are a danger to humans because they promote self-medication (Greysen and Chretien, 2010), which has largely distorted the 'would be' health remedies, especially because the posted remedies often display incomplete or sometimes wrong information to the users. The authors are not concerned with traditional herbalists whose outlets are known, but rather, unidentified 'self-acclaimed professionals' who post conflicting medical remedies using technologies with no address to enable users to seek further clarification. While most of the time medical professionals agree with information published as medical remedies, sometimes they are not. Yet, the users are often kept in the dark because the competent professionals remain silent (Mostaghimi and Crotty, 2011). That's perfectly okay, although oftentimes these herbalists decline to meet up with medical professionals to engage in more productive conversations (Shrank et al. 2011). Clearly, SM has, to some extent, become perilous not only for health professionals and users, but the community as a whole. Yet, academic literature, replete with admonishments of how SM is dangerously breeching the old 'boundary markers' of medicine, is enabling all manner of distasteful content on health remedies to be publicly posted (Mostaghimi and Crotty, 2011).

Nevertheless, in a time of fake news, 'alternative facts', newspeak and attacks on credible publications, it is high time users recognised genuine or fallacies in what they see, hear and read (Atherton and Majeed, 2011). Although such fallacies sometimes carry useful information, most times, the information is either conflicting or incomplete as some postings lack scientific evidence. These include an appeal to ignorance by using the lack of evidence on a topic as support for the conclusion, and confirmation bias – where people notice, seek out, select and share evidence that confirms their own standpoint and beliefs, as opposed to contrary evidence (Hawn, 2017). Other fallacies include 'hasty generalisation' where the publisher makes assumptions about a whole group or range of cases based on a small or inadequate sample – sometimes called stereotypes; 'slippery slope' – a claim that one thing inevitably leads to another without stating evidence for the assumption. As users embark on remedies, 'straw men' characterise the claim as phony, weak, extreme or ridiculous, and then knock it down or reduce it to absurdity (Flew and Smith, 2011; Ramos, 2017 and West and Turner, 2007).

The Context and Problem

There has been information bombardment on social media full of all sorts of information for every type of user – including health-related remedies. The mass information has made it difficult for the users to decipher how much of this information is simply spurious assertions, conspiracy theories, misinterpreted information or genuine. In fact, Bustamente, et al. (2015) found that the problem was not the type of information, but rather, the users' ability to navigate and appropriately process the information that requires not only analytical abilities, but adaptability and critical thinking. In fact, critical thinking is necessary for information processing and making decisions on the legitimacy

of numerous assertions in SM. Instead, the users are getting more confused as 'cognitive load' increases (Sweller, 2010). Many designers and policymakers found SM harmless and, in fact believe that its associated risks are minor and ignorable (Boudry, 2017). However, because health information technology is designed, built and implemented by humans, it will invariably have 'bugs' and latent failure modes that may be detrimental to health. Fallible humans have learned to build generally reliable complex physical systems (e.g., bridges, buildings and cars), but it took more than a century to understand and mitigate the myriad hazards of these systems. In contrast, we cannot yet design and deploy complex software systems that are on time, within budget, meet the specified requirements, satisfy their users, are reliable, maintainable and safe (Walton, 2010).

Whereas the majority of users of SM are educated and enlightened, many fail to distinguish genuine from fake, complete from partial, and researched from opinion information. Secondly, although the debate on information credibility has been ongoing, users continue to rely on SM for health-related remedies, perhaps because they fail to respond to conventional treatment. The problem of relying on Facebook, however, has remained the concealed identities and contacts of the sources of information, which Bahendeka (2015) called deception since the publishers often use other devices of argumentation to sway thinking, such as logical fallacies. The fallacious postings have nonetheless caused more harm as users continue to degenerate into worse health as a result of relying on false and incomplete information (Bustamente, et al. 2015). In order to explore implications for users, three objectives were formulated: (1) to establish why information creators on SM conceal their identities, (2) to evaluate some of the conflicting health-related remedies posted in SM, and (3) to explore causes of receptive usage of SM information.

Literature Review

As medical professionals turn their heads away amid mind-blowing information on SM, we cannot stop interrogating the role of 'development education', which presumably promotes self-efficacy and critical perspectives. Questions about how individuals can use information without processing and ascertaining its authenticity need explanation. Development education has become one of the key current debates within international education policy that has immensely contributed to other forms of development that have attempted to promote emancipation and critical thinking (Freire, 1972). Although the field of development education has mainly focused on international education policy, it could become pertinent to the quality of education quality and the process of learning and teaching to enable the actors to think and act critically and creatively as opposed to the current preoccupation with education access, equity and outcomes (Dudková, 2008).

Similarly, Bourn (2011) argues that development education came to overturn the early practices that used an uncritical view of development and economic growth to educate what was perceived to be a largely ignorant or disinterested public with the goal of 'opening up hearts and minds as well as purses to the problem of poverty in countries overseas' (Cascant and Kelbert, 2012). As a creation to promote a strong critical pedagogy within development education, it was premised to emancipate actors to overcome the 'mentality of passivity', which includes developing

partnerships between educators and learners in the Global North and Global South; the promotion of social justice, empathy and solidarity; a commitment to participatory and transformative learning processes, with an emphasis on dialogue and experience; and a critique of dominant power relations and media messages about development that portray peoples from the Global South as helpless victims (Damtew, 2012).

Health is defined as the state of equilibrium of the mind and body, and research has found that health is managed through effective transfer of knowledge to individuals, clients and families (van Eemeren, 2009). SM has also become an integral tool for medical societies, professional and advocacy groups. These groups are using SM to engage, teach and connect, and they play an important role in providing accurate, vetted health information. Additionally, organisations have realised that encouraging live tweeting or blogging of conferences provides opportunities for wide dissemination of content that far surpasses in-person attendance (Carroll, Bruno, Bosslet and Ramachandran, 2015). Given that SM is a recent development (Walton, 2010), there has not been concrete theory to clearly explain the consequences of SM. Hence, some scholars have attempted to patch up some models and theories that are still being tested. The authors adopted three theories to explain some fallacies and reasons users embrace medical remedies that are provided through SM postings indiscriminately. Hence, although the authors adopted some of the theories, they are cognisant of their recency. In recognition of the challenges, many researchers and theorists use typologies and classification systems to describe types of theories in the context of purpose, functions, boundaries and goals, especially in the area of technology (Gay and Weaver, 2011).

Need for Theory to Extend to Health Behaviours

Against the backdrop of these theories, most of them based on the communication field, researchers have called for theory to be more specific to understand influence or behaviour change in the setting of a type of media in which users were both creators and consumers (Collins, Martino, and Shaw, 2011). Moreno et al. (2013) argued that existing theories of media and behaviour may be able to stretch to cover these factors under broad conceptual labels, but the development of new theory may also be warranted. However, the perspective of how SM may be perceived as influential to its users has left a gap in the interpretation (Henderikus, 2007). Further, the representation of users' views in the development of theory was also missing. Consequently, the authors sought to review existing theories that are specific to SM and networking platforms such as Facebook and Twitter.

Uses and Gratifications Theory

Uses and Gratifications Theory (UGT) discusses how people actively seek out specific media content for particular purposes and intentional goals (Atherton and Majeed, 2011). The theory establishes an active, rather than passive audience member who has the ability to consciously examine and evaluate SM sources in order to accomplish specific outcomes (Wang, Fine, and

Cai, 2008). The theory embodied a functional shift of communications scholarship from examining not what media did to people, but what people could do with media. In fact, the theory of Uses and Gratifications initially grew out of the Needs and Motivation Theory by Maslow (1970), which suggests that people act in line with a specific personal hierarchy of needs. Communications scholars quickly caught on to this notion and sought to determine typologies of needs for media consumption. There are many versions of these typologies. Therefore, Darling-Hammond (2008) suggest a variety of categories of purposeful media consumption that people may engage in, especially usage of a critical lens to be able to live a 'healthy life' or to be 'free from disease'. Therefore, the theory "provides a framework for understanding when and how individual media consumers become more or less active and the consequences of that increased or decreased involvement" (West and Turner, 2007). The theory proposed five main assumptions: (1) an audience is active and goal-oriented in their media consumption; (2) media is used for gratification; (3) media is in competition with other means of need satisfaction; (4) people understand their personal media use, interests and motives enough to communicate with researchers about their choices; (5) the audience members are the only people who can make judgments regarding the value of the media content. The authors find assumptions four and five to be more relevant for this paper, especially when 'the would-be enlightened' users of information from SM surprisingly adopt it, sometimes without a critical stance. Hence, whereas the first three assumptions are relevant, especially the existence need for users with health conditions, the theory also articulates interests of the majority of SM users (Kahneman, 2011). Consequently, the fourth assumption that people are self-aware of their media usage, and the fifth assumption that assumes that researchers make a concerted effort to remove their personal value judgements from the study of media content, become very contributory to this discussion because whereas both assumptions are logical, in reality the practice defies these two assumptions, because most users do not evaluate the value of the given media content.

In support of persuasive argument, Fox (2011) identified some forms of persuasion techniques, illogical argumentation and fallacious reasoning that users commonly encounter in their use of SM. By learning about these devices, users will be more likely to recognise their use, avoid using them themselves, and better assess arguments presented to them (Shrank et al. 2011). They include: ad hominem, anecdotal evidence, an appeal to authority, an appeal to emotion, the bandwagon argument, appeal to popularity, appeal to tradition, appeal to ignorance, appeals to emotion, begging the question, false dilemma or false dichotomy, decision point fallacy or the sorites paradox, the slippery slope fallacy, hasty generalisations and faulty analogies (Fox, 2009). One reason that fallacies are common is that they can be quite effective and the publishers can be extremely convincing. Unfortunately, we often get convinced by a fallacious argument – we will not be acting as good logical and critical thinkers.

The Theory of Social Media Interaction

The Theory of Social Media Interaction was formulated to explain how stable SM interactions

legitimise particular thoughts and practices regarding issues such as health and illness, and help to transform individuals through the effective transfer of knowledge through SM (Carroll, et al. 2015). Hence, the Theory of Social Media Health Interaction, which potentially provides a valuable contribution to SM health research, offers a new theory-based approach for studying how the media and citizens represent personal and social agenda colours according to age or situational frames (Gay and Weaver, 2011). Fundamental communicative mechanisms, therefore, such as SM exchange, SM interaction, and personal integration are posited in this theory. SM and the Internet have fundamentally transformed not only the way we communicate and interact, but also the way we comprehend and make decisions on the content published on SM (Hawn, 2017). Similarly, with all the required information, knowledge and experiences readily available with just a click of the mouse, information is easily accessible and free to anyone with a computer, and communication across continents is as easy as emailing someone next door. As the Internet expanded into our homes, there was a growing expectation of free and open access to information (Bosslet et al., 2011). Since information was easily accessible on so many sites, there developed an expectation that all information should be free and reliable. SM is broadly defined as the use of platforms of electronic communication through which users create online communities (Social Networking Fact Sheet, 2015). SM use is common: 74% of Internet users spend time on social networking sites, with 71% of online adults using Facebook and 23% using Twitter (Deuze, 2007).

The Theory of Social Media Interaction was formulated to explain how stable SM interactions legitimise particular thoughts and practices regarding issues such as health and illness, and help to transform individuals through effective transfer of knowledge through SM. The key concepts of the theory are defined accordingly: personal health agenda, SM transaction, social exchange and social integration (Meleis, 2007). The theory of Social Media Interaction has four underlying assumptions: (1) SM is a means of accessing and gaining information; (2) SM creates a virtual community where interaction occurs; (3) Different groups may have diverse cultural practices regarding the acquisition and dissemination of information; and (4) People who engage in interaction are rationally seeking to maximise their health. Similarly, the theory of Social Media Interaction has four fundamental propositions: (1) Interaction changes over a period of time; (2) SM promotes wellness; (3) Successful interaction leads to active participation; and (4) SM proliferates information quickly. SM has both intensive and extensive influences on individuals and groups (Ramos, 2017), therefore, the theory of Social Media Interaction conceptualises how health interaction can be influential in SM – both positively and negatively (Katz, 1974). Hence, effective usage can help people to understand the role of SM in disseminating health information and influence personal health agendas and behaviours.

Related Literature

A fallacy is the use of invalid or otherwise faulty reasoning, or 'wrong moves' in the construction of an argument. A fallacious argument may be deceptive by appearing to be better than it really is (Walton, 2010). On the other hand, medical fallacies connote the ways in which arguments may be used and

abused in medicine and health. The central claim is that a group of arguments known as the informal fallacies – including slippery slope arguments, fear appeal and the argument from ignorance – undertake considerable work in medical and health contexts, and that they can, in fact, be rationally warranted ways of understanding complex topics contrary to the views of many earlier philosophers and logicians (Frans, 2009). Consequently, modern medicine and healthcare require lay people to engage with increasingly complex decisions in areas such as immunisation, lifestyle and dietary choices and health screening (Damer, 2009). Many of the so-called fallacies of reasoning can also be viewed as cognitive heuristics or shortcuts that help individuals make decisions in these contexts (West, et al. 2007). Therefore, one wonders why, despite the levels of education of the users, they still lack critical thinking, reasoning, logic, the ability to counter-argue and rhetoric.

Whereas the current discussion demonstrates that SM can make numerous contributions such as job advertisements, missing and found people and property, medical experts from overseas to handle complex ailments, sometimes the quality of the information, especially the medical remedies, has confused SM users, thereby placing them in hazardous circumstances (Bustamente, et al. 2015). Consequently, the fallacy of health-related information on SM has been consistent across the globe and the popularity of SM usage is uncontested. However, what has not been clear is the passive reading and usage of information that has put users in an unfamiliar situation. The authors, therefore, have attributed passive usage of SM to be the lack of development education competencies by the users. Yet, it reinforces SM efficacy and promotes critical thinking of the users to enable them to examine a series of misguided beliefs about SM (West and Turner, 2007). The implications of these health-related fallacies on SM and their usage need to be acknowledged and addressed in order for SM to effectively offer its predicted benefits.

SM is many things: announcements, whistle blowing, entertainment, education, networking, health interventions, just to name a few. Unfortunately, it is also a vehicle for promoting faulty thinking and may actually lead to more detrimental consequences (Moreno, et al., 2013). West and Turner (2007) identified some forms of persuasion techniques, illogical argumentation and fallacious reasoning that users commonly encounter in their use of SM. By learning about these devices, users will be more likely to recognise their use, avoid using them themselves, and better assess arguments presented to them (van Eemeren, et al. 2009). Considering that new media is digital, they inevitably have the characteristics of being manipulatable, networkable, dense, compressible, and interactive, which aids any information posted on SM to spread like a 'bush fire' (Flew and Smith, 2011). The emergence of new, digital technologies actually raises numerous questions of who is in control of information, sources, experience and resources (Boudry, 2017).

Methodology

This paper mainly employed an ethnographical inquiry and interactive synthesis as advocated by Creswell (2011). Considering the enigmatic nature of the topic, this design enabled a summary of existing research, which became confirmatory to behaviour observed. Integrative synthesis provided more evidence that made comparison possible. In fact, it was found to be the most

suitable mode of inquiry for investigating SM usage patterns among the masses. Integrative synthesis also compensates for single-study weaknesses in research design, according to Gall (1994). Further, it was also useful in improving the internal and external validity of various research findings, as supported by Kothari (2006). For this matter, therefore, observation and documentary analyses were used to comprehend reasons that SM users fail to employ logic before adopting the misinformation published. The analysis was guided by content and narrative analyses as well as histories and storytelling. Mugenda and Mugenda (1999) recommend this analysis, especially when there isn't much that has been scientifically proven. Histories and storytelling also were helpful in generating rejoinders that helped the authors to arrive at the causes of passive reading. Although Creswell (2013) recommends triangulation for quality purposes, a quantitative approach was deemed inexpedient. Instead, the author resorted to more analytical and interactive techniques to unravel the reasons why SM users do not employ a critical approach to analyse information published on SM.

Findings and Discussion

According to a survey conducted by Pew Research in 2018, Facebook and YouTube dominate the SM landscape for both the young and old, where adults resort to SM for fast information, the young for employment, relationships and fun, and the sick resort to SM mostly for health remedies (West and Turner, 2007). During the rapid growth of technology, SM seems to have overtaken other forms of media such as television, radio stations and newspapers, thereby causing so much excitement that it has affected the critical thinking of some users. Similarly, according to Flew and Smith (2011), 71% of the people around the world have adopted SM, especially Facebook, Twitter and YouTube, for various reasons.

Nonetheless, although many times information on SM is useful, sources are often concealed, they use codes or fake names, they use pictorials instead of photos, etc. Yet, SM is about putting on a personal face to promote one's intentions and products. Although many 'creators' of information have found SM handy, especially in sharing useful information, others use Facebook with the intention to deceive people, which surprisingly gives them pleasure. Walton (2010) also found that by deceiving people, they get more satisfaction by thinking that they are so clever. However, Lieing (2018) found that the reason this deception goes on unabated is because it is easy to post information on SM and get away with it because the chances of getting caught are quite small. Nonetheless, the authors found that most idlers enjoy this attention and sadistically watch users get into trouble, especially as they try to save their lives. Considering that life is so precious with no 'spare parts', it can be understood that the users do it out of desperation because 'health' is extremely valued by everyone. What is confusing, however, is that whereas the young and perhaps semi-illiterate can consume the information with little questioning, the highly educated too have been duped by such fallacies. Similarly, Frans et al. (2009), found that such fallacies have affected the area of unemployment, where the masqueraders post-employment opportunities abroad on SM and dupe thousands of unsuspecting users.

Chronic diseases such as diabetes, high blood pressure, gout, etc. have become a nightmare to the sufferers, leading them to resort to alternative remedies. Maintaining blood sugar levels is part of managing diabetes (Advertising, 2009). Doctors often prescribe traditional treatments like insulin injections to keep blood sugar levels normal. Some people with diabetes also use complementary and alternative therapies (Atherton and Majeed, 2011). Alternative treatments for diabetes include herbs, supplements, diet, exercise and relaxation techniques, among others. Similarly, it is no secret that exercise and a healthy diet are among the key ways to lower blood pressure. Incidentally, the author found that after using conventional medication with no visible improvement, patients with chronic ailments resorted to remedies published on SM that included Facebook, Twitter, YouTube, etc. (Bustamente, et al. 2015). Hence, the remedies with conflicting information are discussed in the following sub-section.

Consumption of Sugars

Sugar consumption has been widely acknowledged for being a danger to humans, although SM has exaggerated its hazards. The mainstream media can't stop demonising sugars, and this trickles down to general fear of sugars among the broader population, which is often expressed via SM (Chretien et al. 2011). Often, there are misinformed statements regarding sugars and how they are the cause of all ailments in the world and, in fact, blamed for causing obesity, diabetes, high blood pressure, cancer, ulcers etc. Oddly, whether the claims about the sentiments of sugar are valid or not, not many have bothered to seek clarification from medical practitioners in order to get the correct version of the actual benefits and dangers. Yet, the majority of the users believe that sugars alone cause chronic disease – a belief that runs counter to the volumes of published literature on the subject, especially on SM (Dwyer, 2011). Comment after comment have mentioned 'unidentified studies' that have purportedly 'proven' the dangers of sugars in and of themselves and how they cause diabetes, hypertension, weight gain or obesity, among other adverse health effects (George, 2011). Nonetheless, as to whether sugar consumption is solely responsible for ill-health has not been proven by any scientific investigation. In fact, Hawn (2017) concluded that sugar can be consumed in moderate and balanced quantities, but does not call for total elimination. When it comes to SM, it's easy to disagree without a second thought, although, users cannot find the right persons to argue with.

Consumption of Water

Consumption of water is the most controversial discussion on SM. Water is important for our overall health and wellness because hydration is essential for our organs and other bodily functions (Jones and Treiber, 2010). In fact, research has found that drinking an adequate amount of water each day will benefit your body in ways you may not be aware of (Merchant et al., 2011). Although drinking water has been found to be the healthiest habit you can have, some postings on SM have discouraged excessive consumption of water but with no clear measurement of how much is excessive. Nonetheless, Moreno, *et al.* (2013) found that water has become the second most

popular drink. However, SM recently published hard news that the benefits of drinking water may have been oversold (Ramos, 2017). Apparently, the old suggestion to drink eight glasses a day was nothing more than a guideline, not based on scientific evidence (Shrank, *et al.* 2011). Issues of containers are often discussed on SM, such as storing hot water in a plastic bottle or drinking left- over water previously opened and left in the car. While we may not need eight glasses, there are plenty of reasons to drink water. In fact, drinking water (either plain or in the form of other fluids or foods) is essential to one's health (Thompson, *et al.* 2008). Water is present in liquids and foods, and is essential for daily usage to replace the large amounts of water lost continuously each day from skin evaporation, breathing, urine and stool. It is essential to consume adequate amounts of water on a daily basis (Walton, 2010). Nonetheless, the source of information that gives us the upside is the same that publishes the downside – sometimes with different codes instead of names. The postings often caution the consumers that "drinking too much of it (overhydration) can lead to water intoxication, and even results in hyponatremia, impaired brain function and sometimes death" (Yamout *et al.* 2011). Whereas both unidentified publishers had genuine concerns and valid arguments, the ideal amount of water that should be consumed was never suggested. Often, doctors and dietitians advise that since 50% of adults are dehydrated, they should endeavour to keep hydrated by drinking 'enough water'. This information too, is often misconstrued, and people end up drinking more water than their body actually needs. Further, the postings often don't provide symptoms of water intoxication and how it can be reversed. Surprisingly though, with all the users being enlightened and some medical professionals, no expert comes out to clear the confusion or conflicting information.

Use of Ginger

Although not scientifically proven, there is some evidence that ginger can lower blood sugar levels because it is the type of herb that people have used for thousands of years in traditional medicine systems (Damer, *et al.* 2009). Ginger has been found to help treat digestive and inflammatory issues, yet according to a study conducted by (Chou, *et al.* 2009) in 2015, ginger was found to help in treating diabetes. According to this research, although ginger lowered blood sugar levels, it did not lower blood insulin levels. Whereas the published information on SM strongly recommends the use of ginger in every meal to treat digestive and inflammatory issues, other sources suggest that actually "ginger was dangerous to the stomach lining and had a high potential of destroying enzymes, thereby causing ulcers" (August, 2017). Although evidently, information on the usage of ginger from different sources conflicts, users never consulted healthcare professionals for the correct information. Nonetheless, although complementary medicine is used with conventional treatments, alternative medicine is used instead of conventional medicine. Another contradiction is that the dosage for alternative remedies is never prescribed, but users never even bother to question the implication of 'open treatment' (Bosslet *et al.* 2012). Hence, although the majority of users are enlightened or more so 'educated', they rarely consult their physicians in conjunction with using complementary or alternative medicine.

Honey Consumption

Worldwide, honey has been found to be a wonder drug that has been used for generations. The naturally sweet substance has so many benefits, ranging from cleansing the gut, soothing an irritated throat, working wonders for the skin, relieving sinus symptoms, among many other benefits (Atherton and Majeed, 2011). Some publishers have advised that honey mixed with a glass of warm water right after waking up has numerous benefits (Bustamente, *et al.* 2015). It is believed that this mixture keeps the body fresh and free from toxins and promotes a healthy mind (FaceBook, June 2018). However, another publication on Facebook in February 2019, cautions consumers of honey with the habit of drinking honey in hot beverages, to stop doing so as soon as possible. In fact, Jithin (2018) equates drinking honey in hot water or any hot substance to poison. Therefore, honey was beneficial in its natural goodness or in its raw form, but warm honey causes 'ama' in the body – a kind of toxic substance that causes indigestion. Consequently, as honey slowly gets digested in the body, its properties turn similar to that of a poison, which, in turn, can lead to many different diseases (Chretien *et al.* 2011; Ayurveda, 2018). This can happen if consumers buy or extract honey from the source. The most dangerous honey is that found in supermarkets, which is usually preheated under extreme temperatures, heavily processed and mostly stored in plastic containers, which in itself makes it toxic to consume (Chou, *et al.* 2009). Yet, SM keeps suggesting that honey is the 'thing' and should be part of our everyday lives without explaining the quantities, quality and packaging concerns.

Lemon Water Consumption

A glass of water with fresh lemon juice is for many people the perfect way to start the day. However, it really has health-related challenges. Many restaurants serve it routinely, and some people start their day with lemon water instead of coffee or tea, which is okay, because there is no doubt that lemons are delicious. However, Damer, *et al.* (2009) doubts whether adding lemon in water makes one healthier. Much of the evidence supporting lemon water's health benefits is anecdotal. The only information available is what is posted on SM by unknown 'scholars'. The origin of the concoction of lemon and hot water has continued to be a mystery since there is no scientific claim to support this information. Literature can be the only remedy since postings on SM can only be substantiated by empirical research. Damer *et al* (2009) also express their concern about the lack of scientific research done specifically on lemon and hot water as there are enormous health benefits of lemon and water separately. According to research, lemons are a source of Vitamin C. In fact, studies have shown that Vitamin C strengthens the immune system and protects against skin aging, infections and heart disease.

Lemon checks the excessive flow of bile and cleanses the mouth, helps in digestion and relieves constipation, prevents vomiting, acidity and rheumatism, as well as destroys intestinal worms. Similarly, lemon juice is a powerful antibacterial for malaria, cholera, diphtheria, typhoid and other deadly diseases (Deuze, 2007).

Use of Garlic

Garlic is best consumed on a daily basis (in food or raw) helps to lower cholesterol levels because of the anti-oxidant properties of Allicin. It is also immensely beneficial to regulate blood pressure and blood sugar levels (Fox, 2009). Garlic is used for many conditions related to the heart and blood system, which include high blood pressure, low blood pressure, high cholesterol, inherited high cholesterol, coronary heart disease, heart attack, reduced blood flow due to narrowed arteries, and 'hardening of the arteries' (atherosclerosis) (Darling-Hammond, 2008). Garlic can also be used to prevent colon cancer, rectal cancer, stomach cancer, breast cancer, prostate cancer, multiple myeloma and lung cancer. It is also used to treat prostate cancer and bladder cancer. Garlic has been used for treating an enlarged prostate, cystic fibrosis, diabetes, metabolic syndrome, osteoarthritis, hayfever (allergic rhinitis), traveller's diarrhoea, high blood pressure late in pregnancy (pre-eclampsia), yeast infection, flu and swine flu. It is also used to prevent tick bites, as a mosquito repellant, for preventing the common cold, and treating and preventing bacterial and fungal infections. Garlic is also used for earaches, chronic fatigue syndrome, menstrual disorders, abnormal cholesterol levels caused by HIV drugs, hepatitis and shortness of breath related to liver disease. Other uses include the treatment of: fever, coughs, headache, stomachache, sinus congestion, gout, joint pain, hemorrhoids, asthma, bronchitis, shortness of breath, low blood sugar, snakebites, diarrhoea and bloody diarrhoea, tuberculosis, bloody urine, diphtheria, whooping cough, tooth sensitivity, stomach inflammation (gastritis), scalp ringworm, a sexually transmitted disease called vaginal trichomoniasis, fighting stress and fatigue, treating skin and nails, warts, and corns (Dwyer, 2011). Nonetheless, with all the health benefits mentioned above, eating too much garlic can also have adverse effects such as ulcers, cancer of the stomach, gastrointestinal discomfort, bloating, diarrhoea, indigestion and pain in the stomach. Yet, these claims are not supported by empirical evidence, which makes it difficult to adopt it wholesale. While the available information does not suggest an upper limit of garlic consumption, it takes cognisance of the side effects that may exist from eating raw garlic such as an upset stomach (Fox and Purcell 2009). Other users, of course, resent garlic because of the bad breath it causes. According to Frans, et al. (2009), garlic increases the potential of developing skin lesions where you came in contact with it, and he recommends wearing protective gloves. George (2011) further identifies garlic as a potential trigger for headaches. Therefore, people who suffer from frequent headaches may want to avoid using garlic. By possibly lowering blood pressure, cholesterol and the initial effects of atherosclerosis, garlic can contribute to a heart-healthy diet much as the lowering or burning of fat would.

Consumption of Aloe Vera

Aloe Vera juice might cause your blood sugar levels to drop. It has laxative effects, which may increase the chances of electrolyte imbalance in diabetics. Stomach discomfort is one of the most common side effects of drinking aloe vera juice. The latex can cause excessive cramps and pain in the tummy (Flew and Smith, 2011). Aloe vera is an ingredient that barely needs an introduction.

It is a rage in the beauty and health world, all thanks to the presence of numerous medicinal properties. There is no denying the fact that it is loaded with nutrients, but there is a chance that aloe vera may not suit your body, skin or hair, which can further lead to side effects. Many people are allergic to the wonder plant (Jones and Treiber, 2010). Whereas aloe vera may have numerous benefits, it has diverse implications that include: latex, which comes from underneath the plant's skin, causes skin allergies, redness in the eyes, skin rashes, irritation and a burning sensation (Kahneman, 2011). Aloe vera also leads to a drop in blood sugar levels, dehydration and lowered levels of potassium in the body, further causing an irregular heartbeat, weakness and fatigue, especially in the elderly and sick people. Aloe vera is further discouraged among pregnant women and lactating mothers due to its qualities that stimulate uterine contractions, which may lead to birth complications. Similarly, the bio-active compounds in aloe vera might interfere with the liver's detoxification process, further causing health complications. With all these health-related challenges, such information is never packaged together for the user, yet even users never bother to consult competent professionals.

Consumption of Green Tea

Although there are little-to-no-known side effects or contra-indications to drinking green tea for adults, the dosage is never provided. However, green tee has the following risks or complications that should be made clear: Caffeine sensitivity – those with severe caffeine sensitivities could experience insomnia, anxiety, irritability, nausea or upset stomach (Katz, 1974). Green tea is 'suspected' to lower cancer prevalence rates yet it is impossible to ascertain such claims since there could be other variables responsible for reduced cancer occurrences. Researchers found that it is the high level of polyphenols in tea that helps to kill cancerous cells and stop them from growing. However, the exact mechanisms by which tea interacts with cancerous cells is unknown. Nonetheless, other studies have not found that tea can reduce cancer risks. The amount of tea required for cancer-preventive effects also varies widely in studies (Walton, 2010).

General Discussion

Wrong medication can lead to permanent ailments or even death. Currently, research has found that 12% of wrong medication is due to misuse because of lack of information or sometimes wrong information (Tomas, et al. 2012). Whereas most beneficiaries of health remedies posted on Facebook are at the same time permanently of conventional treatment, they receive little or no information of combining the two remedies or even other types of prescription in case one is taking both. Yet, taking the wrong medication or right medication but in the wrong doses or timing can also lead to harmful side effects (Boudry, 2017 and Tomas, et al. 2012). Research has shown that whichever mismanagement or wrong dosage with medication – herbal accessed on SM or conventional from hospital, can lead to organ failure, and even death (Jones and Treiber, 2010). Unfortunately, although Facebook is blamed for wrong medication, we found mishaps even among those on conventional medication. Nonetheless, wrong or inconclusive health-related information

has been found to cause challenges among users (Tomas, et al. 2012). This is because taking the wrong medication can exacerbate one's health conditions. Sometimes medication mistakes are not mistakes at all, but are actually administered incorrectly on purpose. This happens when caregivers are trying to improperly sedate a patient and when nursing home staff try to illegally steal or reallocate medication. In fact, Culberson and Ziska (2008) found that error in medication does not always stem from wrong information, but even concealment of previous history and current medical status can lead to undesired consequences. Further, there are many reasons why mistakes occur among health-challenged people. This may include, but is not limited to, over-the-counter drugs, food and vitamin interactions, or timing and dosage (Jones and Treiber, 2010).

Generally, although information on SM spreads like a bush fire, surpassing sometimes the creators, recent articles have implicated medical professionals, especially nurses and paramedics, for being responsible (Tomas, et al. 2012). Notably, stories invoking the 'dangers' of SM have particularly been condemned for the misjudgements of errant health professionals, however, they also often implicate the privacy control problems that have dogged SM, which are especially hazardous to users from the health professions (Walton, 2010). Academic literature has also been found to be replete with admonishments of how SM is dangerously breeching the old 'boundary markers' of medicine, which has enabled all manner of distasteful content to be publically posted, sometimes by healthcare providers, leading to disastrous consequences (Culberson and Ziska, 2008). Consequently, the overall tone and content has focused on the risks rather than the benefits of SM and concentrated on the misuse rather than consideration of how technologies might be used in a positive manner (Jones and Treiber, 2010). Regardless of the approach, the implications of posting wrong, misguided or inconclusive information have had diverse negative implications on unsuspecting users of SM.

Conclusion and Recommendation

While users hastily embrace such remedies and genuine medical professionals remain adamantly against such claims, such information is often conflicting. Nonetheless, the remedies are quickly embraced because of their popular appeal. Yet, without any scientific method, it is difficult to discourage. Unfortunately, most victims lack deep-seated psychological and effective logical and critical analysis. We, therefore, conclude that the reason that medical practitioners do not respond to the fallacies is because they make assumptions that the users are intelligible enough to apply logical reasoning and are capable of understanding that such purported remedies should be used in consultation with physicians. Similarly, the reason that proponents of alternative remedies never critique such information because they possess superior skills in their arguments and can really persuade the followers to 'see their side' of the argument. Whereas there is nothing wrong with trying to persuade someone else to look at a topic from their perspective, it would be more trusted and believed if there was credible evidence to support their claims or assertions. The lack of strong emphasis on development education in the Ugandan educational system shows a lack of focus on critical pedagogy and processes of learning that would have made a major contribution

to such debates. Education is pivotal for development in a rapidly changing world and there is a need to place a greater emphasis on the social role of education in enabling people to fulfill their individual potential and to contribute to the economic, political and social transformation of their countries. Consequently, development education, as a form of emancipatory and dialogical learning, is based on 'critical humanist pedagogy' – which, unfortunately, most social media users lack. Such dialogical education, therefore, is where learners should ideally pose problems, enquire and seek solutions collaboratively. Although this approach is an open and ongoing enquiry aimed at liberating people from servitude and instilling mutual respect and trust, SM users who seek alternative healthy remedies have not applied critical thinking.

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