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## A Literature Review of Website Quality of Pharmaceutical Companies.

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### ABSTRACT

Website quality is a keen requisite for this moment, which is why this review article focused on identifying vital factors that contribute to the quality of websites related to Pharmaceutical Industry. In this paper we reviewed fifty articles correlated to the domain of website quality, This review was conducted between Aug 2016 to Oct 2016. From these articles we collected factors that was already used by various authors in their research articles, among those factors some factors that were missing in the literature but we believed they could also significantly contribute to the quality of Pharmaceutical Industry websites are also added which resulted in a total of 93 factors. We furthermore analyzed the importance of each factors based on how many authors have actually made use of them in their research work, that could help every researcher working in this area to be benefited out of this review article by referring to number of researchers using a particular factor which is a reinforced substantiation that speaks for itself.

**Keywords:** Pharmaceutical web quality, website factors, Website evaluation, online Pharmacy web metrics.

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## INTRODUCTION

In this era of e-commerce websites are considered to be the gateway of conducting business and information sharing, having said the importance of websites it is imperative to focus on the quality of pharmaceutical industry, website is a medium which has made everything possible in a productive as well as cost effective proposition. In view of this fact we now turn our attention towards this electronic revolution that lay down the pathway for utilizing user friendly information highway and also conducting entire pharmaceutical organization business operations online, not to mention the harnessing power of online retail sectors and direct factory outlets which exploited the website medium to flourishes their business by utilizing the technological support provided by website

## MATERIALS AND METHODS

This review focuses at analysing the existing literature in the area of pharmaceutical website quality and there by spot out variety of factors used by different authors in the past research and also to suggest new factors left out so that these new factors can be utilized in future researches related to pharmaceutical website quality evaluation. This review does not express any new research method or framework for evaluating quality of pharmaceutical website. We carried out this review in order towards discovering results for these research queries.

- A. Overall how many factors does the past researcher's have used?
- B. Which factors are specific to pharmaceutical websites?
- C. How many authors used a particular factor connected with pharmaceutical industry?

## LITERATURE REVIEW

Adel M. Aladwani et al. (2002) created an instrument in website quality towards client viewpoint. 25 factors under 4 catagory in web quality namely technical adequacy, content quality, specific content and appearance. [1] Albert L. Lederer and et al. (2000) used TAM for work related jobs using applications in the websites. Information quality, ease of finding, ease of use, ease of understanding are the factors used.[2] Alt, Rainer (2003) developed an integrated strategy that emphasis on portals that bundle services for the patient and physicians customer processes. This frame work has been elaborated in cooperation with nine companies and applied at a major pharmaceutical company.[3] Andrea Back, Christopher Haager (2011) classified 44 pharmaceutical over the counter products websites is classified in three maturity stages, innovators, adopters and laggards.[4]

Bomil Suh et al. (2002) introduced trust factor for the recognition. Analyses using SEM results show that factor trust impacted with a significant level.[5] Camilleri, S.J and et al. (2013) focused on customers' perceptions in retail finance, service quality, of Maltese security, convenience and cost.[6] Chakib hamadi (2010) used satisfaction, commitment, perceived quality for banking online.[7] Chang Liu and Kirk P. Arnett (2000) explored factors related to e-commerce. critical to Website success factors 4 were acknowledged namely service quality, playfulness, system design quality, information service quality.[8]

Cheolho Yoon (2010) researched on online banking satisfaction of customer with respect to China, using factors like, speed, customer support, design, ease of use. Result shows security, design, speed, information content, customer support have customer support influence.[9] Chung-Tzer Liu and et al. (2009) conducted factor analysis for measuring portals

Service quality. Four factors are the outcomes of the result they are privacy, security, appearance and information adequacy.[10] Dave Gehrke and Efraim Turban (1999) used determinants customer focus, navigation efficiency, business content and page loading speed. Their strived point of view is in developing website for e-commerce.[11] Dianne Cyr (2013) User perceptions of website in eight country samples to find out whether all websites are correlated even if they are from different culture.[12]

E. Herrera-Viedma (2004) used fuzzy linguistic approach for judgements.[13] Faizan Ali (2016) examines differences in website quality of hotels. Findings convey customer satisfactions is related to website

quality.[14] Fariz Taherikia and Bagher Shamsi (2014) evaluated and ranked e-banking service quality factors used are motivation, security, communication, support, ease of use and reliability.[15] Farnaz Beheshti and et al.(2012) used E-SERVQUAL scale for features in Iran.[16]

Hans H. Bauer and et al. (2005) used a measurement model Under 3 service dimensions they are problem solving, additional and core.[17] Hans van der Heijden (2003) examined enjoyment, usefulness and ease of use as factors of quality.[18] Henny Medyawati and Ahsin Mabruuri (2012) analyze how e-banking services use webqual for finding quality in banking websites with 6 factors, between the Mandiri bank, BJB Bank.[19] Jan Hartmann and et al. (2008) explores the strength of user judgement on website quality and practical implications for design are discussed.[20]

Jasur Hasanov and Haliyana Khalid (2015) tested the effect on consumers interest for buying online organic food in the view point of Malaya people.[21] Joris Claessens and et al. (2002) discusses about e-banking system security in today's context.[22] K.K. Teoh and et al. (2009) they tested level of satisfaction for different factors based on usability.[23] Kyung Kyu Kim and Bipin Prabhakar (2004) used theory's like social as well as trust in the research model. They found out that trust is not a necessary factor.[24]

Layla Hasan and Emad Abuelrub (2011) evaluated any website quality regardless of type of service it has to offer.[25] Luis Olsina and Gustavo Rossi (2002) In this paper, give an overview of the WebQEM Method and its tool by E-commerce case study.[26] Luisa Mich and et al. (2003) invented 2QCV3Q model to judge quality of Web site in form of five questions who, what, why, when, and where.[27] M. Sadiq Sohaila and Balachandran Shanmugham (2003) reveals factors in Malaysia.[28]

Margaret Tan and et al. (2000) used planned behaviour in adopting Internet banking. The results revealed perceptions of relative advantage.[29] Maya Basant Lohani and Pooja Bhatia (2012) studied comparison of customer's perceptions of service quality with public and private sector banks of India using SERVQUAL scale.[30] Mehri Saeid and et al. (2011) conducted a simulation to different rank-order weighting methods on quality scores.[31] Michael buys and Irwin brown (2004) evaluated factors like content, transaction, innovation and security.[32]

Ming-Chi Lee (2009) explores the various merits on e-banking using technology acceptance model, theory of planned behaviour model for explaining usage of online banking.[33] Miranda, F.J and et al. evaluated private Spanish websites using Web Assessment Index.[34] Mohammed Al-Hawari and et al. (2005) developed a model for automated service quality of banks.[35] Mohd Shoki and et al. (2012) used SERVQUAL for Malaysian banks to unroll the different dimensions hidden .[36]

Monideepa Tarafdar and Jie Zhang (2008) studied factors reach and loyalty of 190 websites[37] Moshe Zviran and et al. (2006) conducted study on shopping, service, trading websites.[38] Oreste Signore (2005) measured quality model in an automated fashion with quality characteristics.[39] Ritu Agarwal, Viswanath Venkatesh (2002) describe heuristic evaluation idea to examining the usability of different rental agencies.[40]

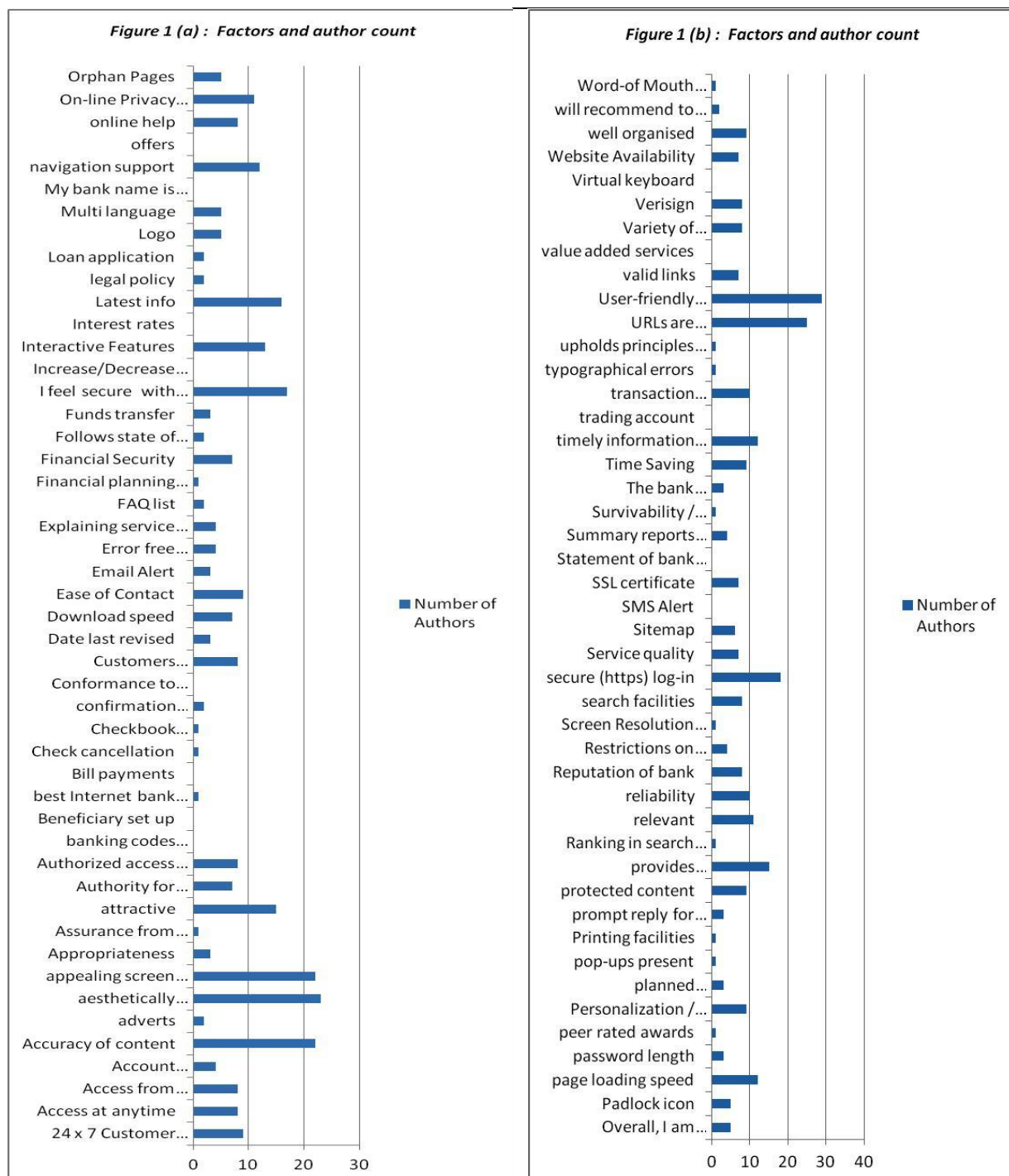
Selcuk Cebi (2013) scope is to address research gaps for determining importance degrees of website design.[41] Soyoung Kim and Leslie Stoel (2004) used Loiacono's WebQual quality along with apparel websites.[42] Steve Myllee and et al. (2004) addresses effective site design with user satisfaction construct.[43] Sutherland L.A et al. (2005) determined features of websites related to nutrition information on internet.[44]

T.C. Edwin Cheng et al. (2006) studied Hong Kong based TAM with SEM for testing correlations.[45] Tim French et al. (2007) studied mainly trust related to using card sorting technique.[46] Vincent S. Lai and Honglei Li (2005) researched on technology acceptance model on gender and age groups in the field of IT. [47] Youngghwa Lee and Kenneth A. Kozar (2012) studied usability. The research identified 10 usability factors for purchase intention, behavior.[48]

Zhilin Yanga et al. (2005) studied 5 dimensions of quality in services to measure perceived quality there. [49] Ziqi Liao and Michael Tow Cheungb (2002) studied interest to use retail banking using internet data showed accurate information relating to underlying properties.[50]

## RESULTS AND DISCUSSION

This pharmaceutical industry website review paper yielded totally 93 factors which is listed in Figure 1(a) and (b): Factors and author count, This chart gives researcher's an overview of all factors identified from the literature we selected and also provides detailed count of how many authors have made use of them in their own research related to pharmaceutical industry website quality. For instance to go by factors used by maximum number of authors comes first the factor user friendly navigation which is used by 29 authors, next comes urls are meaningful and easy to remember with 25 counts.



Aesthetically appealing is used by 23 authors, accuracy of content is referred by 22, appealing screen layout by 22 of the researcher's, secure login is used by 18, feeling secure is used by 17, latest info by 16 authors, attractive by 15 of them, provides trustworthy information utilized by 15, factor interactive features by 13 papers, navigation support is referred by 12 authors, page loading speed by 12 authors, timely information alerts is by 12, online privacy policy by 11, relevant by 11 authors, reliability used by 10 authors.

Transaction processing speed by 10 authors, 24X7 customer care support, ease of contact, personalization, protected content, time saving, well organised these factors where used nearly by 9 authors, any time, place, secured access, customers confidential information, online help, reputation of bank, search facilities, variety of presentation, VeriSign, authority for content, download speed, financial security, service quality, ssl certificates, access from anywhere these factors are nearly utilized by 8 authors.

Authority for content, download speed, financial security, service quality, ssl certificate, valid links, website availability are referred by 7 authors, sitemap by 6 authors, logo, multi language, orphan pages, overall satisfied, padlock icon by 5 authors, account information, error free transaction, explaining service charges, restriction on high value transaction, summary report of transactions all these factors are referred by 4 research authors, appropriateness, date last revised, email alert, fund transfer, password length, planned maintenance information, prompt reply for inquires, bank understands my online banking needs are used by 3 authors.

Adverts, confirmation messages, faq list, follows state of the art technology, legal policy, loan application, recommend to others these factors are used by 2 authors, assurance from bank end, best internet bank awards, check cancellation, check book application, financial planning and analysis, peer rated awards, pop up present, printing facilities, ranking in search engine output, screen resolution indicator, ability to provide service in hostile conditions, typographical errors, upholds principles of well respected bank, word of mouth referrals are used by 1 author only.

The following 13 new factors are added to the existing 80 factors since we believed it could still improve the quality of websites related to online pharmaceutical industry domain. The factors newly added are banking codes disclosed, beneficiary setup, bill payments, conformance to RBI regulations, overdraft increase, decrease, interest rates, bank name listed in major payment methods, offers, sms alerts, account statement, trading account, value added service and virtual keyboards these factors will have a count of zero since they were not collected from literature and hence no referrals to any particular author.

## CONCLUSION

This pharmaceutical industry website review paper strives to collect as many factors as possible from the literature belonging to quality of website with special focus is made on quality of pharmaceutical industry websites. Though this paper has fulfilled its objective of reviewing, our findings may be only a suggestive of the ground, since online pharmaceutical organization also incorporates online payments and cashless transactions some quality factors of banking website that need to work and co-exist with the pharmaceutical industry websites factors so that an mutual inter link between the industries have been taken into account to fully make it a automated system. Future reviews are essential to take in to account of the gap if in the least whichever is left untouched by including those factors also from other sources.

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