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RESEARCH ARTICLE

The Con-Triad Response in the Promotion of Healthcare from a Social Networking Site

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Abstract

The present study, which is anchored in the interesting but less investigated field of virtual health promotion, examined the concept of interactivity relative to two (2) intersecting actors and their corresponding activities at health promotion in a social networking site, namely (1) promoters or *wall posts* and (2) consumers or *thread comments*. This research made use of bibliometric analysis involving validation through covert non-participative observation of five thousand and twenty-five (5,025) *thread comments* from twenty-three (23) health-related SNS pages. Researchers performed and exhibited a resilient and adaptive procedure to assess the importance of SNS interaction. Results of the analysis aspired to supplement the previous gaps in the literature by advancing three (3) themes eidetic of the thread comments and interactions between the SNS site and the virtual participants, namely: (1) concern, (2) conflict and (3) concept, which was further referred to as the Con Triad Response in Healthcare Promotion. Like implied, the study communicates the need to understand SNS consumers' motivation for engaging in and adopting new communication technologies and the unseen potential of SNS in furthering public health awareness and related teaching.

Keywords: *Facebook; health promotion; social media; social networking sites*

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Introduction

Social networking sites (SNSs) have been defined as "Web-based sources that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system." (Boyd and Ellison, 2007). In recent years, researchers have been more interested on how it affects lives of the modern generation. As such, SNSs today have very significant impact on health promotion and allow millions of users fast, easy and concise access to the most important and useful medical information (Masic, Sivic, Toromanovic, Borojevic, & Pandza, 2012). Thus, the use of these sites in healthcare promotion has been generally accepted. In addition to that, social networking today is what the internet was 20 years ago. In January 2011, Facebook alone had six hundred million (600,000,000) users who belong to the unique cyber culture (Masic et al., 2012). Facebook is the most commonly used SNS, used by seventy-one hundredths (71%) of all health promotion activities (Gold, Pedrana, Sacks-Davis, Hellard, Chang, Howard, et al., 2011). According to Thakeray, Neiger, Smith, & Van Wgenen in 2012, the majority of Facebook posts, eighty-eight and three hundredths (88.3%), were health-related. Of the health-related posts, seventy-seven and eight hundredths (77.8%), were factual health-related information, six and eight hundredths (6.8%), were about services offered, and fifteen and seven hundredths (15.7%) were event announcements.

However, this concept is challenged by data showing conflicting ideas between health promotion and health literacy. A recent national survey by the Pew Research Center indicates that more than half of U.S. adults (57%) seek health information on the internet updates about health issues (Fox and Jones, 2009; as cited by Park et al., 2011). Although the emergence of new media has made information seeking and sharing more convenient and satisfying (Fox and Jones, 2009; as cited in Park et., 2011), low health literacy remains a major problem in the United States (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011). A considerable amount of research has been done about *communication* but a little in *interaction*, even though the presence of these SNSs has produced a drastic shift of way in communications, enabling users to interact, observe and exchange knowledge through heaps of accessible frail ties. In spite of the early notifications, the role of SNSs has remained unclear. Hence, additional researches about its function in terms of healthcare promotion are needed.

In this paper, researchers introduced a novel method to show the role of SNSs, Facebook, as the medium. Since Facebook is the most popular SNS in the world and covers a general assortment of topics, it will be used as the platform for empirical validation of the proposal relationships in the communication processing (Alexa, 2011; as quoted by Gold et al., 2011). Also, Facebook is the most frequently used SNS, with over nine hundred and one million (901 000 000) monthly users, five hundred and twenty-six million (526 000 000) daily active users and more than one hundred and twenty-five billion (125 000 000 000) friend connection (Facebook Statistics, 2012). The study is anchored on the Community of Inquiry Model which suggests that learning experience happens through the interaction of three main elements: cognitive, teaching, and social presence. Cognitive presence is an essential element of critical thinking and is the extent to which participants, through sustained communication in online discussion forums, are able to construct meaning. Teaching presence deals with the design and organization of the educational experience as well as facilitation or moderating in online discussions and any student-teacher interactions (Saude et al., 2012). Social presence is the ability of the participants to project themselves socially and emotionally, as real people (Garrison et al., 2001 as cited by Saude (2012) in Learning through the Lounge: Using Social Presence to assess the learning environment in a MyLinE online forum). This deals with the promotion of a sense of community through the development of relationships in order to facilitate critical thinking and knowledge creation (Saude et al., 2012).Since this study primarily focuses on social presence and interactivity online, researchers, aided with the social presence theory, decided to scrutinize only the

third element of the model. The social presence theory, developed by Short, William, and Christie, is understood as "the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships" (Short, et al., 1976 as quoted by Saude (2012). With the emergence of online environment, the amount of literature dedicated to theory of social presence is an indication of how important and popular it is as a concept to describe and understand social interaction online (Lowenthal, 2009 as cited by Saude in 2012). In this study, interactivity can be simply defined as a two-way (reciprocal) communication between the promoters (wall posts) and consumers (thread comments); and social presence can be established by the way health information, in the form of wall posts, are posted and how those wall posts are interpreted by consumers.

This present study aims to fill-in the gaps of researches about SNSs interactivity. Through this, by assessing the common health issues presented and how people respond to it: positive, negative or neutral, there would be a clearer perception about the vitality of interaction between promoters (wall posts) and consumers (thread comments).

Research Method

Research Design

Researchers conducted the study with the use of quantitative method in order to analyze the numerical data gathered through bibliometric analysis. This method is utilized to determine the importance of interactivity between promoters (wall posts) and consumers (thread comments) from a social networking site in relation to the promotion of healthcare.

Population and Sampling

The present study is conducted through the assistance of the internet. Within international context, it has a claim of a wide-range milieu, wherein respondents are socially and physically distant with one another via a social networking site, specifically Facebook. Hence, this medium can provide inter-cultural and inter-racial results with English language as its basis of wordings and verbalizations. The type of sampling used in this study is non-probability. In this case, purposive sampling was utilized with a set of criteria prepared to come up with a qualified number of respondents. This has been the basis in choosing which "like pages" and "thread comments" are included. Qualified "like pages" have received "to-inform consents" from researchers. Twenty-three (23) from them agreed and participated in the said study whereas a total number of five thousand and twenty-five (5025) "thread comments" underwent a covert and non-participative observation.

Research Ethics

There are three ethical principles considered by researchers pertaining to this present study. They are as follows: (a) right to self-determination in relation to sending of "to-inform consent" to every "like page" qualified, (b) right to full disclosure in relation to sharing of actual information to "like pages" for them to have adequate knowledge about the nature of the study, and (c) privilege of veracity in relation to telling the truth in accordance to the purpose and intent of the study.

Research Instruments

This research has been made possible with the help of a sheer covert and non-participative observation to analyze results which ended up to a bibliometric analysis of primary data gathered from a social networking site. Through the use of Facebook's "search engine", researchers were able to filter "like pages" with the keyword – HEALTH. A total of one hundred and fifteen (115) "like pages" were collected but only twenty-four (24) were qualified and received a "to-inform consent" either through "Facebook message", if available or if not, through "wall post" from researchers. However, only twenty-three (23) from them agreed and participated in the said study.

Data Collection

To come up with unspecified but qualified (even or odd) maximum number of responses to be

assessed, it is important to collect and choose the conclusive healthcare promoters attaining the presented criteria that were purposively made and prepared by researchers themselves. The promoters were best represented by "like pages", especially their "wall posts" to guarantee substantiality of results. On the other hand, under each health-related "wall posts" were "thread comments" that represented the consumers as they significantly patronize information given by promoters.

Facebook, as the medium and reference, was the wide-range milieu of this research. With the assistance of the "search engine", it was possible for researchers to gather all the health-related "like pages" in an instant accordingly through the use of the keyword – HEALTH. To intensify effectiveness in filtering of related "like pages", initial criteria created by the researches were used as follows: (1) healthcare information, (2) English-based promotions, (3) "likes" of more than 10,000, and (4) existence for two (2) years or more. The moment researchers had already chosen the unspecified but qualified (even or odd) maximum number of like pages, they sent a "to-inform consent" to certain administrators of the said "like pages" through "Facebook message" to have a consent for the occurring study. The "like pages" that were informed and agreed were considered as subjects for the research and preceded to the next phases of the process. Every "wall" of the "like pages" was browsed to gather "posts" related to healthcare promotion. A 3-month-range (April, May, and June 2013) was implemented to solidify results in accordance to time-bounded context. Non-related "posts" in that certain period was excluded whilst related "posts" was categorized into health related topics in terms of commonality and frequency of postings and was led to partition of which majorities and minorities were. Under every "wall post" related to a specific health related topic were "threads". "Comments" in these "threads" were subjected for screening in terms of relativity, sensibility and period accountability. "Comments" that are not relative to healthcare, sensible to the topic, and accountable for the 3-month-range was excluded, while the qualifying ones were assessed for the interpretation of responses as to if they were positive, negative or neutral. Researchers considered the "comment" as (1) positive if it (a) sought help and (b) used affirmative words and sentences like "Yes.", "I agree.", etc.; (2) negative if it (a) presented ideas contradicting to the topic and (b) used negations and curses like "No.", "I don't care.", etc.; and (3) neutral if it (a) showed no affirmation or negation and (b) displayed both affirmations and negations. After classifying which were the existing topics and assessing the interpretation of the responses, the last phases of the process were to analyze data gathered and conclude for the results.

Data Analysis

The result is represented by the frequency and percentage of interactivity happening between promoters and consumers through the help of "wall posts" and "thread comments". This will be significant in knowing how people respond to rationally assessed common health issues presented in relation to (a) health-related topics, (b) responses, and (c) health-related topics versus responses. In effect, researchers were able to determine the presence and the essence of the interactivity exhibited by both parties.

Results

Health-Related Topics

Researchers provided a list comprising of health-related topics that they observed from all the "like pages". They are arranged according to their commonality and frequency status (see Table 1). Among these health-related topics, four (4) are included in the majorities, and six (6) are in the minorities. The former are with more than ten hundredths (10%) of the total percentage which are: (a) nutrition, (b) diet, (c) medication and (d) fitness; while the latter are with less than ten hundredths (10%) of the total percentage which are: (a) sleep, (b) reproductive health, (c) stress, (d) sexual health, (e) diseases and (f) exercise.

A total of five thousand and twenty-five (5025) "thread comments" were gathered by researchers

Table 1
Health-Related Topics

Health-Related Topics	Number of Comments	%	Rank
Nutrition	2046	40.72	1
Diet	636	12.66	2
Medication	619	12.32	3
Fitness	612	12.18	4
Exercise	476	9.47	5
Diseases	228	4.54	6
Sexual Health	198	3.94	7
Stress	99	1.97	8
Reproductive Health	74	1.47	9
Sleep	37	0.74	10
Total	5025		100.00

all in all (see Table 2). Positive comments are mostly observed whilst Negative and Neutral comments are reckoned to be not setting far apart from one another.

Table 2
Responses

	Number of Comments	%
Positive	3624	72.12
Negative	608	12.10
Neutral	793	15.78
Total	5025	100.00

Health-Related Topics versus Responses

A varied stance of responses were observed by researchers in relation to health-related topics. Interactivity seems to be present since Positive comments are mostly apparent in all health-related topics. Promoters have been effective in their posts as shown with low percentages of Negative and Neutral comments while consumers have been optimistic about their views as evidenced by a high percentage of Positive comments. Although in Table 3, in some sort of view, from all the health related topics of all the responses, the highest Positive comment is Medication, whereas the lowest is Sexual Health; the highest Negative comment is Reproductive Health, whereas the lowest is Medication; and the highest Neutral comment is Sexual Health, whereas the lowest is Sleep.

Nutrition

Nutrition pertains to wall posts concerning benefits of food and its nutritional content. Promoters tend to showcase this idea with new-to-eyes foods, colorful pictures and simple explanations of its nutritional value.

Diet

Diet is shown through different recipes in relation to right combination of food, whether they are for breakfast, lunch or dinner. Promoters use techniques such as food photography, easy-to-follow procedures and affordability of the ingredients needed.

Medication

Medication is concerned about herbal and home remedies. Promoters make sure that the plants or ingredients needed are common, affordable and convenient for the consumers. They also take into consideration citation of credible sources, where in fact, written are the important information about the use of the drug especially its benefits, side effects and contraindications.

Fitness

Fitness demonstrates how to improve immune system, especially proper hygiene. Promoters dwell on simple precautions like tooth brushing, hand washing, and bathing with innovative procedures yet entertaining and easy to follow.

Exercise

Exercise pertains to simple to complex aerobics, jogging and some gym mechanics. Promoters give some advices and tips through varied innovative and efficient ways such as putting up a video demonstration, step-by-step picture sequence and even a descriptive outline of an effective routine.

Diseases

Diseases discuss a variety of common problems about health, like diabetes mellitus, stroke, pneumonia and et cetera. Promoters try to explain to consumers some ways on how to prevent it and also some first aid treatments. However, due to language barriers about medical terms and concepts, some lay persons are having a hard time to relate with it.

Sexual Health

Sexual health demonstrates awareness mostly about contraception, safe sexual intercourse and sexually transmitted infections. Promoters use articles and images to share knowledge to people. However, some topics are sensitive and complicated that sometimes people do not find it interesting anymore.

Stress

Stress is concerned about its four subtypes: physical, social, mental and emotional stress. Promoters give advice and tips on how to cope with it. However, it seems that people are not interested to it.

Reproductive Health

Reproductive health shows concepts about healthy pregnancy, functions of the reproductive system and maternal-child care. Promoters offer advices in relation to conception up to rearing a newborn. However, people may read the article and text, but perhaps confidentially wise, they prefer a personal visit to a professional healthcare provider.

Sleep

Sleep is about having a good sleep. Promoters are consistent in providing help to people who need it. However, they lack innovativeness since sleeping problems vary from person to person and a lot of factors are believed to be considered.

Summary of Variables' Frequency and Occurrence

Through the use of interconnecting variables from a social networking site – promoters (wall posts) and consumers (thread comments), researchers were able to gather relative data (see Table 4) to signify the results of this study. Shown below were the ten (10) health-related topics and the three (3) responses. They were arranged from greatest to least when it comes to frequency and occurrence.

Discussion

Researchers consider "wall posts" as promoters since Pempek, Yermolayeva, and Calvert (2009) suggest that social networking sites are designed to foster social interaction in a virtual environment. With that at hand, uses, consequences, and values may aid promoter's provision of a safer, friendlier, and thus more attractive environments for SNSs users (Pai and Arnott, 2012). Hence, this study provides a set of bi-polar ideals of promotion that constructs similarities and contrasts between majorities and minorities of existing health related topics. Through careful analyses of researchers, they have observed that "majorities" are equipped with three (3) special characteristics, namely: (a) innovative, (b) simple, and (c) attractive. These "wall posts" are supported mainly of (a) new ideas and concepts, (b) easy-to-understand explanations and guidelines, and (c) colorful images and graphics. On the contrary, "minorities" are linked with poor quality standards such as: (a) primitive, (b) complicated,

Table 3
Health-Related Topics versus Responses

	Number of Comments	%
Nutrition		
Positive	1447	70.72
Negative	233	11.39
Neutral	366	17.89
Total	2046	100.00
Diet		
Positive	477	75.00
Negative	69	10.85
Neutral	90	14.15
Total	636	100.00
Medication		
Positive	481	77.71
Negative	48	7.75
Neutral	90	14.54
Total	619	100.00
Fitness		
Positive	433	70.75
Negative	96	15.69
Neutral	83	13.56
Total	612	100.00
Exercise		
Positive	364	76.47
Negative	49	10.29
Neutral	63	13.24
Total	476	100.00
Diseases		
Positive	173	75.88
Negative	32	14.04
Neutral	23	10.09
Total	228	100.00
Sexual Health		
Positive	114	57.58
Negative	33	16.67
Neutral	51	25.76
Total	198	100.00
Stress		
Positive	65	65.66
Negative	16	16.16
Neutral	18	18.18
Total	99	100.00
Reproductive Health		
Positive	43	58.11
Negative	22	29.73
Neutral	9	12.16
Total	74	100.00
Sleep		
Positive	27	72.97
Negative	10	27.03
Neutral	0	0.00
Total	37	100.00

and (c) unappealing. These have been associated with (a) preservation of transitional developments of ideas and concepts, (b) complex interconnected parts of explanations, and (c) non-inviting images and graphics or with only pure words and texts. Akin to the frequency and percentage of all the health-related topics, Nutrition had the highest number of responses which constituted of two thousand and forty-six (2046) thread comments or forty and seventy-two hundredths (40.72%) of all summed-up data gathered. At the same time, nutrition and health claims are strong marketing incentives for the food industry (Cheftel, 2005), providing opportunities for product differentiation based on a health-related positioning. On the other note, Sleep had the lowest number of responses which constituted of only thirty-seven (37) thread comments or seventy-four hundredths (0.74%) of all summed-up data gathered. Since according to Shirazi et al. (2013), given the current broadcast nature of existing social networks, users were only concerned with sharing their sleep patterns indiscriminately.

Logging onto SNS to start their day has become a daily routine for many people (Stone, 2009). Understanding this perception generates involving user interactions as well as the rapid uptake and growth for advertising based revenue models (Pai and Arnott, 2012). This has been the basis of researchers to consider "thread comments" as consumers, while Reynold and Olson (2001) argue that consumer's perceptions (knowledge) of product attributes hold different levels of abstraction (i.e., uses, consequences, and values), and these are related hierarchically. These online contexts are similar in nature to SNSs in terms of satisfying user's social, functional and hedonic needs. When someone posts something on Facebook, expect three (3) types of comments. That is, when consumers relate themselves to promoters, the results are threefold: (a) a Positive comment, when a consumer has a concern to express something about the post, (b) a Negative comment, when a consumer has a conflict to resolve something about the post, and (c) a Neutral comment, when a consumer has a concept to share something about the post. This

Table 4
Summary of Variables' Frequency and Occurrence

Health-Related Topics

		Nutrition	Diet	Medication	Fitness	Exercise	Diseases	Sexual Health	Stress	Reproductive Health	Sleep	TOTAL
Responses	POSITIVE	1447	477	481	433	364	173	114	65	43	27	**3624**
	NEGATIVE	233	69	48	96	49	32	33	16	22	10	**608**
	NEUTRAL	366	90	90	83	63	23	51	18	9	0	**793**
	TOTAL	**2046**	**636**	**619**	**612**	**476**	**228**	**198**	**99**	**74**	**37**	**5025**
OVERALL							**4.35**		**0.51**		**High TWQ**	

Note. These data are gathered through a covert and non-participative observation from twenty-three (23) "like pages" that qualified and agreed to participate in the study.

has been known as the "con-triad response". Based on the Oxford Dictionary, published by the Oxford University Press, "con-" is a Latin prefix which means "expressing intensive force together": in addition, (a) "concern" is defined as a matter of interest or importance to someone; (b) "conflict" is defined as a serious disagreement or argument; and (c) "concept" is defined as an abstract idea or a general notion. Taken as a whole, the social networking site, Facebook, is a highly recommended medium for health teaching because of an apparent existence of Positive comments although Negative and Neutral comments are unavoidable, since they are part of the interaction.

Moreover, in the course of analyzing the views of consumers, researchers observed harmonious interaction, in an affirmative form, that happened with responses concerning Medication having the highest Positive comments of seventy-seven and seventy-one hundredths (77.71%) and the lowest Negative comments of seven and seventy-five hundredths (7.75%) in the total number of responses gathered. Likewise to Sexual Health, but in a dissenting form, researchers have observed harmonious interaction that happened with responses having the lowest Positive comments of fifty-seven and fifty-eight hundredths (57.58%) and highest Neutral comments of twenty-five and seventy-six hundredths (25.76%) in the total number of responses gathered. Therefore, it is imperative for promoters to consider interest of consumers to Medication like herbal medicines and home remedies, whereas in Sexual Health to be improved in terms of lessening the degree of sensitivity and sensuality in terms of graphical and textual usage in accordance to the promotion of healthcare.

SNSs permit simultaneous access to multiple communication tools (Dwyer, Hiltz, and Passerini, 2007). Although according to Pempek et al. (2008), consumers spent more time observing content on Facebook than actually posting content. Such consumer-oriented thinking indicates that the utility of an SNS is not so much in its features but rather in the functional and psychological consequences it delivers, which are important for identifying consumer's goals and values (Pai and

Arnott, 2012). Yet, there is an interactivity present between promoters and consumers as long as both parties relate to one another, whether responses are positive, negative, or neutral. Hence, it is good to know what topics consumers are most interested at. In fact, Elison et al., (2007) found a strong positive relationship between Facebook use and social capital, or the resources gained through social interactions.

Conclusion

This probing study deepens understanding of SNS consumer's behavior, which can benefit both researchers and promoters. Theoretically, this study contributes to research by improving interactivity of two essential variables – promoters and consumers – that are both related to promotion of healthcare. Practically, the results should help SNS promoters design platforms that more closely fit their consumers' needs. Thus, the creation of a hedonic environment would facilitate reciprocal relationships among consumers. Social networking sites like Facebook allow a coming together of observational and interactive media, which may become even more pronounced. Although interactivity is touted as a hallmark of newer media, online users spend a considerable amount of time just watching others. It is imperative for promoters to understand SNS consumer's motivation for engaging in and adopting new communication techniques. Overall, promoters can improve quality of posts with the use of three (3) assumed characteristics, namely: (a) innovative, (b) simple, and (c) attractive in order to get more Positive comments from consumers. Interactivity concerning healthcare promotion has now an active online space wherein promoters (wall posts) and consumers (thread comments) have played an essential role. Dissemination of health education will be fast, easy and concise. Thus, it favors to healthcare professionals and prospers public health as well.

Recommendation

Although this study offers valuable insights into promoters and consumers interactivity in healthcare promotion from a social networking site, it has some limitations. First, it did not measure the relationship between health promotion and health literacy. Hence, it needs further research. Second, it is prudent to improve the bibliometric analysis that exists in the changing environment of Facebook such as: (a) "like" to each thread comment, (b) "reply" on each thread comment, and (c) "@mention" reply of promoters to consumers. Third, it is significant to know the basis of consumers why they "like" that certain "like page". Fourth, it is beneficial to gather more health-related topics since researchers were only able to gather ten (10). Lastly, comparison of interactivity happening among varied social networking sites would be interesting and essential in the world of online communication. In relation to the result of the study, researchers are humbly recommending this paper to whomever of the following: to the online community who gives importance to SNSs especially when it comes to healthcare promotion; to businessmen who use SNSs especially Facebook, to sell and endorse healthcare products; to health organizations who utilize the functions of SNSs for health teaching and awareness; to SNSs enthusiasts or to those people who have interest in online interactivity, and also to ethnologists and sociologists who are conducting studies about online community; to professors who want to share knowledge about this topic; and to sheer fellows, researchers are hoping that you will continue to provide studies akin to this topic or even improve it to enhance its specificity and comprehensiveness as this paper is bound to be done. This paper certainly needs further novel studies.

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