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CONCEPTUALIZING PERCEIVED INFOLLUTION PROCESSING AND MANAGEMENT AND ITS CONSEQUENCE ON EMPLOYEE WELL-BEING

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Abstract

As the nation has driven towards knowledge economy country, information has become an asset to be utilized as competitive resources in most organizations. Information technology has revolutionized the information creation, production and dissemination. Employees analyse and conclude based on information gathered from various sources. Although the abundance of information can be beneficial in numerous levels but the problem of managing the information becomes more difficult due to information pollution. The presence and spreads of useless and undesirable information, which is newly termed as "infollution". Information pollution can lead to detrimental effects on human activities in a long run. Either it is a cyber-bully, rumours gone too far, information flooding or just wrong information, infollution pops up almost everywhere that affects the employee cognition, behaviour, and well-being. The issue related to the information pollution that should be settled in order to make sound decision making within the organization. Yet, there are scarce numbers of research in the field of behavioural studies that have addressed the cognitive, emotional, behavioural, and social effects of the information pollution. Thus, in this study, the conceptual model to better understand perceived infollution management and its effect on employee well-being is proposed.

Keywords: Infollution, Information pollution, Information quality, Information overload, Employee well-being.

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1. Introduction

In the organization, management and employees make use of information in their professional and private life for decision making in almost every field. There is abundant research about linkage of available information and how employees make decisions within organizations. Employees and organizations appear making use of cognitive and motivational preconception in the searching the information for accurate decision making (De Dreu, Nijstad, & van Knippenberg, 2008; Ocasio, 2011). In this information age, due to advancement of communication technology have made access easier to the information than ever before (George, Haas, & Pentland, 2014). Alongside the move to more knowledge-intensive work, the capacity to and process an assorted variety of information likewise progressively comes at a premium.

New technologies made it easier for information to reach the borderless and connected world. The latest statistic shows that nearly 3.7 billion people worldwide use the Internet from various locations around the world to access electronic mailboxes, send instant messages, search for information, participate in virtual communities, and engage in myriad other activities through digital devices (World Internet Users Statistics, 2018). The individual and businesses are now expanding their social and professional networks by accessing information and facilitate the constraints of time and place using electronic information and communication. This is seen as an indication of advance and individual empowerment, and also a positive stride to bridge the divide between the information poor and the information rich (Capurro, 1990; Mandke & Nayar, 2004). However, it also has impacted the growing amount of information available and witnesses profound changes in the structure and functioning of human environments (Misra & Stokols, 2012).

The new form of digital communication revolution not only have introduced an innovative methods of environmental experience but also as sources of information over-burden (Misra & Stokols, 2012). Individuals utilize information with a specific end goal decision and adjust to circumstances they are in. However, cognitive reviews have demonstrated that there is recently so much information the individual can handle before the quality of their decisions starts to deteriorate (Bray, 2008). The abundance of information is usually known as information overload and lead to decision paralysis, where the individual incapable of making a judgment as they cannot judge what is appropriate anymore (Bray, 2008; Orman, 1984). When a person fails to turn the information into knowledge, the information turns into vain and cause information pollution. Thus, anything that distracts our consideration from the fundamental facts to perform a task or make a decision can be viewed as an information pollutant –infollution.

Infollution happens not only from online based sources information but also from offline based sources. But for the purpose of this research, only the online-based information will be studied as the sources of infollution. The online-based information has revolutionized the information production. According to Pandita (2014) some examples of online-based information sources are World Wide Web, social media networks, spam, mobile phone, electronic book, journal and etc. World Wide Web or internet has turned out to be one of the sources of information, which has amassed data stored with a huge number of servers across the length and breadth of the globe. The major portion of the information on internet is time consuming information data banks as the information are cluttered and unstructured (Pandita, 2014). Individual should use their ability, reliability and document validity to evaluate the information (Fritch & Cromwell, 2001). Other internet offering is social media networks which have established and revolutionize in the way people communicate and socialize in their daily lives. Social media networking has introduced

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new dawn of flexibility and freedom of expression. Smart mobile phones in another hand is the rising trend towards flashing the instant texts on mobile phones by service providers of numerous commercial entities with view to endorse their products that create information pollution in its own particular manner.

Information has come to be perceived, on the whole, as something ordinary and seems to be slowly losing its value as not all information can be the turned into knowledge. Although information technology has improved economic proficiency and offered to ascend to numerous new business opportunities, it is questionable whether the quality of life has been enriched by the technology as not all the information on the cyberspace has the positive impact on human life. The information revolution, however, has also produced some negative secondary effects not only on the structure of the society but also human nature itself. It has been estimated that for the billions of websites online, most of the information are not updated periodically and the "old or outdated information" still accessible on the cyberspace. As an excess harmful chemical in the air creates air pollution, it is in the same manner excess, irrelevant and harmful information on the web creates a problem of information pollution which is newly termed as infollution by the experts. According to Özdemir (2016) if the required measures are not implemented, infollution will be named as the new kind of pollution of the 21st century.

Infollution research pays attention to the quality of message (Cai & Zhang, 1996). A message can be essential, useless or harmful. Useless or harmful messages that distract our attention to perform a task or make a decision are information pollutants (Cai & Zhang, 1996). On the other hand, information overload is the exponential growth of information, whereby individual are not ready to use all the relevant information created for their own use even when all the information is not polluted (Pandita, 2014). In other words, information overload is referring the quantity aspect of information while information pollution emphasizes about the quality aspect of information.

2. Problem Statement

The technological advancement has made it relatively easier for information to spread to the furthest corners of the globes but, certain sources of information can be potentially disruptive. Individuals frequently face the problem of information pollution and information overload. The amount of information available for a decision far exceeds the capacity of individuals to process information. However, individuals also differ in their motivations for seeking and engaging with information. In this regard, how effectively and efficiently an individual obtains and manages the information from the internet becomes more prominent issues. Infollution can be considered as the presence and spread of futile or unattractive information that can have damaging effects on human activities. It is considered as one of the hostile impacts of the information revolution (Kai-Yuan & Chao-Yang, 1996). According to Carr (2010), today individual is strangling to read a text and discovering the depth of information. Through this struggle, employees whom are bombarded with continuous information flow and they feel if they dump into information overload (Kominiarczuk & Ledzińska, 2014) and experience certain cognitive and physical problems (Özdemir, 2016). Both limitedness in individuals' data processing capacities and downgrading of received information indicate that these problems are to continue. Information overload and pollution affect not only individual's work performance, productivity on an organizational level but also to employee well-

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being. However, there are limited studies that observed the link between information overload or a type of stressor triggering emotional pain (Kominiarczuk & Ledzińska, 2014) and its effect on well-being.

Thus, in this research we postulate that individual or employee facing with a great level of perceived information pollution aka infollution would experience difficulty in their decision making process and eventually lowered their well-being either is the physical well-being, emotion well-being, social well-being or other dimensions in well-being wheel. Thus, the purpose of this study is to develop and propose a conceptual framework to understand infollution management process and it consequence to employee well-being.

3. Research Questions

3.1 What is the relationship between perceived infollution and individual well-being?

3.2 What is the relationship between perceived infollution and information processing?

3.3 What is the relationship between information processing and individual well-being?

3.4 Will information processing mediate the relationship between perceived infollution and individual well-being?

3.5 Will conscientiousness moderate the relationship between perceived infollution and information processing?

4. Purpose of the Study

The purpose of this study is to develop a conceptual framework aiming to shed new light on how basically employees are coping with information pollution in the organization and how it is affecting their well-being.

5. Research Methods

Through secondary data, selected papers have been analysed to develop a conceptual framework demonstrating how infollution among the employees is affecting their well-being. The published journals regarding infollution have been selected as the database of this study. The journals have been acquired through different sources such as Google Scholar and Scopus by inserting multiple keywords to identify the relevant articles. Later, the abstracts of the studies are reviewed, and more journals have been acquired through the references from these articles.

The articles are selected based on a few criteria. First, the studies about the dimension of perceived infollution have been included in the database. Second, the articles also comprise of the studies regarding the information processing. Third, the articles about dimension of conscientiousness regarding personality trait also have been included. Lastly, the articles that evidenced the effects of perceived infollution, information processing and conscientiousness also have been selected. Then, a conceptual framework is developed through the extensive literature review from the previous studies.

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6. Findings

6.1. Conceptualization of Perceived Infollution and its Effect to Employee Well-being

Infollution is a new word that combines information and pollution (Cho & Lee, 2011). Orman (1984), defines infollution as the pollution of information source with inappropriate, redundant, unsolicited and low-value information. Information pollution can be described as a pile of widespread yet unwanted information that at one point of time these information may significantly impact the social life that may result in undesirable outcomes (Cai & Zhang, 1996). However, recent cognitive reviews have demonstrated that there is so much information individuals can handle before the quality of their decisions may begin deteriorating (Bray, 2008). The abundance of information is typically known as information overload and it leads to decision paralysis, in which the individuals are incapable of making sound judgment as it is quite a challenge for them to judge what is appropriate (Bray, 2008; Orman, 1984). Thus, anything that distracts individuals' consideration from the fundamental facts to perform a task or make a decision may be viewed as information pollution, i.e., infollution. Anything the individual shares or spreads the unnecessary information whether consciously or unconsciously by the mean of ICT and the said act also can cause the infollution. Berkan (2012) state that information pollution as the odourless and invisible waste of human intelligence. An individual cannot discover information pollution without having a mental fatigue, a contradiction on the macro or micro level, a process of shift from deception to enlightenment and exploration unlike the current environmental problem that they can easily trace it with sense organs. However, information pollution is a fact that the individual cannot recognize by himself.

6.2. Framework and Propositions Development

6.2.1. Employee Wellbeing

According to Mill's theory of utilitarian, information necessarily conduce the wellbeing of individual by enabling to make a better choice for their self as well as other people. Thus in this case information seen as instrumentally valuable – valuable as a means to the end of helping total human happiness (Himma, 2007). Although internet technologies giving a remarkable opportunity to the individuals to expand their social and professional links and access a massive amount of information. Nevertheless, these propelled advancements of technologies have forced certain behavioral and psychological problems on individuals. (Jackson et al., 2008; Misra & Stokols, 2012; Stokols, Misra, Runnerstrom, & Hipp, 2009). The access to information is practically unlimited, producing the feeling of burdened by an abundance of information that have impacted individual well-being to certain extend (Kominiarczuk & Ledzińska, 2014). Earlier study has established the relations between information overload and poor physical well-being, increased perceived stress and poor memory recall (Misra & Stokols, 2012). Decision outcomes, such as regret, can affect both psychological and emotional parts of well-being. Regret has been appeared to identify with bring down life fulfilment and and higher depression scores, well beyond the commitments of negative affectivity (Lecci, Okun, & Karoly, 1994). Dispositional factors such as individual differences in personality and the use of emotion regulation strategies also influence one's subjective well-being. However, a number of studies have found well-being such as

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subjective well-being has a strong association with a range of personality traits – conscientiousness (Steel, Schmidt, & Shultz, 2008).

6.2.2. Dimension of Perceived infollution

Pandita (2014) state that the "information pollution is broadly referred as an outcome of information revolution, wherein people are supplied with contaminated information, which is of less importance, irrelevant, unreliable and unauthentic, which lacks exactness and precision, which always has an adverse effect on society at large" (Pandita, 2014, p. 51). As mention above, in this study infollution is defined as the presence and spread of huge amount of information that low in quality in the society through ICT, large enough to produce significantly detrimental effects on human activities and social life.

In the information processing literature, it is presumes that among the most critical elements that affect decision quality are information quality and information quantity (Keller & Staelin, 1987; Paul & Nazareth, 2010). Thus, in this paper, the perceived infollution can be measured from these two dimensions which is information quantity and information quality. According to Gao, Zhang, Wang, and Ba (2010) information quality is characterized as the valuable of the accessible to needed information in helping a decision maker to make better decision based on the information they accumulated. On the other hand, the quantity of information can also referred to information overload, lead to decision paralysis, where the individual incapable of making a judgment as they cannot judge what is appropriate anymore due to information overwhelm (Bray, 2008; Orman, 1984). When a person fails to turn the information into knowledge, the information turns into vain and cause information pollution. Thus, anything that distracts our consideration from the fundamental facts to perform a task or make a decision can be viewed as an information pollutant –infollution.

P1: Perceived infollution dimensions will affect information processing and management

P2: Perceived infollution dimensions will directly affect employee well-being

6.2.3. Information Processing and Management

As new technologies made it easier for information to spread the furthest corners of the globes but certain sources of information can be disruptive. Understanding how individual processing information and response to information pollution has recently received substantial attention. According to Todorov, Chaiken, and Henderson (2002) individual rarely process information in perfect conditions because of environmental and cognitive constraints on information processing situation. Information-processing is the activities such as collection, storage, interpretation, understanding, and use of environmental or internal information is cognition (Lachman, Lachman, & Butterfield, 2015). According to Hoq (2014) regardless of accessibility of big amount of information, individual seems to be knowing less because the quantum of what is known is irrelevant to accessible information.

Information processing embraces that individual's process information by using two qualitatively different pathways that also known as a dual process model and one of the influential dual-process model, the Heuristic-Systematic Model (HSM)(Chaiken, 1980, 1987). Heuristic processing can be defined as "a limited mode of information processing that requires less cognitive effort and fewer cognitive

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resources"(Eagly & Chaiken, 1993, p. 327). Specifically, the HSM stipulates that individual need accurate and adequate information in motivation for information processing. According to Eagly and Chaiken (1993) that "people will exert whatever effort is required to attain a 'sufficient' degree of confidence that they have accomplished their processing goals" (p. 330).

Systematic processing is defined as "a comprehensive, analytic orientation in which perceivers access and scrutinize all informational input for its relevance and importance to their judgment task, and integrate all useful information in forming their judgments."(Chaiken & Eagly, 1989, p. 212). When processing information systematically, individual makes a judgment by carefully examining arguments and relates those arguments to information already held. They make an effort to understand the information and how it relates to decision making. On the other hand, when processing information heuristically, individuals generally apply minimum exertion in processing the information. The focus is "on that subset of available information that enables them to use simple inferential rules, schemata, or cognitive heuristics to formulate their judgments or decisions." (Chaiken, Liberman, & Eagly, 1989, p. 213)

Thus, how effectively an employee obtains and deal with the information from the Internet becomes a more prominent issue. Sometimes information from blogs, social media, personal website and mobile technology increased the "noise levels" and causes information pollution. This more inclusive atmosphere results in a greater volume of information being made available to the individual as not all information has value or impact to the employee as it depends on the context/situation and personal interaction with pull and push strategies. The level of information pollution

P3: Heuristic information process will affect employee well-being

P4: Systematic information processing will affect well-being of employee

6.2.4. Personality Trait – Conscientiousness

Individuals respond differently to the same situations due to their personality traits. According to the theory of Big Five factor of personality, there are five broad domains to describe human personality and explain for individual differences. The traits are openness, conscientiousness, extroversion, agreeableness and neuroticism. Conscientiousness is the personality trait of being careful, or vigilant. Conscientiousness infers a desire to complete the task well. The conscientious individuals are prudent, dependable, well organized, persistent, healthier, thrive, and live longer (Friedman & Kern, 2014). Past research has demonstrated that conscientiousness is identified with assortment emotion-related results. We argue that individual with conscientiousness traits be more vigilant in the information processing behavior. However, personal interaction in information processing using heuristic and systematic strategies will help employee to management the information and effectively avoid false information for example such as spam, commercial advertising, insulting, internet attacks, pornography, and other internet problems.

Thus, it is postulated that personality trait such as conscientiousness trait will act as mediate of perceived infollution and employee well-being.

P5: Employee conscientiousness will moderate employee information processing.

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Based on the relationship of each construct discussed, the conceptual framework is proposed in Figure 1. Since the research on infollution is still novel the proposition been proposed based on the conceptual framework for further exploration:

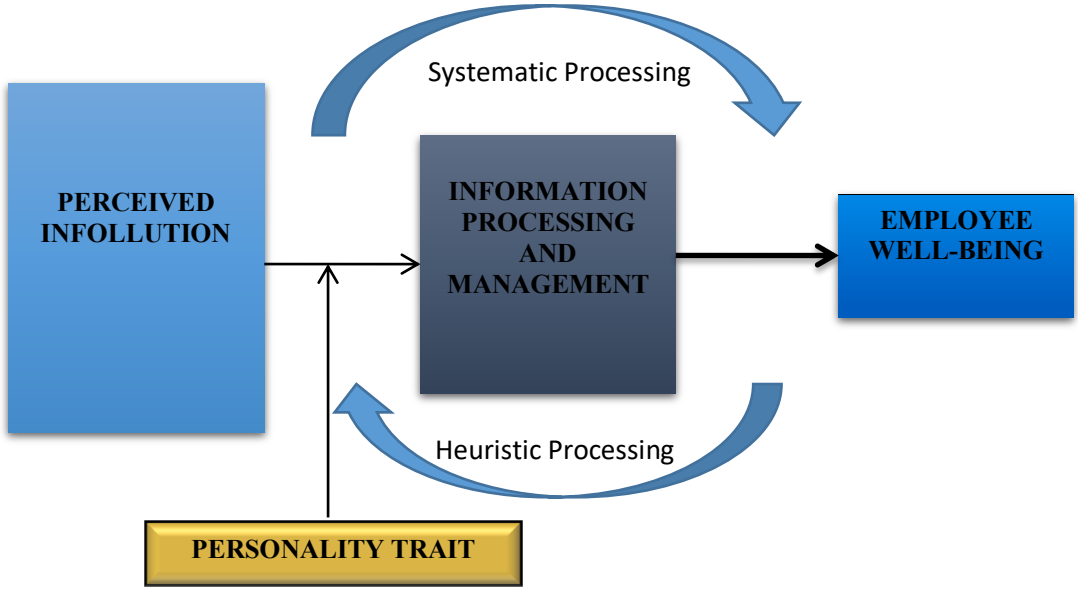

Figure 01. Proposed Conceptual Framework

7. Conclusion

In today's networks, individuals frequently face the problem of information pollution and information overload. The previous researchers have made it clear that the issue of information overload and information pollution. The revolution new technologies and numerous channels of self-publishing and sharing have contributed to information pollution (Hoq, 2014). Thus, understanding how individuals especially employee manage information overload and information pollution and how its effect the decision-making and wellbeing is vital. It is believed the polluted information have lacks of precision and exactness which has adverse effect on society at large.

It isn't the information pollution has gone unobserved, however there is an absence of acknowledgement the negative impact of infollution on human activities in the long run. This is because information pollution is intangible and its and the detrimental impacts are also intangible. How effectively an employee obtains and deal with the information from various sources becomes a more prominent issue. Sometimes information from blogs, social media, personal website and mobile technology increased the "noise levels" and causes information pollution. This more inclusive atmosphere results in a greater volume of information being made available to the individual as not all information has value or impact to the employee as it depends on the context/situation and personal interaction with pull and push strategies. The level of information pollution caused is subject to the environmental context in which the device is being used at the situation. For example, email probably going to cause more information pollution when utilized in a corporate environment than in a private setting. Instant messaging form mobile phones are probably

going to be especially problematic in certain situation and context. However, personality traits and using the dual process model – heuristic and systematic approach will help employee to filter the information and effectively avoid false information.

In conclusion, we are living in an information era with advancement of communication technology with knowledge workers and information factories, which obtain information from an external source, analyse and manage that contribute for the creation of new knowledge. Hence, the reliability and validity of information is critical for the decision makers and success of the firm's business. Although, as new technologies made it easier for information to spread the furthest corners of the globes but certain sources of information can be disruptive. Infollution has a profoundly effects on the decision-making capability and decision accuracy of individuals and organizations. Thus, if a better solution can be found on managing information infollution, policy maker and leaders can implement specific strategies to limit interruptions of information pollution. Economically, better managing information will increase productivity of individual that contributes to healthier society. Therefore, the model proposed in this study aiming to shed new light on how basically individual are coping with information pollution and how it is affecting their well-being.

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