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QUALITY OF PERSIAN ADDICTION WEBSITES: A SURVEY BASED ON SILBERG, DISCERN AND WQET INSTRUMENTS (2011)

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Original paper
ABSTRACT
Background: Nowadays, World Wide Web is an accessible and widespread resource to attain medical information. So physicians and health institutions try to inform patients about different domains of medicine through Web. Addiction is a noteworthy subject in medicine and a controversial issue among them. However, quality of health information on the internet is doubtful. The objective of this study is to determine the quality of Persian addiction websites to offer recommendation for their improvement. **Methods:** This was survey and an applied study that the study population was all Persian addiction websites. Sample of this study was 28 Persian addiction website which were chosen by searching Persian equivalences of 7 key terms (addiction, addict, addiction center, drug, treatment of addiction, recovery of addiction, addiction withdrawal) into the Google and Yahoo search engines. Finally, the websites were ranked based on the Silberg, DISCERN and WQET instruments. Data were analyzed with Excel software using descriptive statistics. **Results:** The overall mean of websites in Silberg, DISCERN and WQET instruments were 1.42, 41.89, 64.57. Also the results showed that "Unit of Substance Abuse Treatment" belonging to Mashhad University of Medical Sciences was ranked first based on the Silberg, DISCERN and WQET instruments. 5 (from total of 9), 60 (from total of 80) and 82 (from total of normalized grade 82) were grades for this website for these instruments respectively. **Conclusion:** It showed that the quality of Persian websites according to Silberg, DISCERN and WQET instruments was "low", "more than half" and "very good" respectively. Not assigning date of entering data, author names, and references of information (authority) were most important missing characteristics of these websites. In addition, lack of interactive opportunities like chat rooms was another problem that leads to dissatisfaction of users.
Key words: Persian addiction websites, quality of website, evaluation of website, Silberg instrument, DISCERN instrument, WQET instrument..

1. BACKGROUND

Today we see deep revolution in information and communication technologies field. We live in network society that main characteristics is information flow in all its sections and all of functions, evaluations and decisions are based on information (1). World Wide Web as a powerful part of internet is complex network that now include more than million pages and hundred million users. Everyday user search websites to obtain useful, appropriate and update information that they need (2). However, with the increasing concern about quality and characteristic of accessible information in the web most people know web an environment that there is not any referee for evaluation of it's information and any methods for denotation of it's accuracy and authority (3).

With this purpose, a lot of researches have been done to evaluate websites. Khaleghi and Davarpanah study in surveying Iranian website condition demonstrated that there was not obvious planning for dissemination of information through websites in Iran (3). Pashotan, in evaluation of Persian library and information science websites found that one site observed less than 39% of criteria and had bad condition; 29 websites observed 40-59% of criteria and had undesirable condition, 27 websites observed between 60-79% criteria and had appropriate situation. Finally only 3 websites observed criteria and were in good condition (4). Hashemi et al. in evaluating of police website demonstrated that police website of Iran has appropriate design, Summarized and useful subject, accessibility capability and suitable traffic but website must be improve for search engine accessibility (5). Hassanzadeh and Navidi for Iranian ministries website expressed that there wasn't significant difference between accessibility of Iran ministries website based on 2 ways of extracting indexes evaluation from world wide web and user experience (1).

And result of Asareh and Papi in evaluation of quality of Iran uni-

versity library websites showed that Ease of searching, Presence present of scientific identification about authors or organization and determining of information purpose is in average level and internal links and updating of content is in low level (2).

On the other hand, today World Wide Web is transformed to extension and accessibility source for medicine information; however the numbers of these web pages are increasing (6). With increasing concern in information quality on the web, this worry is more about medicine science websites because of nature of this area and therapeutic use for different persons. Lissman and et al. at critical review of internet information about depression demonstrated that the quality of information on the internet for this area was quite low. Linda et al. (7) about the nature and quality of back pain information on the internet said that, most back pain-related web sites can be classified as advertising. The quality varied considerably, resulting in difficulties for patients to find useful information in this field. In addition (8), results of Bohacek and et al. demonstrated that majority of burn scar management information on the internet was fair but poor quality. Academic and organizational web sites had the best quality of burn scar management information (9).

Dornan and Oermann (10) expressed about evaluation of breast feeding web sites that seven of the sites included all eight of the content criteria from the American Academy of Pediatrics, and three sites did not included any of the information recommended by the AAP content criteria. These researchers deducted that nurses should be able to recommend best patient education materials for their patients (10). Fathifar in evaluation of Persian health and medicine websites showed that quality information is inappropriate in health and medicine websites and internet user must pay attention for using (11). Vakili's studies in rating viral infectious diseases websites based on WHO and Silberg criteria illustrated that the status of viral infectious information is weak in upgrading information, accuracy, comprehensiveness and meeting Silberg criteria and the users are recommended to be cautious and aware of evaluation means when using website providing health information, particularly on viral infectious diseases (12).

Also web capabilities encourage physicians and relative institutions to design website in different medicine sciences field. One of these areas is addiction and ways of its treatment. Addiction is global problem that its difficulties have effect in person health, family life, economic, social security and cultural growing. Iran has been exposed to the threat of drug abuse because of neighborhood to Afghanistan and Pakistan. This matter has multiplied important of this subject in our country. An important approach is giving information to the society, and website designers. Because of Nature of information, special health information on the web. The necessity of addiction website evaluation is obvious.

For evaluation of website have been design different tools. Among these tools for assessment of Persian addiction websites, selected 3 tools (DISCERN, Silberg and WQET). Silberg criteria is information validity criteria that Silberg designed it and include authorship, disclaimer, currency and attribution (13). DISCERN is a standard instrument for evaluation of health information that provide by Public Health and Primary Care Institution dependent Oxford University (14). Also Website Quality Evaluation Tool is a instrument that designed based on MakInerney and Bird (2005) (14) checklist and include 9 criteria (content, functionality, currency and Stability, links, graphics, Authority, Coverage, Style and using of Meta tags (2). By this explanation, the objective of this study is to determine the quality of Persian addictions websites using the Silberg, DISCERN and WQET instruments and provide suggestion to their promotion.

2. METHODS

First for recognizing Persian addiction websites, Persian equivalences of 7 search terms (addiction, addict, addiction center, drug, treatment of addiction, recovery of addiction, addiction withdrawal) were searched in the Google and Yahoo. Google and Yahoo were chosen because of their popularity among Iranian people (15). The first 30 search results reported by Google and Yahoo per keywords and all related links in these websites were evaluated for quality using Silberg, DISCERN and WQET instruments. However, unrelated websites were excluded. Also related websites mentioned in Ministry of Health and Medical Education and Iran Medline were included. Finally 32 websites were found which four websites became unavailable during the study. So 28 websites was evaluated in this study.

We used three instruments to evaluate our websites, because each of these instruments evaluates different aspects of websites quality (4, 5, 6, 7, 8). Silberg instrument consists of 9 questions in four sections: Authorship, Attribution, Disclosure, and Currency (13). For each question, two answers are possible: Yes (=1) and No (=0). So, maximum score in this instrument is 9 (11).

Second instrument, the DISCERN checklist consists of 16 questions in three sections. Section one assesses reliability of websites using 8 questions. Section two assesses the quality of information on treatment choices with 7 questions. Last question rate overall rating of the publication based on the answers to all of the previous questions (DISCERN,). The DISCERN rating scale for each question is 1 to 5, where 1=definite NO, 3=partially and 5= definite Yes.

Last instrument, The Website Quality Evaluation Tool (WQET) is an interdisciplinary assessment instrument, evaluates 9 criteria (content, functionality, currency, stability, links, graphics, authority, coverage, style) with 37 questions. In WQET, each question rate from 1 to 7 scales. Maximum normalized scale for each website in WQET is 82. For normalizing score, this formula was used:

Score of website A:

$$\frac{X \times 82}{Y}$$

(Which X means total score for each website and Y means top score of one website). Also normalized score coded according to McInerney and Bird (2005) (14). At the end, data were analyzed with Excel software using descriptive statistics. In charts each websites have been marked by W sign (w1-w32) (16).

3. RESULTS

The results showed that "Unit of Substance Abuse Treatment belonging to Mashhad University of Medical Sciences" was ranked first based on the Silberg, DISCERN and WQET instruments. 5 (from total 9), 60 (from total 80) and 82 (from total of normalized grade 82) are grades for this website for these instruments respectively. Similarly, website of "Iranian National Drug Control Headquarters" was first based on DISCERN.

In Silberg instrument, percentage of observance of 4 main characteristics was calculated. It was found that 18% of the websites mentioned references of their contents (Attribution). Also, Authorship characteristic investigate via three questions which 39% of websites mentioned author name, 7% author affiliation and 4% author qualification. But about disclosure, none of them had disclosure. 18% of websites mention sponsorship and 29% their copyright. About last criterion mean currency, only 18% and 21% mentioned date of lunch and the last updating respectively.

In assessing the quality of websites, the overall mean of Silberg score was 1.42 of maximum 9. Also, only score of one website (Unit of Substance Abuse Treatment belonging to Mashhad University of Medical Sciences) was more than half. Figure 1, shows the detail Silberg score of these websites.

According to DISCERN score (60 from total 80), web site of "Unit of Substance Abuse Treatment belonging to Mashhad University of Medical Sciences" and website of "Iranian National Drug Control Headquarters" were ranked first, based on this instrument. Also, score of 15 websites were half or more than half.

DISCERN instrument, focuses on two main criteria: a) reliability, dependability and trustworthiness of a website and b) the quality of information about treatment choices. So we assess the quality of websites based on these two criteria separately shown in Figure 2 and 3.

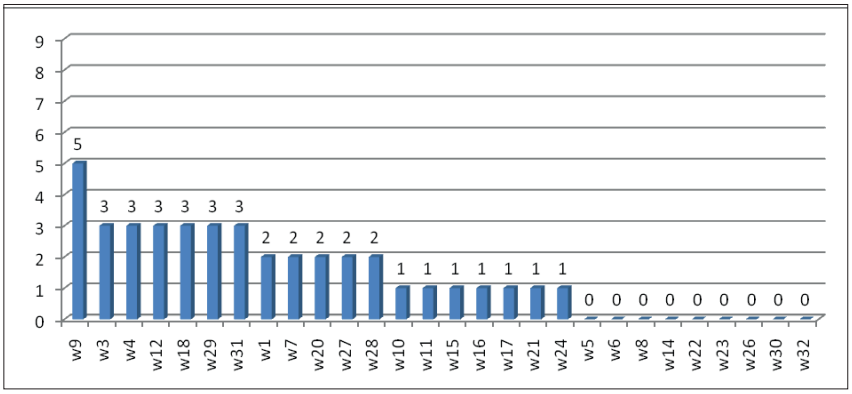

Figure 1. Silberg scores of Persian addiction websites (In descending order)

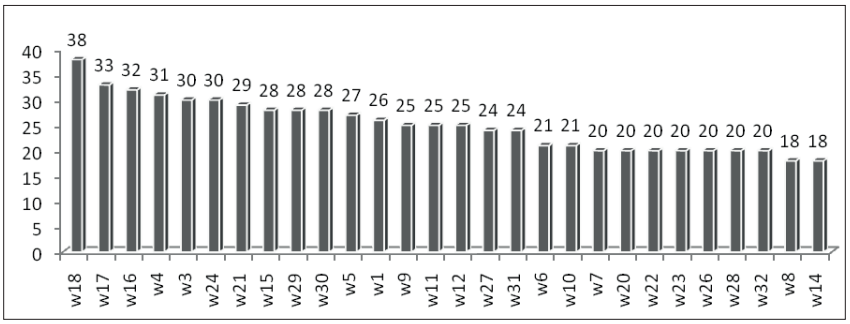

Figure 2. Reliability score of Persian addiction websites based on DISCERN instrument

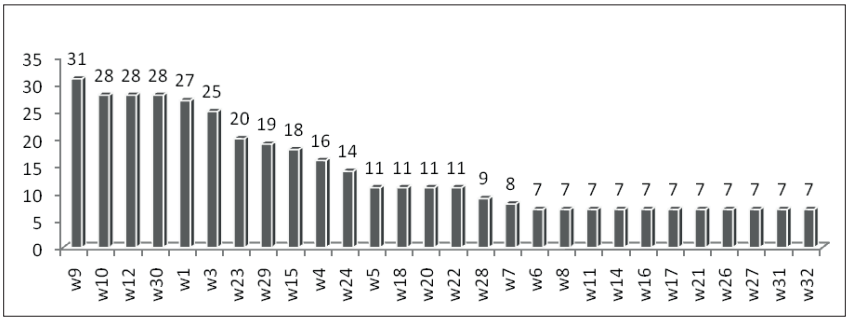

Figure 3. The score of quality of information about treatment choices of Persian addiction websites based on DISCERN instrument

As shown in Figure 2, "Pishgamaneh Rahayi" website gains 38 score (from total 40) and ranked first according reliability criterion. This website ranked sixth based on total score of DISCERN instrument. Except "Dr. Valipour" and "Behboudi websites", others gained half or more than half of total score.

The highest score for quality of information about treatment choices of Persian addiction websites is 31 (from total 35) belongs to "Unit of Substance Abuse Treatment belongs to Mashhad University of Medical Sciences". Score of other websites represented in Figure 3.

Coding result	Websites
71-82: Excellent Site, trust it	W9- W30- W18- W15- W4- W12- W16
64-70: Very Good, bookmark it	W17- W3- W1- W5- W24- W10- W21- W27
57-63: Good, but proceed with caution	W28- W22- W29- W19- W8- W11- W6- W23
50-56: May offer something, but don't trust information without investigation	W31- W32- W7- W26
Below 50: Use the site information with a grain of salt	W14

Table 1. Coding result of Persian addiction websites in WQET

According to WQET instrument "Unit of Substance Abuse Treatment belongs to Mashhad University of

Medical Sciences" gained highest score. Also the mean total quality score was 64.57 which would classify the average websites as 'Very Good' on the Website Quality Evaluation Tool rating scale. Table 1, shows detail results of evaluation of Persian addiction websites in WQET instrument.

Also the median grade of websites for Silberg, DISCERN and WQET instruments were 1.42, 41.89, 64.57 respectively. It showed that the quality of Persian websites according to Silberg criterion was low. However, the average of grades according to DISCERN are more than half, websites need to be improved according to this criteria. At the end, the mean total quality score in WQET instrument was 64.57 which would classify the average websites as 'Very Good' on the Website Quality Evaluation Tool rating scale.

4. DISCUSSION

With consideration of all of these instruments, "Unit of Substance Abuse Treatment belonging to Mashhad University of Medical Sciences" was ranked first among 28 Persian addiction websites. Also "Aayandeh addiction Professional clinic", "Presidency drug control headquarters", "Green House Addiction Center", "Pishgamaneh Rahayi" and "Addiction Studies National Center (dependent on Tehran University of Medical Sciences)" was ranked second to sixth respectively.

The mean Silberg score for 28 unique websites was 1.42, however, this score in medical and health Persian websites was 4.61 (7). Also the range of score in infectious website was between 4-9, but in our research between 0-5 (17). This shows low quality of Persian addiction websites in comparison with other health related Persian websites.

According to DISCERN instrument, the quality of information about treatment choices in 19 Persian websites was under half of total score that need more attention of website designers. Also, the mean DISCERN score for Persian addiction websites was 41.89. While this mean for chronic pain websites was 55.9 (17).

In addition, one requirement for all visitors of addiction websites is interaction with physicians and specialists to ask their questions. But only 6 websites had chat room and only 10 websites let communication through E-mail.

Using ICT in all fields and aspects of medicine and health care protection is growing up. Tho role of internet is especially important in medical education, but also using of social networks and on-line databases for all kinds of education (18-23).

5. CONCLUSION

According to this study, Persian addiction websites quality was moderate. Lack of assigning the date of entering data, author names, and references of information (authority) are most important missing characteristics of these websites. In addition, lack of interactive opportunities like chat rooms was another problem that leads to dissatisfaction of users. Moreover, with consideration of all criteria of these three instruments, "Unit of Substance Abuse Treatment belonging to Mashhad University of Medical Sciences", "Aayandeh Addiction Clinic" and "Presidency Drug Control Headquarters" ranked first to third respectively.

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APPENDIX 1

List of persian addiction websites
W1: http://www.sapto.hbi.ir/ Prohibition of Addiction Office Dependent on Ministry of Health and Medical Education
W2: http://behjoo.ir/ Behjoo
W3: http://www.greenhomeclinic.com/etiad.htm Green House Addiction Center
W4: http://incas.tums.ac.ir/ Addiction Studies National Center (dependent on Tehran University of Medical Sciences)
W5: http://www.rebirth.ir/ Rebirth Welfare Populations
W6: http://www.congress60.org/Fa-IR/Default.aspx# Humanity Revival Population (congress60)
W7: http://tramadol021.blogfa.com/ Special Website of Tramadol Addiction and Addicts
W8: http://www.drvalipour.ir/index php?ToDo=ShowArticles&AID=2353 Dr. Valipour Website
W9: http://www.mums.ac.ir/darman/fa/T_mrt Unit of Treatment Substance Abuse (Addiction Treatment) dependent on Treatment Affair, Mashhad University of Medical Sciences
W10: http://kajcenter.com/ Kaj Therapeutic and Addiction Center
W11: http://dr-kheradmand.com/ Iran Addiction Clinic
W12: http://aayandeh.com/ Ayandeh Addiction Specialized Clinic
W13: http://www.drseidbagheri.com/ dr. seid bagheri website*
W14: http://www.behboudi.com/ Behboudi
W15: http://www.atieno.com/ AtieNo Addiction Specialized Clinic and New Life Admission Center
W16: http://www.behroozan.ir/ Champion Council and Behroozan Addiction Prohibition
W17: http://www.pishgirinovin.com/ The New Prevention, Website of Prevention of Addictions
W18:http://rahayi.ir/index.php?option=com_content&task=view&id=35&Itemid=48 Pishgamaneh Rahayi
W19: http://www.addictionstudy.ir/news.php?item.170 addictionstudy*
W20: http://www.newlifeclinic.ir/news.php New Life
W21: http://home.iranirsa.com/ IRSA: The Institute for Addiction Sciences and Psychology
W22: http://www.etiad-saadat.com/ Saadat Therapeutic and Addiction Center
W23: http://foroghclinic.com/ Forogh Addiction Clinic
W24: http://www.day-clinic.ir/ Day Addiction Clinic
W25: http://www.drasadian.com/addiction/dr. asadian website*
W26:http://www.drazarbayejani.com/index.php?ToDo=ShowArticles&AID=514 Dr. Azerbaijani Website
W27: http://www.pezeshk.us/?cat=52 Pezeshk us
W28: http://systemic-infections.com/etiad.htm Acupuncture and Addiction Therapeutic
W29: http://behzisti.ir/Services/?cid=2&id=68 Behzisti
W30: http://dchq.ir/html/ Presidency Drug Control Headquarters
W31: http://www.khorasandccc.ir/index.php Khorasandccc
W32:http://www.tarikhaneh.com/raha/maghalat/danestaniha.htm Tarikhaneh Young Center (champion with addiction professional website)

*websites which marked with star, during the study became unavailable. So we omitted them from our research.